Appendix I:
Noise Supporting Information

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Project Number: 4340.004 Sheet 1 of 1
Project Name: Rio Vista Specific Plan
Test Personnel: Kevin Nguyendo

Noise Measurement Survey

Site Number: 1 Date: 3/3/22 Time: From 4:13 To: 4:28

Site Location: 34.0335123845, -117.414454451

Primary Noise Sources: Road noise and residential activity

Measurement Results

	dBA
Leq	57.9
Lmax	71
Lmin	37.5
L5	63.1
L10	61.4
L50	55.7
L90	47.5
Ldn	
CNEL	

Observed Noise Sources/Events

Time	Noise Source/Event	dBA
4:16 pm	Dog barking from single family home located 450 ft east of measuring location	57
4:19 pm	Residential backyard construction activity located 40 ft south of measuring location	50

Comments:

Equipment: Larson Davis LXT1 Measured Difference: -0.23 dBA
Settings: A-Weighted☒ Other☐_____ Slow☒ Fast☐ Windscreen☒

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
8-10		69	33	
Comments:	Kestrel ran out of battery so values were taken from local weather station			

Project Number: 4340.004 Sheet 1 of 1
Project Name: Rio Vista Specific Plan
Test Personnel: Kevin Nguyendo

Noise Measurement Survey

Site Number: 2 Date: 3/3/22 Time: From 3:43 To: 3:58

Site Location: 34.0218143176, -117.413620327

Primary Noise Sources: Road noise and residential activity

Measurement Results

	dBA
Leq	47.7
Lmax	62.5
Lmin	38.1
L5	53.6
L10	49
L50	42.7
L90	39.8
Ldn	
CNEL	

Observed Noise Sources/Events

Time	Noise Source/Event	dBA
3:55 pm	Fly by from propeller plane flying above measuring location	59

Comments:

Equipment: Larson Davis LXT1 Measured Difference: -0.2 dBA
Settings: A-Weighted☒ Other☐_____ Slow☒ Fast☐ Windscreen☒

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
8-10		70	36	
Comments:	Kestrel ran out of battery so local weather station values were used			

Project Name: Rio Vista Specific Plan
Test Personnel: Kevin Nguyendo

Noise Measurement Survey

Site Number: 3 Date: 3/3/22 Time: From 2:57 To: 3:12

Site Location: 34.0109944,-117.4120591

Primary Noise Sources: Road noise and residential activity

Measurement Results

	dBA
Leq	55.1
Lmax	65.2
Lmin	47.9
L5	57.7
L10	56.9
L50	54.1
L90	52
Ldn	
CNEL	

Observed Noise Sources/Events

Time	Noise Source/Event	dBA
2:57 pm	Lawn mower	51

Comments: _____

Equipment: Larson Davis LXT1 Measured Difference: 0.5 dBA
Settings: A-Weighted☒ Other☐_____ Slow☒ Fast☐ Windscreen☒

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
8-10		70	36	
Comments:				

Project Number: 4340.004 Sheet 1 of 1
Project Name: Rio Vista Specific Plan
Test Personnel: Kevin Nguyendo

Noise Measurement Survey

Site Number: 4 Date: 3/3/22 Time: From 1:23 pm To: 1:38 pm

Site Location: 34.0239453175, -117.401150087

Primary Noise Sources: _____

_____

_____

Measurement Results

	dBA
Leq	49.9
Lmax	63
Lmin	45.7
L5	53.2
L10	49.6
L50	47.9
L90	47.2
Ldn	
CNEL	

Observed Noise Sources/Events

Time	Noise Source/Event	dBA
1:23 pm	Excavator operating during the entire time located 60 feet east	-
1:25	Concrete mixing truck drove by 30 feet east of measurement location	61

Comments: _____

_____

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_____

Equipment: Larson Davis LXT1 Measured Difference: 0.0 dBA
Settings: A-Weighted☒ Other☐_____ Slow☒ Fast☐ Windscreen☒

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
8-10		70	36	
Comments:				

Project Number: 4340.004 Sheet 1 of 1
Project Name: Rio Vista Specific Plan
Test Personnel: Kevin Nguyendo

Noise Measurement Survey

Site Number: 5 Date: 3/3/22 Time: From 2:09 pm To: 2:24 pm

Site Location: 34.0337905025, -117.399888523

Primary Noise Sources: Nearby roadway that leads into an industrial facility_____

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Measurement Results

	dBA
Leq	39.9
Lmax	49.4
Lmin	35.4
L5	43.2
L10	41.7
L50	39.1
L90	37.1
Ldn	
CNEL	

Observed Noise Sources/Events

Time	Noise Source/Event	dBA
2:15 pm	Dog barking located .38 miles east of measurement location	41

Comments: _____

_____

_____

_____

Equipment: Larson Davis LXT1 Measured Difference: 0.0 dBA
Settings: A-Weighted☒ Other☐_____ Slow☒ Fast☐ Windscreen☒

Atmospheric Conditions:

Maximum Wind Velocity (mph)	Average Wind Velocity (mph)	Temperature (F)	Relative Humidity (%)	
8-10		70	36	
Comments:				

TABLE Existing-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Armstrong Road - SR-60 to 30th Street
NOTES: Rio Vista Specific Plan - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29000 SPEED (MPH): 45 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.0	152.7	325.8	700.3

TABLE Existing-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Armstrong Road - 30th Street to Sierra Avenue
NOTES: Rio Vista Specific Plan - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 29000 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.00

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.0	152.7	325.8	700.3

TABLE Existing-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Sierra Avenue - Armstrong Road to 20th Street
NOTES: Rio Vista Specific Plan - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 2500 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	90.8

TABLE Existing-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: 20th Street - north of Sierra Avenue
NOTES: Rio Vista Specific Plan - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 890 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 53.11

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	0.0

TABLE Existing-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Market Street - Via Cerro to Agua Mansa Road
NOTES: Rio Vista Specific Plan - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 13600 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.53

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	60.7	130.2	280.2

TABLE Existing-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Market Street - Agua Mansa Road to Rubidoux Boulevard
NOTES: Rio Vista Specific Plan - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18800 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.35

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	75.8	161.7	347.5

TABLE Existing-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: 20th Street - Rubidoux Boulevard to Caterpillar Court
NOTES: Rio Vista Specific Plan - Existing

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 3300 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 59.38

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	51.0	109.2

TABLE Existing plus Specific Plan-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Armstrong Road - SR-60 to 30th Street
NOTES: Rio Vista Specific Plan - Existing plus Specific Plan

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 33900 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.68

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
81.3	169.1	361.4	777.0

TABLE Existing plus Specific Plan-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Armstrong Road - 30th Street to Sierra Avenue
NOTES: Rio Vista Specific Plan - Existing plus Specific Plan

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 34000 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 70.70

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
81.5	169.4	362.1	778.5

TABLE Existing plus Specific Plan-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Sierra Avenue - Armstrong Road to 20th Street
NOTES: Rio Vista Specific Plan - Existing plus Specific Plan

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 10300 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	50.5	108.2	232.8

TABLE Existing plus Specific Plan-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: 20th Street - north of Sierra Avenue
NOTES: Rio Vista Specific Plan - Existing plus Specific Plan

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11700 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	55.9	118.2	253.5

TABLE Existing plus Specific Plan-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Market Street - Via Cerro to Agua Mansa Road
NOTES: Rio Vista Specific Plan - Existing plus Specific Plan

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 18300 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.82

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	73.8	158.6	341.4

TABLE Existing plus Specific Plan-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Market Street - Agua Mansa Road to Rubidoux Boulevard
NOTES: Rio Vista Specific Plan - Existing plus Specific Plan

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 23500 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.32

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	87.7	187.5	403.2

TABLE Existing plus Specific Plan-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: 20th Street - Rubidoux Boulevard to Caterpillar Court
NOTES: Rio Vista Specific Plan - Existing plus Specific Plan

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 15500 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.10

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	66.1	142.0	305.7

TABLE General Plan Buildout (Year 2045)-01
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Armstrong Road - SR-60 to 30th Street
NOTES: Rio Vista Specific Plan - General Plan Buildout (Year 2045)

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 42600 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.67

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	93.6	196.4	420.6	904.7

TABLE General Plan Buildout (Year 2045)-02
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Armstrong Road - 30th Street to Sierra Avenue
NOTES: Rio Vista Specific Plan - General Plan Buildout (Year 2045)

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 40800 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.49

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	91.1	190.9	408.7	879.1

TABLE General Plan Buildout (Year 2045)-03
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Sierra Avenue - Armstrong Road to 20th Street
NOTES: Rio Vista Specific Plan - General Plan Buildout (Year 2045)

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 12600 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 65.20

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	57.7	123.7	266.3

TABLE General Plan Buildout (Year 2045)-04
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: 20th Street - north of Sierra Avenue
NOTES: Rio Vista Specific Plan - General Plan Buildout (Year 2045)

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 1900 SPEED (MPH): 35 GRADE: .5

	TRAFFIC DISTRIBUTION PERCENTAGES		
	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 56.40

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	0.0	76.3

TABLE General Plan Buildout (Year 2045)-05
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Market Street - Via Cerro to Agua Mansa Road
NOTES: Rio Vista Specific Plan - General Plan Buildout (Year 2045)

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 26400 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.41

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	94.1	202.4	435.9

TABLE General Plan Buildout (Year 2045)-06
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Market Street - Agua Mansa Road to Rubidoux Boulevard
NOTES: Rio Vista Specific Plan - General Plan Buildout (Year 2045)

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 30900 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.51

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL	70 CNEL	65 CNEL	60 CNEL	55 CNEL
	0.0	104.9	224.9	483.9

TABLE General Plan Buildout (Year 2045)-07
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: 20th Street - Rubidoux Boulevard to Caterpillar Court
NOTES: Rio Vista Specific Plan - General Plan Buildout (Year 2045)

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* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 5700 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

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* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 61.75

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	73.1	157.0

TABLE General Plan Buildout plus Specific Plan-01

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Armstrong Road - SR-60 to 30th Street
NOTES: Rio Vista Specific Plan - General Plan Buildout plus Specific Plan

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 47500 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 72.15

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
100.2	211.0	452.1	972.8

TABLE General Plan Buildout plus Specific Plan-02

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Armstrong Road - 30th Street to Sierra Avenue
NOTES: Rio Vista Specific Plan - General Plan Buildout plus Specific Plan

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 45800 SPEED (MPH): 45 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 24 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 71.99

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
98.0	206.0	441.3	949.4

TABLE General Plan Buildout plus Specific Plan-03

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Sierra Avenue - Armstrong Road to 20th Street
NOTES: Rio Vista Specific Plan - General Plan Buildout plus Specific Plan

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 20400 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.29

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	79.3	170.5	367.1

TABLE General Plan Buildout plus Specific Plan-04

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: 20th Street - north of Sierra Avenue
NOTES: Rio Vista Specific Plan - General Plan Buildout plus Specific Plan

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 11800 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 64.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	56.2	118.8	254.9

TABLE General Plan Buildout plus Specific Plan-05

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Market Street - Via Cerro to Agua Mansa Road
NOTES: Rio Vista Specific Plan - General Plan Buildout plus Specific Plan

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 31100 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	105.0	225.8	486.2

TABLE General Plan Buildout plus Specific Plan-06

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: Market Street - Agua Mansa Road to Rubidoux Boulevard
NOTES: Rio Vista Specific Plan - General Plan Buildout plus Specific Plan

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 35600 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 12 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.13

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
54.5	115.2	247.0	531.6

TABLE General Plan Buildout plus Specific Plan-07

FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 04/22/2022
ROADWAY SEGMENT: 20th Street - Rubidoux Boulevard to Caterpillar Court
NOTES: Rio Vista Specific Plan - General Plan Buildout plus Specific Plan

---

* * ASSUMPTIONS * *

AVERAGE DAILY TRAFFIC: 17900 SPEED (MPH): 35 GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 6 SITE CHARACTERISTICS: SOFT

---

* * CALCULATED NOISE LEVELS * *

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 66.72

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	72.7	156.3	336.4

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Appendix J:
Transportation Supporting Information

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J.1 - Traffic Impact Analysis

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RIO VISTA SPECIFIC PLAN

TRAFFIC IMPACT ANALYSIS
TRSTY-2020-00026

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February 15, 2023

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1 EXECUTIVE SUMMARY

This Traffic Impact Analysis (TIA) has been prepared by EPD Solutions, Inc. (EPD) to analyze the potential transportation-related impacts of the proposed Rio Vista Specific Plan (SP; proposed SP). The proposed SP is the development of the approximately 917.3-acre Specific Plan Area, located south of the San Bernardino County boundary, west of Rubidoux Boulevard, north of SR-60, and east of Armstrong Road in the City of Jurupa Valley. The SP site is currently vacant. The SP proposes to include the following uses:

- up to 1,133 single family detached homes
- up to 144 single family attached homes
- up to 420 multi-family units
- an elementary school with up to 620 students
- a middle school with up to 330 students
- up to 18.4 acres of public park
- a technical college with up to 13,000 total students and 10,000 daily on-site students
- up to 559,310 feet (sf) of Business Park
- and up to 1,269,774 sf of industrial uses

For this analysis, the full SP will be analyzed in one Interim Year, as the specific developments are currently unknown. The proposed SP would generate approximately 39,775 daily PCE trips which includes 4,138 AM peak hour and 3,837 PM peak hour PCE trips.

The following study area intersections were evaluated during the AM and PM peak hours, which are defined as the hours with the highest traffic volumes during the 6 AM to 9 AM and 3 PM to 6 PM peak commute periods.

1. Sierra Avenue/I-10 Ramps (50% City of Fontana, 50% Caltrans)
2. Sierra Avenue/Slover Avenue (100% City of Fontana)
3. Sierra Avenue/Santa Ana Avenue (100% City of Fontana)
4. Sierra Avenue/Jurupa Avenue (100% City of Fontana)
5. Armstrong Road/Sierra Avenue (100% City of Jurupa Valley)
6. Armstrong Road/30th Street (100% City of Jurupa Valley)
7. Valley Way/SR-60 WB Off Ramp (50% City of Jurupa Valley, 50% Caltrans)
8. Valley Way/SR-60 WB On Ramp (50% City of Jurupa Valley, 50% Caltrans)
9. SR-60 EB Ramps/Mission Boulevard (50% City of Jurupa Valley, 50% Caltrans)
10. Valley Way/Mission Boulevard (100% City of Jurupa Valley)
11. Jurupa Road/Mission Boulevard (100% City of Jurupa Valley)
12. Pacific Avenue/Mission Boulevard (100% City of Jurupa Valley)
13. Cedar Avenue/I-10 WB Ramp (50% County of San Bernardino, 50% Caltrans)
14. Cedar Avenue/I-10 EB Ramp (50% County of San Bernardino, 50% Caltrans)
15. Cedar Avenue/Orange Street (100% County of San Bernardino)
16. Cedar Avenue/Slover Avenue (100% County of San Bernardino)
17. Cedar Avenue/Santa Ana Avenue (100% County of San Bernardino)
18. Cedar Avenue/Jurupa Avenue (100% County of San Bernardino)
19. Cedar Avenue/7th Street (100% County of San Bernardino)

20. Rubidoux Boulevard/Market Street (100% City of Jurupa Valley)
21. Agua Mansa Road/Market Street (100% City of Jurupa Valley)
22. Rubidoux Boulevard/SR-60 WB Off Ramp (50% City of Jurupa Valley, 50% Caltrans)
23. Rubidoux Boulevard/SR-60 WB On Ramp (50% City of Jurupa Valley, 50% Caltrans)
24. Rubidoux Boulevard/SR-60 EB Ramps (50% City of Jurupa Valley, 50% Caltrans)
25. Market Street/Rivera Street (100% City of Riverside)
26. Market Street/SR-60 WB Ramp (50% City of Riverside, 50% Caltrans)
27. Market Street/SR-60 EB Ramp (50% City of Riverside, 50% Caltrans)
28. Sierra Avenue/20th Street (100% City of Jurupa Valley)
29. Armstrong Road/Driveway 1 (100% City of Jurupa Valley)
30. Driveway 2/20th Street (100% City of Jurupa Valley)
31. Street A/20th Street (100% City of Jurupa Valley)
32. Street B/20th Street (100% City of Jurupa Valley)
33. Street M/20th Street (100% City of Jurupa Valley)
34. Driveway 3/20th Street (100% City of Jurupa Valley)
35. Driveway 4/20th Street (100% City of Jurupa Valley)
36. Driveway 5/20th Street (100% City of Jurupa Valley)

In addition to the study area intersections, the following study area roadway segments were evaluated.

1. Sierra Avenue: Santa Ana Avenue to Jurupa Avenue (100% City of Fontana)
2. Sierra Avenue: Jurupa Avenue to Armstrong Road (50% City of Fontana, 50% City of Jurupa Valley)
3. Sierra Avenue: Armstrong Road to 20th Street (100% City of Jurupa Valley)
4. Sierra Avenue: 20th Street to UPRR Tracks (100% City of Jurupa Valley)
5. Valley Way: Sierra Avenue to 34th Street (100% City of Jurupa Valley)
6. Valley Way: 34th Street to Granite Hill (100% City of Jurupa Valley)
7. Cedar Avenue: I-10 EB Ramps to Slover Avenue (100% County of San Bernardino)
8. Cedar Avenue: Slover Avenue to Santa Ana Avenue (100% County of San Bernardino)
9. Cedar Avenue: Santa Ana Avenue to Jurupa Avenue (100% County of San Bernardino)
10. Cedar Avenue: Jurupa Avenue to 7th Street (100% County of San Bernardino)
11. Cedar Avenue: 7th Street to El Rivino Road (100% County of San Bernardino)
12. Rubidoux Boulevard: El Rivino Road to Market Street (100% City of Jurupa Valley)
13. Rubidoux Boulevard: Market Street to 28th Street (100% City of Jurupa Valley)
14. Rubidoux Boulevard: 28th Street to SR-60 WB Off Ramp (100% City of Jurupa Valley)
15. Market Street: Agua Mansa Road to 24th Street (100% City of Jurupa Valley)
16. Market Street: 24th Street to SR-60 WB Off Ramp (100% City of Jurupa Valley)
17. Mission Boulevard: SR-60 EB Ramps to Valley Way (100% City of Jurupa Valley)
18. 20th Street: Driveway 2 to Street A (100% City of Jurupa Valley)
19. 20th Street: Street A to Street B (100% City of Jurupa Valley)
20. 20th Street: Street B to Steet M (100% City of Jurupa Valley)
21. 20th Street: Street M to Driveway 3 (100% City of Jurupa Valley)
22. 20th Street: Driveway 3 to Driveway 4 (100% City of Jurupa Valley)
23. 20th Street: Driveway 4 to Driveway 5 (100% City of Jurupa Valley)
24. 20th Street: Driveway 5 to Rubidoux Boulevard (100% City of Jurupa Valley)

AM and PM peak hour traffic and Roadway Segment operations were evaluated for the following scenarios:

- Existing Condition
- Interim Year Baseline
- Interim Year plus SP
- General Plan Buildout (Year 2045)
- General Plan Buildout (Year 2045) plus SP

Interim Year plus Specific Plan Operation Analysis Results

For the Interim Year plus Specific Plan analysis, the following intersections and roadway segments have a significant deficiency with addition of the project.

Intersections

- #5 – Armstrong Road/Sierra Avenue (PM peak hour)
- #7 – Valley Way/SR-60 WB Off Ramp (AM and PM peak hour)
- #9 – SR-60 EB Ramps/Mission Boulevard (PM peak hour)
- #10 – Valley Way/Mission Boulevard (AM and PM peak hour)
- #11 – Jurupa Road/Mission Boulevard (AM and PM peak hour)
- #15 – Cedar Avenue/Orange Street (AM peak hour)
- #16 – Cedar Avenue/Slover Avenue (AM and PM peak hour)
- #17 – Cedar Avenue/Santa Ana Avenue (PM peak hour)
- #18 – Cedar Avenue/Jurupa Avenue (AM and PM peak hour)
- #20 – Rubidoux Boulevard/Market Street (AM and PM peak hour)
- #21 – Agua Mansa Road/Market Street (PM peak hour)
- #22 – Rubidoux Boulevard/SR-60 WB Off Ramp (PM peak hour)
- #23 – Rubidoux Boulevard/SR-60 WB On Ramp (AM and PM peak hour)
- #24 – Rubidoux Boulevard/SR-60 EB Ramps (AM and PM peak hour)
- #27 – Market Street/SR-60 EB Ramp (AM and PM peak hour)

Roadway Segment

- #2 – Sierra Avenue: Santa Ana Avenue to Jurupa Avenue
- #3 – Sierra Avenue: Armstrong Road to 20th Street
- #5 – Valley Way: Sierra Avenue to 34th Street
- #6 – Valley Way: 34th Street to Granite Hill
- #7 – Cedar Avenue: I-10 EB Ramps to Slover Avenue
- #8 – Cedar Avenue: Slover Avenue to Santa Ana Avenue
- #9 – Cedar Avenue: Santa Ana Avenue to Jurupa Avenue
- #10 – Cedar Avenue: Jurupa Avenue to 7th Street
- #11 – Cedar Avenue: 7th Street to El Rivino Road
- #12 – Rubidoux Boulevard: El Rivino Road to Market Street
- #13 – Rubidoux Boulevard: Market Street to 28th Street
- #14 – Rubidoux Boulevard: 28th Street to SR-60 WB Off-Ramp
- #15 – Market Street: Agua Mansa Road to 24th Street
- #16 – Market Street: 24th Street to SR-60WB Off Ramp

- #17 – Mission Boulevard: SR-60 EB Ramps to Valley Way

Queues at Caltrans Facilities

- Sierra Avenue/I-10 Ramps
  - Northbound left-turn lane
- SR-60 EB Ramps/Mission Boulevard
  - Southbound left-turn lane
  - Southbound right-turn lane
- Cedar Avenue/I-10 EB Ramp
  - Northbound right-turn lane
- Rubidoux Blvd/SR-60 WB Off Ramp
  - Westbound right-turn lane
- Rubidoux Boulevard/SR-60 WB On Ramp
  - Northbound left-turn lane
- Rubidoux Boulevard/SR-60 EB Ramps
  - Southbound left-turn lane
  - Eastbound left-turn lane
- Market Street/SR-60 EB Ramp
  - Southbound left-turn lane

General Plan Buildout (Year 2045) plus Specific Plan Operation Analysis Results

In the General Plan Buildout (Year 2045) plus Specific Plan analysis the following intersections and roadway segments have a significant deficiency with addition of the project:

Intersections

- #4 – Sierra Avenue/Jurupa Avenue (PM peak hour)
- #5 – Armstrong Road/Sierra Avenue (AM and PM peak hour)
- #7 – Valley Way/SR-60 WB Off Ramp (AM and PM peak hour)
- #9 – SR-60 EB Ramps/Mission Boulevard (PM peak hour)
- #10 – Valley Way/Mission Boulevard (AM and PM peak hour)
- #11 – Jurupa Road/Mission Boulevard (AM and PM peak hour)
- #12 – Pacific Avenue/Mission Boulevard (PM peak hour)
- #15 – Cedar Avenue/Orange Street (AM and PM peak hour)
- #16 – Cedar Avenue/Slover Avenue (AM and PM peak hour)
- #17 – Cedar Avenue/Santa Ana Avenue (AM and PM peak hour)
- #18 – Cedar Avenue/Jurupa Avenue (AM and PM peak hour)
- #20 – Rubidoux Boulevard/Market Street (AM and PM peak hour)
- #21 – Agua Mansa Road/Market Street (PM peak hour)
- #22 – Rubidoux Boulevard/SR-60 WB Off Ramp (AM and PM peak hour)
- #23 – Rubidoux Boulevard/SR-60 WB On Ramp (AM and PM peak hour)

- #24 – Rubidoux Boulevard/SR-60 EB Ramps (AM and PM peak hour)
- #26 – Market Street/Sr-60 WB Ramps (PM peak hour)
- #27 – Market Street/SR-60 EB Ramps (AM and PM peak hour)
- #28 – Sierra Avenue/20th Street (PM peak hour)

Roadway Segment

- #2 – Sierra Avenue: Santa Ana Avenue to Jurupa Avenue
- #3 – Sierra Avenue: Armstrong Road to 20th Street
- #5 – Valley Way: Sierra Avenue to 34th Street
- #6 – Valley Way: 34th Street to Granite Hill
- #7 – Cedar Avenue: I-10 EB Ramps to Slover Avenue
- #8 – Cedar Avenue: Slover Avenue to Santa Ana Avenue
- #9 – Cedar Avenue: Santa Ana Avenue to Jurupa Avenue
- #10 – Cedar Avenue: Jurupa Avenue to 7th Street
- #11 – Cedar Avenue: 7th Street to El Rivino Road
- #12 – Rubidoux Boulevard: El Rivino Road to Market Street
- #13 – Rubidoux Boulevard: Market Street to 28th Street
- #14 – Rubidoux Boulevard: 28th Street to SR-60 WB Off-Ramp
- #15 – Market Street: Agua Mansa Road to 24th Street
- #16 – Market Street: 24th Street to SR-60WB Off Ramp
- #17 – Mission Boulevard: SR-60 EB Ramps to Valley Way

Queues at Caltrans Facilities

- Sierra Avenue/I-10 Ramps
  - Northbound left-turn lane
- SR-60 EB Ramps/Mission Boulevard
  - Southbound left-turn lane
  - Southbound right-turn lane
- Cedar Avenue/I-10 EB Ramp
  - Northbound right-turn lane
- Rubidoux Boulevard/SR-60 WB On Ramp
  - Northbound left-turn lane
- Rubidoux Boulevard/SR-60 EB Ramps
  - Southbound left-turn lane
  - Eastbound left-turn lane
- Market Street/SR-60 EB Ramp
  - Southbound left-turn lane

Project Improvements and Fair-Share Calculation

Where feasible, the project proposes intersection and roadway segment improvements to reduce the LOS. The following intersections do not have any feasible improvements due to right of way constraints:

Intersections

- #4 – Sierra Avenue/Jurupa Avenue (PM peak hour)
- #9 – SR-60 EB Ramps/Mission Boulevard PM peak hour)
- #10 – Valley Way/Mission Boulevard (AM and PM peak hour)
- #15 – Cedar Avenue/Orange Street (AM peak hour)

Roadway Segment

- #5 – Valley Way: Sierra Avenue to 34th Street
- #6 – Valley Way: 34th Street to Granite Hill
- #7 – Cedar Avenue: I-10 EB Ramps to Slover Avenue
- #8 – Cedar Avenue: Slover Avenue to Santa Ana Avenue
- #9 – Cedar Avenue: Santa Ana Avenue to Jurupa Avenue
- #10 – Cedar Avenue: Jurupa Avenue to 7th Street
- #11 – Cedar Avenue: 7th Street to El Rivino Road
- #12 – Rubidoux Boulevard: El Rivino Road to Market Street
- #13 – Rubidoux Boulevard: Market Street to 28th Street
- #14 – Rubidoux Boulevard: 28th Street to SR-60 WB Off-Ramp
- #15 – Market Street: Agua Mansa Road to 24th Street
- #16 – Market Street: 24th Street to SR-60WB Off Ramp
- #17 – Mission Boulevard: SR-60 EB Ramps to Valley Way

Queues at Caltrans Facilities

- Sierra Avenue/I-10 Ramps
  - Northbound left-turn lane
- SR-60 EB Ramps/Mission Boulevard
  - Southbound left-turn lane
  - Southbound right-turn lane
- Cedar Avenue/I-10 EB Ramp
  - Northbound right-turn lane
- Rubidoux Blvd/SR-60 WB Off Ramp
  - Westbound left-turn lane
- Rubidoux Boulevard/SR-60 WB On Ramp
  - Northbound left-turn lane
- Rubidoux Boulevard/SR-60 EB Ramps
  - Southbound left-turn lane

- Eastbound left-turn lane

- Market Street/SR-60 EB Ramp
  - Southbound left-turn lane

To reduce the project's effect on LOS and queueing, the following intersection and roadway improvements are recommended:

Intersections

- #5 – Armstrong Road/Sierra Avenue (100% City of Jurupa Valley): *Change northbound right turn from permissive phasing to overlap phasing*
- #7 – Valley Way/SR-60 WB Off Ramp (100% City of Jurupa Valley): *Add east bound left and restripe east leg to one left and one right turn. Restripe west bound leg to one thru-left and one right turn*
- #11 – Jurupa Road/Mission Boulevard (100% City of Jurupa Valley): *restrict north bound left turn*
- #16 – Cedar Ave/Slover Ave (100% County of San Bernardino): *Add a 2nd eastbound left turn lane*
- *#17 – Cedar Avenue/Santa Ana Avenue (100% County of San Bernardino): Add an eastbound and westbound left turn lane and restripe the legs to be one left turn and one shared thru right*
- #18 – Cedar Ave/Jurupa Ave (100% County of San Bernardino): *Add an eastbound left turn lane, restripe EB thru-left to thru lane*
- #20 – Rubidoux Blvd/Market St (100% City of Jurupa Valley): *Change northbound right turn from permissive phasing to overlap phasing*
- #21 – Market St/24th St (100% City of Jurupa Valley): *Add 2nd eastbound left turn lane*
- #22 – Rubidoux Boulevard/SR-60 WB Off Ramp: *Reconstruct the Rubidoux Boulevard and SR-60 interchange using the tight diamond alternative analyzed in the SR-60/Rubidoux Project Study Report (PSR)*
- #23 – Rubidoux Boulevard/SR-60 WB On Ramp: *Reconstruct the Rubidoux Boulevard and SR-60 interchange using the tight diamond alternative analyzed in the SR-60/Rubidoux Project Study Report (PSR)*
- #24 – Rubidoux Boulevard/SR-60 EB Ramps: *Reconstruct the Rubidoux Boulevard and SR-60 interchange using the tight diamond alternative analyzed in the SR-60/Rubidoux Project Study Report (PSR)*
- #26 – Market Street/SR-60 WB Ramps (50% City of Riverside, 50% Caltrans): *Add 2nd westbound left turn lane*
- #27 – Market St/SR-60 EB Ramp (Specific Plan project impact only) (50% City of Riverside, 50% Caltrans): *Add 2nd southbound left turn lane*
- #28 – Sierra Avenue/20th Street (100% City of Jurupa Valley): *Restripe left turn lane to a shared left right turn lane.*

2 INTRODUCTION

This Traffic Impact Analysis (TIA) has been prepared by EPD Solutions, Inc. (EPD) to analyze the potential transportation-related impacts of the proposed Rio Vista Specific Plan (SP; proposed SP). The TIA was prepared using methodologies and significance criteria consistent with the requirements of the Jurupa Valley General Plan (September 7, 2017) (also referred to herein as the General Plan) and applicable provisions of the California Environmental Quality Act (CEQA).

2.1 Project Description

The proposed SP is the redevelopment of the approximately 917.3-acre Specific Plan Area, located south of the San Bernardino County boundary, west of Rubidoux Boulevard, north of SR-60, and east of Armstrong Road in the City of Jurupa Valley. The SP site is currently vacant. The SP proposes to include the following uses:

- up to 1,133 single family detached homes
- up to 144 single family attached homes
- up to 420 multi-family units
- an elementary school with up to 620 students
- a middle school with up to 330 students
- up to 18.4 acres of public park
- a technical college with up to 13,000 total students and 10,000 daily on-site students
- up to 559,310 feet (sf) of Business Park
- and up to 1,269,774 sf of industrial uses

The project does not have specific developments proposed; therefore, the date of operation is unknown. For the purpose of this analysis, an interim year of 2030 was used as it is a reasonable amount of time for the full specific plan to be developed.

Access to the SP area site would be primarily provided along 20th Street at Rubidoux Boulevard to the east and Sierra Avenue to the west, with one driveway along Armstrong Road. Truck access will be limited to the Rubidoux Boulevard/20th Street access.

The location of the SP is shown in Figure 1 - Project Location, and the SP site plan is shown in Figure 2 – Project (Specific Plan) Site Plan.

Figure 1: Project Location

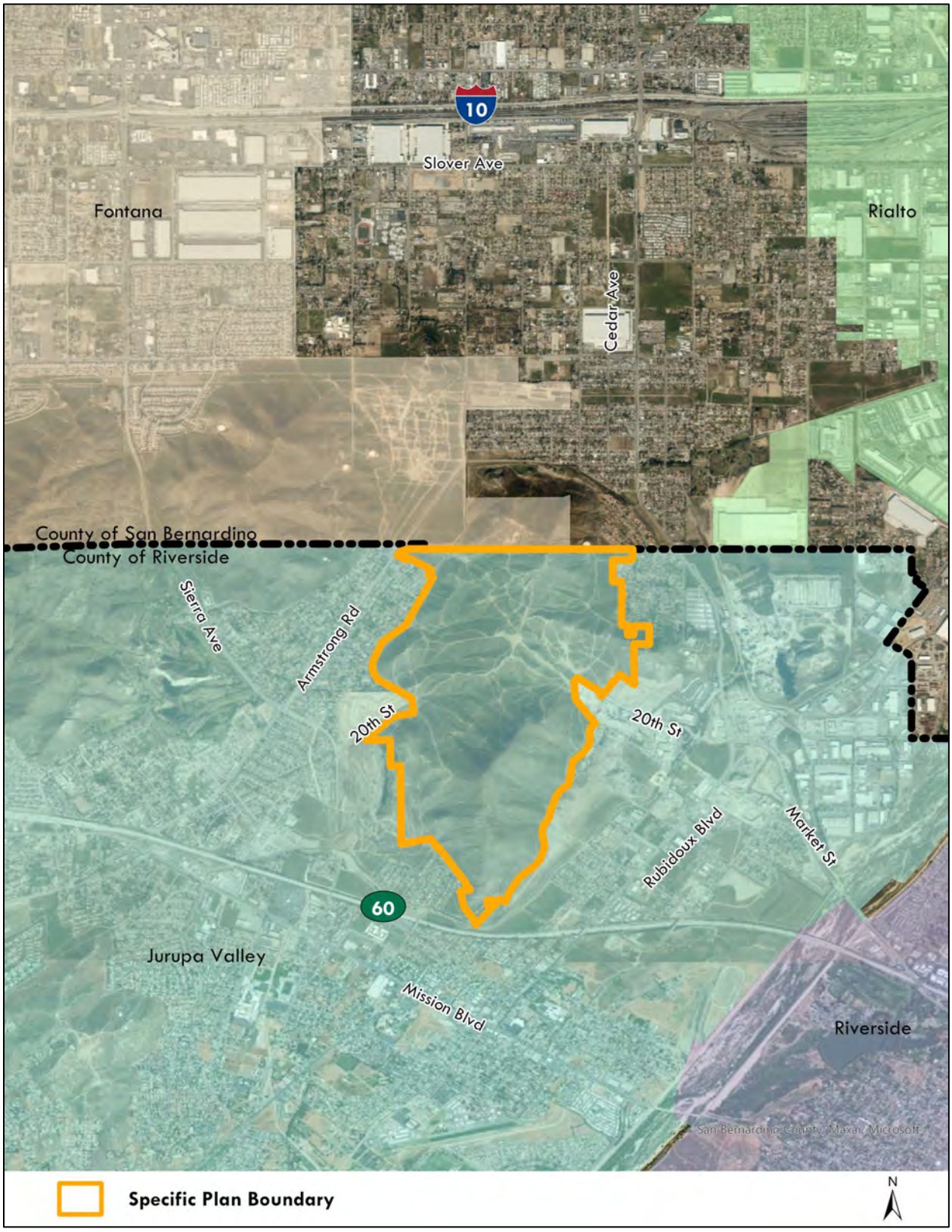
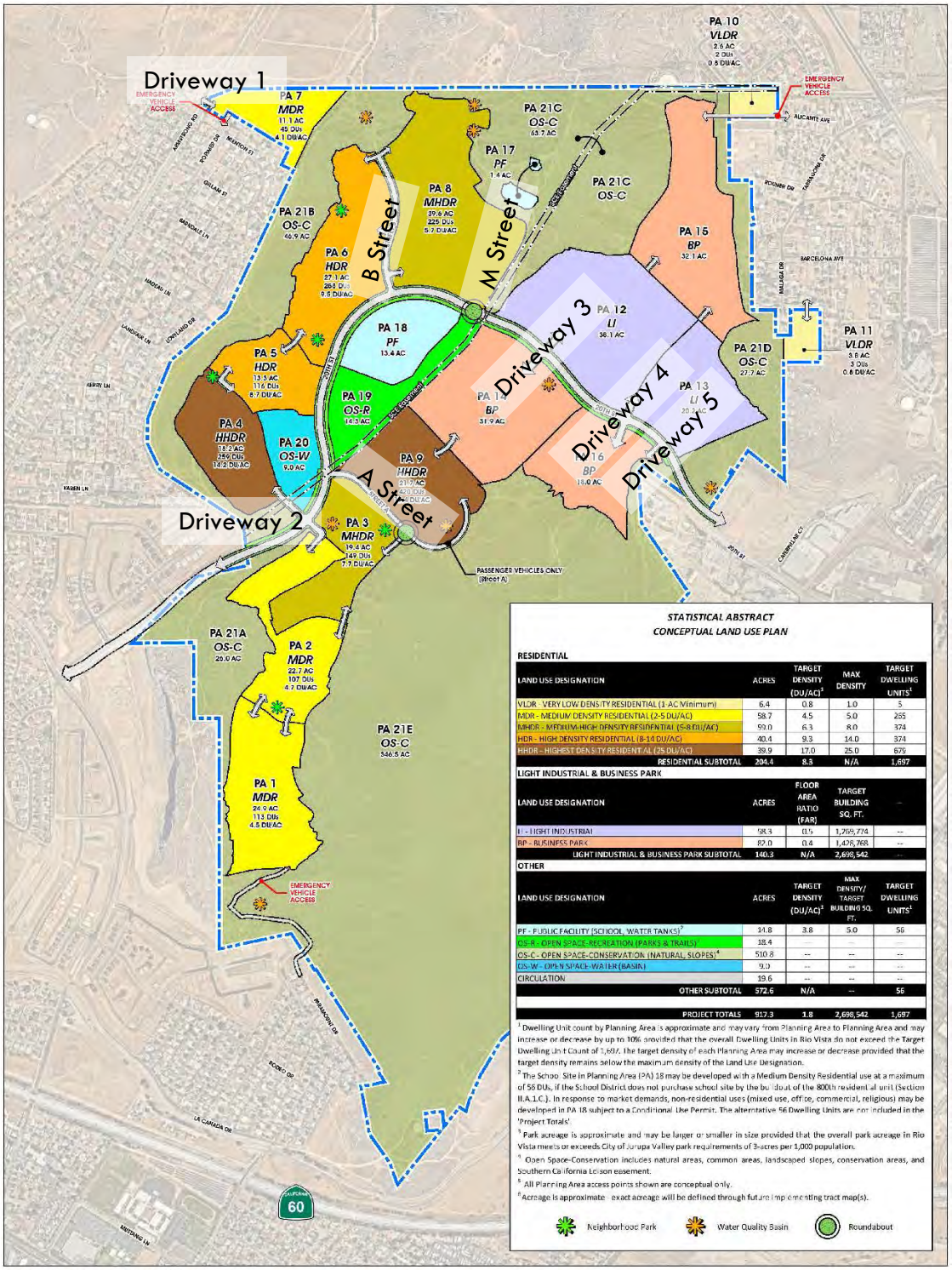


Figure 2: Project (Specific Plan) Site Plan



STATISTICAL ABSTRACT
CONCEPTUAL LAND USE PLAN

RESIDENTIAL

LAND USE DESIGNATION	ACRES	TARGET DENSITY (DU/AC)[3]	MAX DENSITY	TARGET DWELLING UNITS[1]
VLDR - VERY LOW DENSITY RESIDENTIAL (1-AC Minimum)	6.4	0.8	1.0	5
MDR - MEDIUM DENSITY RESIDENTIAL (2-5 DU/AC)	58.7	4.5	5.0	265
MHDR - MEDIUM-HIGH DENSITY RESIDENTIAL (5-8 DU/AC)	59.0	6.3	8.0	374
HDR - HIGH DENSITY RESIDENTIAL (8-14 DU/AC)	40.4	9.3	14.0	374
HHDR - HIGHEST DENSITY RESIDENTIAL (25 DU/AC)	39.9	17.0	25.0	679
RESIDENTIAL SUBTOTAL	204.4	8.3	N/A	1,697

LIGHT INDUSTRIAL & BUSINESS PARK

LAND USE DESIGNATION	ACRES	FLOOR AREA RATIO (FAR)	TARGET BUILDING SQ. FT.	--
LI - LIGHT INDUSTRIAL	98.3	0.5	1,705,774	--
BP - BUSINESS PARK	92.0	0.4	1,428,768	--
LIGHT INDUSTRIAL & BUSINESS PARK SUBTOTAL	140.3	N/A	2,698,542	--

OTHER

LAND USE DESIGNATION	ACRES	TARGET DENSITY (DU/AC)[2]	MAX DENSITY/ TARGET BUILDING SQ. FT.	TARGET DWELLING UNITS[1]
PF - PUBLIC FACILITY (SCHOOL, WATER TANKS)[2]	14.8	3.8	5.0	56
OS-R - OPEN SPACE-RECREATION (PARKS & TRAILS)[3]	18.4	--	--	--
OS-C - OPEN SPACE-CONSERVATION (NATURAL, SLOPES)[4]	510.8	--	--	--
OS-W - OPEN SPACE-WATER (BASIN)	9.0	--	--	--
CIRCULATION	19.6	--	--	--
OTHER SUBTOTAL	572.6	N/A	--	56
PROJECT TOTALS	917.3	1.8	2,698,542	1,697

[1] Dwelling Unit count by Planning Area is approximate and may vary from Planning Area to Planning Area and may increase or decrease by up to 10% provided that the overall Dwelling Units in Rio Vista do not exceed the Target Dwelling Unit Count of 1,697. The target density of each Planning Area may increase or decrease provided that the target density remains below the maximum density of the Land Use Designation.

[2] The School Site in Planning Area (PA) 18 may be developed with a Medium Density Residential use at a maximum of 56 DUs, if the School District does not purchase school site by the build-out of the 800th residential unit (Section II.A.1.C.). In response to market demands, non-residential uses (mixed use, office, commercial, religious) may be developed in PA 18 subject to a Conditional Use Permit. The alternative 56 Dwelling Units are not included in the 'Project Totals'.

[3] Park acreage is approximate and may be larger or smaller in size provided that the overall park acreage in Rio Vista meets or exceeds City of Jurupa Valley park requirements of 3-acres per 1,000 population.

[4] Open Space-Conservation includes natural areas, common areas, landscaped slopes, conservation areas, and Southern California Edison easement.

[5] All Planning Area access points shown are conceptual only.

[6] Acreage is approximate - exact acreage will be defined through future implementing tract map(s).

Neighborhood Park Water Quality Basin Roundabout

Source(s): Nearmap Imagery (2020), RCTLMA (2020)
Composite: Hunsaker and Associates (07-22-2021)

0 225 450 900 Feet

Rio Vista Specific Plan Land Use Plan

SP 16001

Job #: 471-004
Date: August 5, 2021

2.2 Study Area and Analysis Scenarios

The study area was compiled with coordination of the Jurupa Valley Public works department. Below is the list of study area intersections:

1. Sierra Avenue/I-10 Ramps (50% City of Fontana, 50% Caltrans)
2. Sierra Avenue/Slover Avenue (100% City of Fontana)
3. Sierra Avenue/Santa Ana Avenue (100% City of Fontana)
4. Sierra Avenue/Jurupa Avenue (100% City of Fontana)
5. Armstrong Road/Sierra Avenue (100% City of Jurupa Valley)
6. Armstrong Road/30th Street (100% City of Jurupa Valley)
7. Valley Way/SR-60 WB Off Ramp (50% City of Jurupa Valley, 50% Caltrans)
8. Valley Way/SR-60 WB On Ramp (50% City of Jurupa Valley, 50% Caltrans)
9. SR-60 EB Ramps/Mission Boulevard (50% City of Jurupa Valley, 50% Caltrans)
10. Valley Way/Mission Boulevard (100% City of Jurupa Valley)
11. Jurupa Road/Mission Boulevard (100% City of Jurupa Valley)
12. Pacific Avenue/Mission Boulevard (100% City of Jurupa Valley)
13. Cedar Avenue/I-10 WB Ramp (50% County of San Bernardino, 50% Caltrans)
14. Cedar Avenue/I-10 EB Ramp (50% County of San Bernardino, 50% Caltrans)
15. Cedar Avenue/Orange Street (100% County of San Bernardino)
16. Cedar Avenue/Slover Avenue (100% County of San Bernardino)
17. Cedar Avenue/Santa Ana Avenue (100% County of San Bernardino)
18. Cedar Avenue/Jurupa Avenue (100% County of San Bernardino)
19. Cedar Avenue/7th Street (100% County of San Bernardino)
20. Rubidoux Boulevard/Market Street (100% City of Jurupa Valley)
21. Agua Mansa Road/Market Street (100% City of Jurupa Valley)
22. Rubidoux Boulevard/SR-60 WB Off Ramp (50% City of Jurupa Valley, 50% Caltrans)
23. Rubidoux Boulevard/SR-60 WB On Ramp (50% City of Jurupa Valley, 50% Caltrans)
24. Rubidoux Boulevard/SR-60 EB Ramps (50% City of Jurupa Valley, 50% Caltrans)
25. Market Street/Rivera Street (100% City of Riverside)
26. Market Street/SR-60 WB Ramp (50% City of Riverside, 50% Caltrans)
27. Market Street/SR-60 EB Ramp (50% City of Riverside, 50% Caltrans)
28. Sierra Avenue/20th Street (100% City of Jurupa Valley)
29. Armstrong Road/Driveway 1 (100% City of Jurupa Valley)
30. Driveway 2/20th Street (100% City of Jurupa Valley)
31. Street A/20th Street (100% City of Jurupa Valley)
32. Street B/20th Street (100% City of Jurupa Valley)
33. Street M/20th Street (100% City of Jurupa Valley)
34. Driveway 3/20th Street (100% City of Jurupa Valley)
35. Driveway 4/20th Street (100% City of Jurupa Valley)
36. Driveway 5/20th Street (100% City of Jurupa Valley)

Study area intersections were evaluated during the AM and PM peak hours, which are defined as the hour with the highest traffic volumes during the 6 AM to 9 AM and 3 PM to 6 PM peak commute periods. The locations of the study area intersections and roadway segments are shown on Figure 3 – Project Study Area.

In addition to the study area intersections, the following study area roadway segments were evaluated.

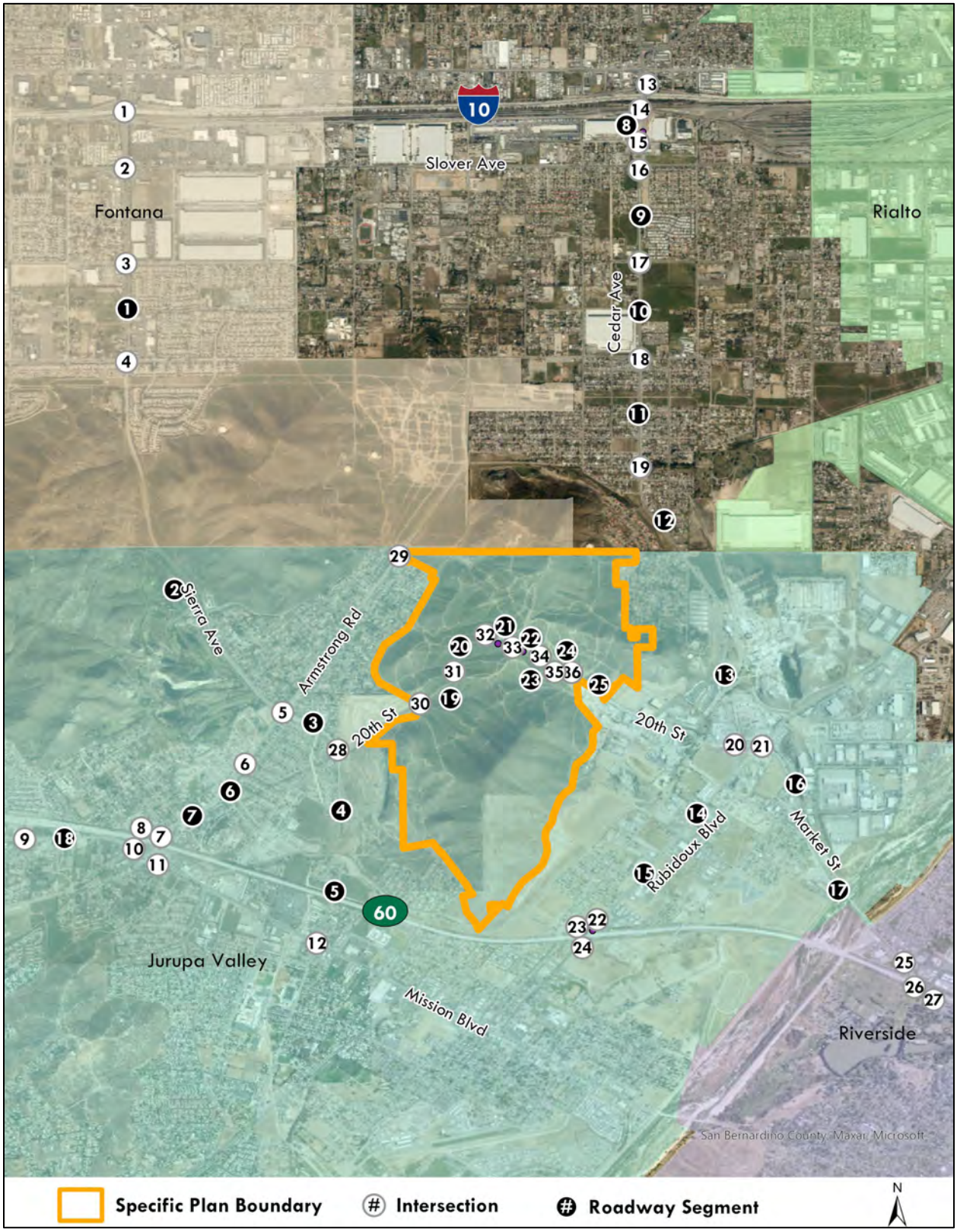
1. Sierra Avenue: Santa Ana Avenue to Jurupa Avenue (100% City of Fontana)
2. Sierra Avenue: Jurupa Avenue to Armstrong Road (50% City of Fontana, 50% City of Jurupa Valley)
3. Sierra Avenue: Armstrong Road to 20th Street (100% City of Jurupa Valley)
4. Sierra Avenue: 20th Street to UPRR Tracks (100% City of Jurupa Valley)
5. Valley Way: Sierra Avenue to 34th Street (100% City of Jurupa Valley)
6. Valley Way: 34th Street to Granite Hill (100% City of Jurupa Valley)
7. Cedar Avenue: I-10 EB Ramps to Slover Avenue (100% County of San Bernardino)
8. Cedar Avenue: Slover Avenue to Santa Ana Avenue (100% County of San Bernardino)
9. Cedar Avenue: Santa Ana Avenue to Jurupa Avenue (100% County of San Bernardino)
10. Cedar Avenue: Jurupa Avenue to 7th Street (100% County of San Bernardino)
11. Cedar Avenue: 7th Street to El Rivino Road (100% County of San Bernardino)
12. Rubidoux Boulevard: El Rivino Road to Market Street (100% City of Jurupa Valley)
13. Rubidoux Boulevard: Market Street to 28th Street (100% City of Jurupa Valley)
14. Rubidoux Boulevard: 28th Street to SR-60 WB Off Ramp (100% City of Jurupa Valley)
15. Market Street: Agua Mansa Road to 24th Street (100% City of Jurupa Valley)
16. Market Street: 24th Street to SR-60 WB Off Ramp (100% City of Jurupa Valley)
17. Mission Boulevard: SR-60 EB Ramps to Valley Way (100% City of Jurupa Valley)
18. 20th Street: Driveway 2 to Street A (100% City of Jurupa Valley)
19. 20th Street: Street A to Street B (100% City of Jurupa Valley)
20. 20th Street: Street B to Steet M (100% City of Jurupa Valley)
21. 20th Street: Street M to Driveway 3 (100% City of Jurupa Valley)
22. 20th Street: Driveway 3 to Driveway 4 (100% City of Jurupa Valley)
23. 20th Street: Driveway 4 to Driveway 5 (100% City of Jurupa Valley)
24. 20th Street: Driveway 5 to Rubidoux Boulevard (100% City of Jurupa Valley)

AM and PM peak hour traffic and roadway segment operations were evaluated for the following scenarios:

- Existing Condition
- Interim Year (2030) Baseline
- Interim Year (2030) plus SP
- General Plan Buildout (Year 2045)
- General Plan Buildout (Year 2045) plus SP

Forecast traffic volumes for the Interim Year scenario were developed by taking counts and applying a growth factor of two percent per year. The forecast traffic volumes for the General Plan Buildout (Year 2045) were developed using estimates of growth forecast using the RIVCOM model. The Scoping Agreement with the City of Jurupa Valley can be found in Appendix A.

Figure 3: Project Study Area



2.3 Methodology

Intersection operations are evaluated using Level of Service (LOS), which is a measure of the delay experienced by drivers on a roadway facility. LOS A indicates free-flow traffic conditions and is generally the best operating conditions. LOS F is an extremely congested condition and is the worst operating condition from the driver's perspective. In this report, LOS at signalized and unsignalized intersections is calculated using the Highway Capacity Manual (HCM), 7th Edition methodology.

LOS at signalized intersections is defined in terms of the weighted average control delay for the intersection as a whole. Control delay is a measure of the increase in travel time that is experienced due to traffic signal control and is expressed in terms of average control delay per vehicle (in seconds). Control delay is determined based on the intersection geometry and volume, signal cycle length, phasing and coordination along the arterial corridor. Table 1 shows the relationship between control delay and LOS.

Table 1. Relationship between Control Delay and LOS at a Signalized Intersection

LOS	Delay (Seconds per Vehicle)
A	≤ 10
B	>10 – 20
C	>20 – 35
D	>35 – 55
E	>55 – 80
F	>80

Unsignalized intersections are categorized as either all-way stop control (AWSC) or two-way stop control (TWSC). LOS at AWSC intersections is determined by the weighted average control delay of the overall intersection. The HCM TWSC intersection methodology calculates LOS based on the delay experienced by drivers on the minor (stop-controlled) approaches to the intersection. For TWSC intersections, LOS is determined for each minor-street movement, as well as the major-street left-turns. The relationship between delay and LOS at Unsignalized intersections is shown in Table 2.

Table 2. Relationship between Delay and LOS an Unsignalized Intersection

LOS	Delay (seconds)
A	0-10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F	>50

Daily Roadway Segments are evaluated using roadway segment capacities to determine LOS. The capacity of a roadway is dependent on the number of lanes and the type of roadway. The roadway capacities provided in the City of Jurupa Valley Traffic Impact Analysis Guidelines are for planning purposes, as capacity is affected by factors as spacing, configuration, and others. The relationship between capacity and LOS for roadway segments is shown in Table 3 for the City of Jurupa Valley, Table 4 for the City of Fontana, and Table 5 for the County of San Bernardino.

Table 3. Roadway Segment Capacities City of Jurupa Valley

Type of Roadway	Number of Lanes	Maximum Two-Way Daily Traffic Volume (ADT)(1)		
		LOS C	LOS D	LOS E
Local	2	2,500	2,800	3,100
Collector	2	9,900	11,200	12,500
Industrial Collector	2	10,400	11,300	12,500
Secondary	4	20,700	23,300	25,900
Major	4	27,300	30,700	34,100
Arterial (2)	2	14,400	16,200	18,000
Arterial	4	20,000	22,500	25,000
Urban Arterial	4	30,000	33,800	37,500
Urban Arterial	6	45,000	50,600	56,300
Expressway	4	32,700	36,800	40,900
Expressway	6	49,000	55,200	61,300

* - Maximum Average Daily Traffic (ADT)

These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS "E" service volumes are estimated maximum daily capacity for respective classifications. Capacity is affected by such factors as intersections (spacing, configuration, and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic), and pedestrian and bicycle traffic

(1) Maximum two-way ADT values are based on the County of Riverside General Plan Circulation Element and the Riverside County Congestion Management Program.

(2) Two-lane roadways designated as future arterials that conform to arterial design standards for vertical and horizontal alignment are analyzed as arterials.

Source: City of Jurupa Valley TIA Preparation Guidelines November 2020

Table 4. Roadway Segment Capacities City of Fontana

Type of Roadway	Number of Lanes	Maximum Two-Way Daily Traffic Volume (ADT)(1)				
		LOS A	LOS B	LOS C	LOS D	LOS E
8-Lane Major Highway	8	43,200	50,400	57,600	64,800	72,000
Major Highway	6	32,400	37,800	43,200	48,600	54,000

* - Maximum Average Daily Traffic (ADT)

All Capacity figures are based on optimum conditions and are intended as guidelines for planning purposes only.

(1) Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual Level of Service Tables.

(2) Two-lane roadways designated as future arterials that conform to arterial design standards for vertical and horizontal alignment are analyzed as arterials.

Table 5. Roadway Segment Capacities County of San Bernardino

Type of Roadway	Number of Lanes	Maximum Two-Way Daily Traffic Volume (ADT)(1)				
		LOS A	LOS B	LOS C	LOS D	LOS E
Major Divided Highway	4	22,500	26,300	30,000	33,800	37,500
Major Highway	4	18,000	21,000	24,000	27,000	33,000

* - Maximum Average Daily Traffic (ADT)

All Capacity figures are based on optimum conditions and are intended as guidelines for planning purposes only.

(1) Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual Level of Service Tables.

(2) Two-lane roadways designated as future arterials that conform to arterial design standards for vertical and horizontal alignment are analyzed as arterials.

Intersection signal and saturation requirements will be specific to the jurisdiction the intersection is under, deferring to the more conservative analysis method. These requirements were found in the City of Jurupa, City of Fontana, County of San Bernardino, and City of Riverside respective transportation analysis guidelines.

2.4 Significance Criteria

City of Jurupa Valley
The City of Jurupa Valley General Plan defines the minimum acceptable intersection LOS as LOS D for intersections and roadway segments.

Intersections which worsen from an acceptable LOS (D or better) to an unacceptable LOS (E or F) shall identify improvements to improve operations to LOS D or better. A project adds 3 or more seconds of delay to an intersection that already operates at an unacceptable LOS shall identify improvements to off-set the increase in delay.

Roadway segments which worsen from an acceptable LOS D (or better) to an unacceptable LOS (E or F) shall identify improvements to improve operations to LOS D or better. Roadways which operate at an unacceptable LOS without project traffic that is increased in excess of 5% of the roadway capacity with project traffic should identify improvements to add capacity to the segment.

County of San Bernardino
The County of San Bernardino Traffic Impact Study Guidelines provides the following criteria for the determination of traffic impacts. It should be noted that the project is located in the Valley region.

Signalized Intersections

"Any study intersection that is operating at a LOS A, B, C or D for any study scenario without project traffic in which the addition of project traffic causes the intersection to degrade to a LOS E or F shall mitigate the impact to bring the intersection back to at least LOS D.

Any study intersection that is operating at a LOS E or F for any study scenario without project traffic shall mitigate any impacts so as to bring the intersection back to the overall level of delay established prior to project traffic being added.

For scenarios which include the addition of Cumulative Project Traffic (i.e. shared impacts), study intersections shall be mitigated to LOS D or better in the Valley and Mountain regions and LOS C or better in the Desert regions of the County."

Unsignalized Intersections

"An impact is considered significant if the study determines that either section a) or both sections b) and c) occur.

a) The addition of project related traffic causes the intersection to move from a LOS D or better to a LOS E or worse

OR

b) The project contributes additional traffic to an intersection that is already projected to operate at an LOS E or F with background traffic

AND

c) One or both of the following conditions are met:
    1) The project adds ten (10) or more trips to any approach
    2) The intersection meets the peak hour traffic signal warrant after the addition of project traffic"

"Once a significant impact has been identified, mitigation shall be provided as follows:

1. For scenarios involving project traffic but not Cumulative Project Traffic, the LOS shall be mitigated to either LOS D or better for case a) above or to pre-project LOS and delay for case b) above.
2. For scenarios that include Cumulative Project Traffic study intersections shall be mitigated to LOS D or better in the Valley and Mountain regions and LOS C or better in the Desert regions of the County."

Roadway Segment Analysis

The County of San Bernardino *Transportation Impact Study Guidelines* recommend that roadway segments, in the Valley region, which worsen from an acceptable LOS D (or better) to an unacceptable LOS (E or F) shall identify improvements to improve operations to LOS D or better. Roadways which operate at an unacceptable LOS without project traffic that is increased in excess of 5% of the roadway capacity with project traffic should identify improvements to add capacity to the segment.

City of Fontana

The City of Fontana Traffic Impact Analysis Guidelines provides the following criteria for the determination of traffic impacts.

The City's *Traffic Impact Analysis (TIA) Guidelines for Vehicle Miles Traveled (VMT and Level of Service Assessment* states the target LOS of C, and for and intersections which are forecast to operate at unsatisfactory conditions shall be identified as cumulatively significant impacts. Table 6 below shows the thresholds that would cause an impact.

Table 6. Thresholds of Significant Impact for Fontana Intersections

With Project LOS	Significant Impact Threshold
A/B	+10.0 Seconds
C	+8.0 Seconds
D	+5.0 Seconds
E	+3.0 Seconds
F	+1.0 Seconds

The City of Fontana TIA Guidelines do not have methodology for roadway segments, therefore, the City of Jurupa Valley methodology and will be used, however, instead of LOS D, a threshold of LOS C will be used.

City of Riverside
The City of Riverside Traffic Impact Analysis Preparation Guide provides the following criteria for the determination of traffic impacts.

Table 7 below shows the thresholds that would cause an impact.

Table 7. Thresholds of Significant Impact for Riverside Intersections

With Project LOS	Significant Impact Threshold
A/B	+10.0 Seconds
C	+8.0 Seconds
D	+5.0 Seconds
E	+2.0 Seconds
F	+1.0 Seconds

The City's General Plan recommends a LOS standard of D for roadways of Collector or higher classifications. LOS C is to be maintained on all street intersections.

San Bernardino County Congestion Management Program (CMP)
The San Bernardino County CMP sets a LOS standard of E for intersections or roadway segments on the CMP system of roadways. LOS E would apply as the standard at the following intersections and roadway segments:

Intersections

1. Sierra Avenue/I-10 Ramps (50% City of Fontana, 50% Caltrans)
2. Sierra Avenue/Slover Avenue (100% City of Fontana)
4. Sierra Avenue/Jurupa Avenue (100% City of Fontana)
11. Cedar Avenue/I-10 WB Ramp (50% County of San Bernardino, 50% Caltrans)
12. Cedar Avenue/I-10 EB Ramp (50% County of San Bernardino, 50% Caltrans)

Roadway Segments

1. Sierra Avenue: Santa Ana Avenue to Jurupa Avenue (100% City of Fontana)
2. Sierra Avenue: Jurupa Avenue to Armstrong Road (50% City of Fontana, 50% City of Jurupa Valley)
8. Cedar Avenue: I-10 EB Ramps to Slover Avenue (100% County of San Bernardino)
9. Cedar Avenue: Slover Avenue to Santa Ana Avenue (100% County of San Bernardino)
10. Cedar Avenue: Santa Ana Avenue to Jurupa Avenue (100% County of San Bernardino)
11. Cedar Avenue: Jurupa Avenue to 7th Street (100% County of San Bernardino)
12. Cedar Avenue: 7th Street to El Rivino Road (100% County of San Bernardino)

Riverside County Congestion Management Program (CMP)
The Riverside County CMP sets a LOS standard of E for roadway segments on the CMP system of roadways. LOS E would apply as the standard at the following roadway segments:

Roadway Segments

2. Sierra Avenue: Jurupa Avenue to Armstrong Road (50% City of Fontana, 50% City of Jurupa Valley)
6. Valley Way: Sierra Avenue to 34th Street (100% City of Jurupa Valley)
7. Valley Way: 34th Street to Granite Hill (100% City of Jurupa Valley)
13. Rubidoux Boulevard: El Rivino Road to Market Street (100% City of Jurupa Valley)
16. Market Street: Agua Mansa Road to 24th Street (100% City of Jurupa Valley)
17. Market Street: 24th Street to SR-60 WB Off Ramp (100% City of Jurupa Valley)

California Department of Transportation (Caltrans)

The Caltrans *Guide for the Preparation of Traffic Impact Studies* (December 2002) required that State Highway facilities be analyzed when project traffic was added to the facility. These guidelines were superseded by the Caltrans *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* in May 2020. As noted in the updated guidelines, Caltrans is now focused on vehicle miles traveled (VMT) as a metric for transportation analysis and states the following: "With this guidance, the Department will transition away from requesting LOS or other vehicle operations analyses of land use projects". Therefore, all Caltrans facilities will be analyzed using the appropriate thresholds set by the City, County, or CMP.

Queueing Criteria

For Caltrans Facilities, a queuing analysis was done In addition to LOS. A significant queueing deficiency would occur if:

a) The addition of project trips causes the queue to exceed the storage length.

b) The project adds one car length (25 feet) of queue to a queue that exceeds the storage length in the baseline condition.

3 BASELINE CONDITIONS

This section discusses the baseline (without project) conditions. Baseline conditions are those conditions that exist within the study area in the existing condition and that are forecast to occur in the future, without the proposed project.

3.1 Existing Transportation System

Access to the Specific Plan area site would be primarily provided along 20th Street at Rubidoux Boulevard to the east and Sierra Avenue to the west, with one driveway along Armstrong Road. Truck access will be limited to the Rubidoux Boulevard/20th Street access. The major streets analyzed are Sierra Avenue, Cedar Avenue, Rubidoux Boulevard, Valley Way, Armstrong Road Mission Boulevard, Pacific Avenue, and Market Street. Mission Boulevard east of Valley Way is classified as Arterial, Armstrong Road, Valley Way, Rubidoux Boulevard, Market Street, and Mission Boulevard east of the SR-60 EB ramps are classified as Major, Mission Boulevard west of Valley Way and Sierra Avenue are classified as Secondary, Pacific Avenue and the existing portion of 20th Street west of Rubidoux Boulevard is classified as Local as per the City of Jurupa Valley General Plan Mobility Element. Cedar Avenue is classified as a Major Highway, in the County of San Bernardino General Plan Circulation Element. Finally, Sierra Avenue is classified as a Major Highway in the City of Fontana General Plan Community Mobility Circulation Element. Cedar Avenue and Sierra Avenue are roadways designated in the Congestion Management Plan Road system. Table 8 Shows the roadway characteristics that are observed within the project study area.

Table 8. Existing Roadway Characteristics within Study Area

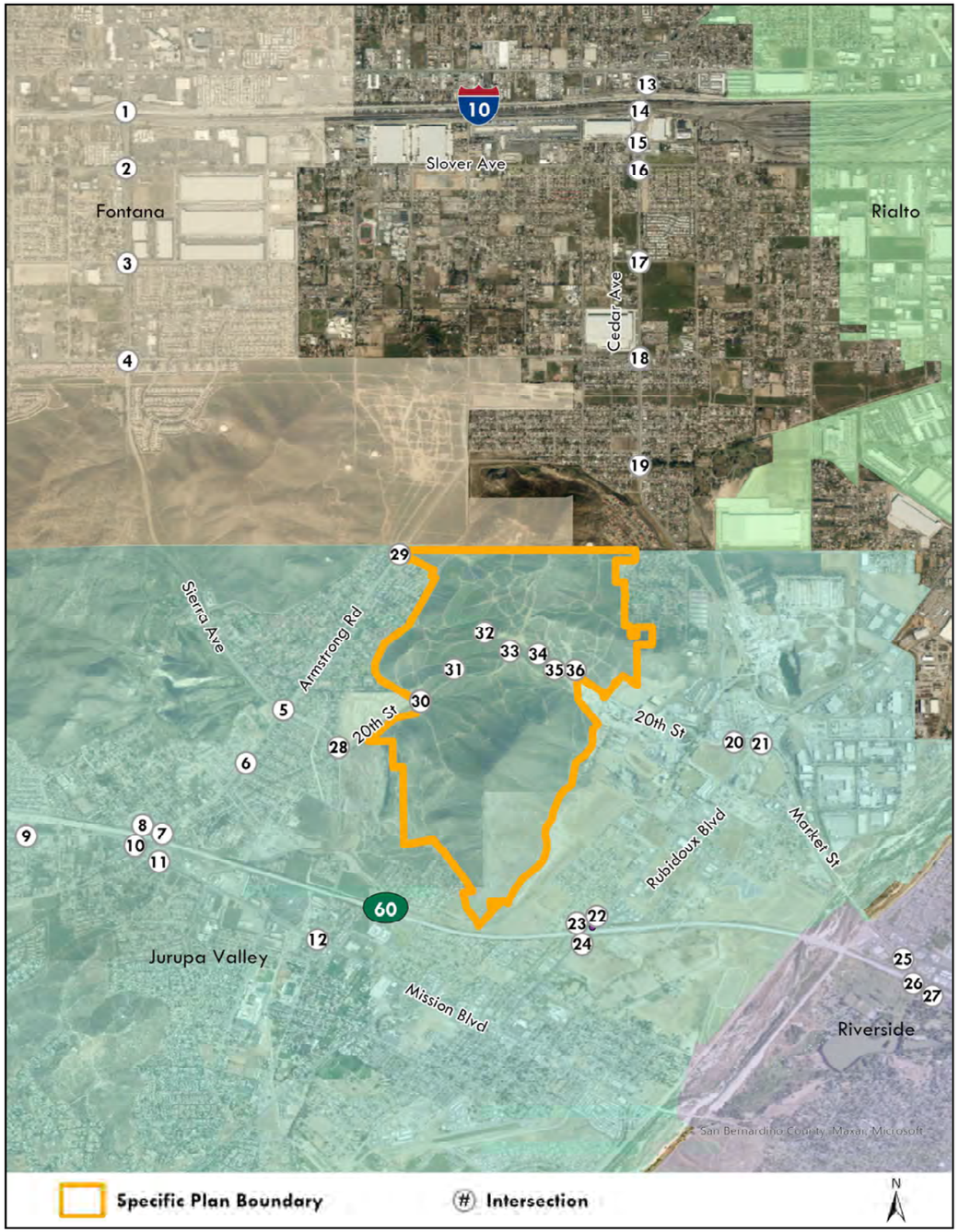
Roadway	Number of Lanes	Sidewalks?	Bike Lane?
20th Street (E/W)	2-Lane divided east of Sierra Avenue and 2-Lane undivided west of Rubidoux Boulevard (currently unconnected)	Sierra Side: Yes Rubidoux Side: North Side: No South Side: No east of Van Dell Road, Yes west of Van Dell Road	No
Armstrong Road (N/S)	2-Lane undivided north of Gillam Street 2-Lane divided from Sierra Avenue to Gillam Street 4-Lane Divided south of Sierra Avenue	West Side: No north of Sierra Avenue, Yes south of Sierra Avenue. East Side: Yes south of Jurupa Valley City Boundary	No
Valley Way (N/S)	4-Lane divided	Yes	No
Pacific Avenue (N/S)	2-Lane undivided (no thru traffic at UPRR Tracks)	Partially south of UPRR tracks	No
Rubidoux Boulevard (N/S)	4-Lane divided north of 24th street and south of 28th street. Painted median is present from north of 26th street to south of Arbuckle School Road.	No north of 24th Street Yes from 24th Street to 30th Street No south of 30th Street	No

Mission Boulevard (E/W)	4-Lane divided from SR-60 EB Ramps to Soto Avenue and east of Valley Way 7000 and 7100 blocks are 4-Lane undivided	Yes east of Valley Way West of Valley Way: North Side: No South Side: sporadically	No
Market Street (N/S)	2-Lane undivided north of Rivera Street, 4-Lane divided south of Rivera Street	West Side: No East Side: No North of Rivera Street, Yes South of Rivera Street	No
Sierra Avenue (Jurupa Valley) (N/S)	4-Lane Divided north of Karen Lane, 4-Lane undivided between Karen Lane and Armstrong Road, 2-Lane undivided from Armstrong Road to WoodBriar Drive, and 2-Lane divided south of WoodBriar Drive	West Side: Yes South of Karen Lane East Side: Yes between Karen Lane and Armstrong Avenue, and south of 20th Street	Jurupa Valley: No
Sierra Avenue (Fontana) (N/S)	7-Lane Divided north of Slover, 6-Lane Divided south of Slover, 5-Lane Divided South of Santa Ana, and 4 Lane Divided South of Jurupa Avenue	West Side: Yes north of Martin Tudor Jurupa Hills Regional Park East Side: Yes north of Jurupa Avenue	Fontana: Yes on east side between Santa Ana Avenue and Technology Street
Cedar Avenue (N/S)	4-Lane divided. Solid median south of Slover Avenue, painted median north of Slover Avenue	West Side: Intermittently East Side: Yes north of Santa Ana Avenue, Intermittently south of Santa Ana Avenue	No

There are two bus routes from the Riverside Transit Agency (RTA) that service the Specific Plan. RTA route 49 has stops along Mission Boulevard, with the closest at the intersection of Valley Way/Mission Boulevard, and route 29 has stops along Rubidoux Boulevard and Market Street, with the closest stop at the intersection of Rubidoux Boulevard/24th Street.

The existing traffic control and intersection geometrics at study area intersections are shown in Figure 4.

Figure 4a: Existing Traffic Control and Intersection Geometrics



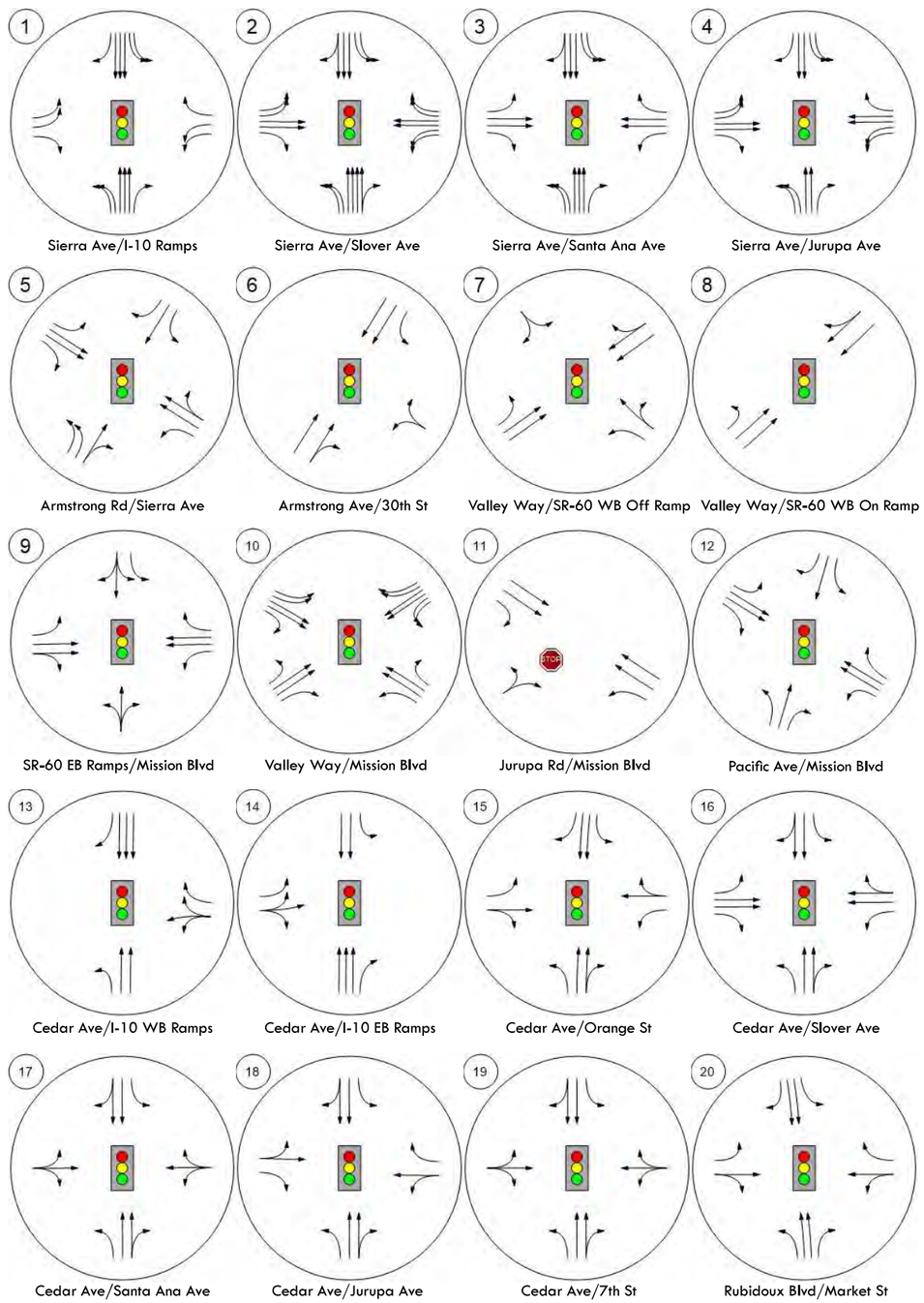
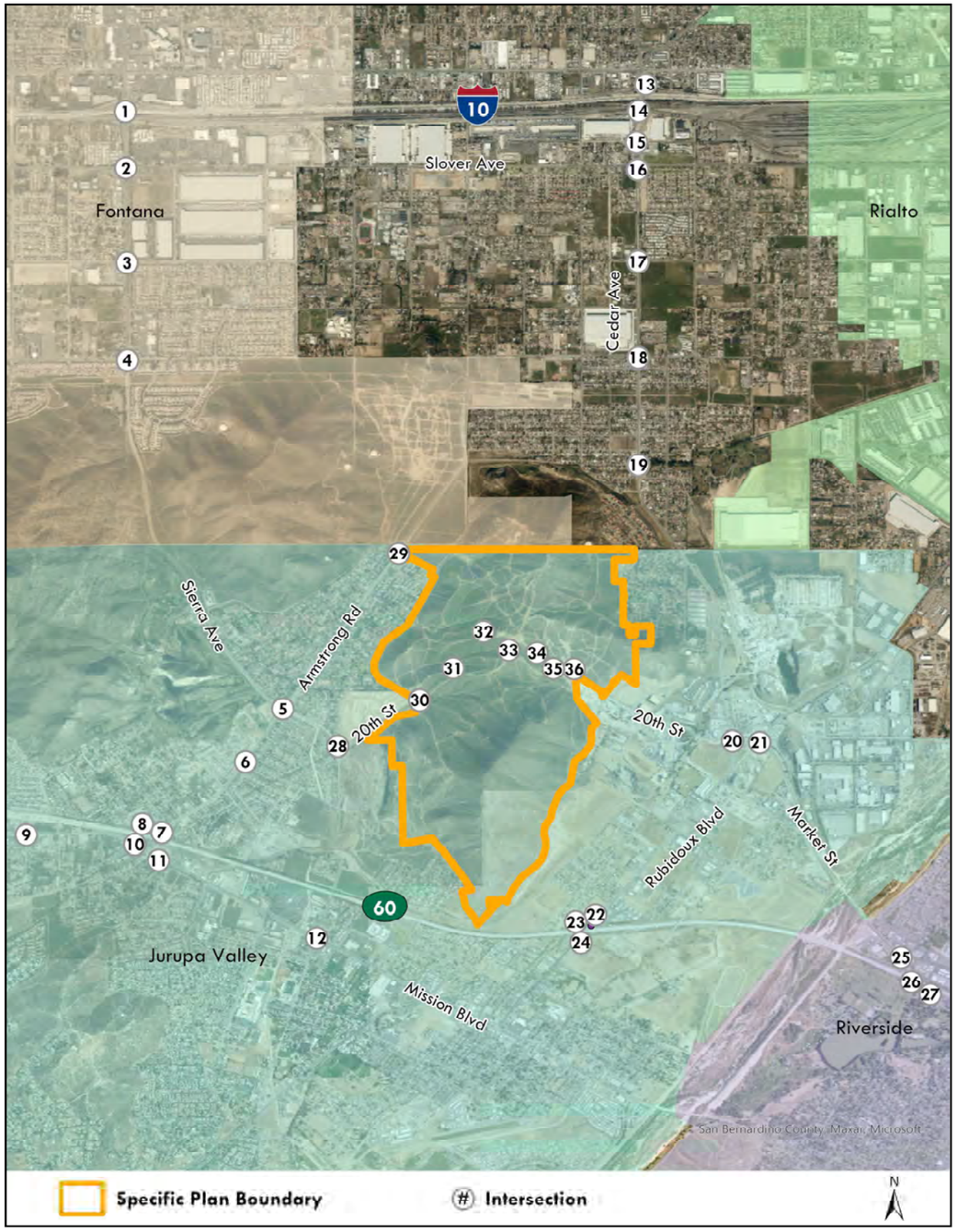
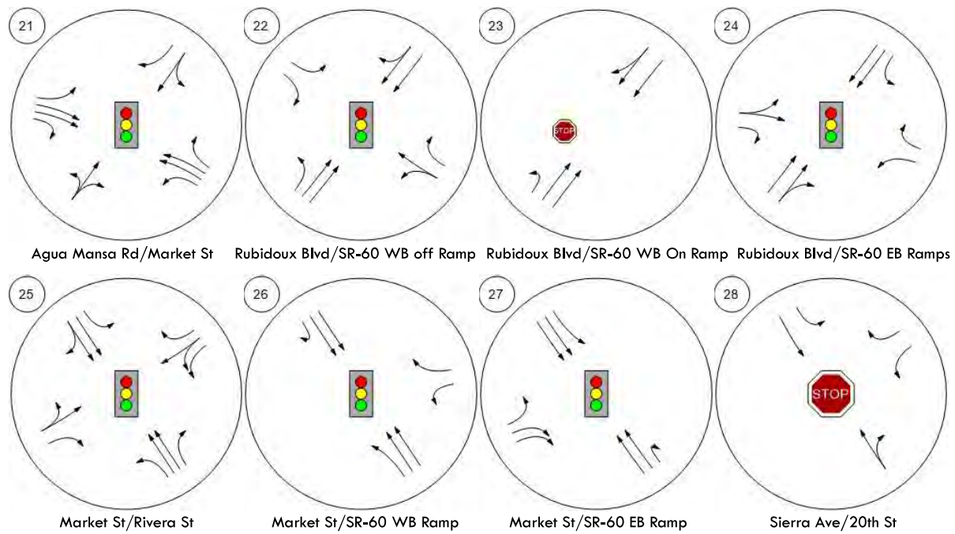


Figure 4b: Existing Traffic Control and Intersection Geometrics





3.2 Existing Traffic Volumes and Operations

Existing AM and PM peak hour traffic volumes at the study area intersections are shown in Figures 5 and 6. The existing traffic volumes were collected on Thursday, October 7th, 2021. All traffic count data is provided in Appendix B. Intersection #28: Sierra Avenue/20th Street volumes were developed using the daily roadway counts from Roadway Segment #3 Sierra Avenue: Armstrong Road to 20th Street, and Intersection #5: Armstrong Road/Sierra Avenue. In addition, the 90 occupied homes that are newly developed were added to the volumes at Intersection #28 using the Institute of Transportation Engineers *Trip Generation Manual* 11th Edition, Single Family Detached Housing Rates (Land Use Code 210).

The existing LOS at the study area intersections and roadway segments were determined using the HCM methodology and vehicle capacity ratio respectively, described previously in section 2.3. Table 9 shows the existing AM and PM peak hour LOS at study intersections and Table 10 shows the existing LOS for daily roadway segments. All LOS calculations are provided in Appendix C. As shown in Table 9 and Table 10, the following intersections and roadway segments operate at an unacceptable LOS:

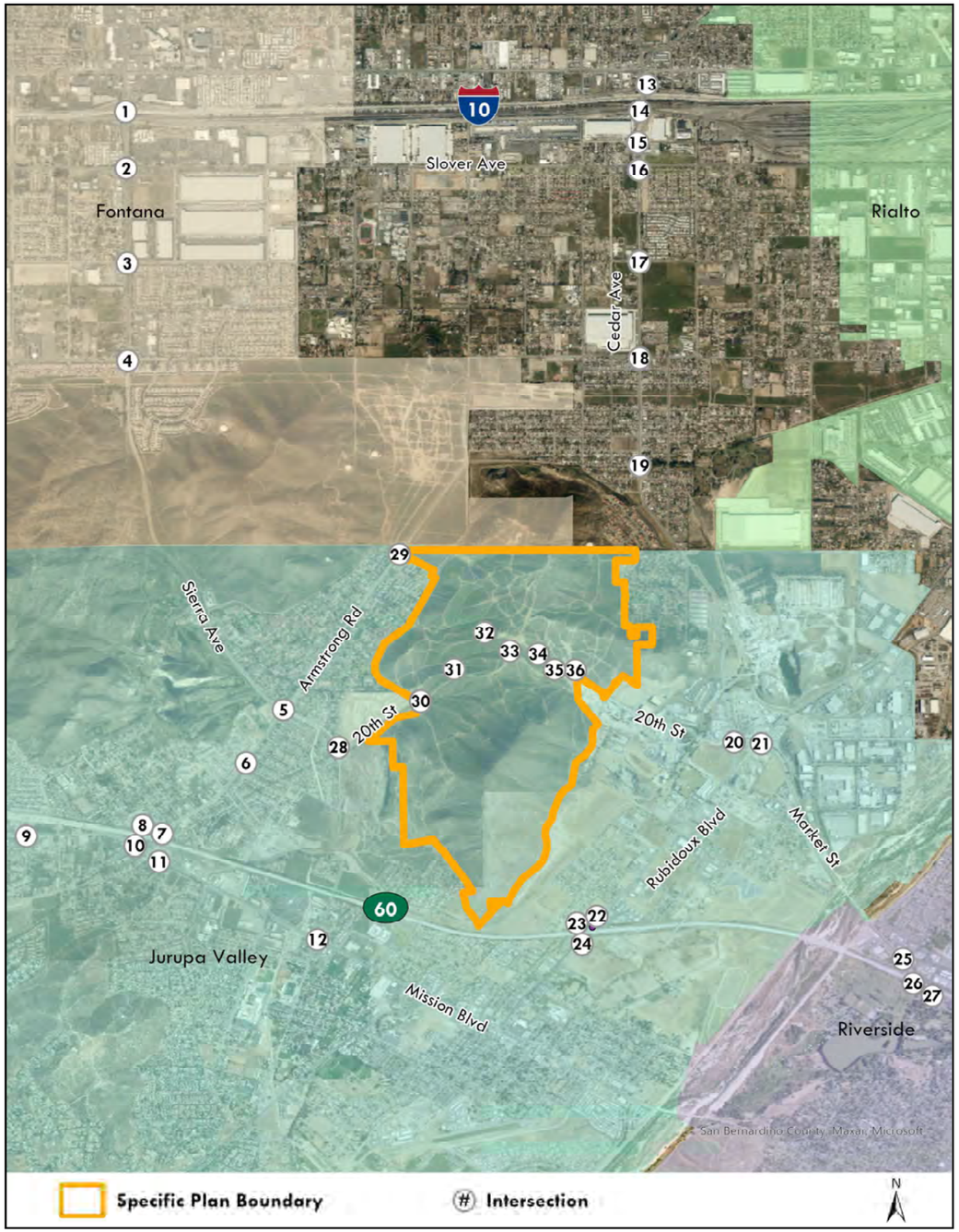
Intersections:

- #7 Valley Way/SR-60 WB Off Ramp (AM and PM peak hour)
- #11 Jurupa Road/Mission Boulevard (AM and PM peak hour)
- #20 Rubidoux Boulevard/Market Street (PM peak hour)

Roadway Segments

- #2 Sierra Avenue: Jurupa Avenue to Armstrong Road
- #5 Valley Way: Sierra Avenue to 34th Street
- #6 Valley Way: 34th Street to Granite Hill
- #7 Cedar Avenue: I-10 EB Ramps to Slover Avenue
- #14 Rubidoux Boulevard: 28th Street to SR-60 WB Off-Ramp
- #15 Market Street: Agua Mansa Road to 24th Street
- #16 Market Street: 24th Street to SR-60 WB Off Ramp

Figure 5a: Existing AM Peak Hour Traffic Volumes



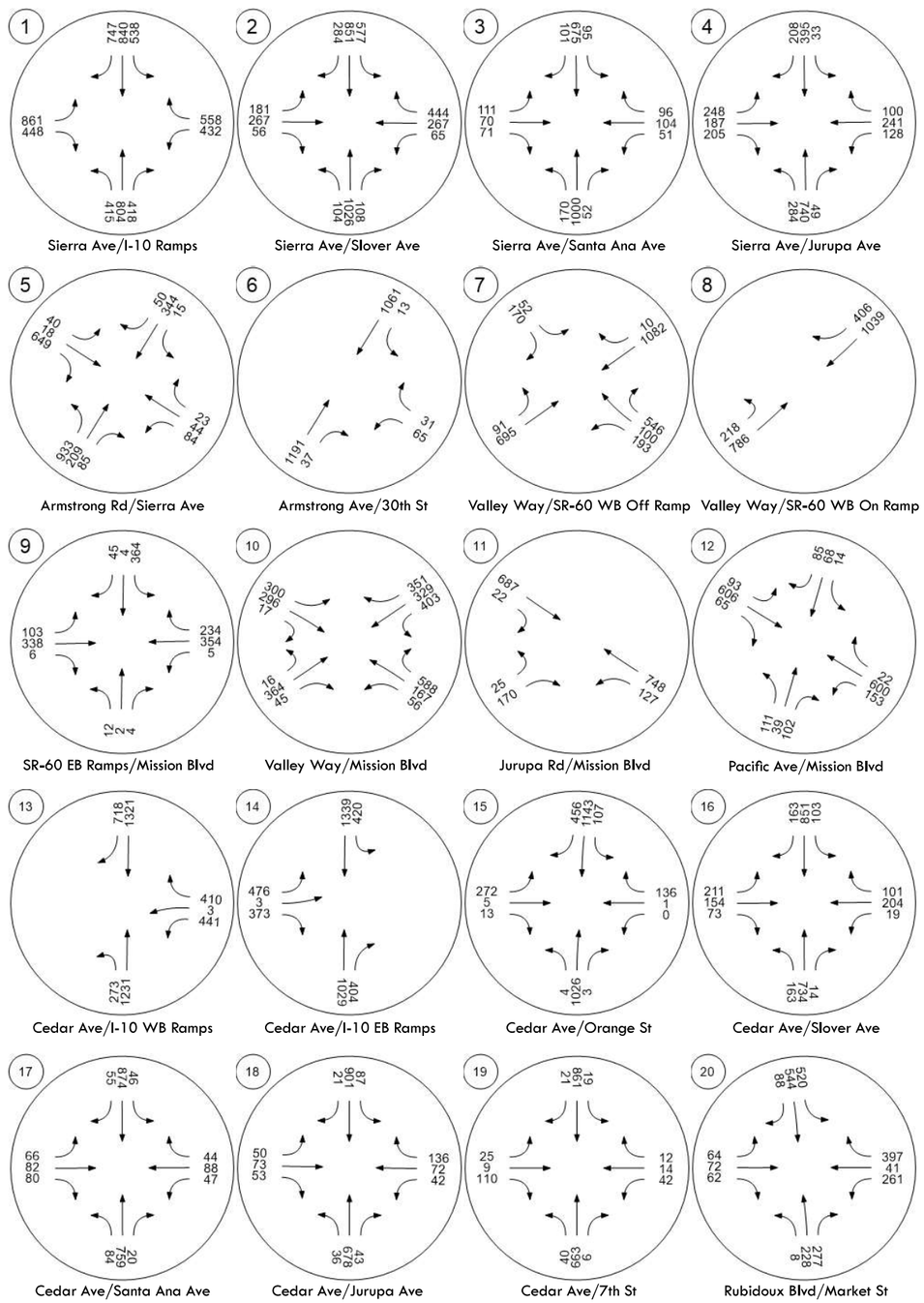
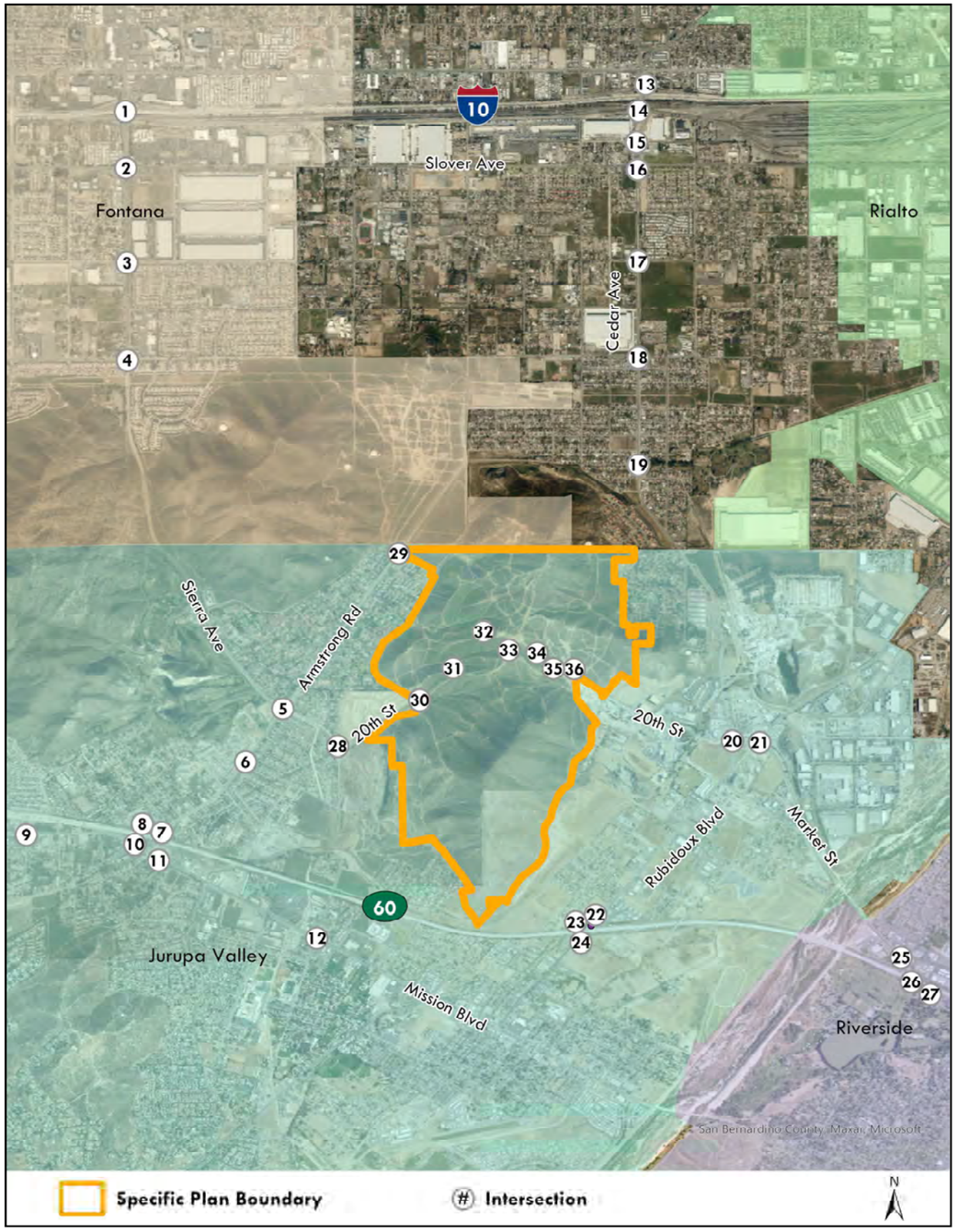


Figure 5b: Existing AM Peak Hour Traffic Volumes



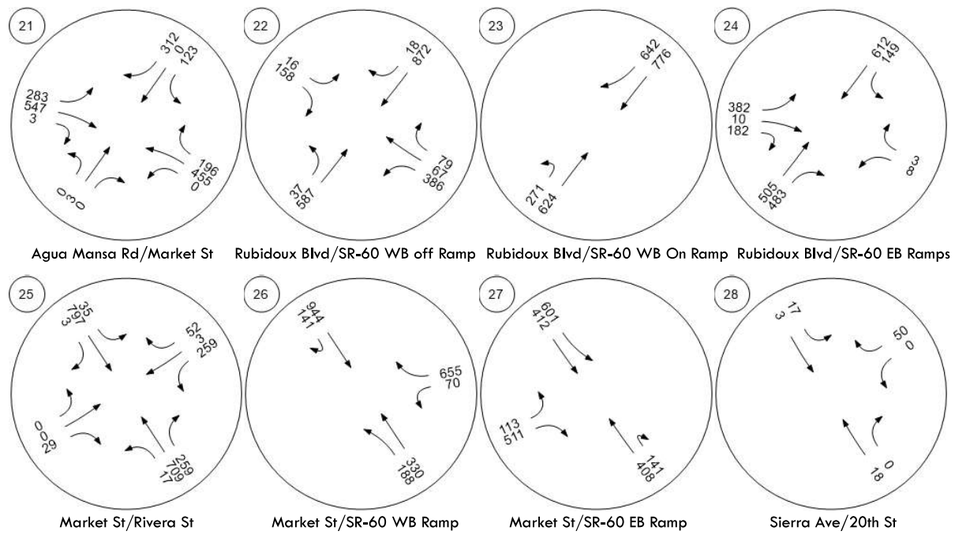
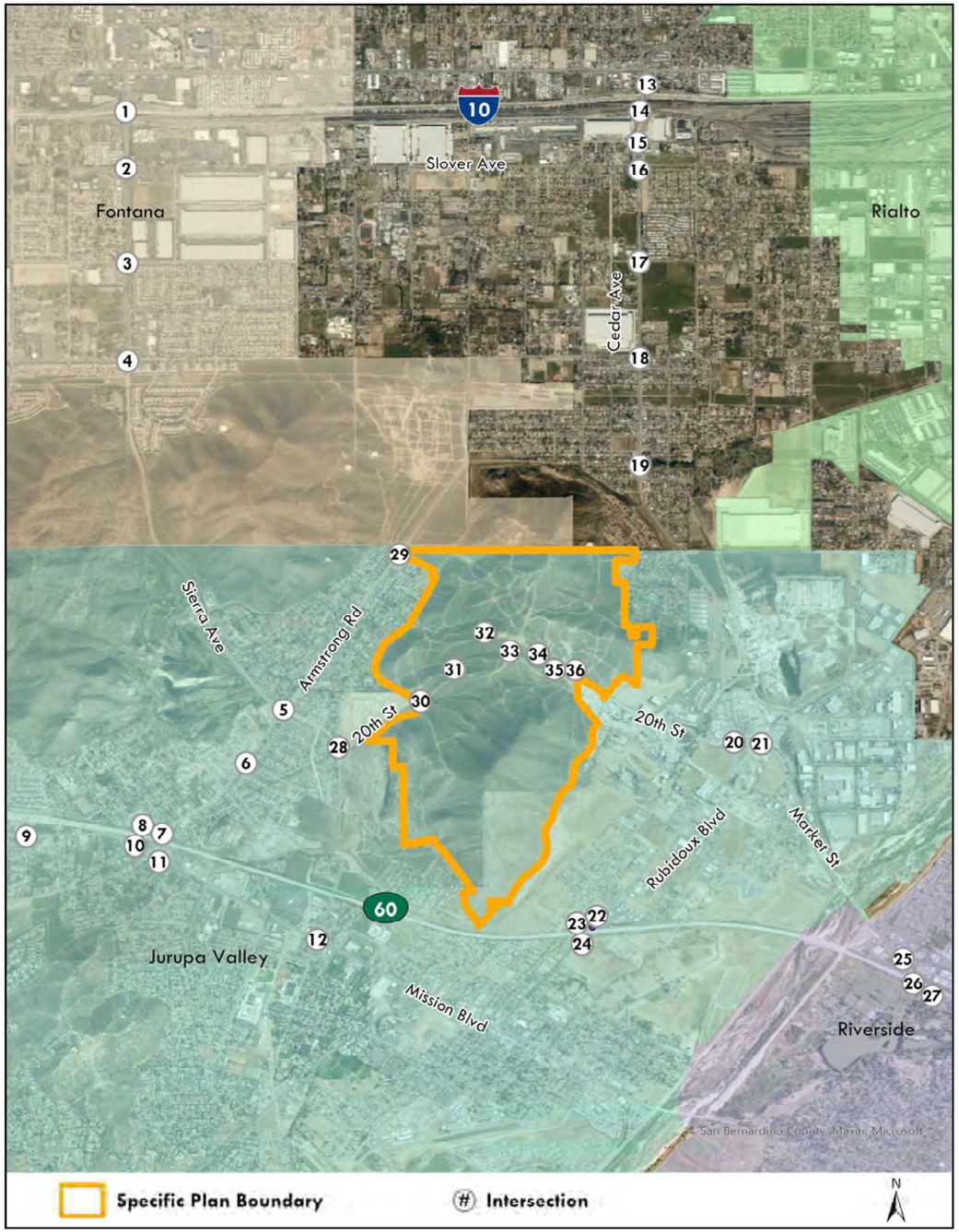


Figure 6a: Existing PM Peak Hour Traffic Volumes



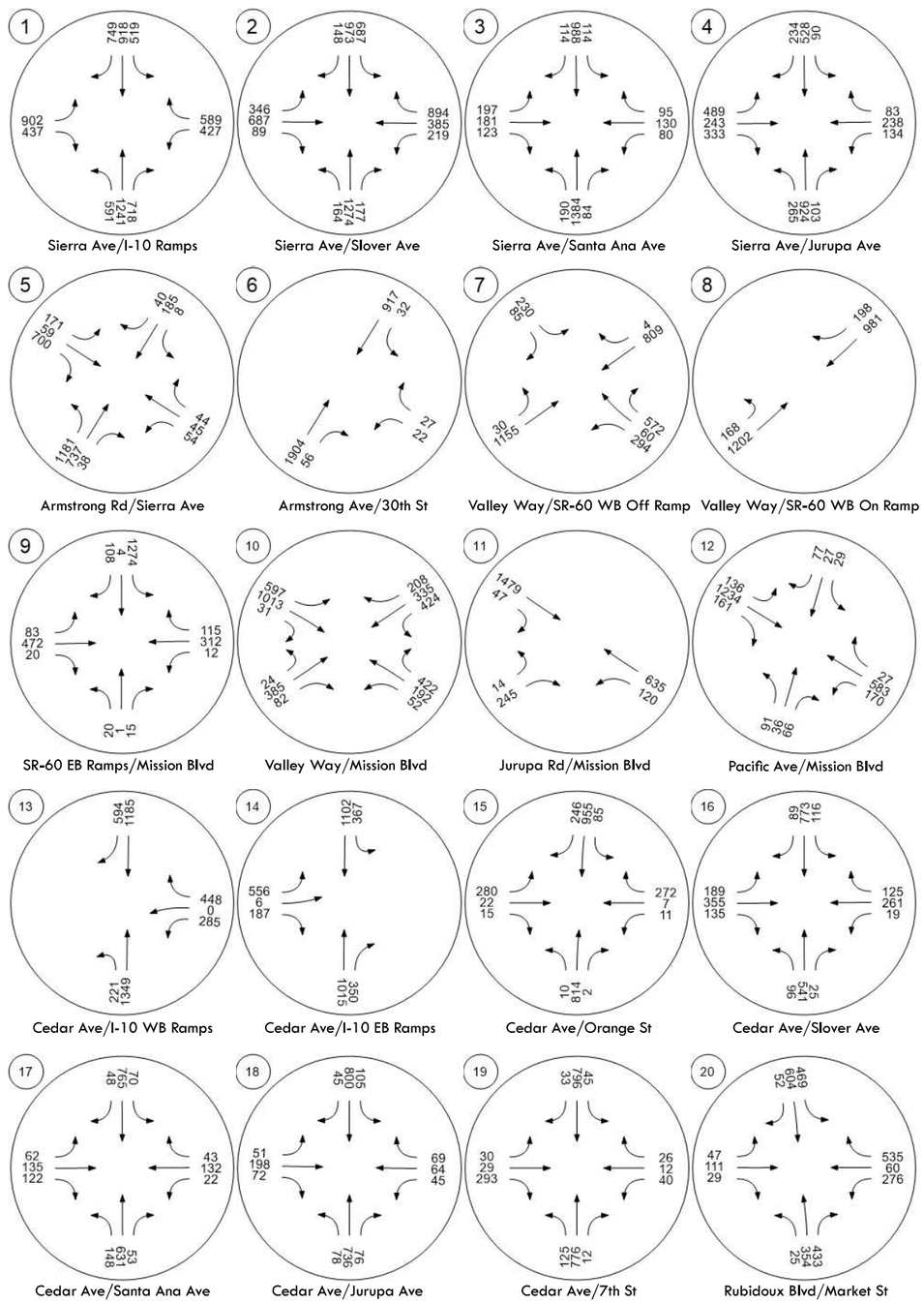
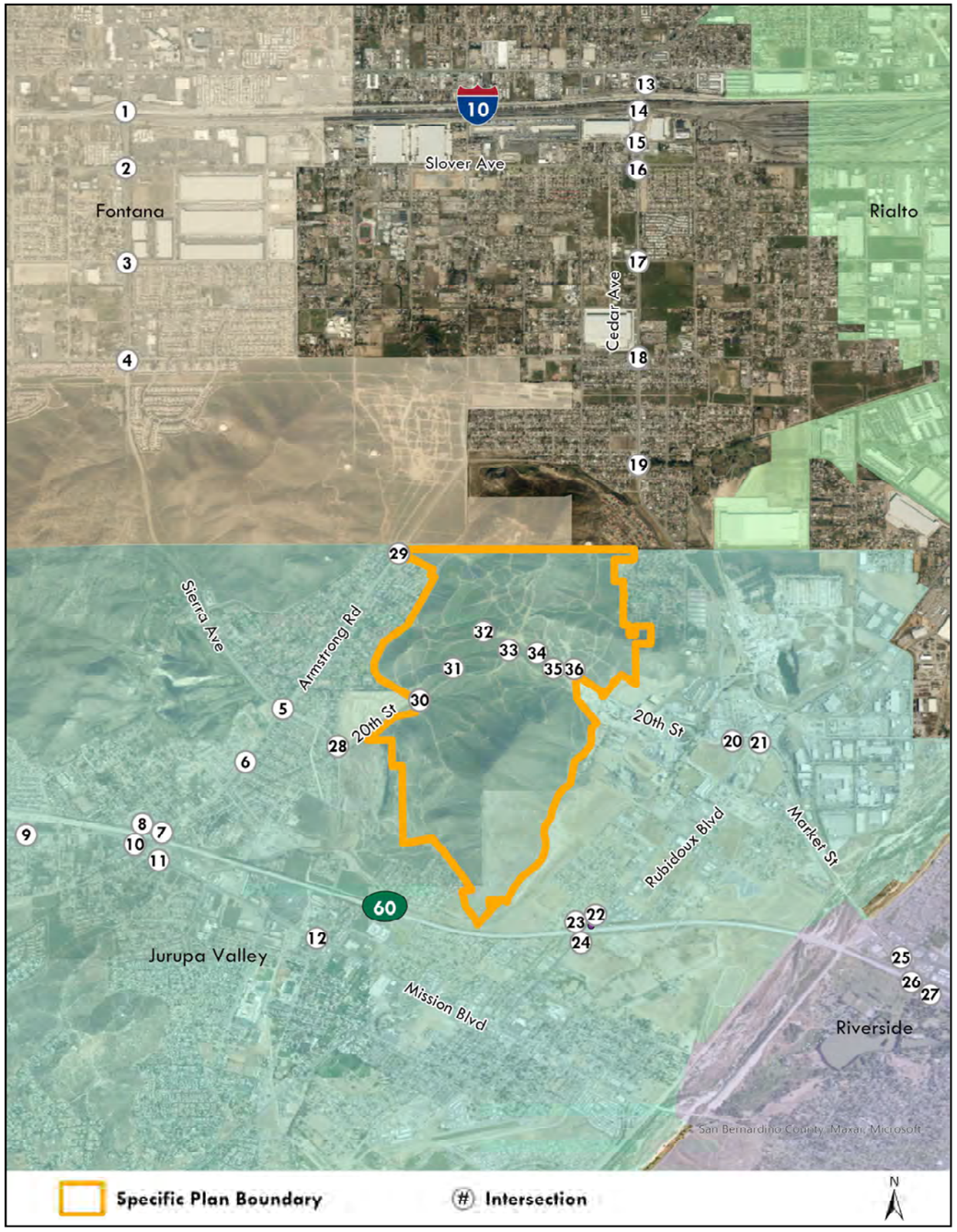


Figure 6b: Existing PM Peak Hour Traffic Volumes



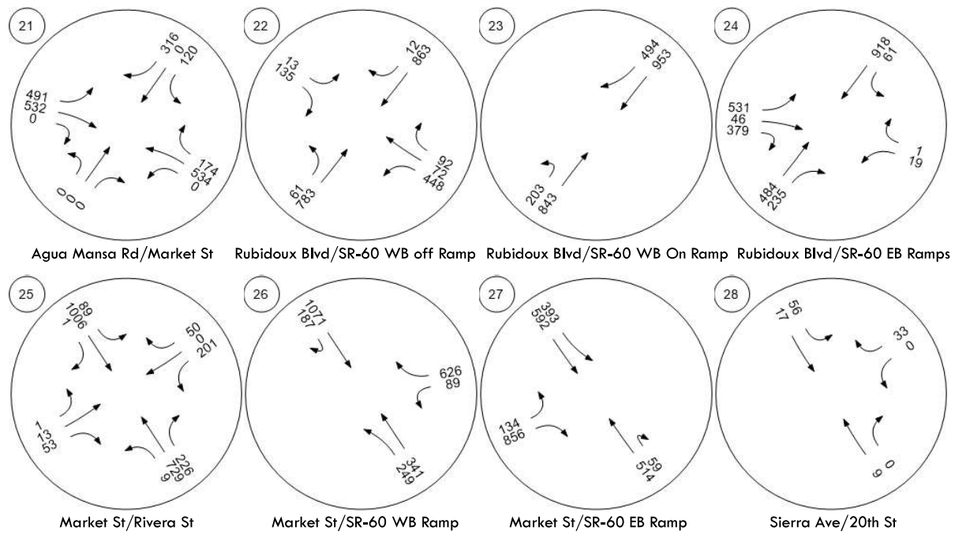


Table 9. Existing AM and PM Peak Hour Levels of Service

Intersection		Location %	Signal Control	AM Peak		PM Peak	
				Delay[1]	LOS[2]	Delay[1]	LOS[2]
1.	Sierra Ave/I-10 Ramps (Existing)	50F/50C	Signal	21.9	C	22.5	C
2.	Sierra Ave/Slover Ave (Existing)	100 F	Signal	30.5	C	47.8	D
3.	Sierra Ave/Santa Ana Ave (Existing)	100 F	Signal	19.6	B	22.2	C
4.	Sierra Ave/Jurupa Ave (Existing)	100 F	Signal	28.6	C	32.6	C
5.	Armstrong Rd/Sierra Ave (Existing)	100 JV	Signal	39.8	D	38.3	D
6.	Armstrong Rd/30th St (Existing)	100 JV	Signal	5.1	A	4.8	A
7.	Valley Way/SR-60 WB Off Ramp (Existing)	50JV/50C	Signal	68.9	E	73.0	E
8.	Valley Way/SR-60 WB On Ramp (Existing)	50JV/50C	Signal	9.7	A	7.0	A
9.	SR-60 EB Ramps/Mission Blvd (Existing)	50JV/50C	Signal	24.6	C	42.3	D
10.	Valley Way/Mission Blvd (Existing)	100 JV	Signal	35.9	D	41.2	D
11.	Jurupa Rd/Mission Blvd (Existing)	100 JV	TWSC	48.3	E	>99	F
12.	Pacific Ave/Mission Blvd (Existing)	100 JV	Signal	20.4	C	18.7	B
13.	Cedar Ave/ I-10 WB Ramps (Existing)	50SB/50C	Signal	28.5	C	18.3	B
14.	Cedar Ave/ I-10 EB Ramps (Existing)	50SB/50C	Signal	21.7	C	18.9	B
15.	Cedar Ave/Orange St (Existing)	100 SB	Signal	18.8	B	21.0	C
16.	Cedar Ave/Slover Ave (Existing)	100 SB	Signal	29.7	C	27.5	C
17.	Cedar Ave/Santa Ana Ave (Existing)	100 SB	Signal	13.7	B	16.4	B
18.	Cedar Ave/Jurupa Ave (Existing)	100 SB	Signal	12.2	B	16.5	B
19.	Cedar Ave/7th St (Existing)	100 SB	Signal	8.8	A	15.4	B
20.	Rubidoux Blvd/Market St (Existing)	100 JV	Signal	62.0	E	82.1	F
21.	Agua Mansa Rd/Market St (Existing)	100 JV	Signal	35.4	D	42.3	D
22.	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	50JV/50C	Signal	20.5	C	23.1	C
23.	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	50JV/50C	TWSC	25.5	D	19.5	C
24.	Rubidoux Blvd/SR-60 EB Ramps (Existing)	50JV/50C	Signal	30.8	C	33.2	C
25.	Market St/Rivera St (Existing)	100 R	Signal	13.0	B	13.8	B
26.	Market St/SR-60 WB Ramps (Existing)	50R/50C	Signal	8.6	A	10.2	B
27.	Market St/SR-60 EB Ramps (Existing)	50R/50C	Signal	23.1	C	19.5	B
28.	Sierra Ave/20th St (Existing)	100 JV	AWSC	7.2	A	7.7	A
29.	Armstrong Rd/Driveway 1 (Proposed)	100 JV	TWSC	-	-		
30.	Driveway 2/20th St (Proposed)	100 JV	TWSC	-	-	-	-
31.	Street A/20th St (Proposed)	100 JV	TWSC	-	-	-	-
32.	Street B/20th St (Proposed)	100 JV	TWSC	-	-	-	-
33.	Street M/20th St (Proposed)	100 JV	TWSC	-	-	-	-
34.	Driveway 3/20th St (Proposed)	100 JV	TWSC	-	-	-	-
35.	Driveway 4/20th St (Proposed)	100 JV	TWSC	-	-	-	-
36.	Driveway 5/20th St (Proposed)	100 JV	TWSC	-	-	-	-

= Unsatisfactory Level of Service TWSC = Two-Way Stop Controlled AWSC = All Way Stop Controlled

F Fontana

C Caltrans

SB San Bernardino

JV Jurupa Valley

R Riverside

[1] Delay in Seconds

[2] Level of Service

Table 10. Existing Daily Roadway Network Levels of Service

	Roadway Segment	Type	# of Lanes	Capacity	Existing			Deficient?
					Volume	V/C Ratio	LOS	
1	Sierra Ave: Santa Ana Ave to Jurupa Ave	Major Highway	6	54,000	34,574	0.640	B	No
2	Sierra Ave: Jurupa Ave to Armstrong Rd	Arterial	4	25,000	25,899	1.036	F	Yes
3	Sierra Ave: Armstrong Rd to 20th Street	Arterial	2	18,000	2,065	0.115	A	No
4	Sierra Ave: 20th Street to UPRR Tracks	Arterial	2	18,000	400	0.022	A	No
5	Valley Way: Sierra Ave to 34th St	Major	4	34,100	34,358	1.008	F	Yes
6	Valley Way: 34th St to Granite Hill	Major	4	34,100	34,987	1.026	F	Yes
7	Cedar Ave: I-10 EB Ramps to Slover Ave	Major Hwy	4	33,000	33,533	1.016	F	Yes
8	Cedar Ave: Slover Ave to Santa Ana Ave	Major Divided Hwy	4	37,500	27,267	0.727	C	No
9	Cedar Ave: Santa Ana Ave to Jurupa Ave	Major Divided Hwy	4	37,500	26,995	0.720	C	No
10	Cedar Ave: Jurupa Ave to 7th St	Major Divided Hwy	4	37,500	25,657	0.684	B	No
11	Cedar Ave:7th St to El Rivino Rd	Major Divided Hwy	4	37,500	25,575	0.682	B	No
12	Rubidoux Blvd: El Rivino Rd to Market St	Major	4	34,100	26,065	0.764	C	No
13	Rubidoux Blvd: Market St to 28th St	Major	4	34,100	21,183	0.621	B	No
14	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Arterial	4	25,000	25,258	1.010	F	Yes
15	Market St: Agua Mansa Road to 24th St	Arterial	2	18,000	20,125	1.118	F	Yes
16	Market St: 24th St to SR-60 WB Off Ramp	Arterial	2	18,000	26,156	1.453	F	Yes
17	Mission Blvd: SR-60 EB Ramps to Valley Way	Arterial	4	25,000	22,381	0.895	D	No

3.3 Existing Queueing Analysis

A queueing analysis has been conducted for Caltrans right of way intersections that could be affected by a deficient queueing length for the Existing condition. The queuing analysis was done utilizing the 95th percentile available in the Vistro output sheets attached as Appendix C. The queueing analysis concluded that most approaches require a queue length that is below the available queue length threshold.

As shown in Table 11, the following approaches would have a deficient queue in the Existing condition at the following approaches:

- Valley Way/SR-60 WB Off Ramp
  - Westbound right-turn lane
- Valley Way/SR-60 WB On Ramp
  - Northbound left-turn lane
- Cedar Avenue/I-10 WB Ramp
  - Southbound right-turn lane
- Rubidoux Boulevard/SR-60 EB Ramps
  - Southbound left-turn lane
  - Eastbound right-turn lane
- Market Street/SR-60 EB Ramp
  - Southbound left-turn lane

Table 11. Existing AM and PM Queueing Analysis

Intersection	Turning Movement	Available Queue Length (Ft)	Existing Year	
			AM	PM
			Required Queueing (Ft)	Required Queueing (Ft)
1. Sierra Ave/I-10 Ramps	NBL	565	225	307
	SBL	325	305	278
	EBL[1]	1205	361	390
	WBL[1]	1200	177	181
7. Valley Way/SR-60 WB Off Ramp	WBL[1]	880	202	322
	WBR	280	879	892
8. Valley Way/SR-60 WB On Ramp	NBL	115	309	277
9. SR-60 EB Ramps/Mission Blvd	SBL[1]	1120	270	757
	SBR	1550	265	779
	EBL	200	157	127
	WBR	340	28	14
13. Cedar Ave/I-10 WB Ramp	NBL	870	267	150
	SBR	450	575	332
	WBL[1]	1570	382	222
	WBR	485	285	215
14. Cedar Ave/I-10 EB Ramps	NBR	600	254	198
	SBL	535	274	222
	EBL	380	248	223
	EBR[1]	2350	256	220
22. Rubidoux Blvd/SR-60 WB Off Ramp	WBL[1]	1280	368	454
	WBR	85	37	42
23. Rubidoux Blvd/SR-60 WB On Ramp	NBL	145	106	60
24. Rubidoux Blvd/SR-60 EB Ramps	NBR	1045	418	297
	SBL	145	195	82
	EBL[1]	1160	453	641
	EBR	40	177	310
	WBL	750	12	26
	WBR	65	4	1
26. Market St/SR-60 WB Ramp	NBL	185	138	172
	WBL[1]	1345	54	67
27. Market St/SR-60 EB Ramp	SBL	155	377	228
	EBL	180	68	59
	EBR[1]	1630	179	224

Indicates queueing required greater than storage available

[1] Available queue length reflects the full ramp length.

3.4 Interim Year (2030) Traffic Volumes and Operations

Interim Year Baseline (2030) traffic volumes were developed by applying a growth rate of two percent per year to the existing (2022) traffic volumes and adding traffic generated by other approved and pending development projects. There are five intersections, as well as two roadway segments, that would be updated by 2030. The updated intersection lane geometry can be found in Figure 7, and Market Street from Rubidoux Boulevard to the Jurupa Valley/Riverside border will be built to its General Plan Designation of four-lane Major.

Additionally, there were 24 cumulative development projects in the County of San Bernardino, and the Cities of Fontana and Jurupa Valley were included in the Interim Year Baseline traffic volumes. The locations of the cumulative projects are shown in Figure 8. The project trip generation for each cumulative project was calculated using trip rates from the Institute of Transportation Engineers, *Trip Generation Manual*, 11th Edition, or taken from each project's respective traffic study. Table 12 shows the trip generation for each cumulative project, and the cumulative detailed assignment can be found in Appendix D.

The Interim Year (2030) Baseline traffic volumes are illustrated in Figures 9 and 10. Table 13 shows the Interim Year (2030) AM and PM peak hour LOS at study intersections and Table 14 shows the Interim Year (2030) daily roadway segment LOS. As shown in Table 13 and 14, the following intersections and roadway segments would operate with unsatisfactory LOS in the Interim Year (2030) Baseline condition.

Intersections:

- #3 Sierra Avenue/Santa Ana Avenue (PM peak hour)
- #4 Sierra Avenue/Jurupa Avenue (PM peak hour)
- #5 Armstrong Road/Sierra Avenue (AM and PM peak hour)
- #7 Valley Way/SR-60 WB Off Ramp (AM and PM peak hour)
- #9 SR-60 EB Ramps/Mission Boulevard (PM peak hour)
- #11 Jurupa Road/Mission Boulevard (AM and PM peak hour)
- #17 Cedar Avenue/Santa Ana Avenue (PM peak hour)
- #18 Cedar Avenue/Jurupa Avenue (AM and PM peak hour)
- #20 Rubidoux Boulevard/Market Street (AM and PM peak hour)
- #21 Agua Mansa Road/Market Street (PM peak hour)
- #22 Rubidoux Boulevard/SR-60 WB Off Ramp (PM peak hour)
- #23 Rubidoux Boulevard/SR-60 WB On Ramp (AM and PM peak hour)
- #24 Rubidoux Boulevard/SR-60 EB Ramps (AM and PM peak hour)
- #27 Market Street/SR-60 EB Ramp (AM and PM peak hour)

Roadway Segments

- #2 Sierra Avenue: Jurupa Avenue to Armstrong Road
- #5 Valley Way: Sierra Avenue to 34th Street
- #6 Valley Way: 34th Street to Granite Hill
- #7 Cedar Avenue: I-10 EB Ramps to Slover Avenue
- #8 Cedar Avenue: Slover Avenue to Santa Ana Ave
- #9 Cedar Avenue: Santa Ana Avenue to Jurupa Avenue

- #10 Cedar Avenue: Jurupa Avenue to 7th Street
- #11 Cedar Avenue: 7th Street to El Rivino Road
- #12 Rubidoux Boulevard: El Rivino Road to Market Street
- #13 Rubidoux Boulevard: Market Street to 28th Street
- #14 Rubidoux Boulevard: 28th Street to SR-60 WB Off-Ramp
- #15 Market Street: Agua Mansa Road to 24th Street
- #16 Market Street: 24th Street to SR-60 WB Off Ramp
- #17 Mission Boulevard: SR-60 EB Ramps to Valley Way

Figure 7: Future Lane Geometries

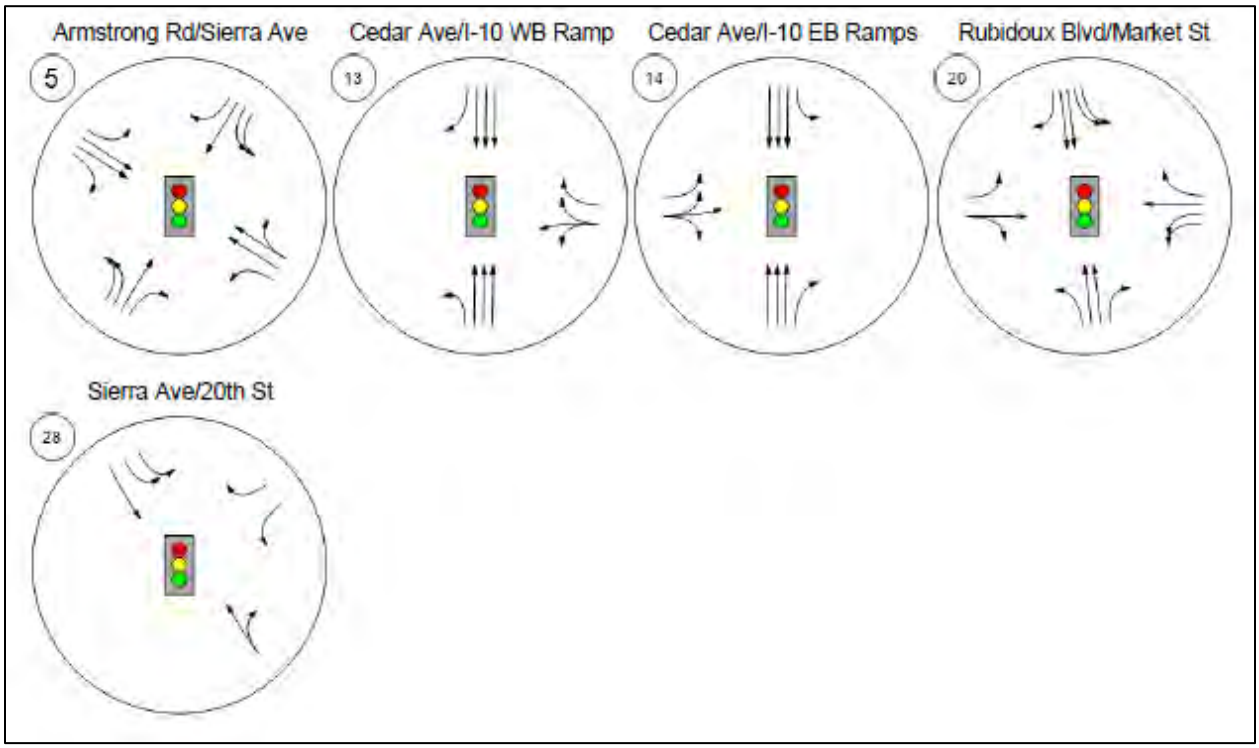


Figure 8: Location of Cumulative Projects

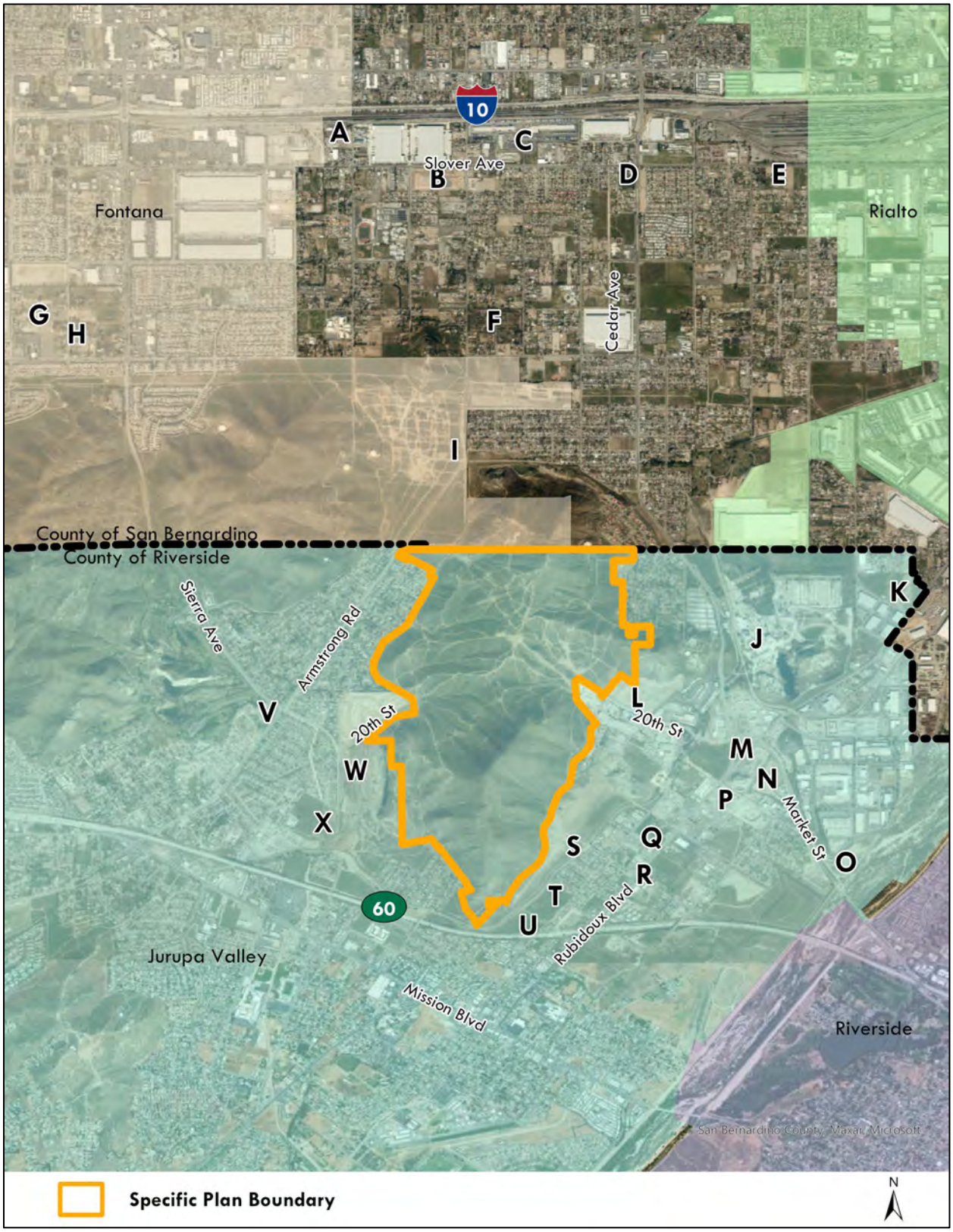


Table 12. Cumulative Projects Trip Generation

				AM Peak Hour			PM Peak Hour		
Land Use	**Units**		**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Trip Rates									
Industrial Park[1]		TSF	3.37	0.28	0.06	0.34	0.07	0.27	0.34
Gasoline Station with Convenience Market[2]		TSF	700.43	28.26	28.26	56.52	27.26	27.26	54.52
Fast Food Restaurant with Drive-Through[3]		TSF	467.48	22.75	21.86	44.61	17.18	15.85	33.03
Warehouse[4]		TSF	1.71	0.13	0.04	0.17	0.05	0.13	0.18
Single Family Detached Housing[5]		TSF	9.43	0.18	0.53	0.70	0.59	0.35	0.94
Multifamily Housing (Low-Rise)[6]		TSF	6.74	0.09	0.31	0.40	0.32	0.19	0.51
Tractor Supply Store[7]		TSF	-	-	-	-	0.66	0.74	1.40
County of San Bernardino									
A: Alder Ave Industrial PCE[8]	174.78	TSF	403	30	13	43	14	35	49
B: Bloomington Business Center PCE[8]	344	TSF	1604	107	30	137	35	108	143
C: Slover High Cube PCE[8]	708.24	TSF	629	50	24	74	6	38	44
D: Chevron Slover[8]	13	FP	1936	25	25	50	39	39	78
E: Slover Cactus Warehouse PCE[8]	257.855	TSF	587	44	13	57	17	47	64
F: Bloomington Business Park SP PCE[8]	3235.836	TSF	8555	498	123	621	215	504	719
City of Fontana									
G: Goodman Industrial Park PCE[8]	1,118.46	TSF	3144	206	62	268	73	194	267
H: Fontana Foothills Commerce Center PCE[8]	754.408	TSF	1640	74	22	96	32	85	117
I: West Logistics Center PCE[8]	3,473.69	TSF	7619	351	105	456	196	470	666
City of Jurupa Valley									
J: Agua Mansa Commerce Park Specific Plan Alt 1 PCE[8]	4,480/71.3	TSF/AC	11376	581	165	746	231	637	868
K: Agua Mansa Development Project PCE[8]	335.00	TSF	1670	209	58	267	90	202	292
L: Rubidoux Commercial Development PCE[1]	306.89	TSF	1590	138	32	170	34	127	160
M: Drive thru Restaurant and Gas Station/Conv. Store[2,3]	2.5/2.5	TSF	1367	57	55	111	50	49	101
N: Wheeler Upfitters[8]	25.00	TSF	120	39	3	42	3	39	42
O: Market Street Commercial[8]	7.42/18	TSF/FP	11617	124	118	242	117	110	227
P: Kiewit Infrastructure West[8]	63.00	TSF	248	30	9	39	13	29	42
Q: Ice Box[8]	122.00	TSF	390	15	3	18	5	14	19
R: Karcher Industrial Project PCE[4]	190.594	TSF	497	39	11	50	18	40	58
S: Emerald Ridge North[5]	184	DU	1735	32	97	129	109	64	173
T: Emerald Ridge South[5,6]	97/118	DU	1778	29	93	122	99	58	157
U: TTM 33373[5]	97	DU	915	17	51	68	57	34	91
V: Commercial Development[7]	18.8/5.91	TSF	1409	69	60	122	62	61	123
W: Highland Park Sunnyslope[5, 9]	308	DU	2904	54	162	216	182	107	290
X: Highland Park 2[5]	24	DU	226	4	13	17	14	8	23
Total Project PCE Trip Generation			63959	2822	1346	4160	1712	3099	4813

TSF = Thousand Square Feet
FP = Fuelling Positions
PCE = Passenger Car Equivalent

[1] Trip rates from the Institute of Transporation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 130 - Industrial Park.

[2] Trip rates from the Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021. Land Use Code 945 - Convenience Store/Gas Station.

[3] Trip rates from the Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021. Land Use Code 934 - Fast Food Restaurant with Drive Through.

[4] Trip rates from the Institute of Transporation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 150 - Warehousing.

[5] Trip rates from the Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021. Land Use Code 210 - Single Family Detached Housing.

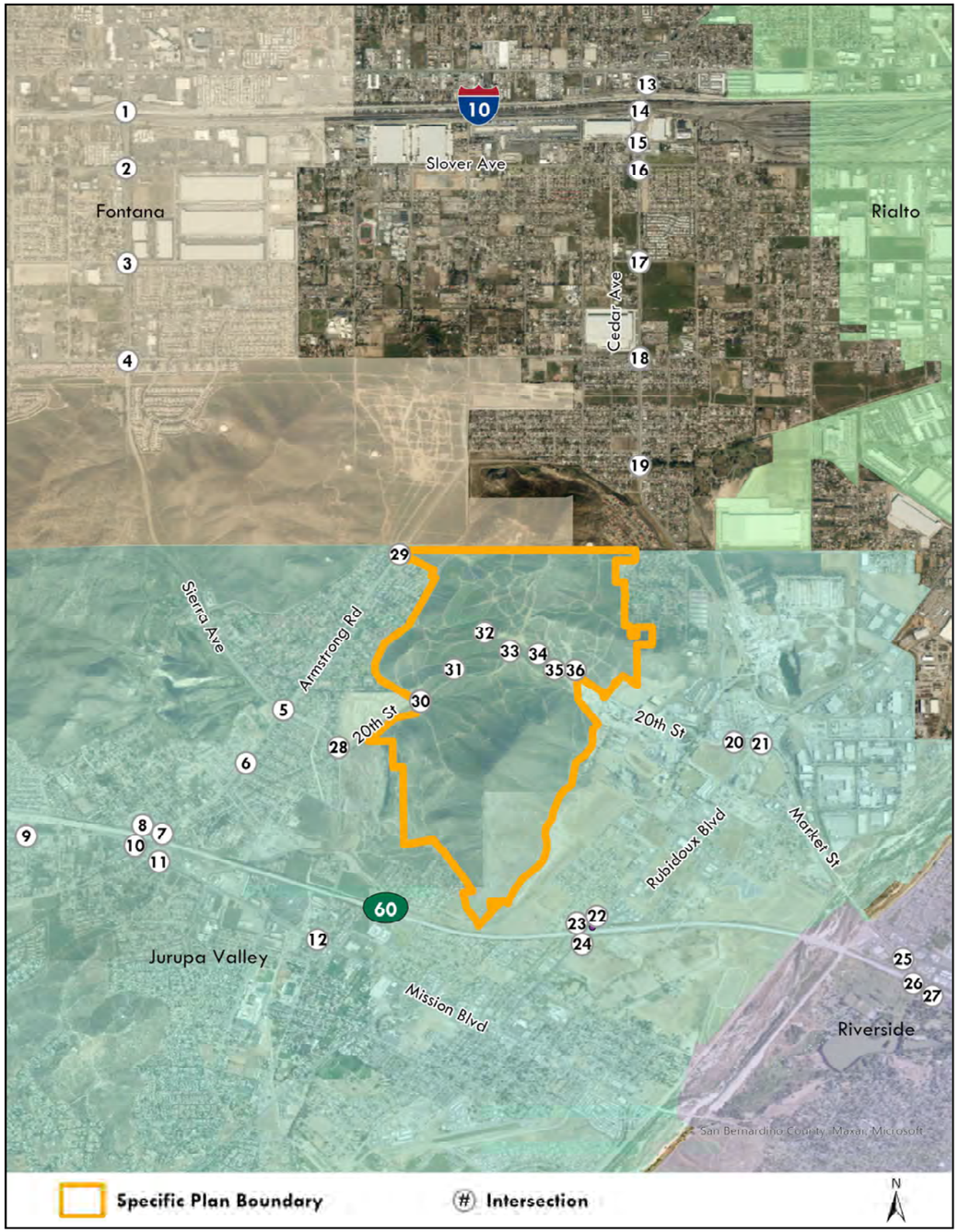
[6] Trip rates from the Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021. Land Use Code 220 - Multifamily Housing (Low-Rise).

[7] Trip rates from the Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021. Land Use Code 810 - Tractor Supply Store.

[8] Trip Generation estimates taken from Project's Traffic Analysis Document

[9] 90 of the 398 homes have been built and are currently occupied.

Figure 9a: Interim Year (2030) AM Peak Hour Traffic Volumes



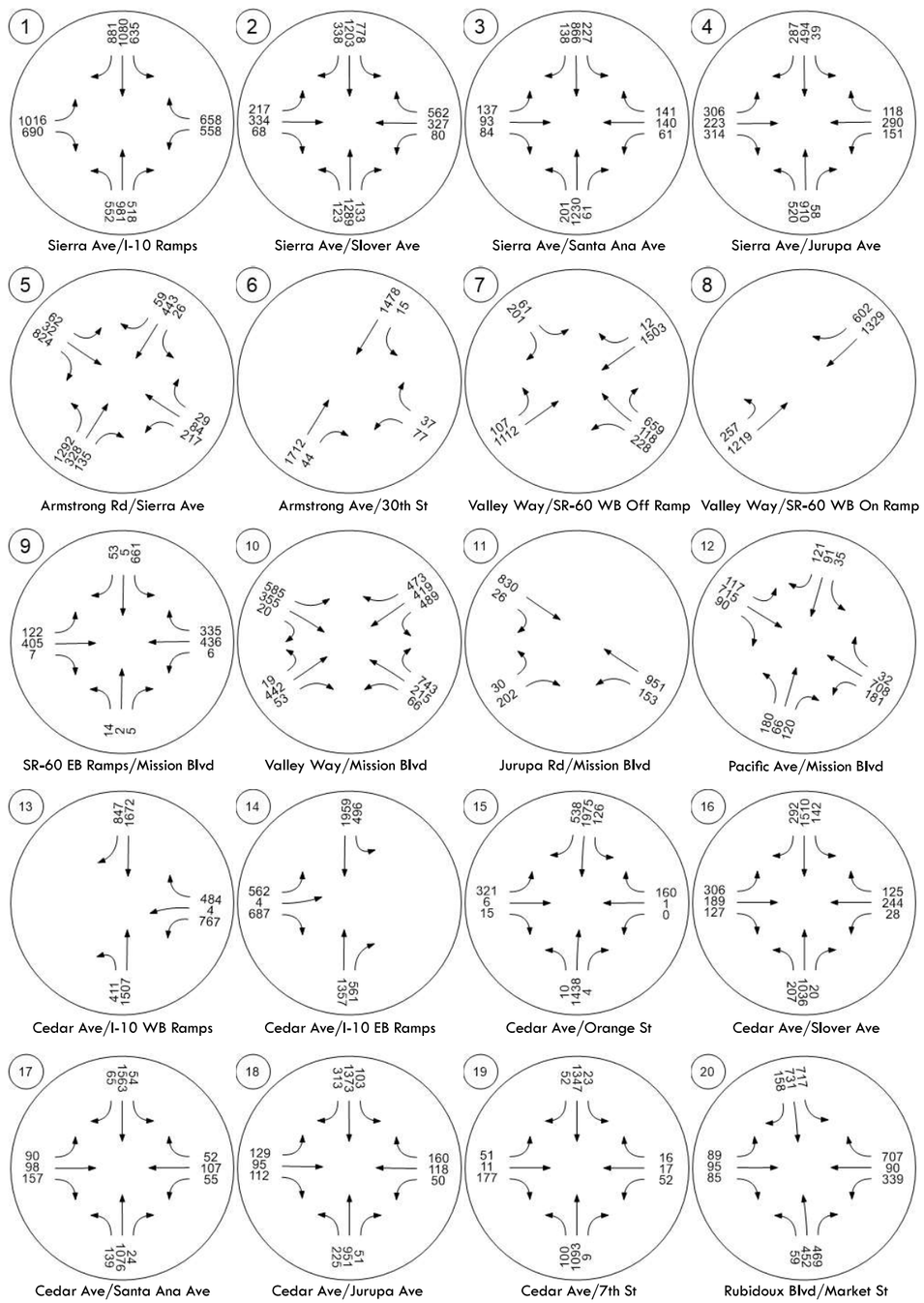
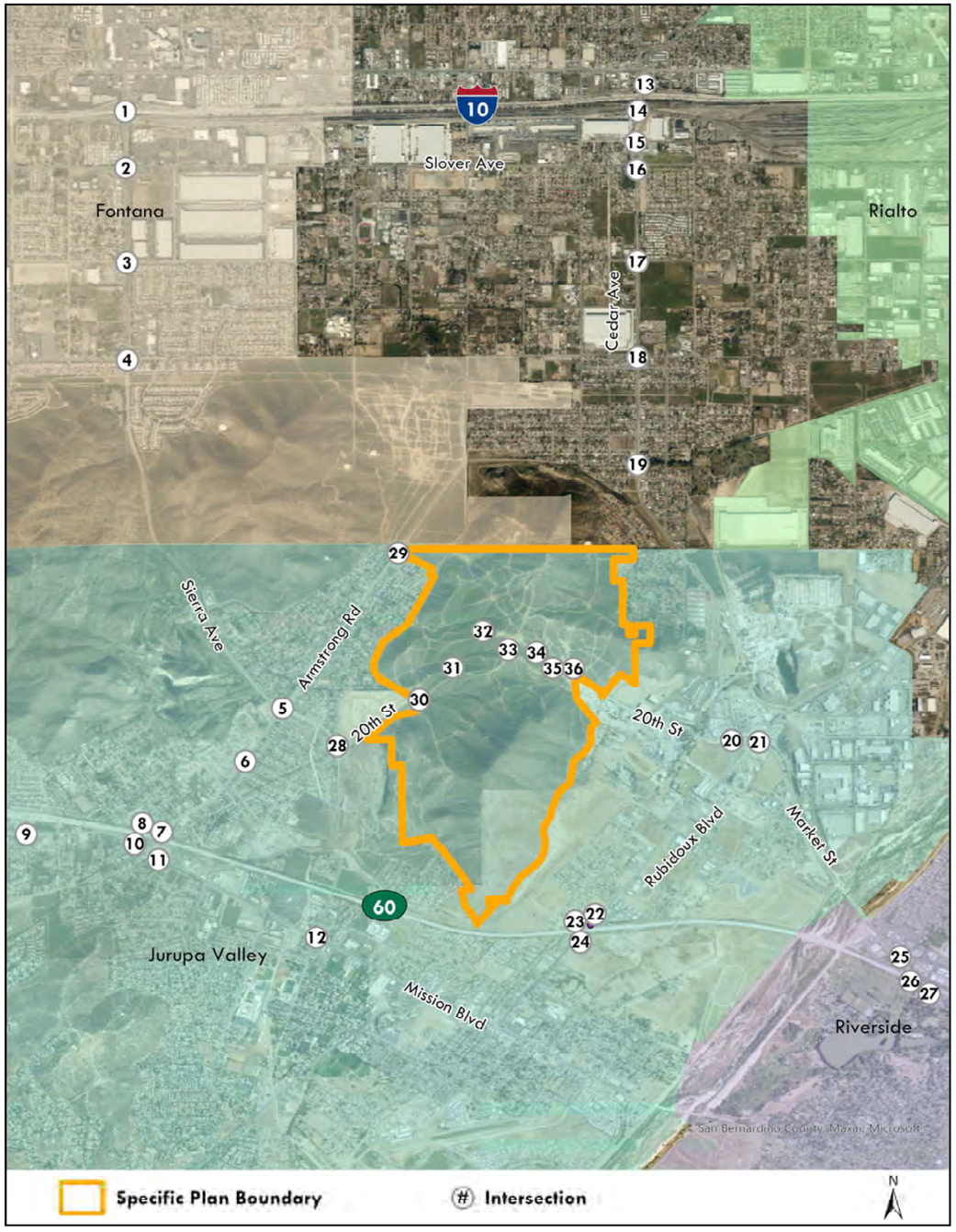


Figure 9b: Interim Year (2030) AM Peak Hour Traffic Volumes



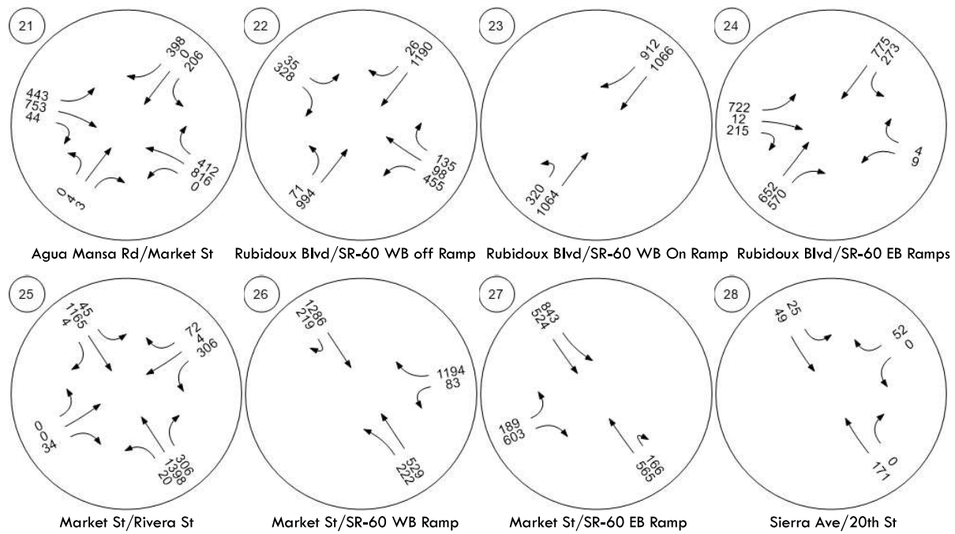
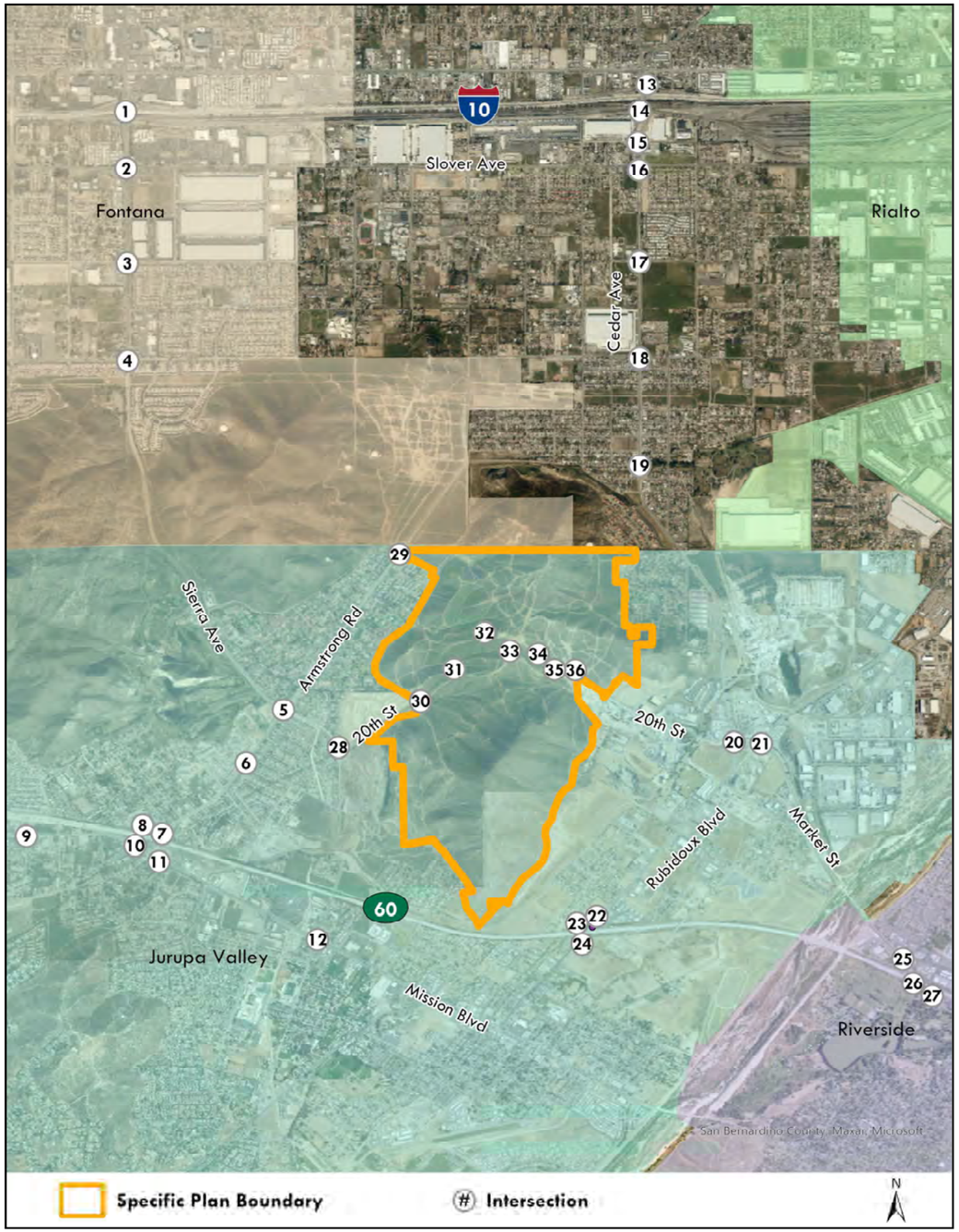


Figure 10a: Interim Year (2030) PM Peak Hour Traffic Volumes



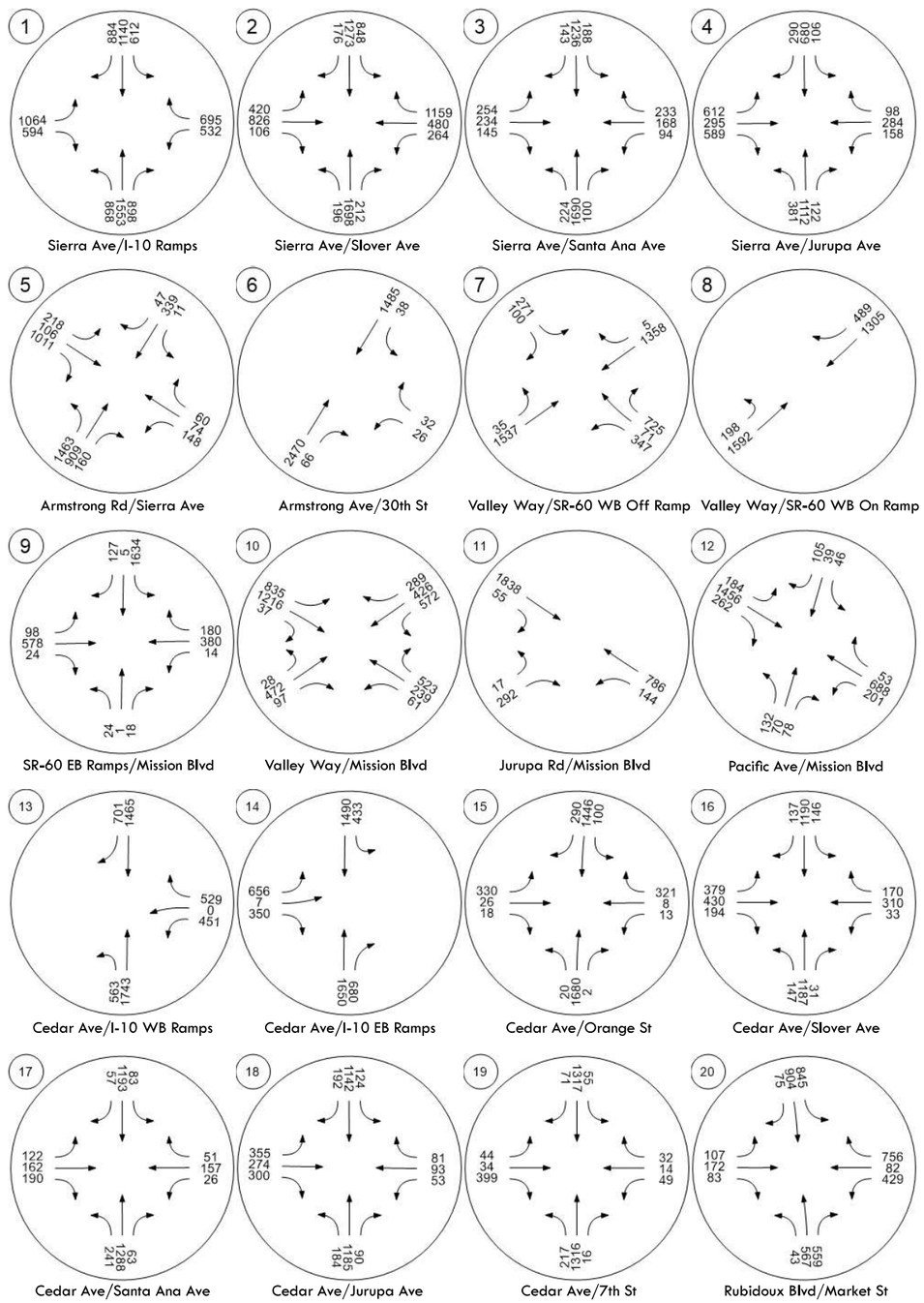
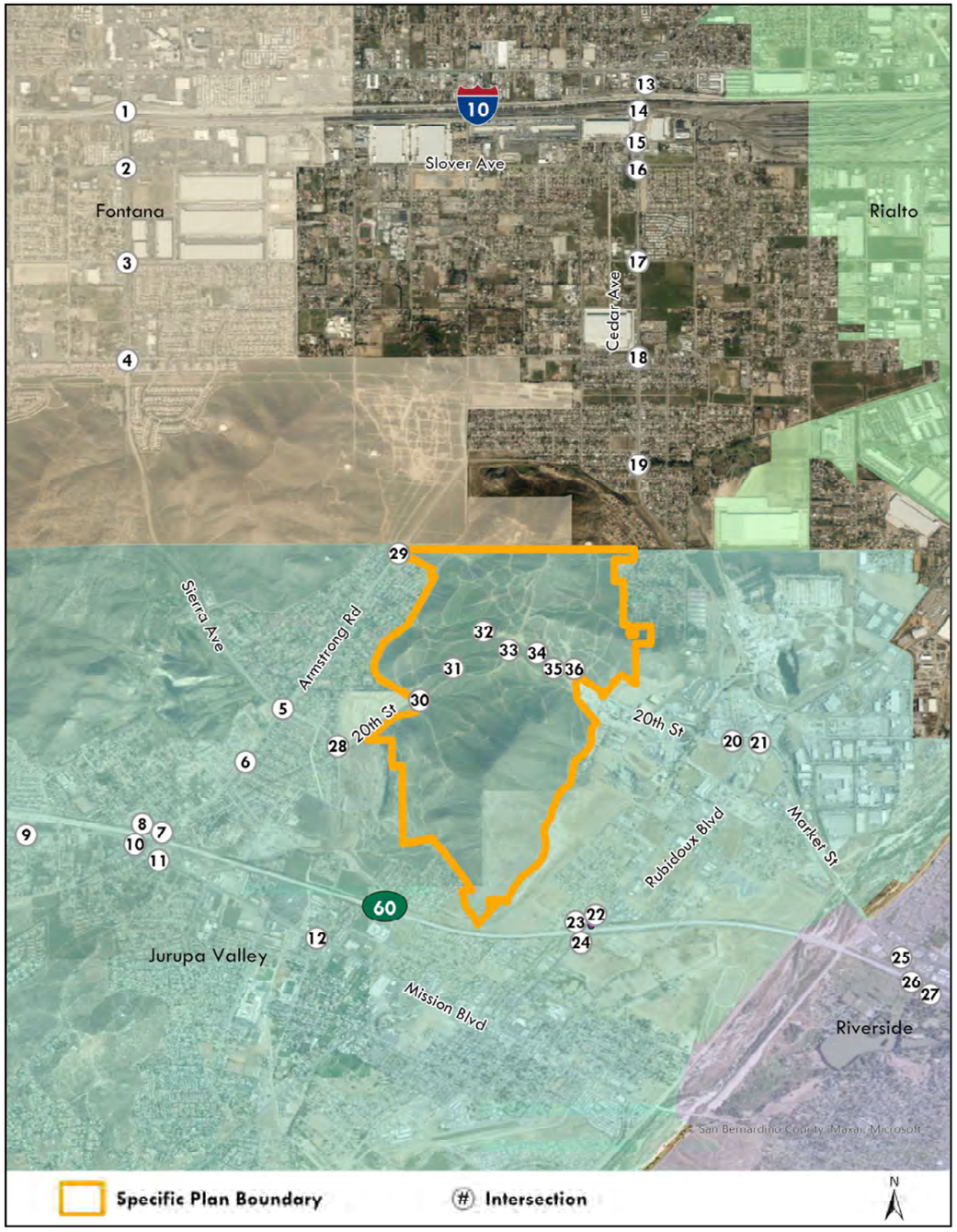


Figure 10b: Interim Year (2030) PM Peak Hour Traffic Volumes



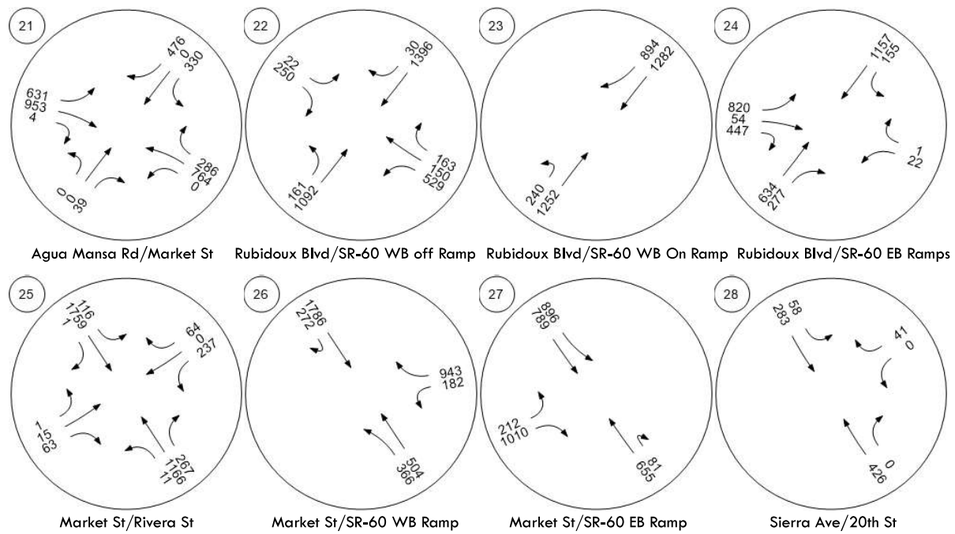


Table 13. Interim Year (2030) AM and PM Peak Hour Levels of Service

Intersection		Location %	Signal Control	AM Peak		PM Peak	
				Delay[1]	LOS[2]	Delay[1]	LOS[2]
1.	Sierra Ave/I-10 Ramps (Existing)	50F/50C	Signal	24.1	C	31.2	C
2.	Sierra Ave/Slover Ave (Existing)	100 F	Signal	35.1	D	69.9	E
3.	Sierra Ave/Santa Ana Ave (Existing)	100 F	Signal	23.0	C	38.6	D
4.	Sierra Ave/Jurupa Ave (Existing)	100 F	Signal	34.3	C	43.7	D
5.	Armstrong Rd/Sierra Ave (Existing)	100 JV	Signal	55.7	E	54.1	D
6.	Armstrong Rd/30th St (Existing)	100 JV	Signal	6.7	A	6.4	A
7.	Valley Way/SR-60 WB Off Ramp (Existing)	50JV/50C	Signal	>99	F	>99	F
8.	Valley Way/SR-60 WB On Ramp (Existing)	50JV/50C	Signal	12.6	B	8.1	A
9.	SR-60 EB Ramps/Mission Blvd (Existing)	50JV/50C	Signal	30.2	C	>99	F
10.	Valley Way/Mission Blvd (Existing)	100 JV	Signal	41.0	D	46.3	D
11.	Jurupa Rd/Mission Blvd (Existing)	100 JV	TWSC	>99	F	>99	F
12.	Pacific Ave/Mission Blvd (Existing)	100 JV	Signal	22.0	C	24.1	C
13.	Cedar Ave/ I-10 WB Ramps (Existing)	50SB/50C	Signal	16.6	B	15.2	B
14.	Cedar Ave/ I-10 EB Ramps (Existing)	50SB/50C	Signal	40.5	D	23.9	C
15.	Cedar Ave/Orange St (Existing)	100 SB	Signal	25.0	C	33.3	C
16.	Cedar Ave/Slover Ave (Existing)	100 SB	Signal	64.9	E	58.8	E
17.	Cedar Ave/Santa Ana Ave (Existing)	100 SB	Signal	29.9	C	57.3	E
18.	Cedar Ave/Jurupa Ave (Existing)	100 SB	Signal	>99	F	>99	F
19.	Cedar Ave/7th St (Existing)	100 SB	Signal	16.7	B	30.1	C
20.	Rubidoux Blvd/Market St (Existing)	100 JV	Signal	98.3	F	>99	F
21.	Agua Mansa Rd/Market St (Existing)	100 JV	Signal	41.9	D	66.1	E
22.	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	50JV/50C	Signal	33.4	C	64.3	E
23.	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	50JV/50C	TWSC	>99	F	>99	F
24.	Rubidoux Blvd/SR-60 EB Ramps (Existing)	50JV/50C	Signal	95.0	F	75.0	E
25.	Market St/Rivera St (Existing)	100 R	Signal	16.0	B	18.9	B
26.	Market St/SR-60 WB Ramps (Existing)	50R/50C	Signal	9.1	A	19.4	B
27.	Market St/SR-60 EB Ramps (Existing)	50R/50C	Signal	45.2	D	>99	F
28.	Sierra Ave/20th St (Existing)	100 JV	AWSC	15.7	B	11.6	B
29.	Armstrong Rd/Driveway 1 (Proposed)	100 JV	TWSC	-	-	-	-
30.	Driveway 2/20th St (Proposed)	100 JV	TWSC	-	-	-	-
31.	Street A/20th St (Proposed)	100 JV	TWSC	-	-	-	-
32.	Street B/20th St (Proposed)	100 JV	TWSC	-	-	-	-
33.	Street M/20th St (Proposed)	100 JV	TWSC	-	-	-	-
34.	Driveway 3/20th St (Proposed)	100 JV	TWSC	-	-	-	-
35.	Driveway 4/20th St (Proposed)	100 JV	TWSC	-	-	-	-
36.	Driveway 5/20th St (Proposed)	100 JV	TWSC	-	-	-	-

= Unsatisfactory Level of Service TWSC = Two-Way Stop Controlled AWSC = All Way Stop Controlled

F Fontana

C Caltrans

SB San Bernardino

JV Jurupa Valley

R Riverside

[1] Delay in Seconds

[2] Level of Service

Table 14. Interim Year (2030) Daily Roadway Segment Levels of Service

					Interim Year (2030)		
	Roadway Segment	Type	# of Lanes	Capacity	Volume	V/C Ratio	LOS
1	Sierra Ave: Santa Ana Ave to Jurupa Ave	Major Highway	6	54,000	42,185	0.781	C
2	Sierra Ave: Jurupa Ave to Armstrong Rd	Arterial	4	25,000	34,624	1.385	F
3	Sierra Ave: Armstrong Rd to 20th Street	Arterial	2	18,000	6,678	0.371	A
4	Sierra Ave: 20th Street to UPRR Tracks	Arterial	2	18,000	4,456	0.248	A
5	Valley Way: Sierra Ave to 34th St	Major	4	34,100	48,327	1.417	F
6	Valley Way: 34th St to Granite Hill	Major	4	34,100	48,716	1.429	F
7	Cedar Ave: I-10 EB Ramps to Slover Ave	Major Hwy	4	33,000	51,316	1.555	F
8	Cedar Ave: Slover Ave to Santa Ana Ave	Major Divided Hwy	4	37,500	41,807	1.115	F
9	Cedar Ave: Santa Ana Ave to Jurupa Ave	Major Divided Hwy	4	37,500	43,480	1.159	F
10	Cedar Ave: Jurupa Ave to 7th St	Major Divided Hwy	4	37,500	40,818	1.088	F
11	Cedar Ave:7th St to El Rivino Rd	Major Divided Hwy	4	37,500	41,647	1.111	F
12	Rubidoux Blvd: El Rivino Rd to Market St	Major	4	34,100	41,148	1.207	F
13	Rubidoux Blvd: Market St to 28th St	Major	4	34,100	32,763	0.961	E
14	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Arterial	4	25,000	35,991	1.440	F
15	Market St: Agua Mansa Road to 24th St	Major	4	34,100	33,623	0.986	F
16	Market St: 24th St to SR-60 WB Off Ramp	Major	4	34,100	47,904	1.405	F
17	Mission Blvd: SR-60 EB Ramps to Valley Way	Arterial	4	25,000	29,405	1.176	F

3.5 Interim Year (2030) Queueing Analysis

A queueing analysis has been conducted for Caltrans right of way intersections that could be affected by a deficient queueing length for the Interim Year (2030) condition. The queuing analysis was done utilizing the 95th percentile available in the Vistro output sheets attached as Appendix C. As shown in Table 15, the following approaches would have a deficient queue in the Interim Year (2030) at the following approaches:

- Sierra Avenue/I-10 Ramps
  - Southbound left-turn lane
- Valley Way/SR-60 WB Off Ramp
  - Westbound right-turn lane
- Valley Way/SR-60 WB On Ramp
  - Northbound left-turn lane
- SR-60 EB Ramps/Mission Boulevard
  - Southbound left-turn lane
  - Southbound right-turn lane
- Cedar Avenue/I-10 EB Ramp
  - Northbound right-turn lane
- Rubidoux Blvd/SR-60 WB Off Ramp
  - Westbound left-turn lane
  - Westbound right-turn lane
- Rubidoux Boulevard/SR-60 WB On Ramp
  - Northbound left-turn lane
- Rubidoux Boulevard/SR-60 EB Ramps
  - Northbound right-turn lane
  - Southbound left-turn lane
  - Eastbound left-turn lane
  - Eastbound right-turn lane
- Market Street/SR-60 WB Ramp
  - Northbound left-turn lane
- Market Street/SR-60 EB Ramp
  - Southbound left-turn lane
  - Eastbound left-turn lane

Table 15. Interim Year (2030) AM and PM Queueing Analysis

Intersection	Turning Movement	Available Queue Length (Ft)	Interim Year Without Project	
			AM	PM
			Required Queueing (Ft)	Required Queueing (Ft)
1. Sierra Ave/I-10 Ramps	NBL	565	300	484
	SBL	325	351	365
	EBL[1]	1205	439	569
	WBL[1]	1200	227	261
7. Valley Way/SR-60 WB Off Ramp	WBL[1]	880	266	405
	WBR	280	1721	1809
8. Valley Way/SR-60 WB On Ramp	NBL	115	406	311
9. SR-60 EB Ramps/Mission Blvd	SBL[1]	1120	420	1765
	SBR	1550	418	1811
	EBL	200	186	162
	WBR	340	81	36
13. Cedar Ave/I-10 WB Ramp	NBL	870	129	168
	SBR	450	208	159
	WBL[1]	1570	221	128
	WBR	485	114	143
14. Cedar Ave/I-10 EB Ramps	NBR	600	613	402
	SBL	535	413	303
	EBL	380	196	281
	EBR[1]	2350	607	285
22. Rubidoux Blvd/SR-60 WB Off Ramp	WBL[1]	1280	704	1440
	WBR	85	63	93
23. Rubidoux Blvd/SR-60 WB On Ramp	NBL	145	404	293
24. Rubidoux Blvd/SR-60 EB Ramps	NBR	1045	1061	527
	SBL	145	491	247
	EBL[1]	1160	1350	1744
	EBR	40	194	386
	WBL	750	13	33
	WBR	65	6	1
26. Market St/SR-60 WB Ramp	NBL	185	155	386
	WBL[1]	1345	64	163
27. Market St/SR-60 EB Ramp	SBL	155	906	1049
	EBL	180	233	242
	EBR[1]	1630	401	1045

Indicates queueing required greater than storage available

[1] Available queue length reflects the full ramp length.

3.6 General Plan Buildout (2045) Traffic Volumes and Operations

General Plan Buildout (GPB) 2045 traffic volumes were forecast using the County of Riverside Transportation Analysis Model (RIVCOM). GPB 2045 traffic volumes were post-processed using the methodology outlined in NCHRP Report 765 *Analytical Travel Forecasting Approaches for Project-Level Planning and Design*. The GPB 2045 Baseline traffic volumes are illustrated in Figures 11 and 12. Table 16 shows the GPB 2045 AM and PM peak hour LOS at study intersections and Table 17 shows the GPB 2045 daily roadway segment LOS. As shown in Table 16 and 17, the following intersections and roadway segments would operate with unsatisfactory LOS in the GPB 2045 condition. The post processing sheets can be found in Appendix E

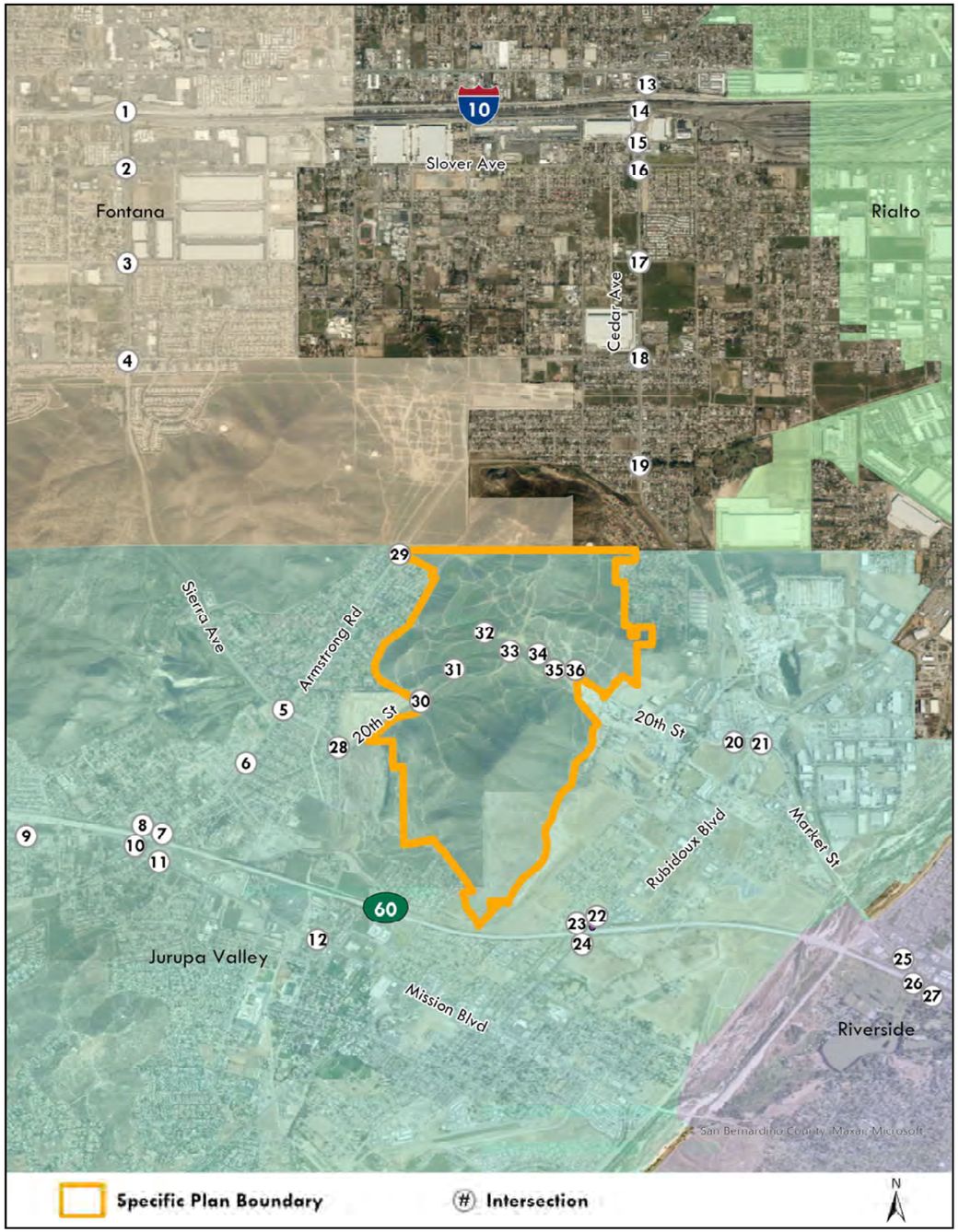
Intersections:

- #4 Sierra Avenue/Jurupa Avenue (AM and PM peak hour)
- #5 Armstrong Road/Sierra Avenue (AM and PM peak hour)
- #7 Valley Way/SR-60 WB Off Ramp (AM and PM peak hour)
- #9 SR-60 EB Ramps/Mission Boulevard (PM peak hour)
- #11 Jurupa Road/Mission Boulevard (AM and PM peak hour)
- #16 Cedar Avenue/Slover Avenue (AM peak hour)
- #18 Cedar Avenue/Jurupa Avenue (AM and PM peak hour)
- #20 Rubidoux Boulevard/Market Street (AM and PM peak hour)
- #21 Agua Mansa Road/Market Street (AM peak hour)
- #22 Rubidoux Boulevard/SR-60 WB Off Ramp (AM and PM peak hour)
- #23 Rubidoux Boulevard/SR-60 WB On Ramp (AM and PM peak hour)
- #24 Rubidoux Boulevard/SR-60 EB Ramps (AM peak hour)
- #27 Market Street/SR-60 EB Ramp (PM peak hour)

Roadway Segments

- #2 Sierra Avenue: Jurupa Avenue to Armstrong Road
- #5 Valley Way: Sierra Avenue to 34th Street
- #6 Valley Way: 34th Street to Granite Hill
- #7 Cedar Avenue: I-10 EB Ramps to Slover Avenue
- #8 Cedar Avenue: Slover Avenue to Santa Ana Ave
- #9 Cedar Avenue: Santa Ana Avenue to Jurupa Avenue
- #10 Cedar Avenue: Jurupa Avenue to 7th Street
- #11 Cedar Avenue: 7th Street to El Rivino Road
- #12 Rubidoux Boulevard: El Rivino Road to Market Street
- #13 Rubidoux Boulevard: Market Street to 28th Street
- #14 Rubidoux Boulevard: 28th Street to SR-60 WB Off-Ramp
- #15 Market Street: Agua Mansa Road to 24th Street
- #16 Market Street: 24th Street to SR-60 WB Off Ramp
- #17 Mission Boulevard: SR-60 EB Ramps to Valley Way

Figure 11a: General Plan Buildout (2045) AM Peak Hour Traffic Volumes



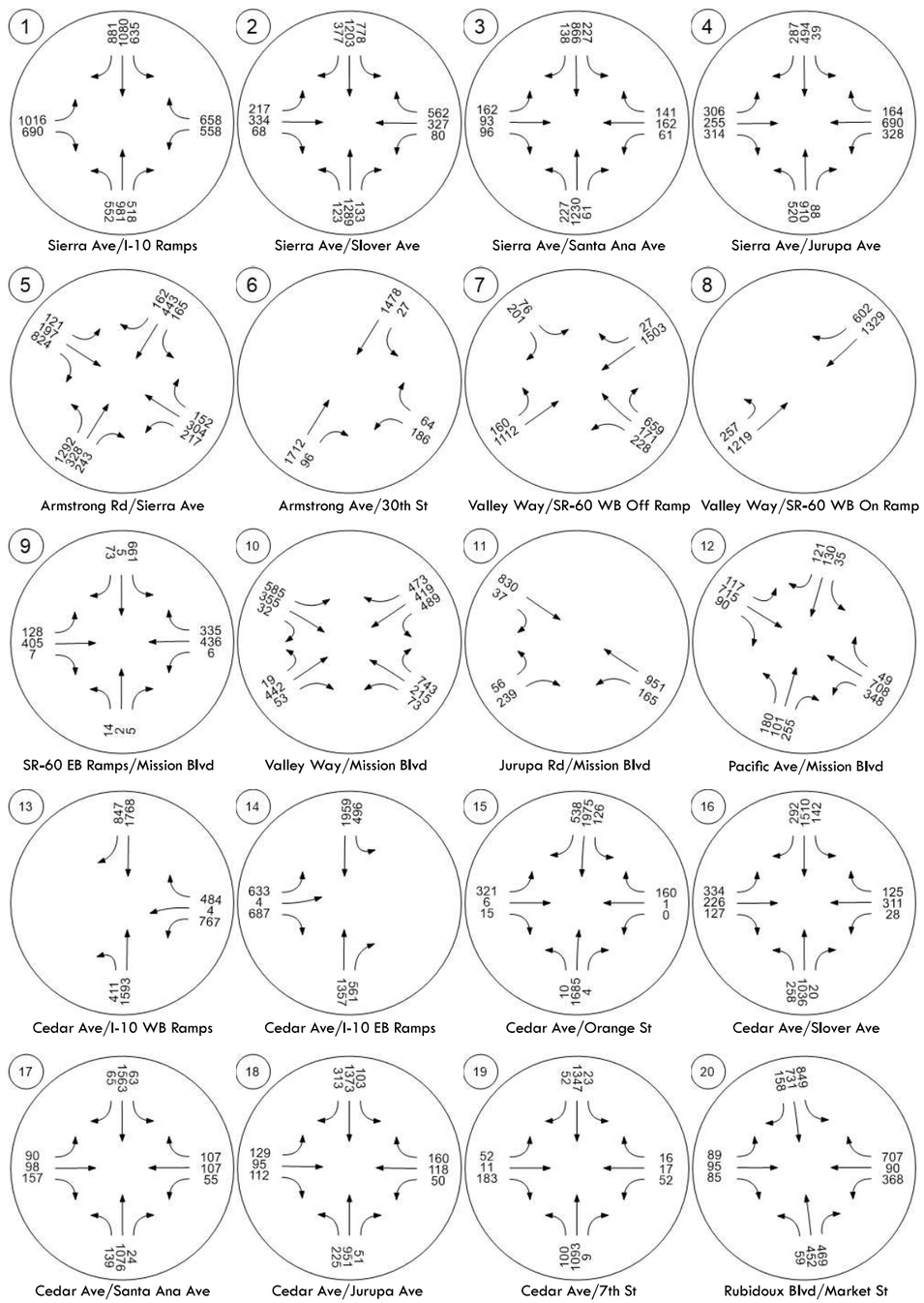
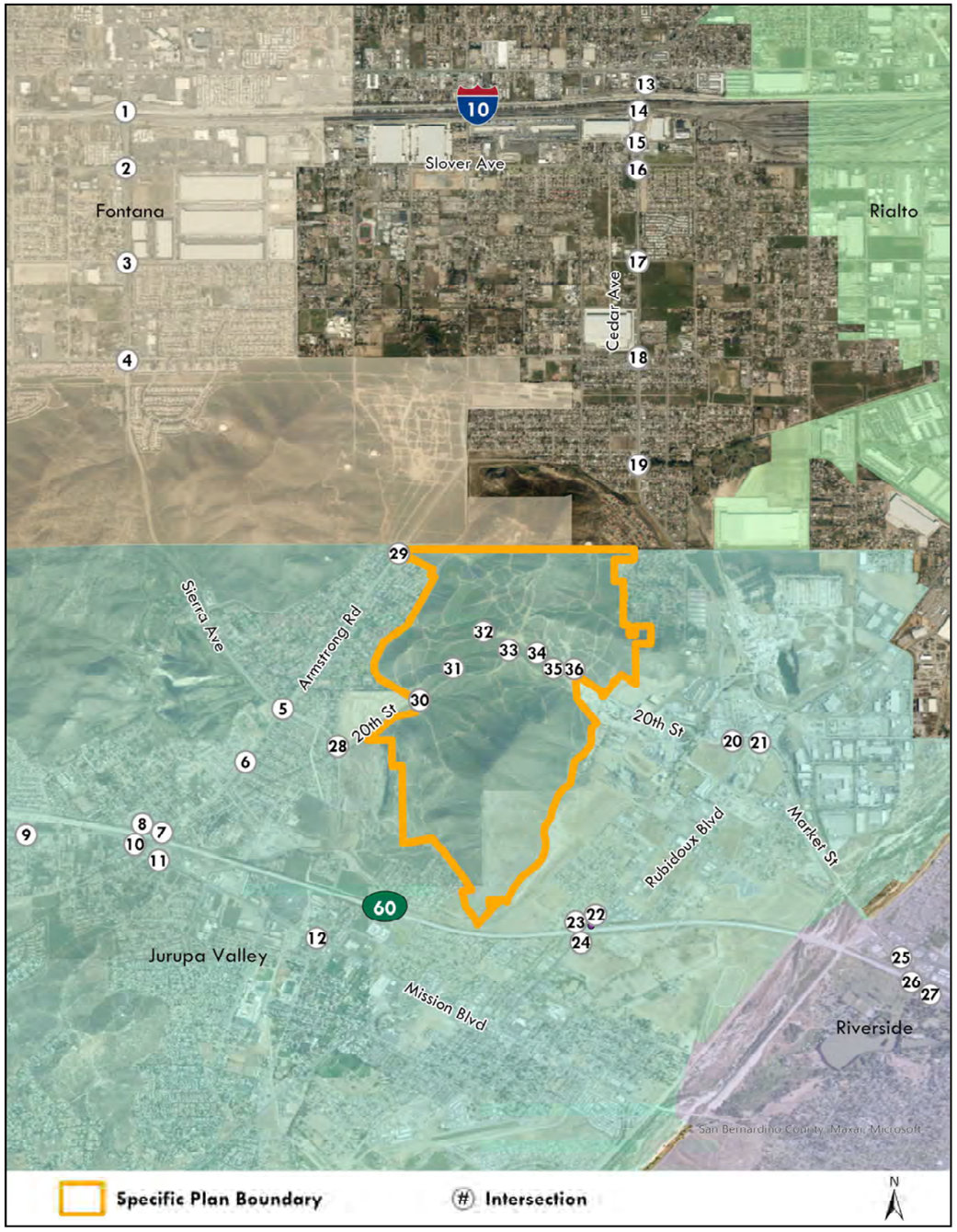


Figure 11b: General Plan Buildout (2045) AM Peak Hour Traffic Volumes



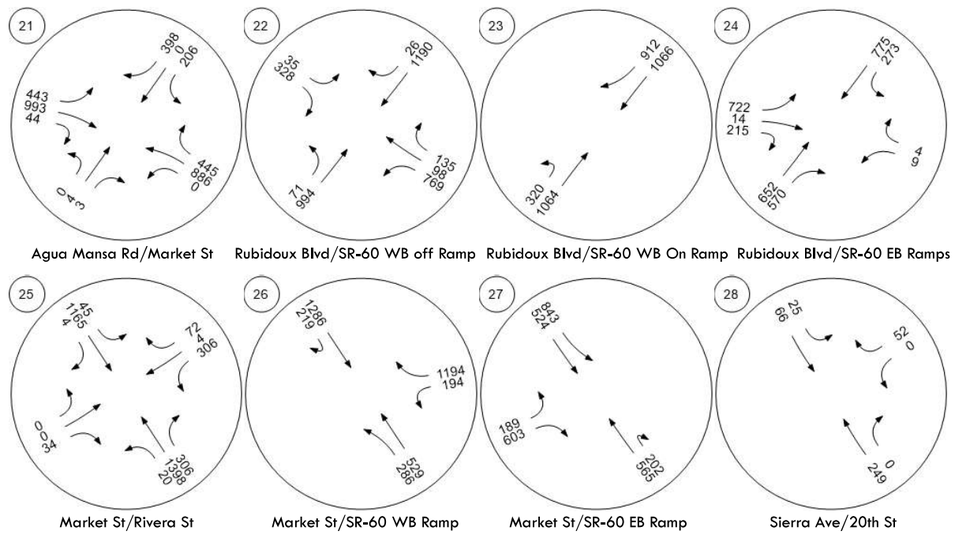
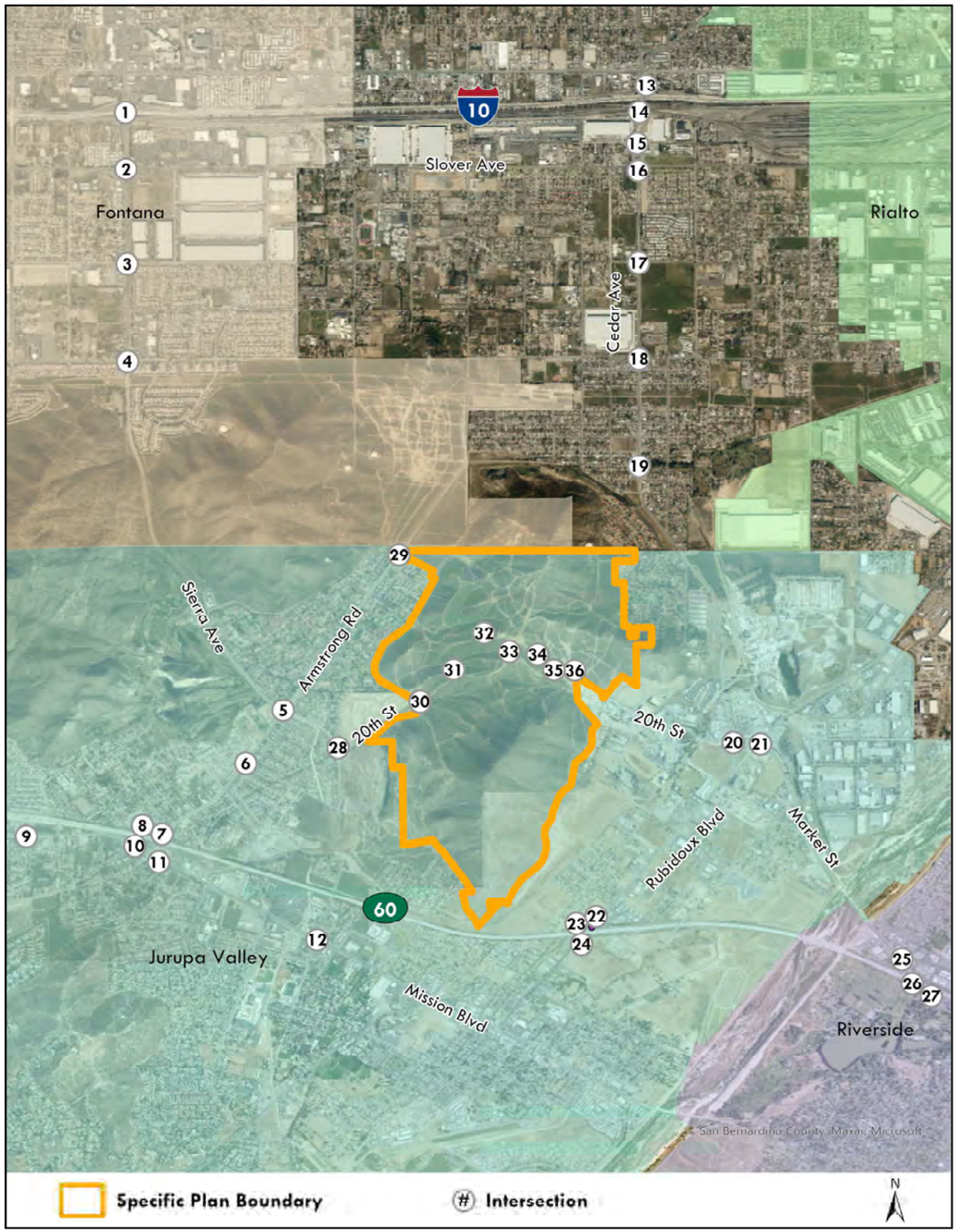


Figure 12a: General Plan Buildout (2045) PM Peak Hour Traffic Volumes



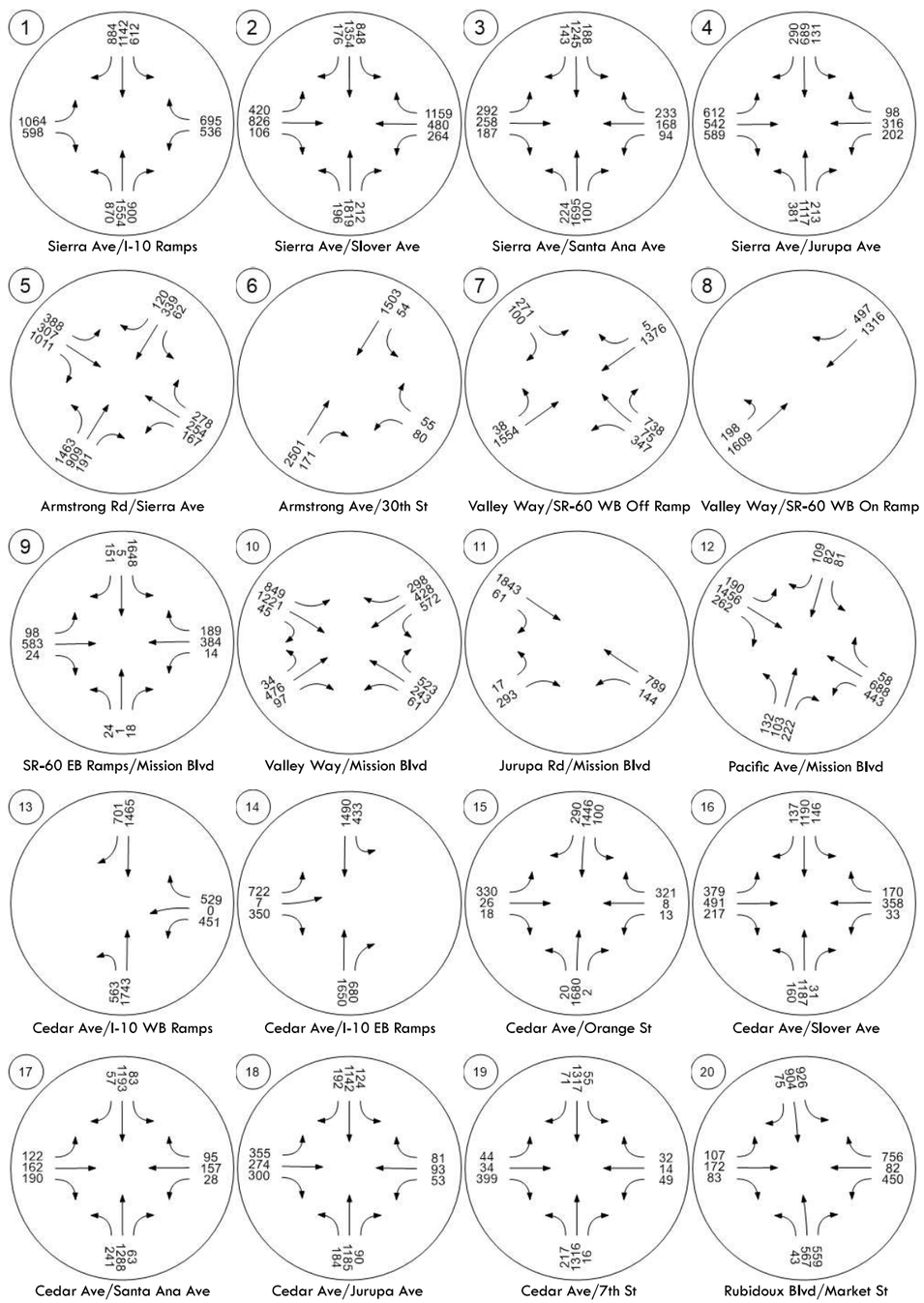
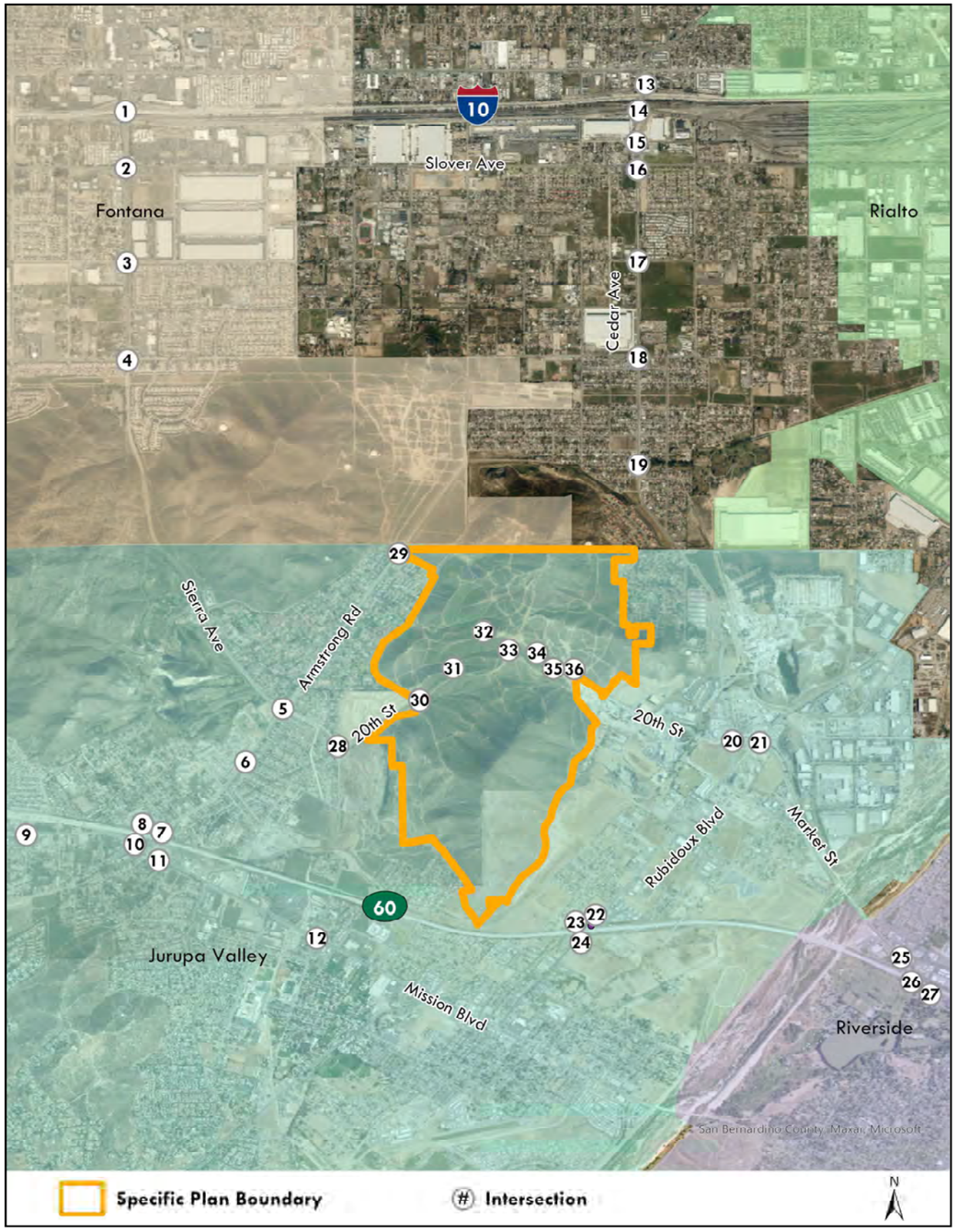


Figure 12b: General Plan Buildout (2045) PM Peak Hour Traffic Volumes



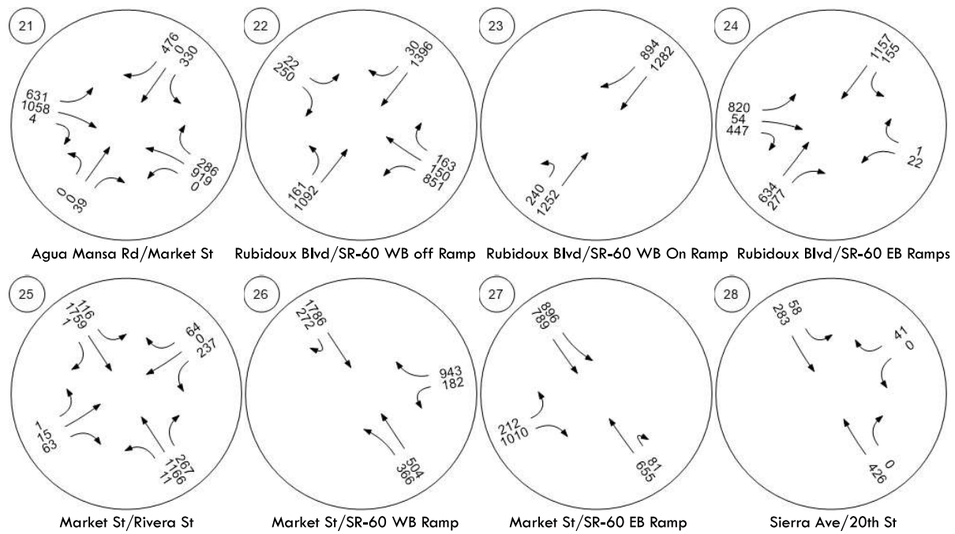


Table 16. General Plan Buildout (2045) AM and PM Peak Hour Levels of Service

	Intersection	Location %	Signal Control	AM Peak		PM Peak	
				Delay[1]	LOS[2]	Delay[1]	LOS[2]
1.	Sierra Ave/I-10 Ramps (Existing)	50F/50C	Signal	24.7	C	30.8	C
2.	Sierra Ave/Slover Ave (Existing)	100 F	Signal	41.6	D	58.6	E
3.	Sierra Ave/Santa Ana Ave (Existing)	100 F	Signal	24.5	C	33.0	C
4.	Sierra Ave/Jurupa Ave (Existing)	100 F	Signal	37.7	D	44.3	D
5.	Armstrong Rd/Sierra Ave (Existing)	100 JV	Signal	69.7	E	>99	F
6.	Armstrong Rd/30th St (Existing)	100 JV	Signal	13.2	B	11.3	B
7.	Valley Way/SR-60 WB Off Ramp (Existing)	50JV/50C	Signal	>99	F	>99	F
8.	Valley Way/SR-60 WB On Ramp (Existing)	50JV/50C	Signal	12.6	B	8.1	A
9.	SR-60 EB Ramps/Mission Blvd (Existing)	50JV/50C	Signal	30.7	C	>99	F
10.	Valley Way/Mission Blvd (Existing)	100 JV	Signal	41.1	D	47.2	D
11.	Jurupa Rd/Mission Blvd (Existing)	100 JV	TWSC	>99	F	>99	F
12.	Pacific Ave/Mission Blvd (Existing)	100 JV	Signal	28.1	C	48.4	D
13.	Cedar Ave/ I-10 WB Ramps (Existing)	50SB/50C	Signal	16.7	B	15.2	B
14.	Cedar Ave/ I-10 EB Ramps (Existing)	50SB/50C	Signal	40.3	D	24.5	C
15.	Cedar Ave/Orange St (Existing)	100 SB	Signal	35.1	D	48.9	D
16.	Cedar Ave/Slover Ave (Existing)	100 SB	Signal	82.6	F	59.0	E
17.	Cedar Ave/Santa Ana Ave (Existing)	100 SB	Signal	28.6	C	36.3	D
18.	Cedar Ave/Jurupa Ave (Existing)	100 SB	Signal	41.1	D	>99	F
19.	Cedar Ave/7th St (Existing)	100 SB	Signal	16.3	B	30.1	C
20.	Rubidoux Blvd/Market St (Existing)	100 JV	Signal	>99	F	>99	F
21.	Agua Mansa Rd/Market St (Existing)	100 JV	Signal	>99	F	80.7	F
22.	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	50JV/50C	Signal	88.8	F	>99	F
23.	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	50JV/50C	TWSC	>99	F	>99	F
24.	Rubidoux Blvd/SR-60 EB Ramps (Existing)	50JV/50C	Signal	95.3	F	75.0	E
25.	Market St/Rivera St (Existing)	100 R	Signal	15.8	B	18.6	B
26.	Market St/SR-60 WB Ramps (Existing)	50R/50C	Signal	14.1	B	26.8	C
27.	Market St/SR-60 EB Ramps (Existing)	50R/50C	Signal	44.8	D	>99	F
28.	Sierra Ave/20th St (Existing)	100 JV	AWSC	19.0	B	8.3	A
29.	Armstrong Rd/Driveway 1 (Proposed)	100 JV	TWSC	-	-	-	-
30.	Driveway 2/20th St (Proposed)	100 JV	TWSC	-	-	-	-
31.	Street A/20th St (Proposed)	100 JV	TWSC	-	-	-	-
32.	Street B/20th St (Proposed)	100 JV	TWSC	-	-	-	-
33.	Street M/20th St (Proposed)	100 JV	TWSC	-	-	-	-
34.	Driveway 3/20th St (Proposed)	100 JV	TWSC	-	-	-	-
35.	Driveway 4/20th St (Proposed)	100 JV	TWSC	-	-	-	-
36.	Driveway 5/20th St (Proposed)	100 JV	TWSC	-	-	-	-

= Unsatisfactory Level of Service TWSC = Two-Way Stop Controlled AWSC = All Way Stop Controlled

F Fontana

C Caltrans

SB San Bernardino

JV Jurupa Valley

R Riverside

[1] Delay in Seconds

[2] Level of Service

Table 17. General Plan Buildout (2045) AM and PM Peak Hour Levels of Service

					GPB 2045		
	Roadway Segment	Type	# of Lanes	Capacity	Volume	V/C Ratio	LOS
1	Sierra Ave: Santa Ana Ave to Jurupa Ave	Major Highway	6	54,000	42,185	0.781	C
2	Sierra Ave: Jurupa Ave to Armstrong Rd	Arterial	4	25,000	34,624	1.385	F
3	Sierra Ave: Armstrong Rd to 20th Street	Arterial	2	18,000	8,933	0.496	A
4	Sierra Ave: 20th Street to UPRR Tracks	Arterial	2	18,000	5,997	0.333	A
5	Valley Way: Sierra Ave to 34th St	Major	4	34,100	49,540	1.453	F
6	Valley Way: 34th St to Granite Hill	Major	4	34,100	50,283	1.475	F
7	Cedar Ave: I-10 EB Ramps to Slover Ave	Major Hwy	4	33,000	51,316	1.555	F
8	Cedar Ave: Slover Ave to Santa Ana Ave	Major Divided Hwy	4	37,500	41,807	1.115	F
9	Cedar Ave: Santa Ana Ave to Jurupa Ave	Major Divided Hwy	4	37,500	43,480	1.159	F
10	Cedar Ave: Jurupa Ave to 7th St	Major Divided Hwy	4	37,500	40,818	1.088	F
11	Cedar Ave:7th St to El Rivino Rd	Major Divided Hwy	4	37,500	41,647	1.111	F
12	Rubidoux Blvd: El Rivino Rd to Market St	Major	4	34,100	41,148	1.207	F
13	Rubidoux Blvd: Market St to 28th St	Major	4	34,100	32,763	0.961	E
14	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Arterial	4	25,000	35,991	1.440	E
15	Market St: Agua Mansa Road to 24th St	Major	4	34,100	35,054	1.028	F
16	Market St: 24th St to SR-60 WB Off Ramp	Major	4	34,100	47,904	1.405	F
17	Mission Blvd: SR-60 EB Ramps to Valley Way	Arterial	4	25,000	29,693	1.188	F

3.7 General Plan Buildout (2045) Queueing Analysis

A queueing analysis has been conducted for Caltrans right of way intersections that could be affected by a deficient queueing length for the General Plan Buildout (2045) condition. The queuing analysis was done utilizing the 95th percentile available in the Vistro output sheets attached as Appendix C. As shown in Table 18, the following approaches would have a deficient queue in the General Plan Buildout (2045) condition at the following approaches:

- Sierra Avenue/I-10 Ramps
  - Southbound left-turn lane
- Valley Way/SR-60 WB Off Ramp
  - Westbound right-turn lane
- Valley Way/SR-60 WB On Ramp
  - Northbound left-turn lane
- SR-60 EB Ramps/Mission Boulevard
  - Southbound left-turn lane
  - Southbound right-turn lane
- Cedar Avenue/I-10 EB Ramp
  - Northbound right-turn lane
- Rubidoux Blvd/SR-60 WB Off Ramp
  - Westbound left-turn lane
  - Westbound right-turn lane
- Rubidoux Boulevard/SR-60 WB On Ramp
  - Northbound left-turn lane
- Rubidoux Boulevard/SR-60 EB Ramps
  - Northbound right-turn lane
  - Southbound left-turn lane
  - Eastbound left-turn lane
  - Eastbound right-turn lane
- Market Street/SR-60 WB Ramp
  - Northbound left-turn lane
- Market Street/SR-60 EB Ramp
  - Southbound left-turn lane
  - Eastbound left-turn lane

Table 18. General Plan Buildout (2045) AM and PM Queueing Analysis

Intersection	Turning Movement	Available Queue Length (Ft)	General Plan Without Project	
			AM	PM
			Required Queueing (Ft)	Required Queueing (Ft)
1. Sierra Ave/I-10 Ramps	NBL	565	310	485
	SBL	325	351	386
	EBL[1]	1205	464	536
	WBL[1]	1200	239	248
7. Valley Way/SR-60 WB Off Ramp	WBL[1]	880	266	405
	WBR	280	1985	1895
8. Valley Way/SR-60 WB On Ramp	NBL	115	406	311
9. SR-60 EB Ramps/Mission Blvd	SBL[1]	1120	430	1859
	SBR	1550	427	1913
	EBL	200	194	162
	WBR	340	83	38
13. Cedar Ave/I-10 WB Ramp	NBL	870	124	168
	SBR	450	208	159
	WBL[1]	1570	229	128
	WBR	485	117	143
14. Cedar Ave/I-10 EB Ramps	NBR	600	614	427
	SBL	535	413	286
	EBL	380	219	342
	EBR[1]	2350	606	299
22. Rubidoux Blvd/SR-60 WB Off Ramp	WBL[1]	1280	2109	12
	WBR	85	62	285
23. Rubidoux Blvd/SR-60 WB On Ramp	NBL	145	404	293
24. Rubidoux Blvd/SR-60 EB Ramps	NBR	1045	1061	527
	SBL	145	491	247
	EBL[1]	1160	1359	1744
	EBR	40	194	386
	WBL	750	13	33
	WBR	65	6	1
26. Market St/SR-60 WB Ramp	NBL	185	233	486
	WBL[1]	1345	171	273
27. Market St/SR-60 EB Ramp	SBL	155	906	1049
	EBL	180	233	242
	EBR[1]	1630	401	1045

Indicates queueing required greater than storage available

[1] Available queue length reflects the full ramp length.

4 PROPOSED PROJECT

4.1 Project Description and Project Access

As Described in Section 2.1 – Project Description, the proposed SP is the redevelopment of the approximately 917.3-acre Specific Plan Area, located south of the San Bernardino County boundary, west of Rubidoux Boulevard, north of SR-60, and east of Armstrong Road in the City of Jurupa Valley. The SP site is currently vacant.

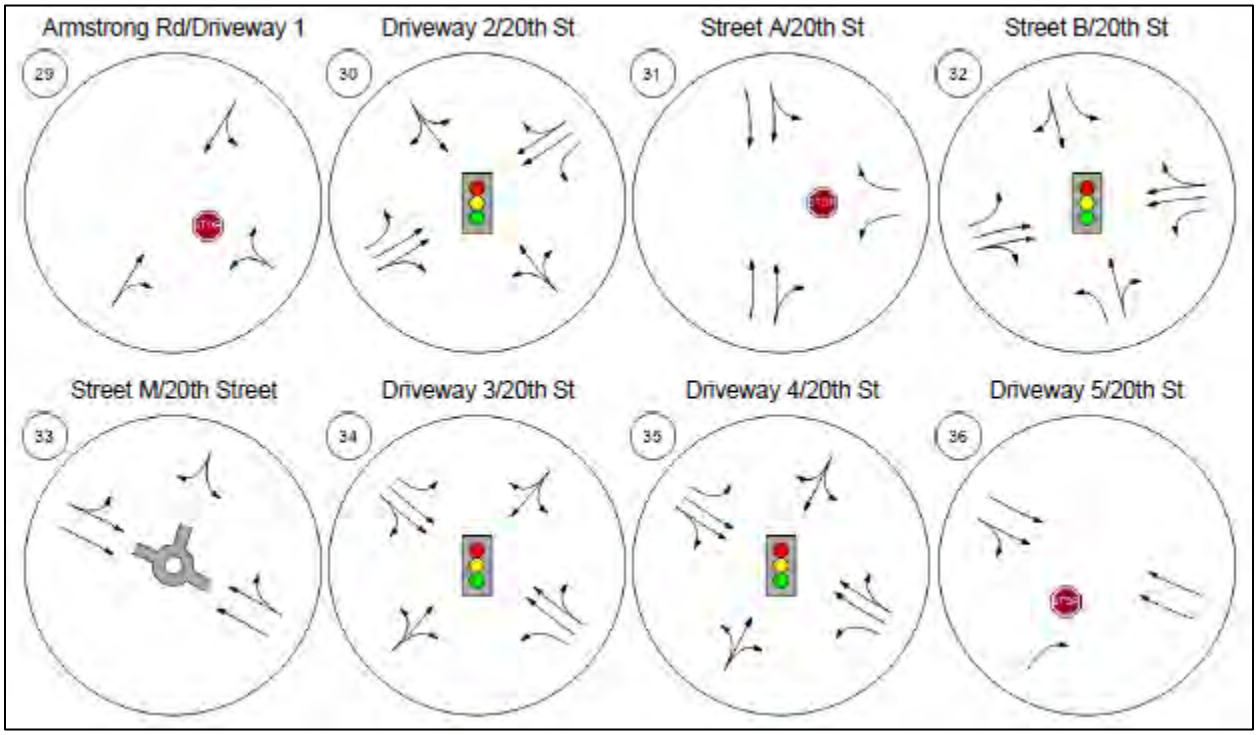
The SP proposes to include the following uses:

- up to 1,133 single family detached homes
- up to 144 single family attached homes
- up to 420 multi-family units
- an elementary school with up to 620 students
- a middle school with up to 330 students
- up to 18.4 acres of public park
- a technical college with up to 13,000 total students and 10,000 daily on-site students
- up to 559,310 feet (sf) of Business Park
- and up to 1,269,774 sf of industrial uses

The project does not have specific developments proposed; therefore, the date of operation is unknown. For the purpose of this analysis, an interim year of 2030 was used as it is a reasonable amount of time for the full specific plan to be developed.

Access to the SP area site would be primarily provided along 20th Street at Rubidoux Boulevard to the east and Sierra Avenue to the west, with one driveway along Armstrong Road. Truck access will be limited to the Rubidoux Boulevard/20th Street access. The lane geometry used for the proposed project access points is shown in Figure 13.

Figure 13: Proposed Project Access Points Lane Geometries



4.2 Project Trip Generation

Vehicle trips were generated for the project using trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). The trip generation is broken out by vehicle type for the Fulfillment Center use and passenger car equivalent (PCE) factors are applied to the truck trips to determine the PCE trip generation. Passenger car equivalent factors account for the additional roadway capacity utilized by trucks due to their larger size, slower acceleration and reduced maneuverability when compared to passenger cars. The project trip generation is shown in Table 19. The proposed SP would generate approximately 39,775 daily PCE trips which includes 4,138 AM peak hour and 3,837 PM peak hour PCE trips.

4.3 Project Trips

Due to the different land uses, five different distributions were developed for the SP. This is to account for the fact that the different uses would draw from different areas within and outside of the city, the percent of vehicles that would head to the freeway verses:

1. School and Park Trips
2. Residential Trips
3. Business Park and Industrial Automobile Trips
4. Truck Trips
5. Technical School Trips

Automobile trips from the school/park, residences, business park/industrial area, and technical school would travel to and from the site using both Sierra Avenue/20th Street and Rubidoux Boulevard/20th Street, with a majority using the I-10 and SR-60 Freeways. All truck trips would travel using Rubidoux Boulevard/20th Street to travel to the 1-10 and SR-60 Freeways. The project trip distributions for the SP shown in Figures 14, 15, 16, 17, and 18. The total project trip assignment is shown in Figures 19 and 20. The distribution was approved by the City of Jurupa Valley during the scoping period and can be found in Appendix A. The detailed distribution and assignment for each land use are provided in Appendix D.

Table 19. Project Trip Generation

				AM Peak Hour			PM Peak Hour		
Land Use		**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Trip Rates									
Single-Family Detached Housing[1]		DU	9.43	0.18	0.52	0.70	0.59	0.35	0.94
Single-Family Attached Housing[2]		DU	7.20	0.12	0.36	0.48	0.34	0.23	0.57
Multifamily Housing (Low-Rise)[3]		DU	6.74	0.10	0.30	0.40	0.32	0.19	0.51
Elementary School[4]		Students	2.27	0.40	0.34	0.74	0.07	0.09	0.16
Middle School/Junior High School[5]		Students	2.10	0.36	0.31	0.67	0.07	0.08	0.15
Public Park[6]		Acre	0.78	0.01	0.01	0.02	0.06	0.05	0.11
Junior/Community College[7]		Students	1.15	0.09	0.02	0.11	0.06	0.05	0.11
Business Park[8]		TSF	12.44	1.15	0.20	1.35	0.32	0.90	1.22
General Light Industrial[9]		TSF	4.87	0.65	0.09	0.74	0.09	0.56	0.65
Warehouse[10]		TSF	1.71	0.13	0.04	0.17	0.05	0.13	0.18
Total Vehicle Trip Generation									
Single-Family Detached Housing	1133	DU	10684	206	587	793	671	394	1065
Single-Family Attached Housing	144	DU	1037	17	52	69	48	34	82
Multifamily Housing (Low-Rise)	420	DU	2831	40	128	168	135	79	214
Elementary School	620	Students	1407	248	211	459	46	54	100
Middle School	330	Students	825	119	102	221	24	26	50
Public Park	18.4	Acres	14	0	0	0	1	1	2
Technical School (PA 14/16)	10000	Students	11500	891	209	1100	616	484	1100
Business Park (PA 15)	559.310	TSF	6958	642	113	755	177	505	682
General Light Industrial	380.932	TSF	1855	248	34	282	35	213	248
Ancillary Warehouse	888.842	TSF	1520	116	35	151	45	115	160
Total			38632	2527	1471	3998	1797	1905	3703
General Light Industrial Vehicle Mix[11]		***Percent***							
Passenger Cars		78.60%	1458	195	27	222	27	167	195
2 Axle Trucks		8.00%	148	20	3	23	3	17	20
3 Axle Trucks		3.90%	72	10	1	11	1	8	10
4 Axle Trucks		9.50%	176	24	3	27	3	20	24
			1855	248	34	282	35	213	248
Ancillary Warehouse Vehicle Mix[11]		***Percent***							
Passenger Cars		72.50%	1102	84	25	110	32	84	116
2 Axle Trucks		4.60%	70	5	2	7	2	5	7
3 Axle Trucks		5.70%	87	7	2	9	3	7	9
4 Axle Trucks		17.20%	261	20	6	26	8	20	28
		100%	1520	116	35	151	45	115	160
PCE Trip Generation[12]		***PCE Factor***							
Passenger Vehicles		1.0	2560	279	52	331	60	251	311
2-Axle Trucks		1.5	327	38	6	44	7	34	41
3-Axle Trucks		2.0	318	33	7	39	8	30	38
4+-Axle Trucks		3.0	1313	131	28	158	33	120	153
Total Fulfillment Center PCE Trip Generation			4519	480	92	573	108	434	542
Total Project PCE Trip Generation			**39775**	**2643**	**1494**	**4138**	**1826**	**2011**	**3837**

Table 19 (footnotes) Project Trip Generation

TSF = Thousand Square Feet

DU = Dwelling Units

PCE = Passenger Car Equivalent

1 Trip rates from the Institute of Transportation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 210 - Single-Family Detached Housing.

2 Trip rates from the Institute of Transportation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 220 - Multifamily Housing (Low-Rise).

3 Trip rates from the Institute of Transportation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 520 - Elementary School.

4 Trip rates from the Institute of Transportation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 522 - Middle School/Junior High School.

5 Trip rates from the Institute of Transportation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 411 - Public Park.

6 Trip rates from the Institute of Transportation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 540 - Junior/Community College, Southwest Region from 2000.

7 Trip rates from the Institute of Transportation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 770 - Business Park.

8 Trip rates from the Institute of Transportation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 110 - General Light Industrial.

9 Trip rates from the Institute of Transportation Engineers, Trip Generation,11th Edition, 2021. Land Use Code 150 - Warehouse.

10 General Light Industrial Vehicle Mix from the City of Fontana *Truck Trip Generation Study* , 2003, Light Industrial

11 Ancillary Warehouse Vehicle Splits from SCAQMD Warehouse Truck Study Data 2014, without cold storage

12Passenger Car Equivalent (PCE) factors from City of Jurupa Valley TIA Preparation Guidelines November 2020

Figure 14: School/Park Project Distribution

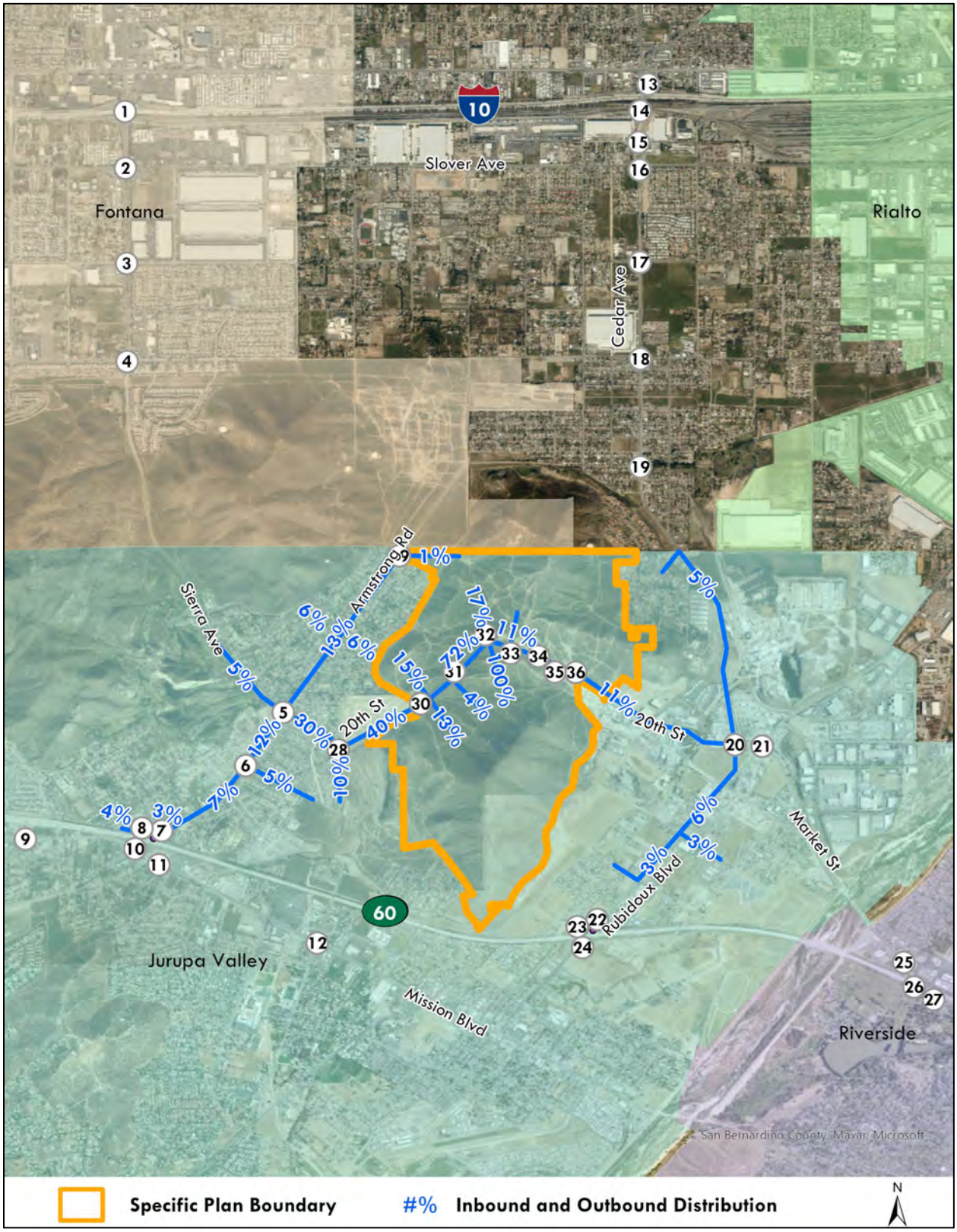


Figure 15: Residential Project Distribution

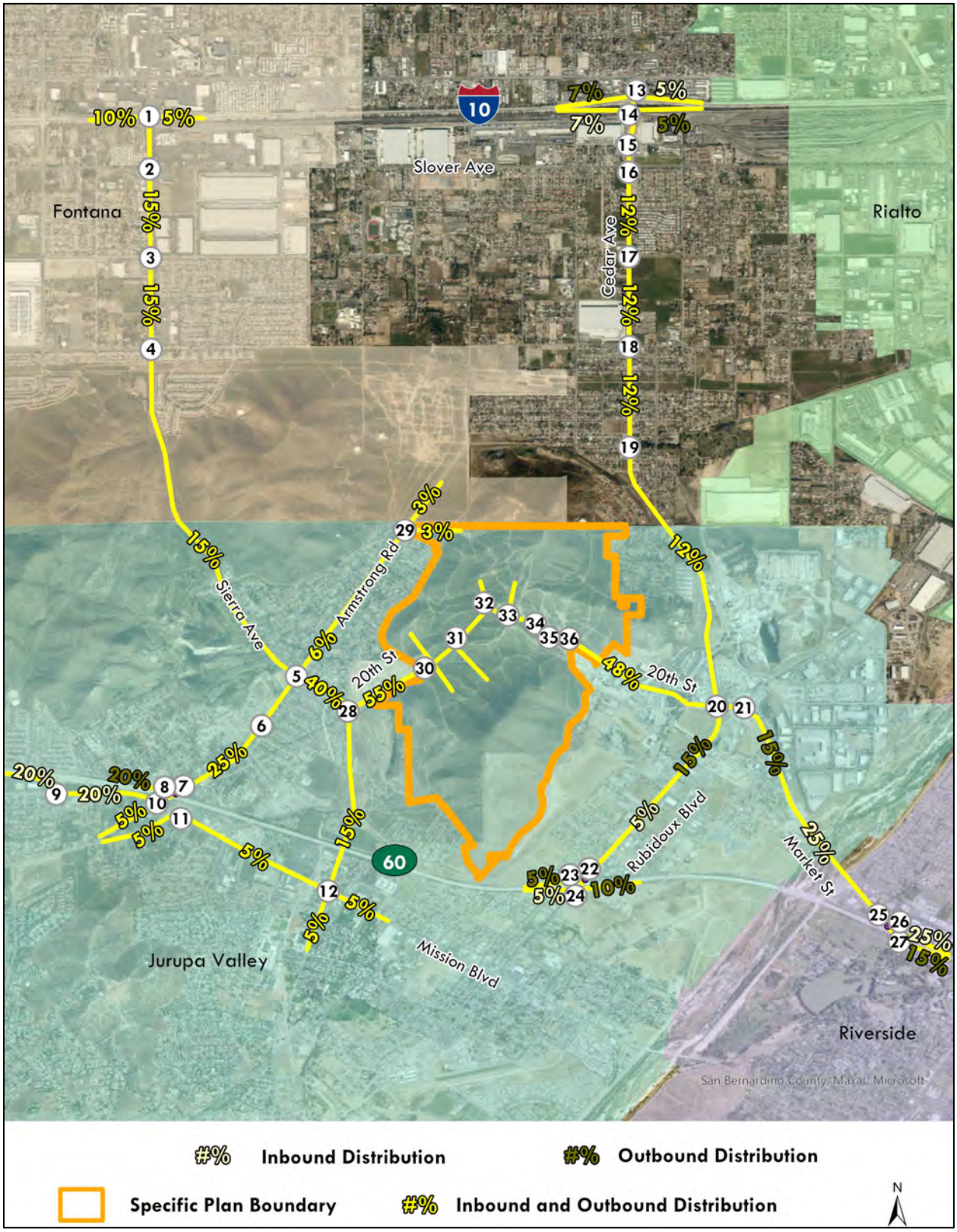


Figure 16: Business Park/Industrial Automobile Project Distribution

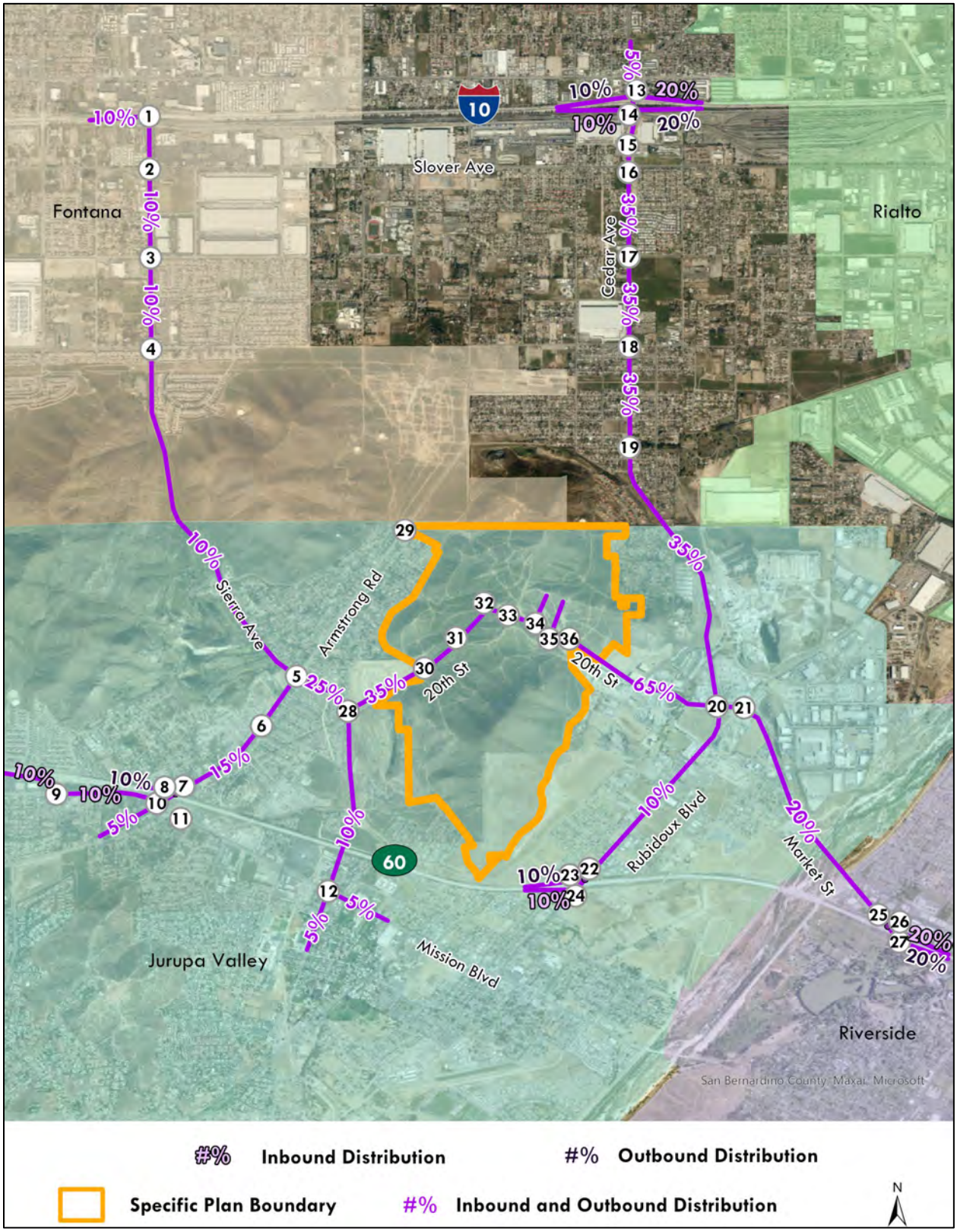


Figure 17: Truck Project Distribution

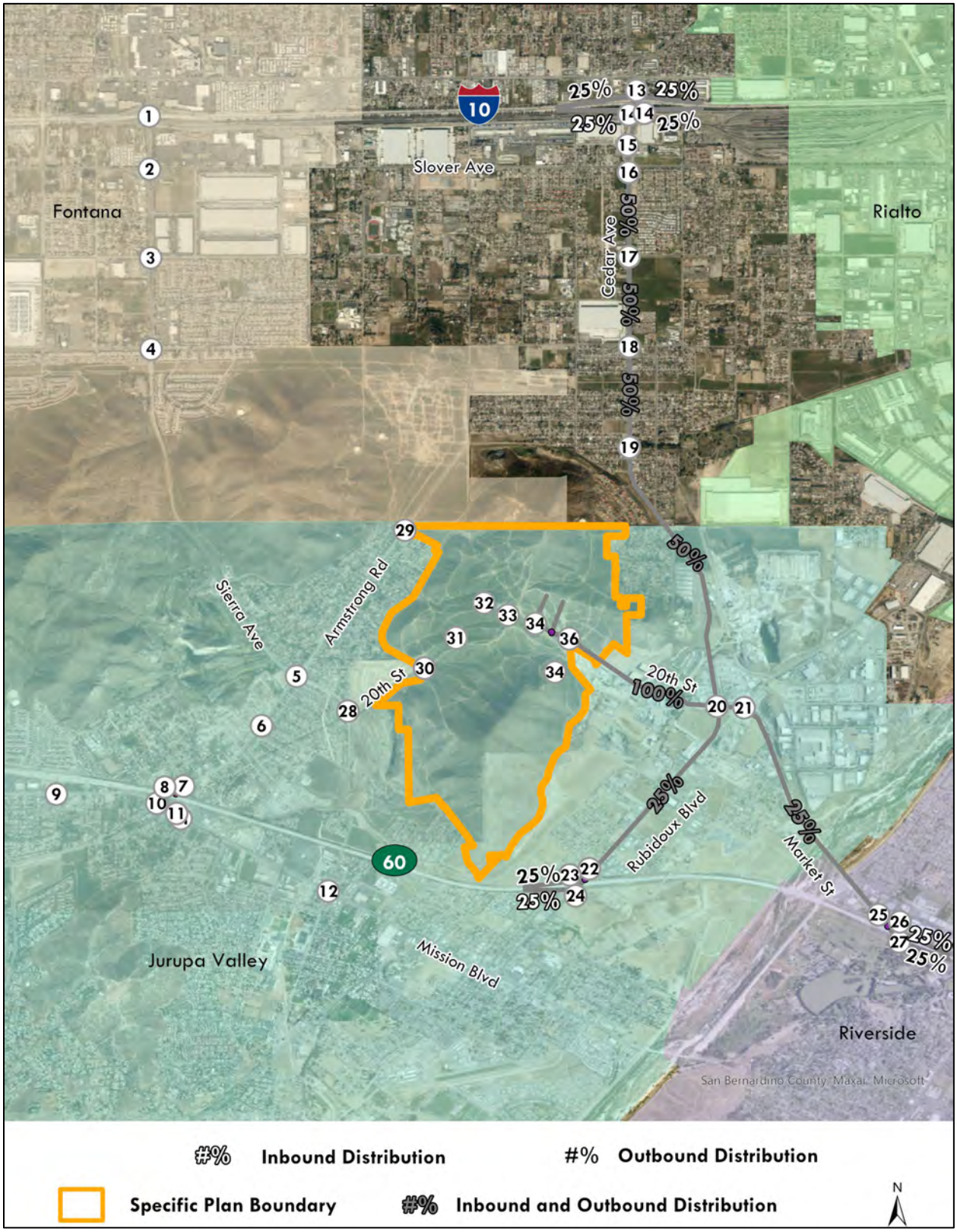


Figure 18: Technical School Project Distribution

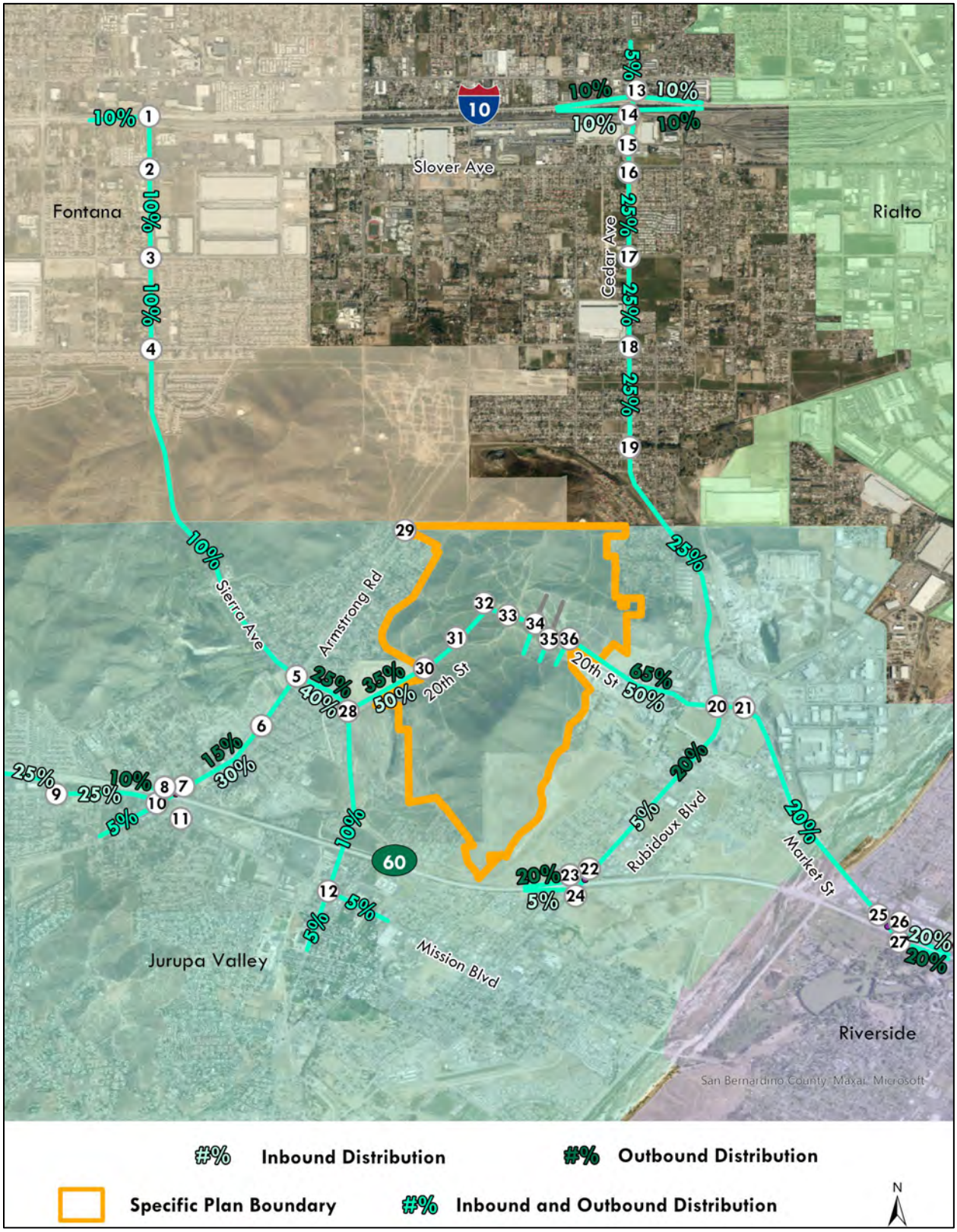
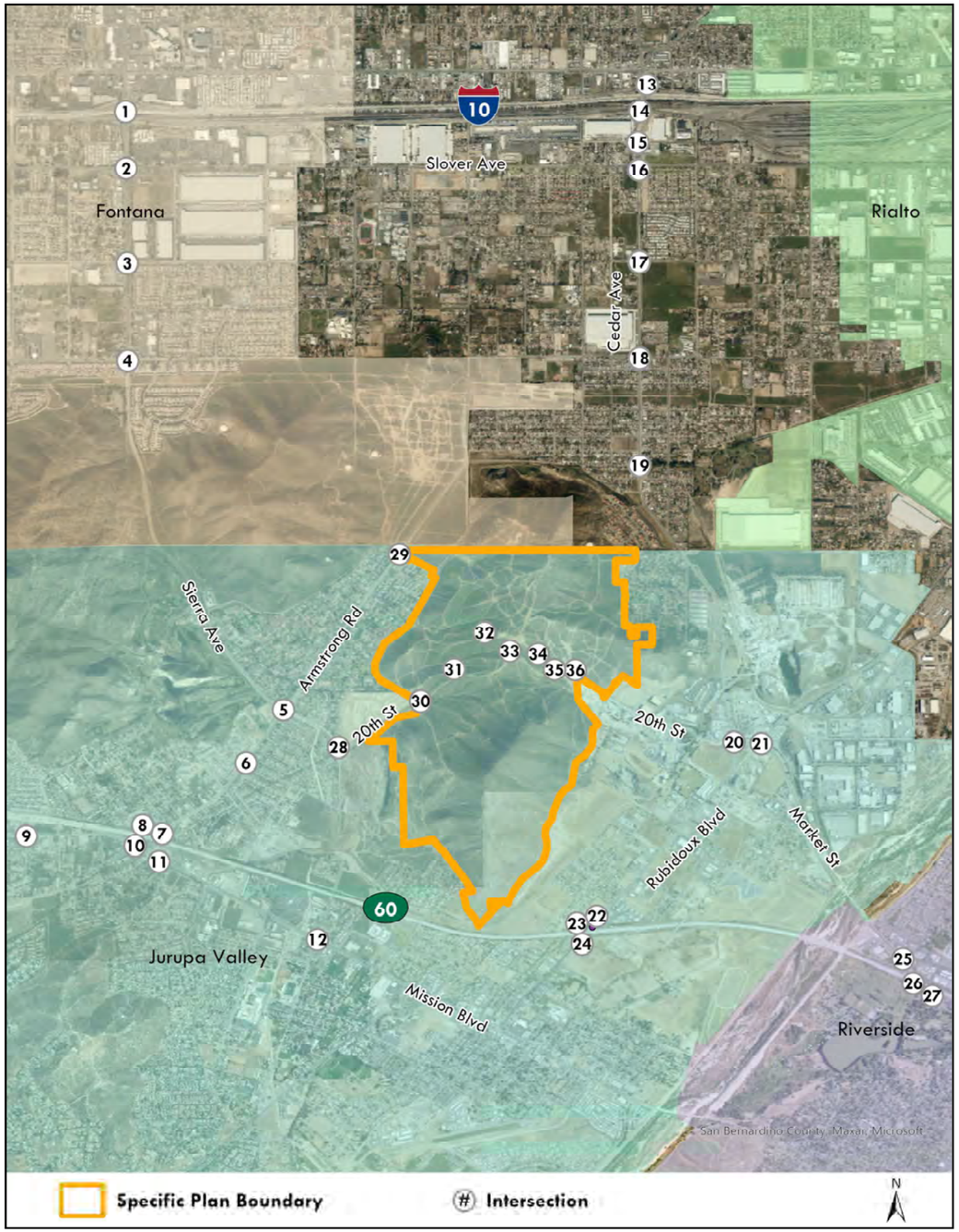


Figure 19a: Specific Plan Project AM Assignment



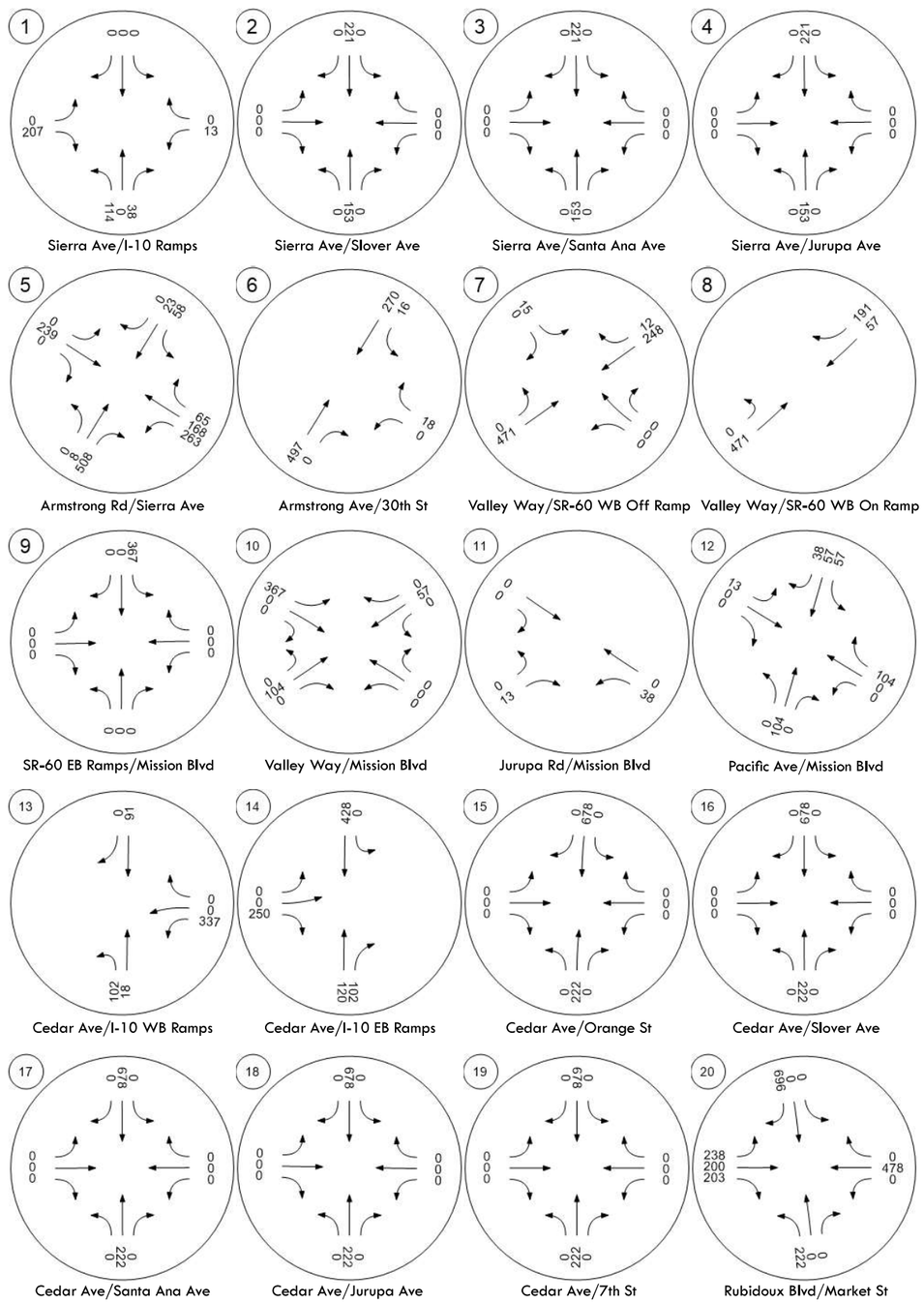
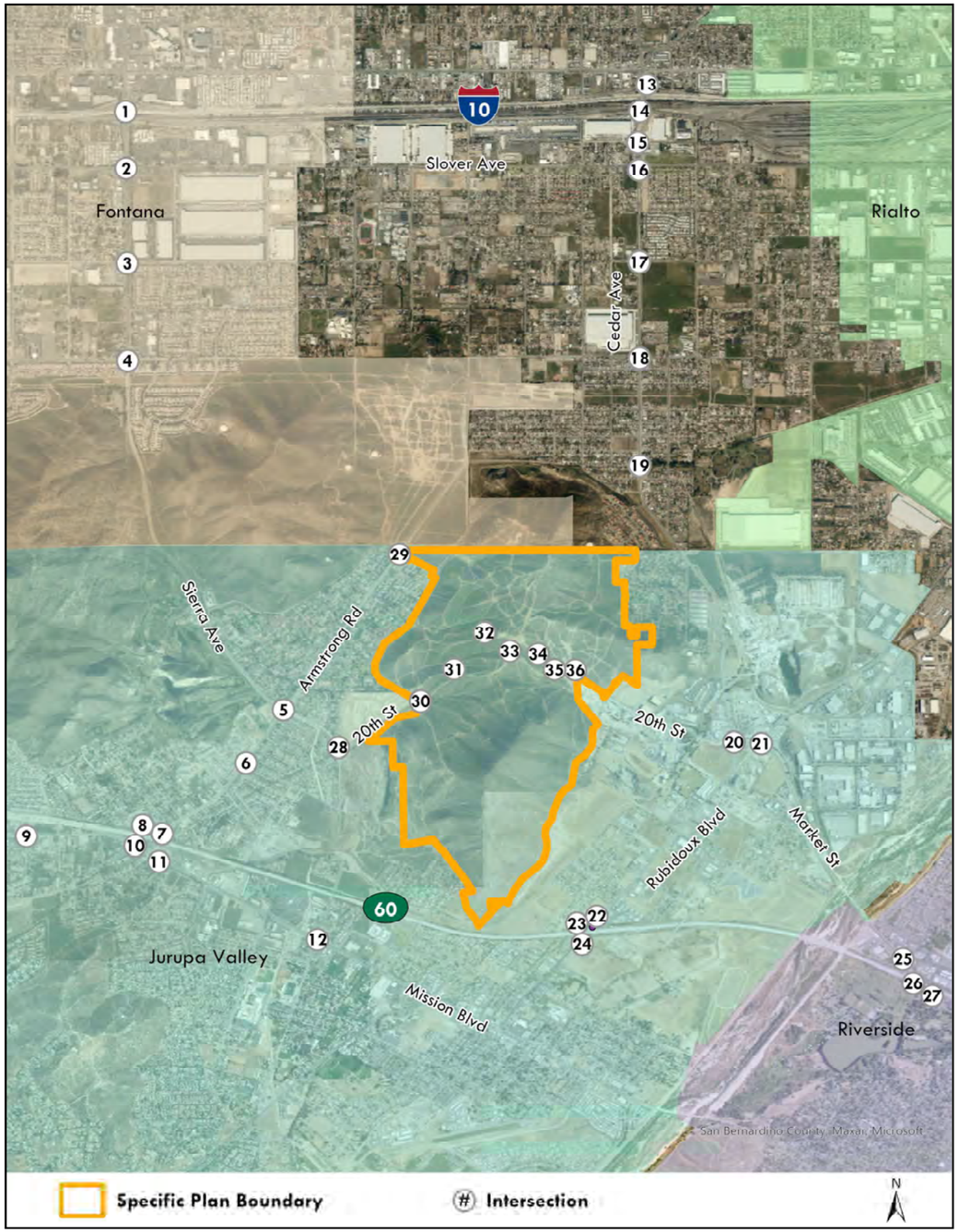


Figure 19b: Specific Plan Project AM Assignment



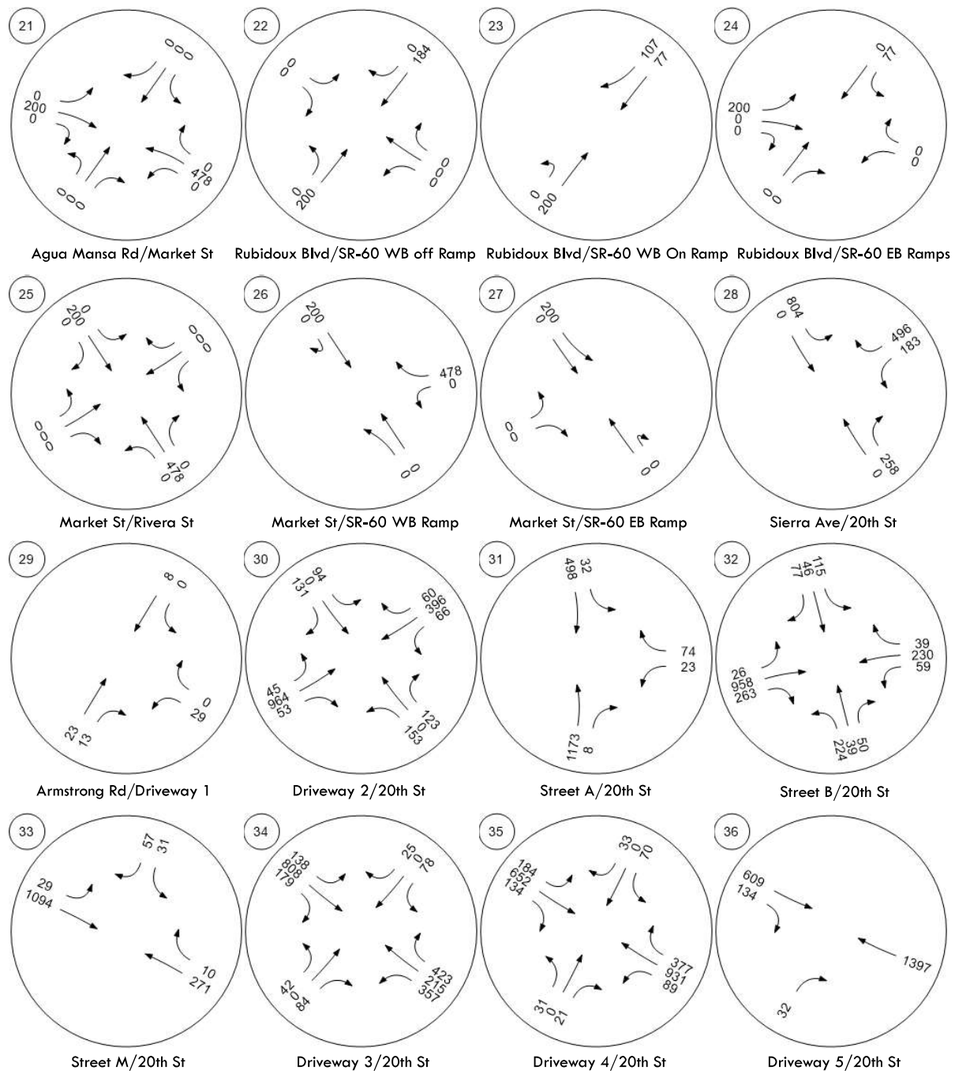
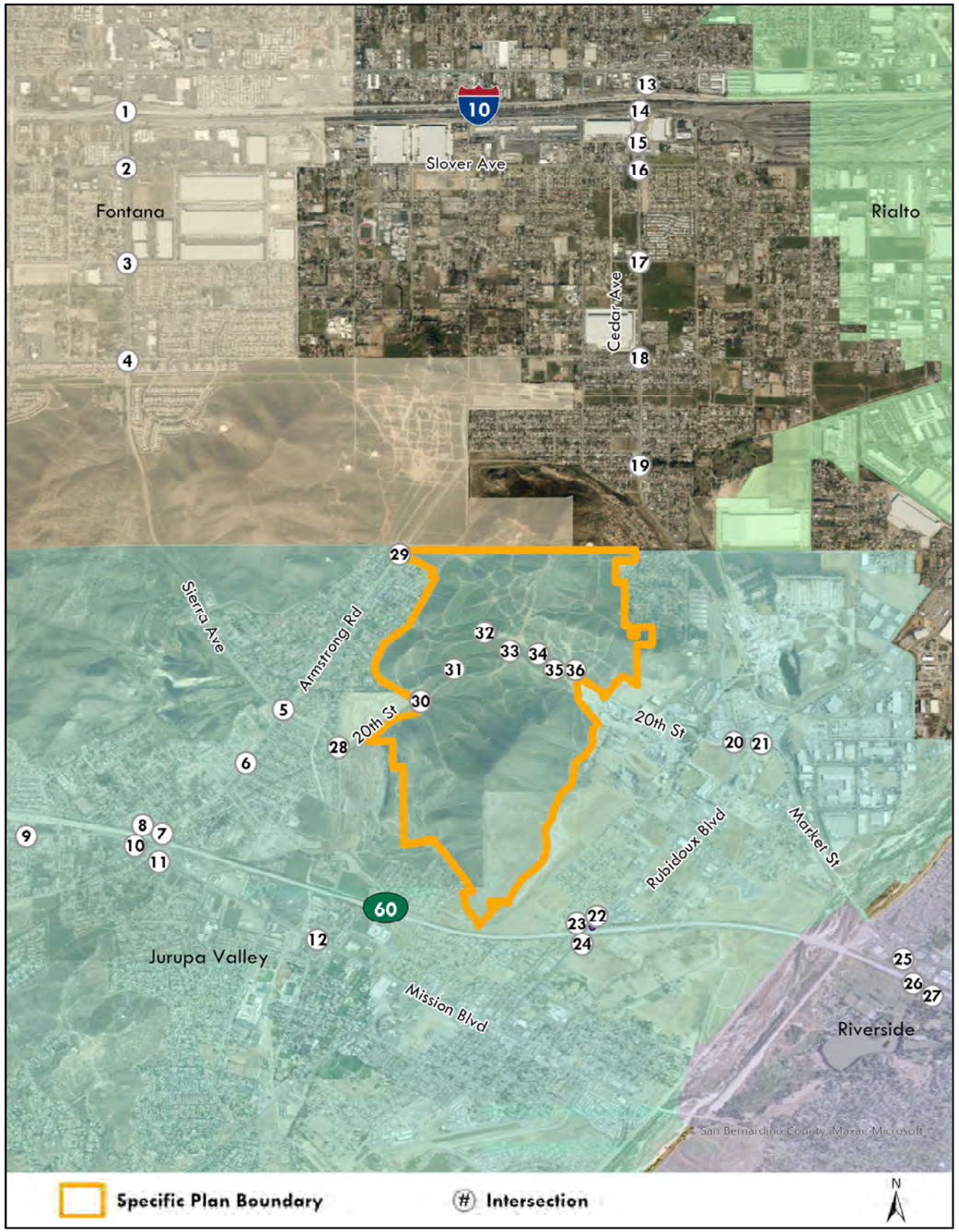


Figure 20a: Specific Plan Project PM Assignment



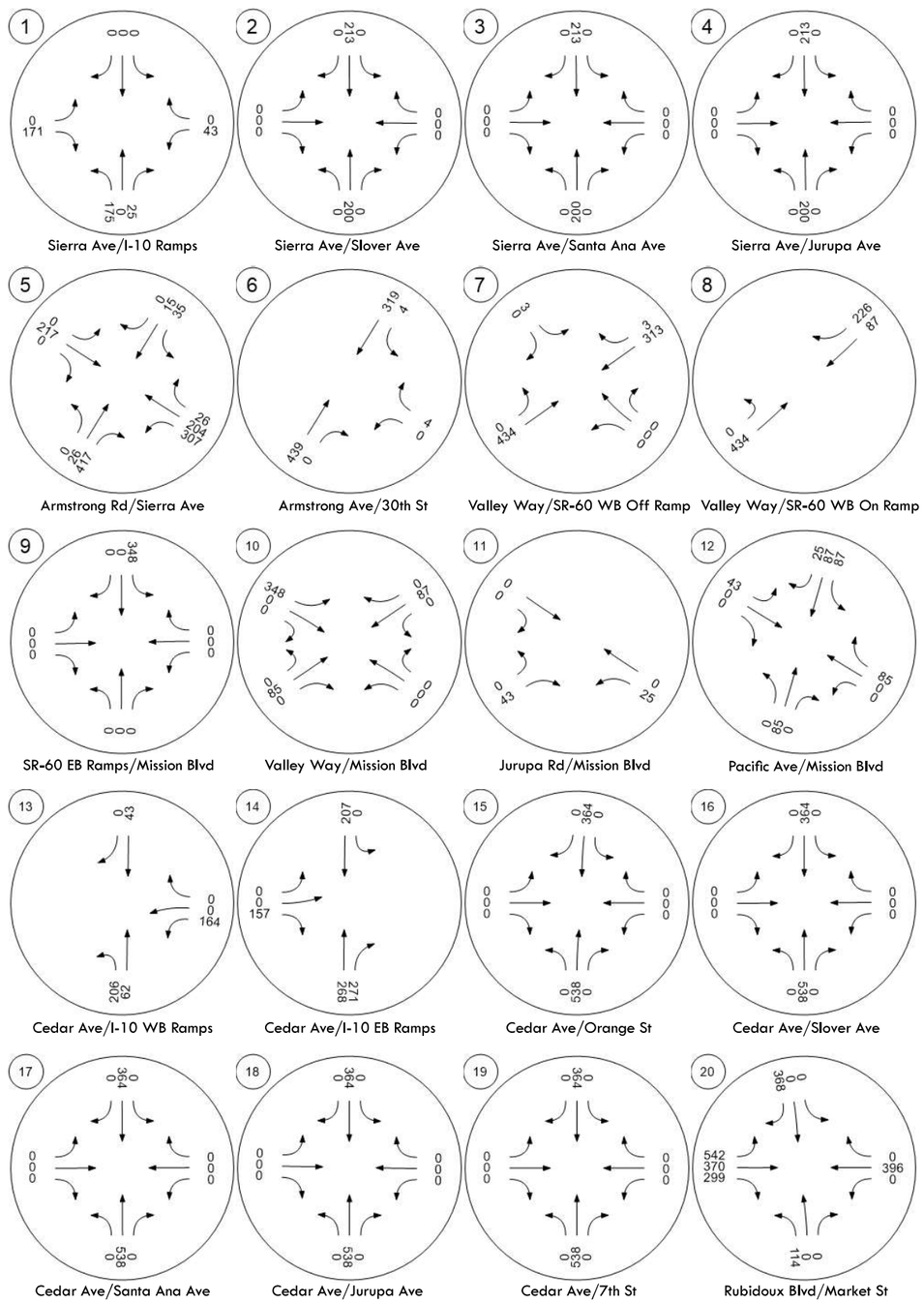
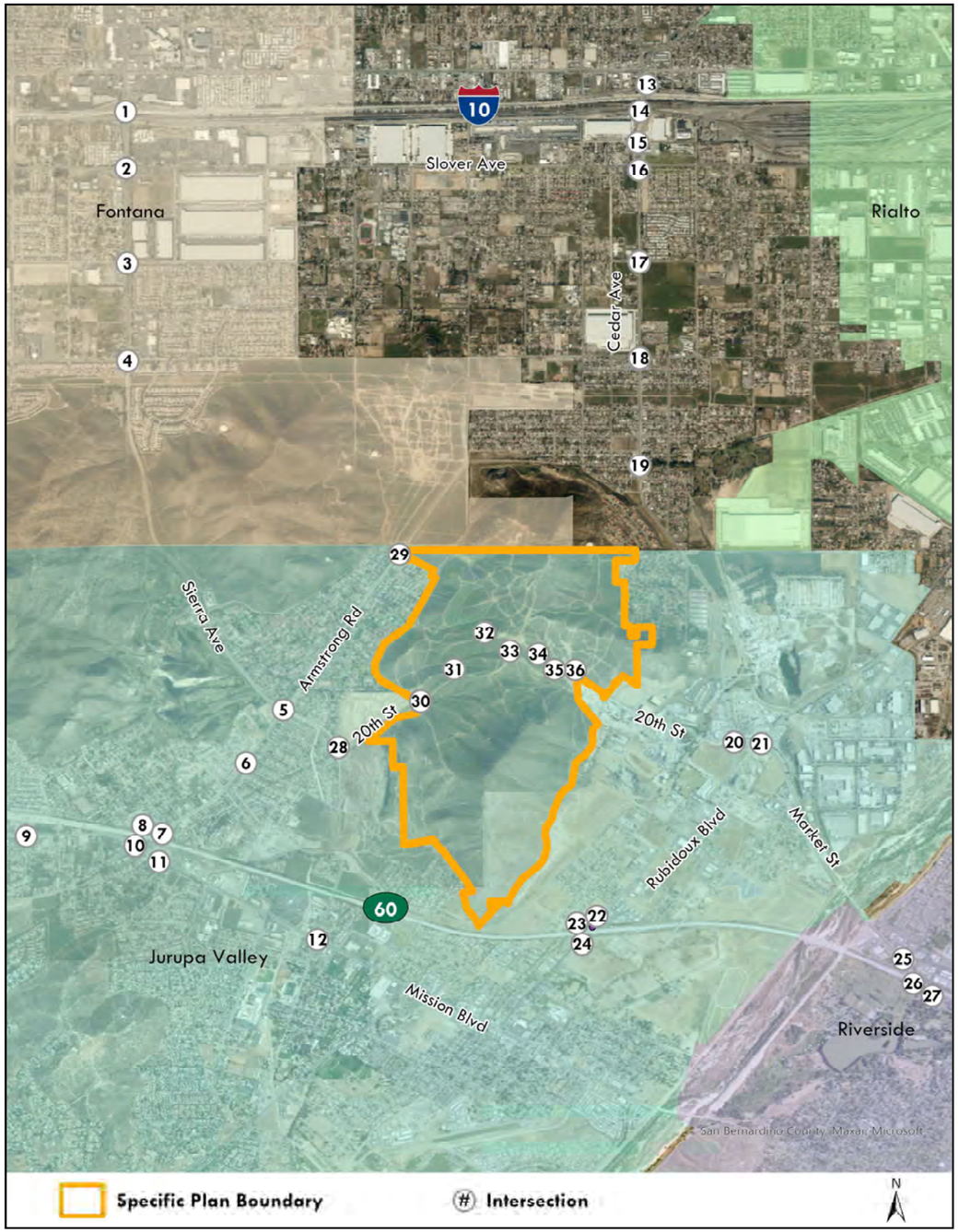
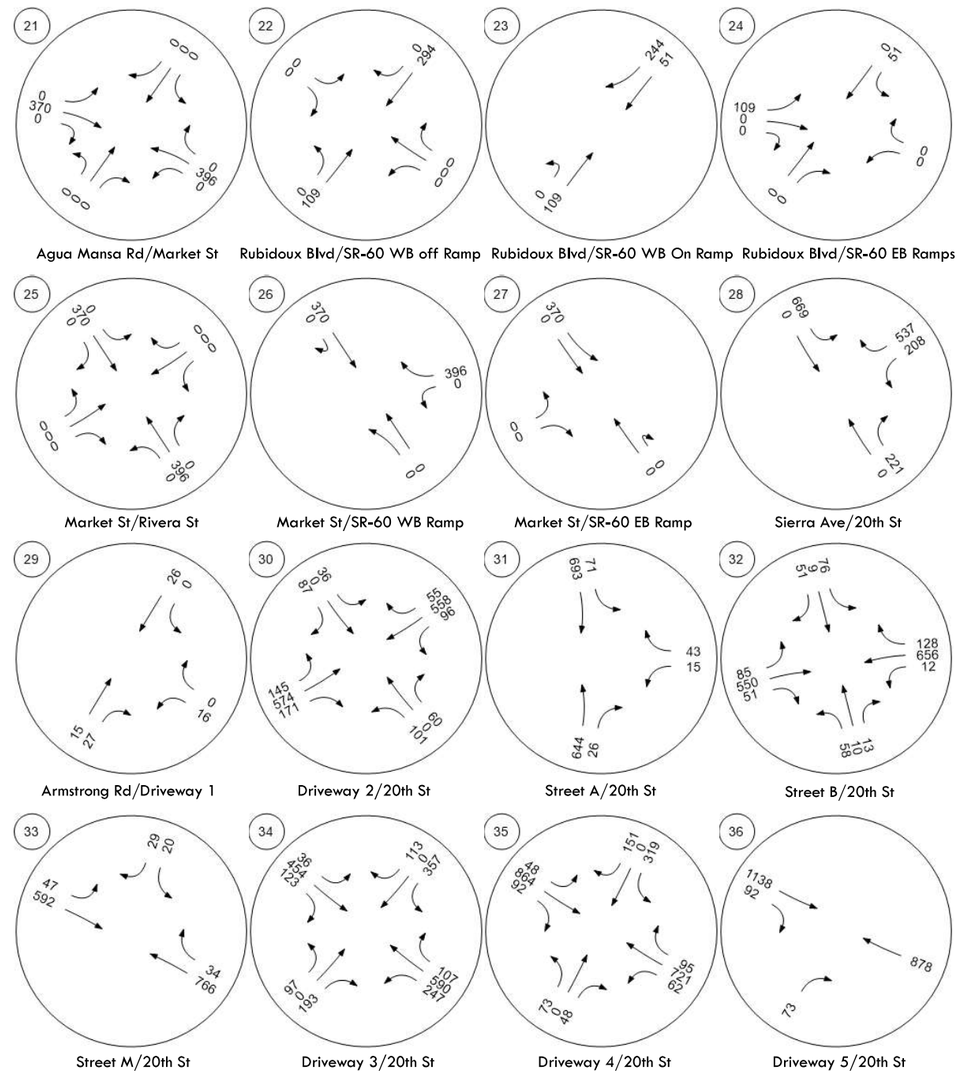


Figure 20b: Specific Plan Project PM Assignment





5 PROJECT EFFECT ON INTERSECTION AND ROADWAY OPERATIONS

5.1 Interim Year (2030) plus Specific Plan Traffic Volumes and Operations

The Interim Year (2030) plus SP traffic volumes were developed by adding the project trip assignment to the Interim Year (2030) traffic volumes. The Interim Year (2030) plus SP traffic volumes are shown in Figures 21 and 22. Table 20 shows the Interim Year (2030) plus SP AM and PM peak hour LOS at study intersections, and Table 21 shows the Interim Year (2030) plus SP daily roadway segments. All LOS calculations are provided in Appendix C. As shown in Table 20 and 21, the following intersections and roadway segments would have significant operational deficiencies with addition of the project.

Intersections

- #5 – Armstrong Road/Sierra Avenue (PM peak hour)
- #7 – Valley Way/SR-60 WB Off Ramp (AM and PM peak hour)
- #9 – SR-60 EB Ramps/Mission Boulevard PM peak hour)
- #10 – Valley Way/Mission Boulevard (AM and PM peak hour)
- #11 – Jurupa Road/Mission Boulevard (AM and PM peak hour)
- #15 – Cedar Avenue/Orange Street (AM peak hour)
- #16 – Cedar Avenue/Slover Avenue (AM and PM peak hour)
- #17 – Cedar Avenue/Santa Ana Avenue (PM peak hour)
- #18 – Cedar Avenue/Jurupa Avenue (AM and PM peak hour)
- #20 – Rubidoux Boulevard/Market Street (AM and PM peak hour)
- #21 – Agua Mansa Road/Market Street (PM peak hour)
- #22 – Rubidoux Boulevard/SR-60 WB Off Ramp (PM peak hour)
- #23 – Rubidoux Boulevard/SR-60 WB On Ramp (AM and PM peak hour)
- #24 – Rubidoux Boulevard/SR-60 EB Ramps (AM and PM peak hour)
- #27 – Market Street/SR-60 EB Ramp (AM and PM peak hour)

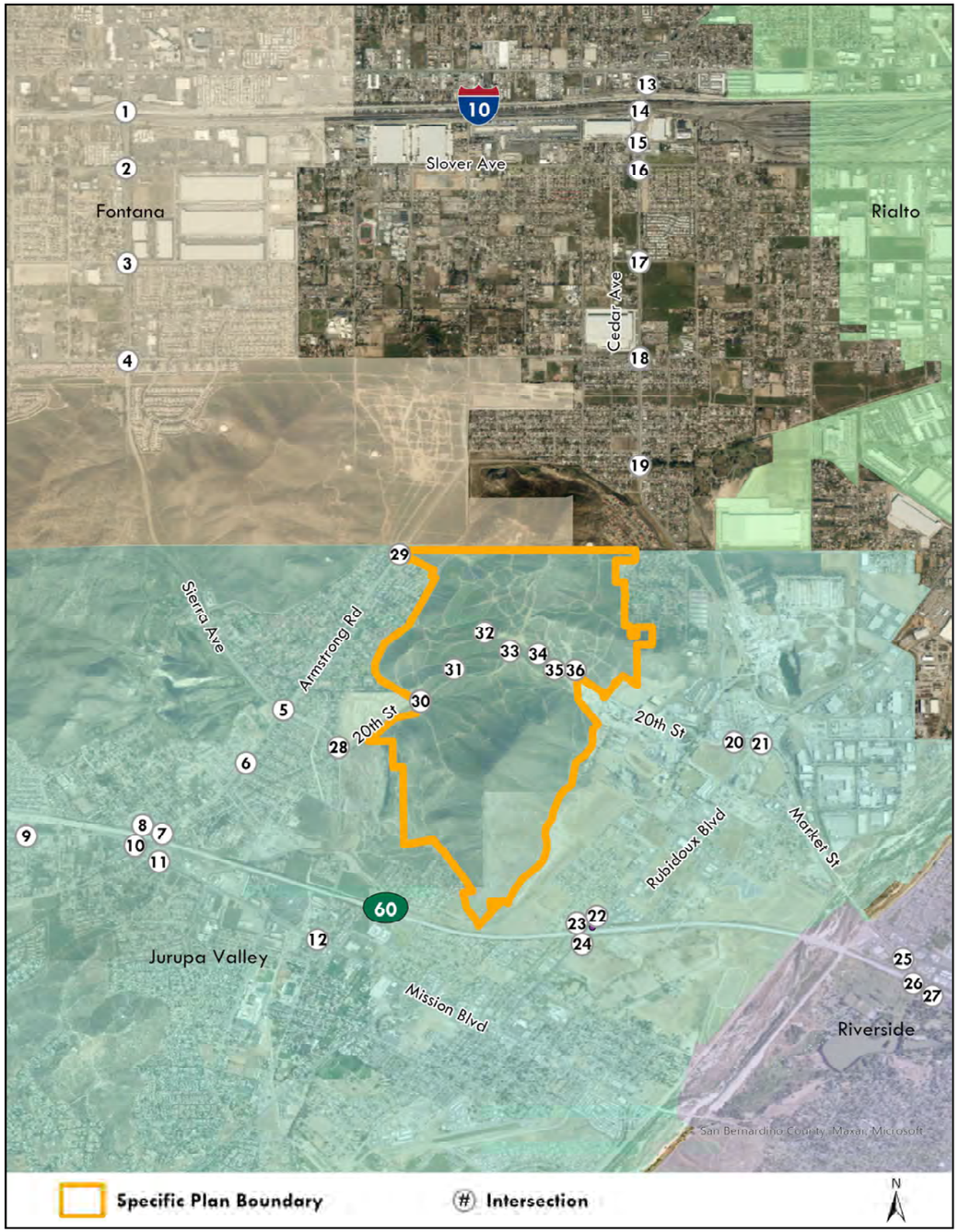
Roadway Segment

- #2 – Sierra Avenue: Santa Ana Avenue to Jurupa Avenue
- #3 – Sierra Avenue: Armstrong Road to 20th Street
- #5 – Valley Way: Sierra Avenue to 34th Street
- #6 – Valley Way: 34th Street to Granite Hill
- #7 – Cedar Avenue: I-10 EB Ramps to Slover Avenue
- #8 – Cedar Avenue: Slover Avenue to Santa Ana Avenue
- #9 – Cedar Avenue: Santa Ana Avenue to Jurupa Avenue
- #10 – Cedar Avenue: Jurupa Avenue to 7th Street
- #11 – Cedar Avenue: 7th Street to El Rivino Road
- #12 – Rubidoux Boulevard: El Rivino Road to Market Street
- #13 – Rubidoux Boulevard: Market Street to 28th Street
- #14 – Rubidoux Boulevard: 28th Street to SR-60 WB Off-Ramp
- #15 – Market Street: Agua Mansa Road to 24th Street

- #16 – Market Street: 24th Street to SR-60WB Off Ramp
- #17 – Mission Boulevard: SR-60 EB Ramps to Valley Way

Improvements for the significantly deficient intersections are discussed in Section 6 Project Improvements and Fair Share.

Figure 21a: Interim Year plus Specific Plan AM Peak Hour Traffic Volumes



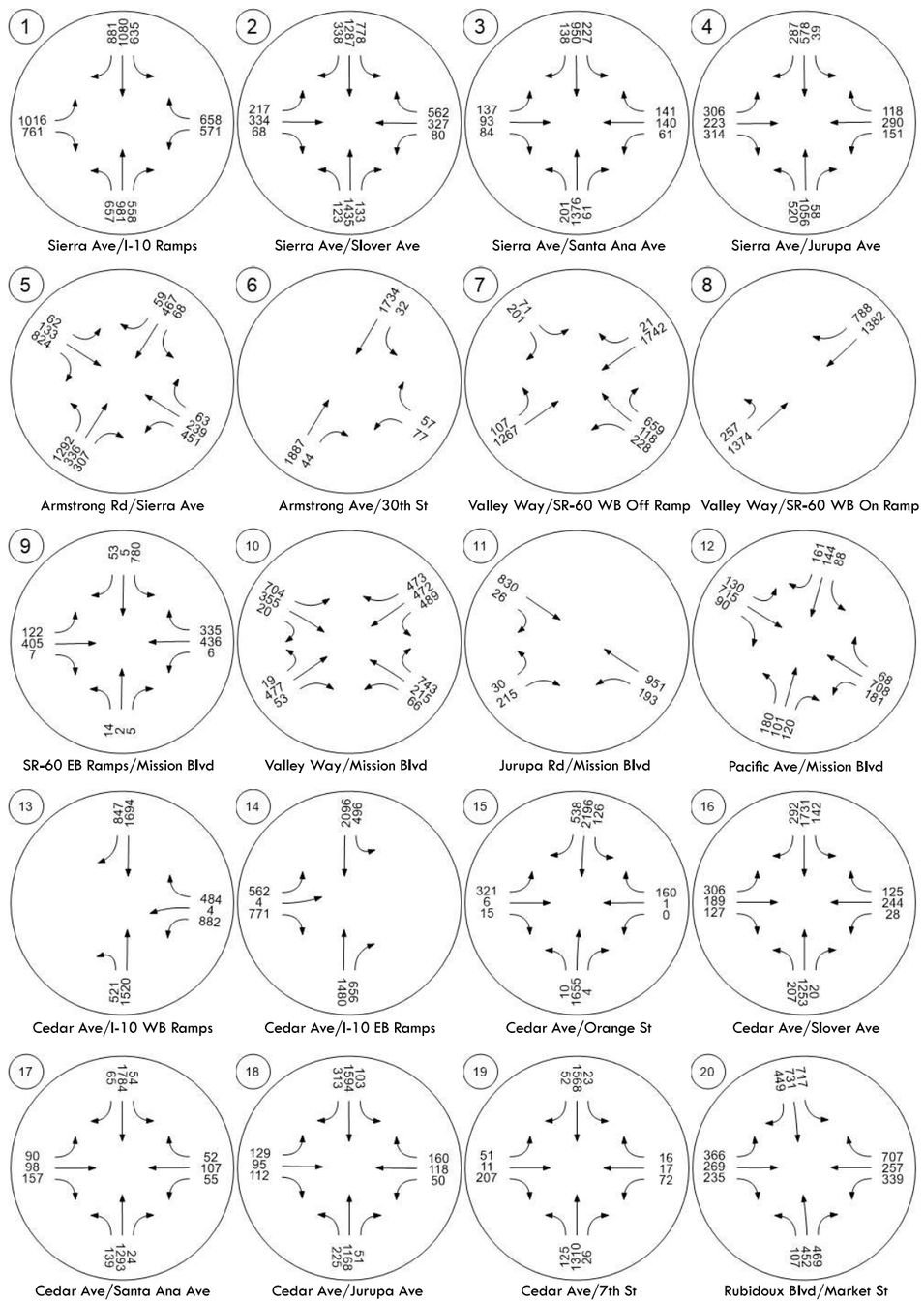
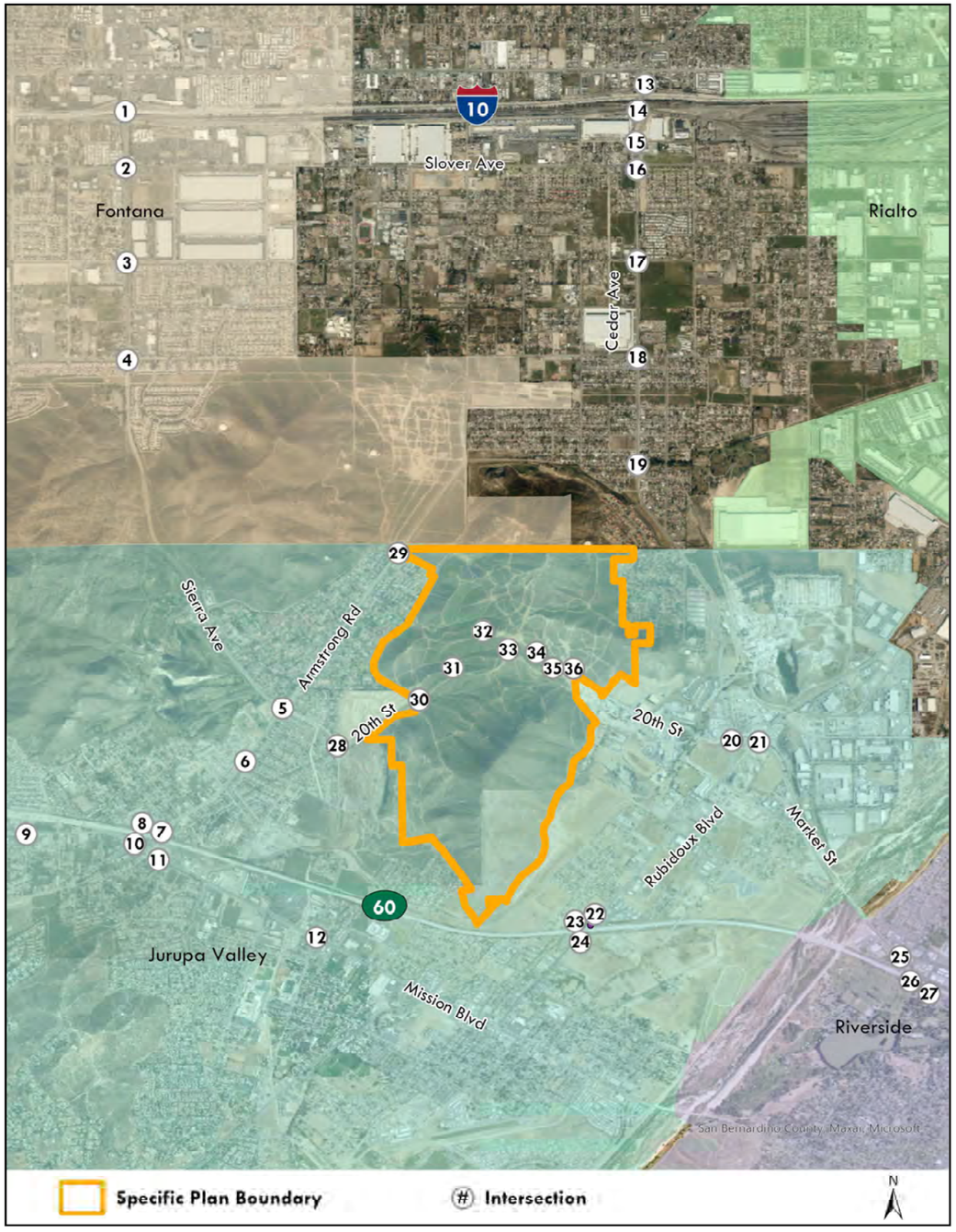


Figure 21b: Interim Year plus Specific Plan AM Peak Hour Traffic Volumes



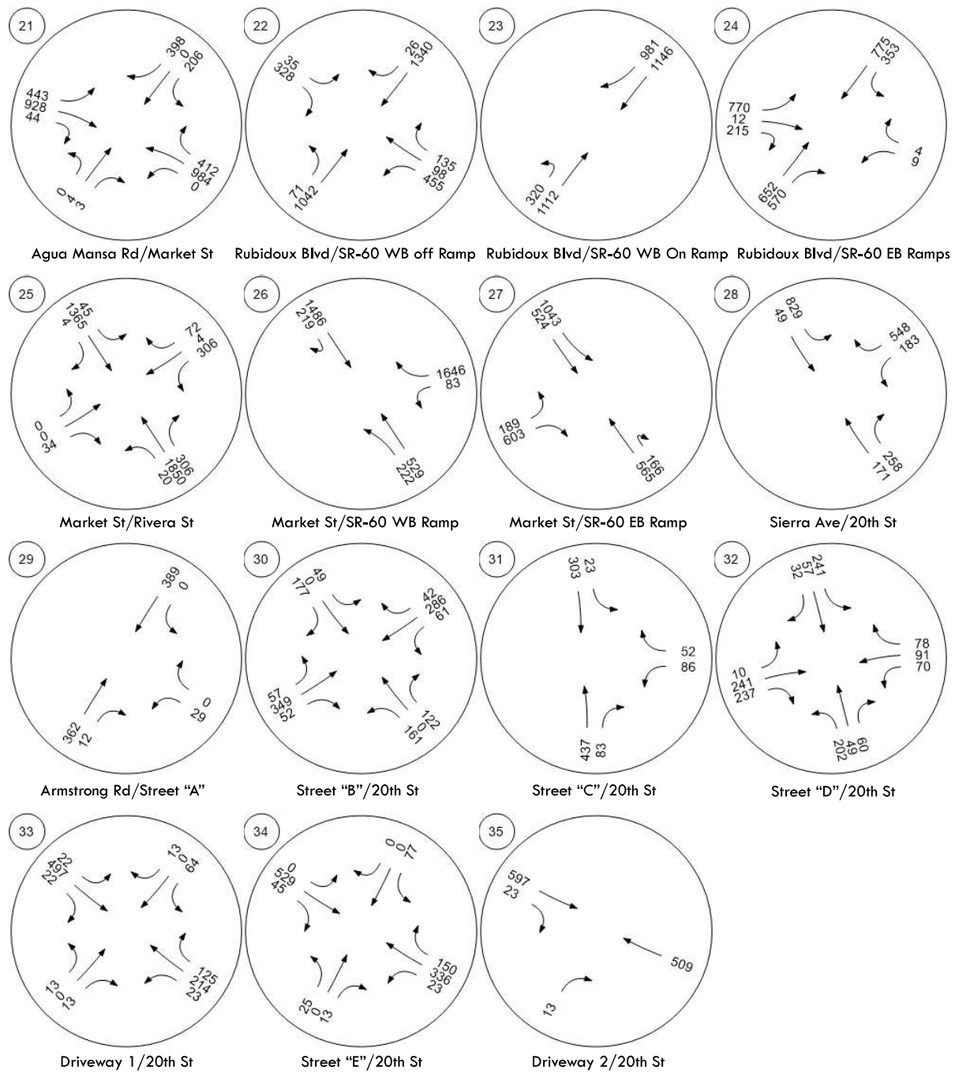
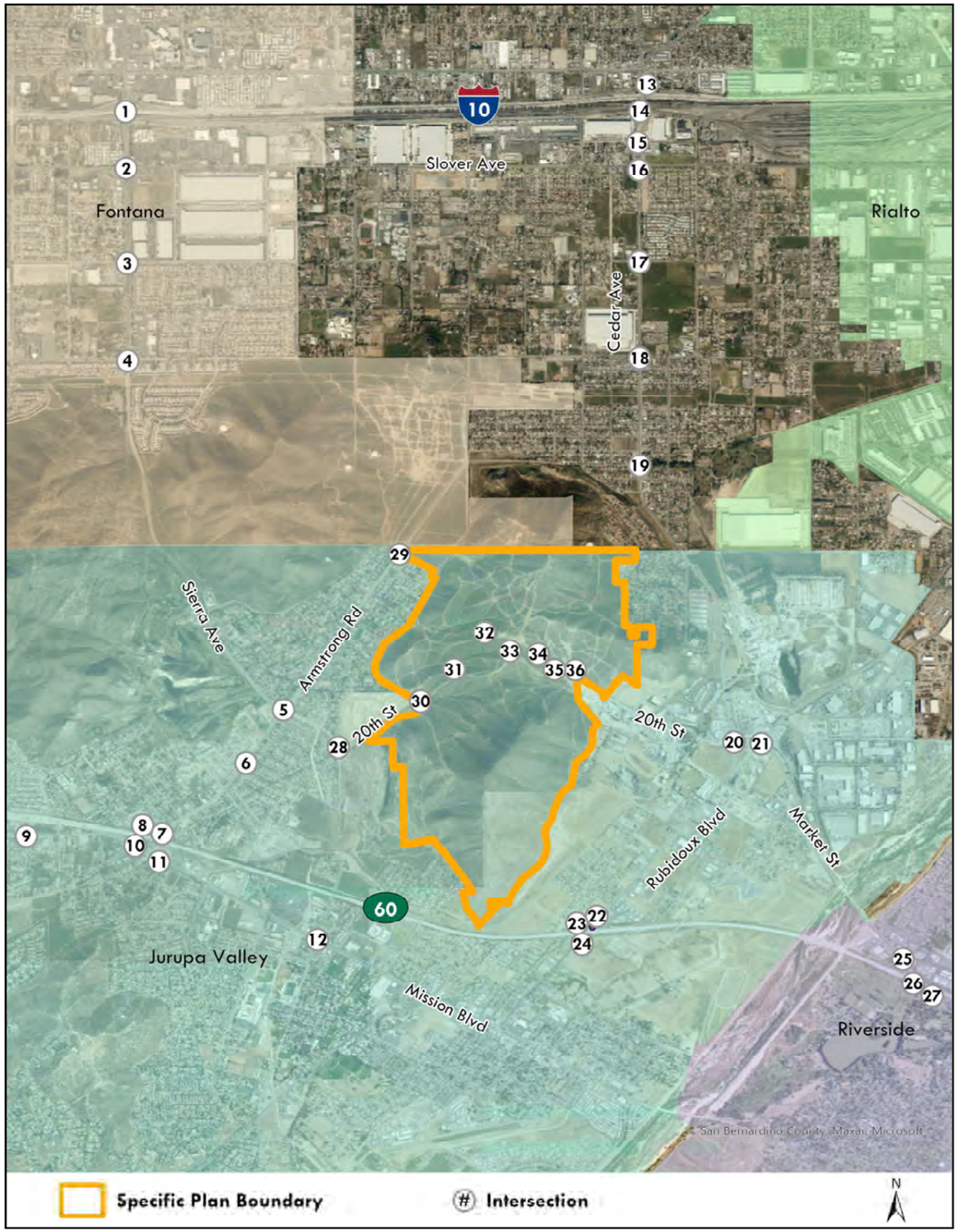


Figure 22a: Interim Year plus Specific Plan PM Peak Hour Traffic Volumes



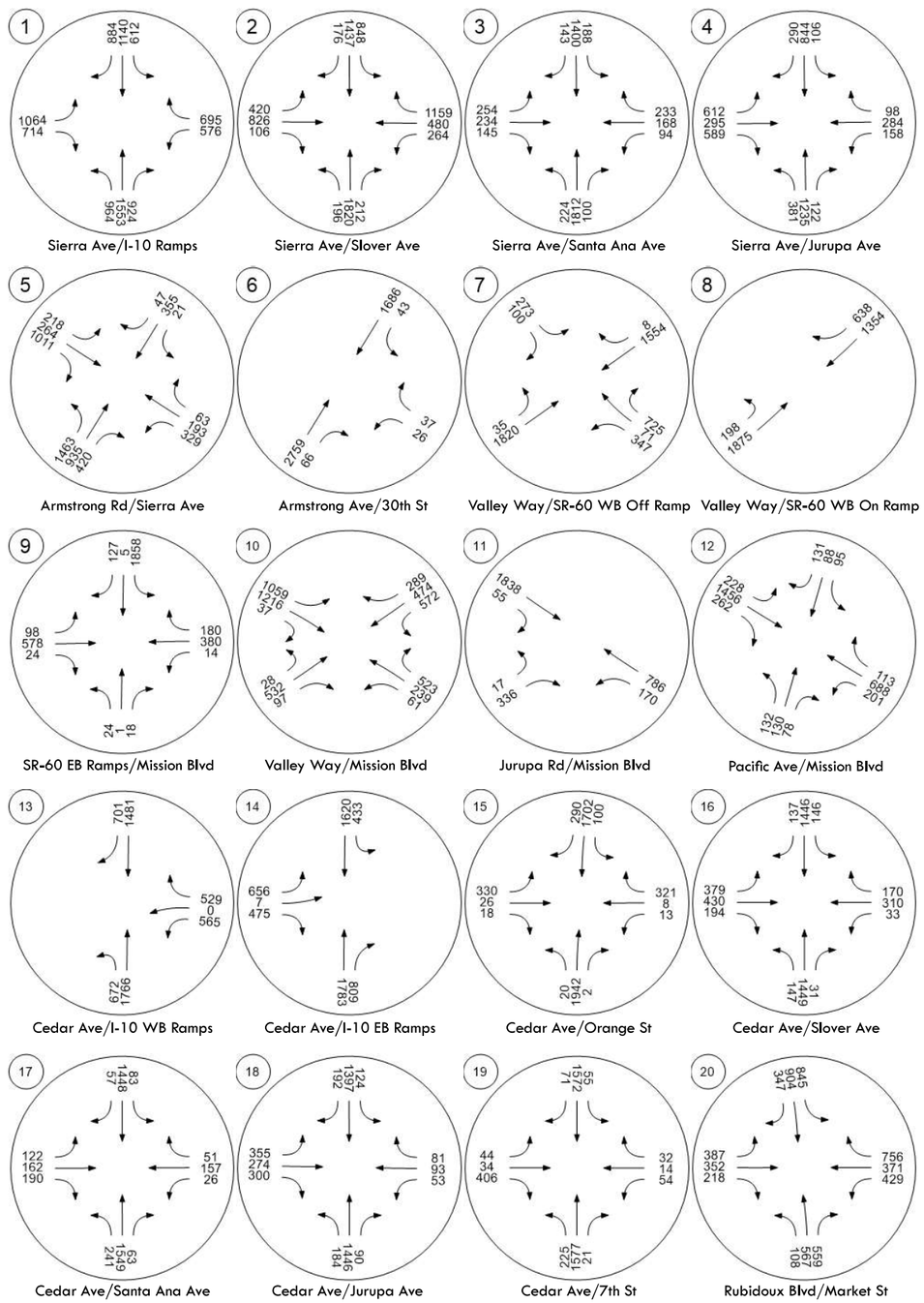
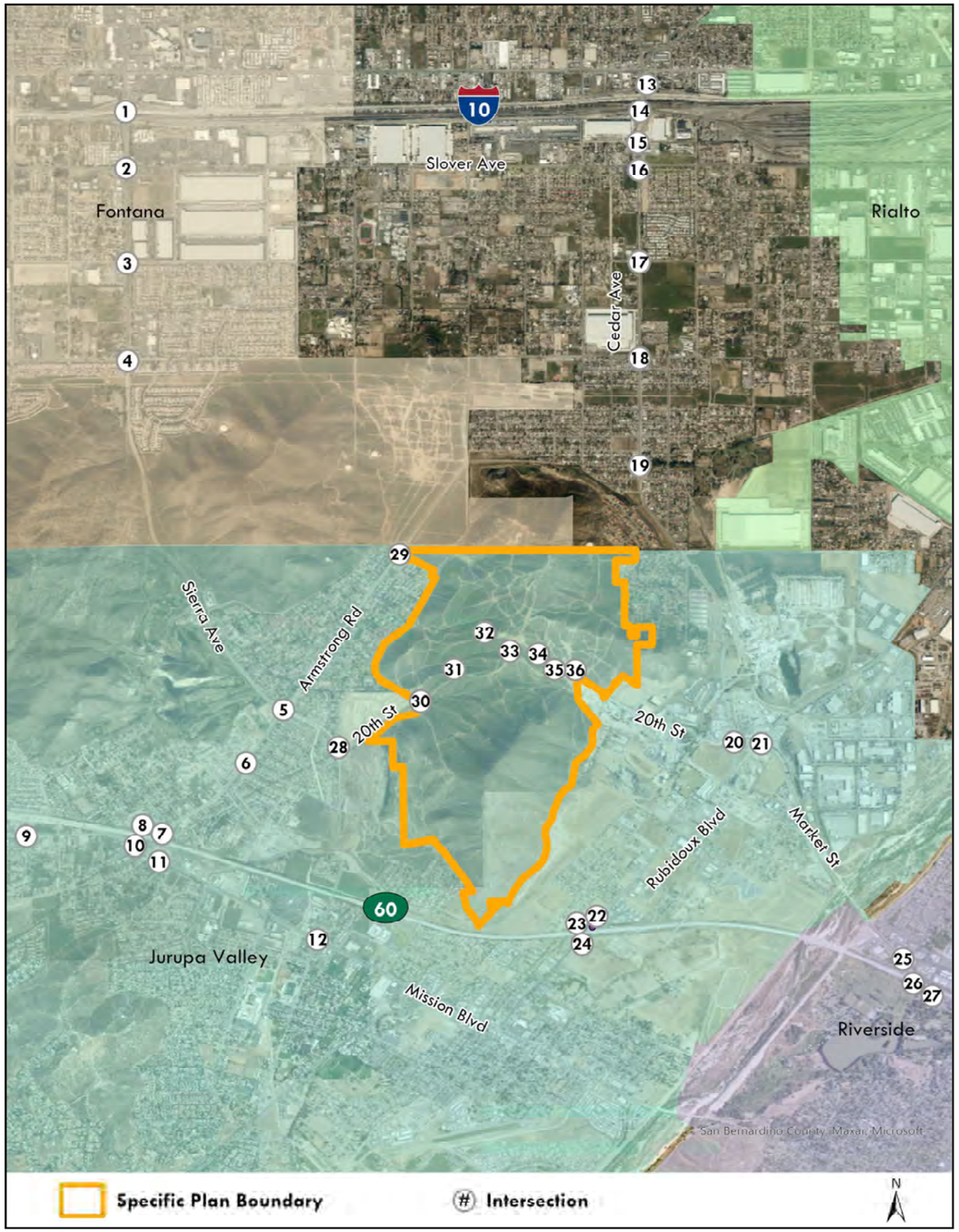


Figure 22b: Interim Year plus Specific Plan PM Peak Hour Traffic Volumes



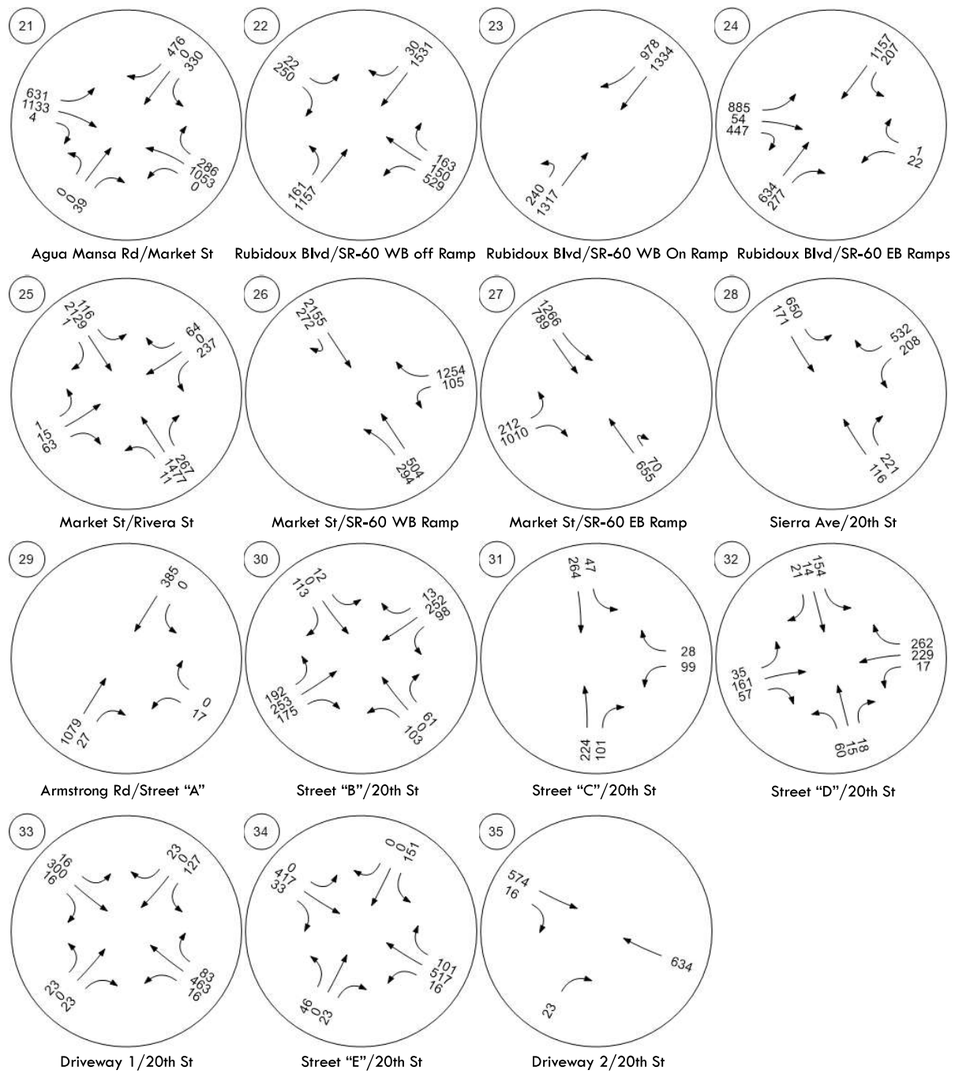


Table 20. Interim Year Plus Specific Plan AM and PM Peak Hour Levels of Service

	Intersection	Location %	Signal Control	Interim Year (2030)				Interim Year (2030) plus Project				Difference		Significant Difficiency?	
				AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]				
1.	Sierra Ave/I-10 Ramps (Existing)	50F/50C	Signal	24.1	C	31.2	C	25.3	C	33.3	C	1.2	2.1	No	No
2.	Sierra Ave/Slover Ave (Existing)	100 F	Signal	35.1	D	69.9	E	34.7	C	75.0	E	-0.4	5.1	No	No
3.	Sierra Ave/Santa Ana Ave (Existing)	100 F	Signal	23.0	C	38.6	D	22.6	C	38.4	D	-0.4	-0.2	No	No
4.	Sierra Ave/Jurupa Ave (Existing)	100 F	Signal	34.3	C	43.7	D	33.7	C	47.2	D	-0.6	3.5	No	No
5.	Armstrong Rd/Sierra Ave (Existing)	100 JV	Signal	55.7	E	54.1	D	>99	F	>99	F	56.1	51.9	Yes	Yes
6.	Armstrong Rd/30th St (Existing)	100 JV	Signal	6.7	A	6.4	A	10.4	B	13.3	B	3.7	6.9	No	No
7.	Valley Way/SR-60 WB Off Ramp (Existing)	50JV/50C	Signal	>99	F	>99	F	>99	F	>99	F	38.4	81.3	Yes	Yes
8.	Valley Way/SR-60 WB On Ramp (Existing)	50JV/50C	Signal	12.6	B	8.1	A	13.3	B	8.9	A	0.7	0.8	No	No
9.	SR-60 EB Ramps/Mission Blvd (Existing)	50JV/50C	Signal	30.2	C	>99	F	37.5	D	>99	F	7.3	76.4	No	Yes
10.	Valley Way/Mission Blvd (Existing)	100 JV	Signal	41.0	D	46.3	D	59.6	E	87.6	F	18.6	41.3	Yes	Yes
11.	Jurupa Rd/Mission Blvd (Existing)	100 JV	TWSC	>99	F	>99	F	>99	F	>99	F	39.2	505.4	Yes	Yes
12.	Pacific Ave/Mission Blvd (Existing)	100 JV	Signal	22.0	C	24.1	C	23.3	C	30.1	C	1.3	6.0	No	No
13.	Cedar Ave/ I-10 WB Ramps (Existing)	50SB/50C	Signal	16.6	B	15.2	B	23.6	C	17.5	B	7.0	2.3	No	No
14.	Cedar Ave/ I-10 EB Ramps (Existing)	50SB/50C	Signal	40.5	D	23.9	C	69.8	E	43.7	D	29.3	19.8	No	No
15.	Cedar Ave/Orange St (Existing)	100 SB	Signal	25.0	C	33.3	C	66.1	E	50.3	D	41.1	17.0	Yes	No
16.	Cedar Ave/Slover Ave (Existing)	100 SB	Signal	64.9	E	58.8	E	>99	F	86.0	F	63.8	27.2	Yes	Yes
17.	Cedar Ave/Santa Ana Ave (Existing)	100 SB	Signal	29.9	C	57.3	E	56.5	E	57.3	E	26.6	0.0	Yes	No
18.	Cedar Ave/Jurupa Ave (Existing)	100 SB	Signal	>99	F	>99	F	>99	F	>99	F	196.4	21.0	Yes	Yes
19.	Cedar Ave/7th St (Existing)	100 SB	Signal	16.7	B	30.1	C	21.5	C	48.5	D	4.8	18.4	No	No
20.	Rubidoux Blvd/Market St (Existing)	100 JV	Signal	98.3	F	>99	F	>99	F	>99	F	84.6	111.0	Yes	Yes
21.	Agua Mansa Rd/Market St (Existing)	100 JV	Signal	41.9	D	66.1	E	81.2	F	96.7	F	39.3	30.6	Yes	Yes
22.	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	50JV/50C	Signal	33.4	C	64.3	E	36.3	D	77.0	E	2.9	12.7	Yes	Yes
23.	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	50JV/50C	TWSC	>99	F	>99	F	>99	F	>99	F	102.7	157.0	Yes	Yes
24.	Rubidoux Blvd/SR-60 EB Ramps (Existing)	50JV/50C	Signal	95.0	F	75.0	E	>99	F	>99	F	57.8	30.0	Yes	Yes
25.	Market St/Rivera St (Existing)	100 R	Signal	16.0	B	18.9	B	17.7	B	21.4	C	1.7	2.5	No	No
26.	Market St/SR-60 WB Ramps (Existing)	50R/50C	Signal	9.1	A	19.4	B	10.1	B	30.8	C	1.0	11.4	No	No
27.	Market St/SR-60 EB Ramps (Existing)	50R/50C	Signal	45.2	D	>99	F	66.8	E	>99	F	21.6	49.7	Yes	Yes
28.	Sierra Ave/20th St (Existing)	100 JV	AWSC	15.7	B	11.6	B	43.9	D	33.7	C	28.2	22.1	Yes	No
29.	Armstrong Rd/Driveway 1 (Proposed)	100 JV	TWSC	-	-	-	-	13.3	B	21.3	C	N/A	N/A	No	No
30.	Driveway 2/20th St (Proposed)	100 JV	TWSC	-	-	-	-	10.8	B	7.1	A	N/A	N/A	No	No
31.	Street A/20th St (Proposed)	100 JV	TWSC	-	-	-	-	26.0	D	10.2	B	N/A	N/A	No	No
32.	Street B/20th St (Proposed)	100 JV	TWSC	-	-	-	-	11.7	B	6.3	A	N/A	N/A	No	No
33.	Street M/20th St (Proposed)	100 JV	TWSC	-	-	-	-	6.0	A	5.2	A	N/A	N/A	No	No
34.	Driveway 3/20th St (Proposed)	100 JV	TWSC	-	-	-	-	9.1	A	17.2	B	N/A	N/A	No	No
35.	Driveway 4/20th St (Proposed)	100 JV	TWSC	-	-	-	-	5.4	A	13.8	B	N/A	N/A	No	No
36.	Driveway 5/20th St (Proposed)	100 JV	TWSC	-	-	-	-	11.3	B	15.7	C	N/A	N/A	No	No

= Unsatisfactory Level of Service TWSC = Two-Way Stop Controlled AWSC = All Way Stop Controlled

F Fontana

C Caltrans

SB San Bernardino

JV Jurupa Valley

R Riverside

[1] Delay in Seconds

[2] Level of Service

Table 21. Interim Year Plus Specific Plan AM and PM Peak Hour Levels of Service

					Interim Year (2030)			Interim Year (2030) plus Project			Percent	Deficient?
	Roadway Segment	Type	# of Lanes	Capacity	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Increase	
1	Sierra Ave: Santa Ana Ave to Jurupa Ave	Major Highway	6	54,000	42,185	0.781	C	46,469	0.861	D	7.9%	No
2	Sierra Ave: Jurupa Ave to Armstrong Rd	Arterial	4	25,000	34,624	1.385	F	39,020	1.561	F	17.6%	Yes
3	Sierra Ave: Armstrong Rd to 20th Street	Arterial	2	18,000	6,678	0.371	A	19,302	1.072	F	70.1%	Yes
4	Sierra Ave: 20th Street to UPRR Tracks	Arterial	2	18,000	4,456	0.248	A	8,966	0.498	A	25.1%	No
5	Valley Way: Sierra Ave to 34th St	Major	4	34,100	48,327	1.417	F	56,250	1.650	F	23.2%	Yes
6	Valley Way: 34th St to Granite Hill	Major	4	34,100	48,716	1.429	F	55,627	1.631	F	20.3%	Yes
7	Cedar Ave: I-10 EB Ramps to Slover Ave	Major Hwy	4	33,000	51,316	1.555	F	60,685	1.839	F	28.4%	Yes
8	Cedar Ave: Slover Ave to Santa Ana Ave	Major Divided Hwy	4	37,500	41,807	1.115	F	51,176	1.365	F	25.0%	Yes
9	Cedar Ave: Santa Ana Ave to Jurupa Ave	Major Divided Hwy	4	37,500	43,480	1.159	F	52,849	1.409	F	25.0%	Yes
10	Cedar Ave: Jurupa Ave to 7th St	Major Divided Hwy	4	37,500	40,818	1.088	F	50,187	1.338	F	25.0%	Yes
11	Cedar Ave:7th St to El Rivino Rd	Major Divided Hwy	4	37,500	41,647	1.111	F	51,016	1.360	F	25.0%	Yes
12	Rubidoux Blvd: El Rivino Rd to Market St	Major	4	34,100	41,148	1.207	F	50,629	1.485	F	27.8%	Yes
13	Rubidoux Blvd: Market St to 28th St	Major	4	34,100	32,763	0.961	E	37,231	1.092	F	13.1%	Yes
14	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Arterial	4	25,000	35,991	1.440	F	40,325	1.613	F	17.3%	Yes
15	Market St: Agua Mansa Road to 24th St	Major	4	34,100	33,623	0.986	F	41,226	1.209	F	22.3%	Yes
16	Market St: 24th St to SR-60 WB Off Ramp	Major	4	34,100	47,904	1.405	F	55,507	1.628	F	22.3%	Yes
17	Mission Blvd: SR-60 EB Ramps to Valley Way	Arterial	4	25,000	29,405	1.176	F	32,774	1.311	F	13.5%	Yes
18	20th St: Driveway 2 to Street A	Arterial	4	25,000	Does not Exisit			14,630	0.585	A	N/A	No
19	20th St: Street A to Street B	Arterial	4	25,000	Does not Exisit			15,438	0.618	B	N/A	No
20	20th St: Street B to Street M	Arterial	4	25,000	Does not Exisit			15,698	0.628	B	N/A	No
21	20th St: Street M to Driveway 3	Arterial	4	25,000	Does not Exisit			16,938	0.678	B	N/A	No
22	20th St: Driveway 3 to Driveway 4	Arterial	4	25,000	Does not Exisit			19,763	0.791	C	N/A	No
23	20th St: Driveway 4 to Driveway 5	Arterial	4	25,000	Does not Exisit			21,118	0.845	D	N/A	No
24	20th St: Driveway 5 to Rubidoux Blvd	Arterial	4	25,000	Does not Exisit			15,154	0.606	B	N/A	No

5.2 Interim Year (2030) Plus Specific Plan Queueing Analysis

A queueing analysis has been conducted for Caltrans right of way intersections that could be affected by a deficient queueing length for the Interim Year (2030) Plus Project condition. The queuing analysis was done utilizing the 95th percentile available in the Vistro output sheets attached as Appendix C. As seen in Table 22, the Specific Plan would cause a queue deficiency at the following approaches in the Interim Year (2030) Plus Specific Plan condition:

- Sierra Avenue/I-10 Ramps
  - Northbound left-turn lane
- SR-60 EB Ramps/Mission Boulevard
  - Southbound left-turn lane
  - Southbound right-turn lane
- Cedar Avenue/I-10 EB Ramp
  - Northbound right-turn lane
- Rubidoux Blvd/SR-60 WB Off Ramp
  - Westbound right-turn lane
- Rubidoux Boulevard/SR-60 WB On Ramp
  - Northbound left-turn lane
- Rubidoux Boulevard/SR-60 EB Ramps
  - Southbound left-turn lane
  - Eastbound left-turn lane
- Market Street/SR-60 EB Ramp
  - Southbound left-turn lane

Improvements for the significantly deficient queues are discussed in Section 6 Project Improvements and Fair Share.

Table 22. Interim Year (2030) Plus Specific Plan AM and PM Queueing Analysis

Intersection	Turning Movement	Available Queue Length (Ft)	Interim Year Without Project		Interim Year With Project		Project Deficiency?[2]		Queue Difference	
			AM	PM	AM	PM	AM	PM	AM	PM
			Required Queueing (Ft)	Required Queueing (Ft)	Required Queueing (Ft)	Required Queueing (Ft)			Queueing Difference (Ft)	Queueing Difference (Ft)
1. Sierra Ave/I-10 Ramps	NBL	565	300	484	387	608	No	Yes	-	123
	SBL	325	351	365	351	365	No	No	-	-
	EBL[1]	1205	439	569	439	569	No	No	-	-
	WBL[1]	1200	227	261	232	282	No	No	-	-
7. Valley Way/SR-60 WB Off Ramp	WBL[1]	880	266	405	266	405	No	No	-	-
	WBR	280	1721	1809	1721	1809	No	No	-	-
8. Valley Way/SR-60 WB On Ramp	NBL	115	406	311	406	311	No	No	-	-
9. SR-60 EB Ramps/Mission Blvd	SBL[1]	1120	420	1765	626	2701	No	Yes	-	935
	SBR	1550	418	1811	635	2743	No	Yes	-	932
	EBL	200	186	162	187	162	No	No	-	-
	WBR	340	81	36	80	36	No	No	-	-
13. Cedar Ave/I-10 WB Ramp	NBL	870	129	168	176	225	No	No	-	-
	SBR	450	208	159	279	192	No	No	-	-
	WBL[1]	1570	221	128	364	188	No	No	-	-
	WBR	485	114	143	101	141	No	No	-	-
14. Cedar Ave/I-10 EB Ramps	NBR	600	613	402	1042	1208	Yes	Yes	429	806
	SBL	535	413	303	413	303	No	No	-	-
	EBL	380	196	281	193	263	No	No	-	-
	EBR[1]	2350	607	285	1490	714	No	No	-	-
22. Rubidoux Blvd/SR-60 WB Off Ramp	WBL[1]	1280	704	1440	704	1440	No	No	-	-
	WBR	85	63	93	77	150	No	Yes	-	57
23. Rubidoux Blvd/SR-60 WB On Ramp	NBL	145	404	293	501	408	Yes	Yes	97	115
24. Rubidoux Blvd/SR-60 EB Ramps	NBR	1045	1061	527	1061	527	No	No	-	-
	SBL	145	491	247	884	489	Yes	Yes	393	242
	EBL[1]	1160	1350	1744	2404	2330	Yes	Yes	1054	585
	EBR	40	194	386	194	386	No	No	-	-
	WBL	750	13	33	13	33	No	No	-	-
	WBR	65	6	1	6	1	No	No	-	-
26. Market St/SR-60 WB Ramp	NBL	185	155	386	155	386	No	No	-	-
	WBL[1]	1345	64	163	64	163	No	No	-	-
27. Market St/SR-60 EB Ramp	SBL	155	906	1049	1486	2837	Yes	Yes	580	1788
	EBL	180	233	242	233	242	No	No	-	-
	EBR[1]	1630	401	1045	401	1045	No	No	-	-

Indicates queueing required greater than storage available

[1] Available queue length reflects the full ramp length.

[2] The project would cause a deficiency if: a) The addition of project trips causes the queue to exceed the storage length and b) The project adds one car length (25 feet) of queue to a queue that exceeds the storage length in the baseline condition.

5.3 General Plan Buildout (2045) Plus Specific Plan Traffic Volumes and Operations

General Plan Buildout (2045) plus SP traffic volumes were determined by adding the SP trips to Year 2045 traffic volumes. The General Plan Buildout (2045) plus SP traffic volumes are shown in Figures 23 and 24. Table 23 shows the General Plan Buildout (2045) plus SP AM and PM peak hour levels of service at study intersections, and Table 24 shows the General Plan Buildout (2045) plus SP daily roadway segments. All LOS calculations are provided in Appendix C. As shown in Table 23 and Table 24, the following intersections and roadway segments would have significant operational deficiencies with addition of the project:

Intersections

- #4 – Sierra Avenue/Jurupa Avenue (PM peak hour)
- #5 – Armstrong Road/Sierra Avenue (AM and PM peak hour)
- #7 – Valley Way/SR-60 WB Off Ramp (AM and PM peak hour)
- #9 – SR-60 EB Ramps/Mission Boulevard (PM peak hour)
- #10 – Valley Way/Mission Boulevard (AM and PM peak hour)
- #11 – Jurupa Road/Mission Boulevard (AM and PM peak hour)
- #12 – Pacific Avenue/Mission Boulevard (PM peak hour)
- #15 – Cedar Avenue/Orange Street (AM and PM peak hour)
- #16 – Cedar Avenue/Slover Avenue (AM and PM peak hour)
- #17 – Cedar Avenue/Santa Ana Avenue (AM and PM peak hour)
- #18 – Cedar Avenue/Jurupa Avenue (AM and PM peak hour)
- #20 – Rubidoux Boulevard/Market Street (AM and PM peak hour)
- #21 – Agua Mansa Road/Market Street (PM peak hour)
- #22 – Rubidoux Boulevard/SR-60 WB Off Ramp (AM and PM peak hour)
- #23 – Rubidoux Boulevard/SR-60 WB On Ramp (AM and PM peak hour)
- #24 – Rubidoux Boulevard/SR-60 EB Ramps (AM and PM peak hour)
- #26 – Market Street/Sr-60 WB Ramps (PM peak hour)
- #27 – Market Street/SR-60 EB Ramps (AM and PM peak hour)
- #28 – Sierra Avenue/20th Street (PM peak hour)

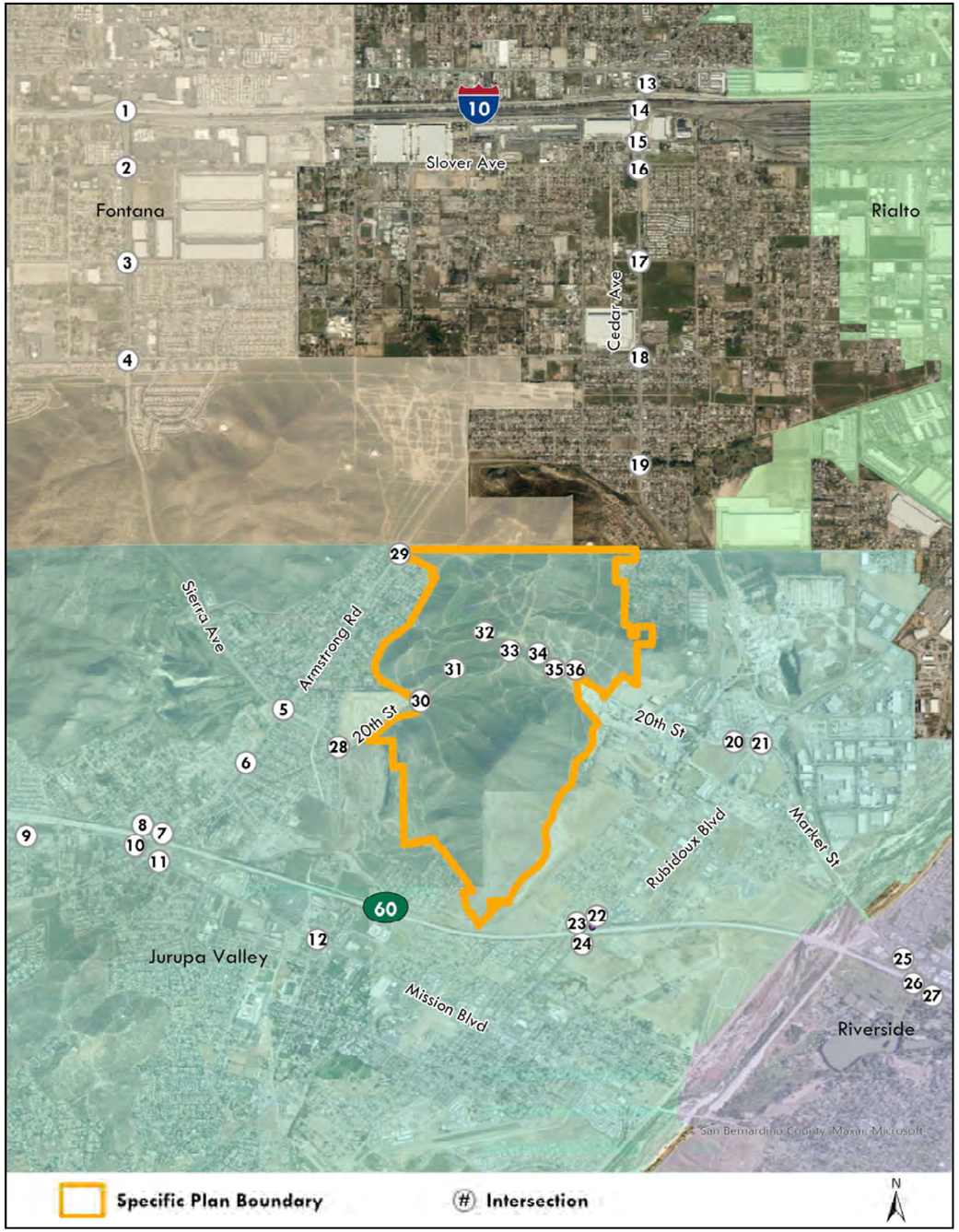
Roadway Segment

- #2 – Sierra Avenue: Santa Ana Avenue to Jurupa Avenue
- #3 – Sierra Avenue: Armstrong Road to 20th Street
- #5 – Valley Way: Sierra Avenue to 34th Street
- #6 – Valley Way: 34th Street to Granite Hill
- #7 – Cedar Avenue: I-10 EB Ramps to Slover Avenue
- #8 – Cedar Avenue: Slover Avenue to Santa Ana Avenue
- #9 – Cedar Avenue: Santa Ana Avenue to Jurupa Avenue
- #10 – Cedar Avenue: Jurupa Avenue to 7th Street
- #11 – Cedar Avenue: 7th Street to El Rivino Road
- #12 – Rubidoux Boulevard: El Rivino Road to Market Street
- #13 – Rubidoux Boulevard: Market Street to 28th Street
- #14 – Rubidoux Boulevard: 28th Street to SR-60 WB Off-Ramp

- #15 – Market Street: Agua Mansa Road to 24th Street
- #16 – Market Street: 24th Street to SR-60WB Off Ramp
- #17 – Mission Boulevard: SR-60 EB Ramps to Valley Way

Improvements for the significantly deficient intersections are discussed in Section 6 Project Improvements and Fair Share.

Figure 23a: General Plan Buildout plus Specific Plan AM Peak Hour Traffic Volumes



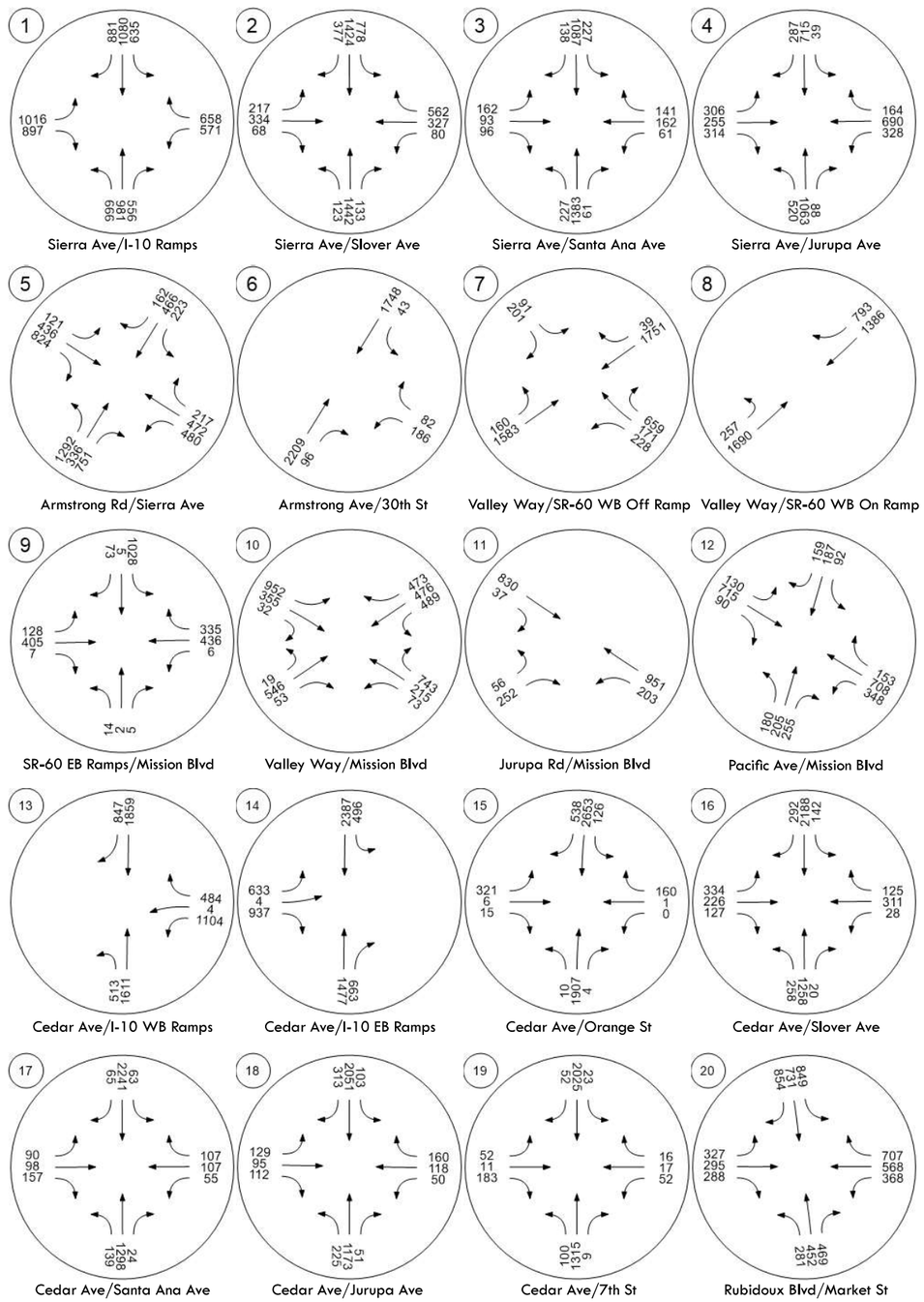
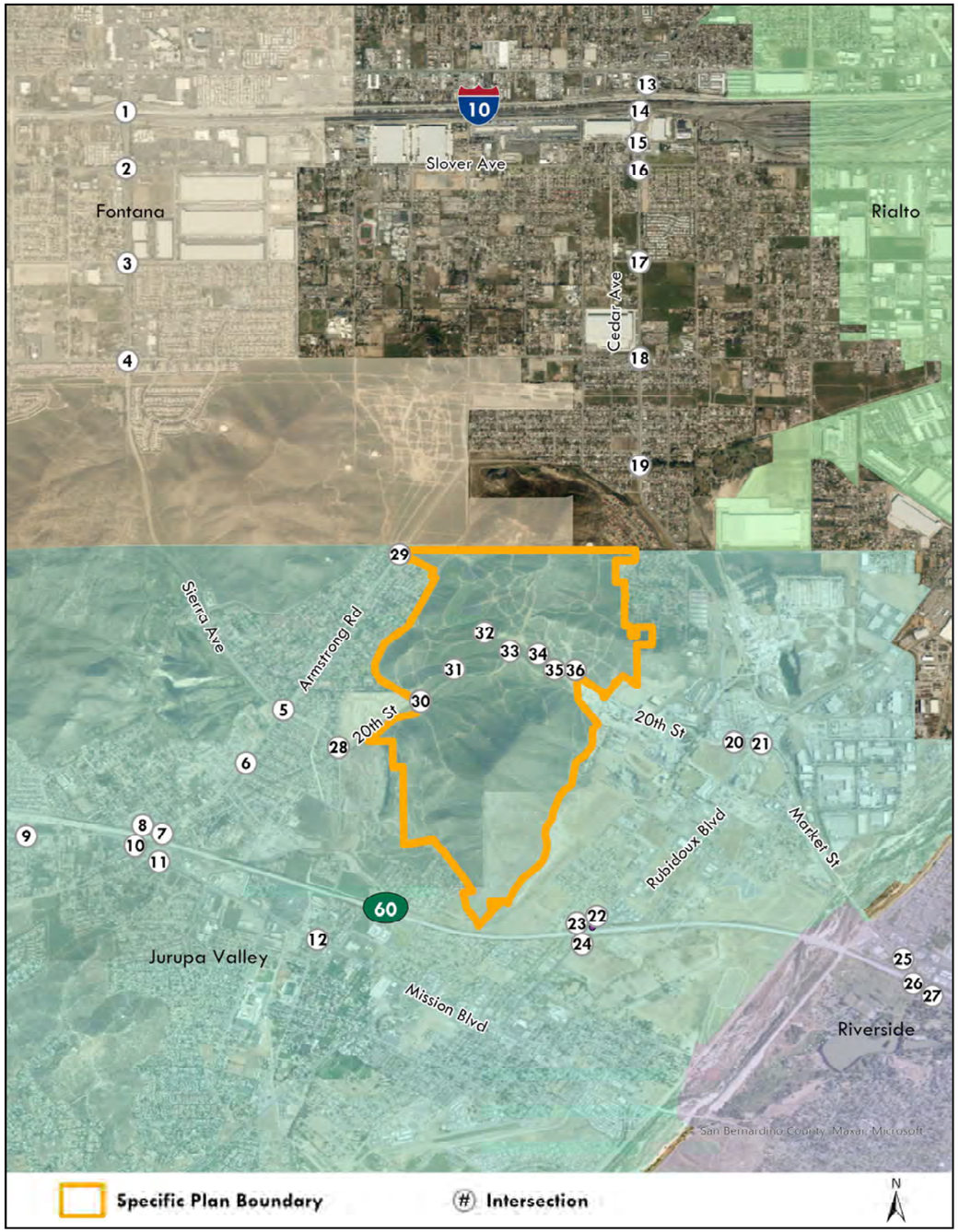


Figure 23b: General Plan Buildout plus Specific Plan AM Peak Hour Traffic Volumes



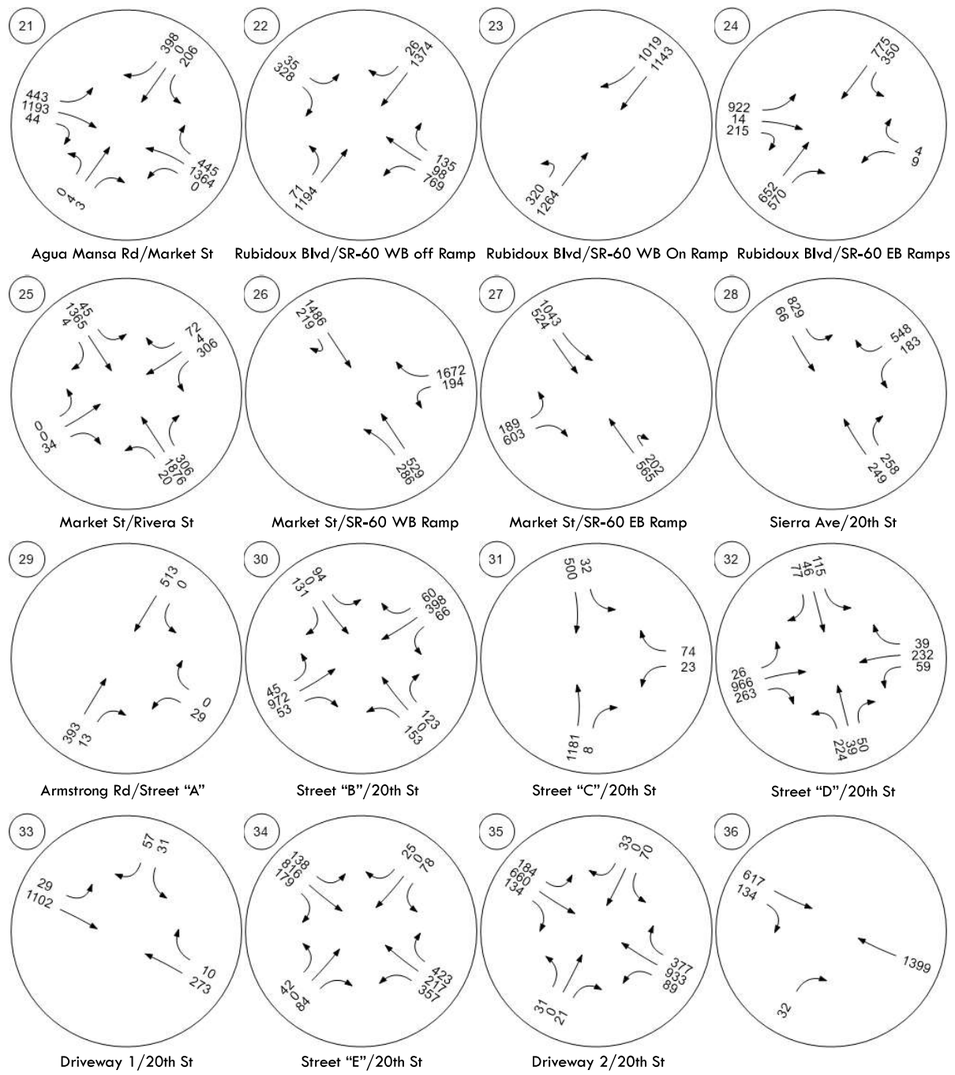
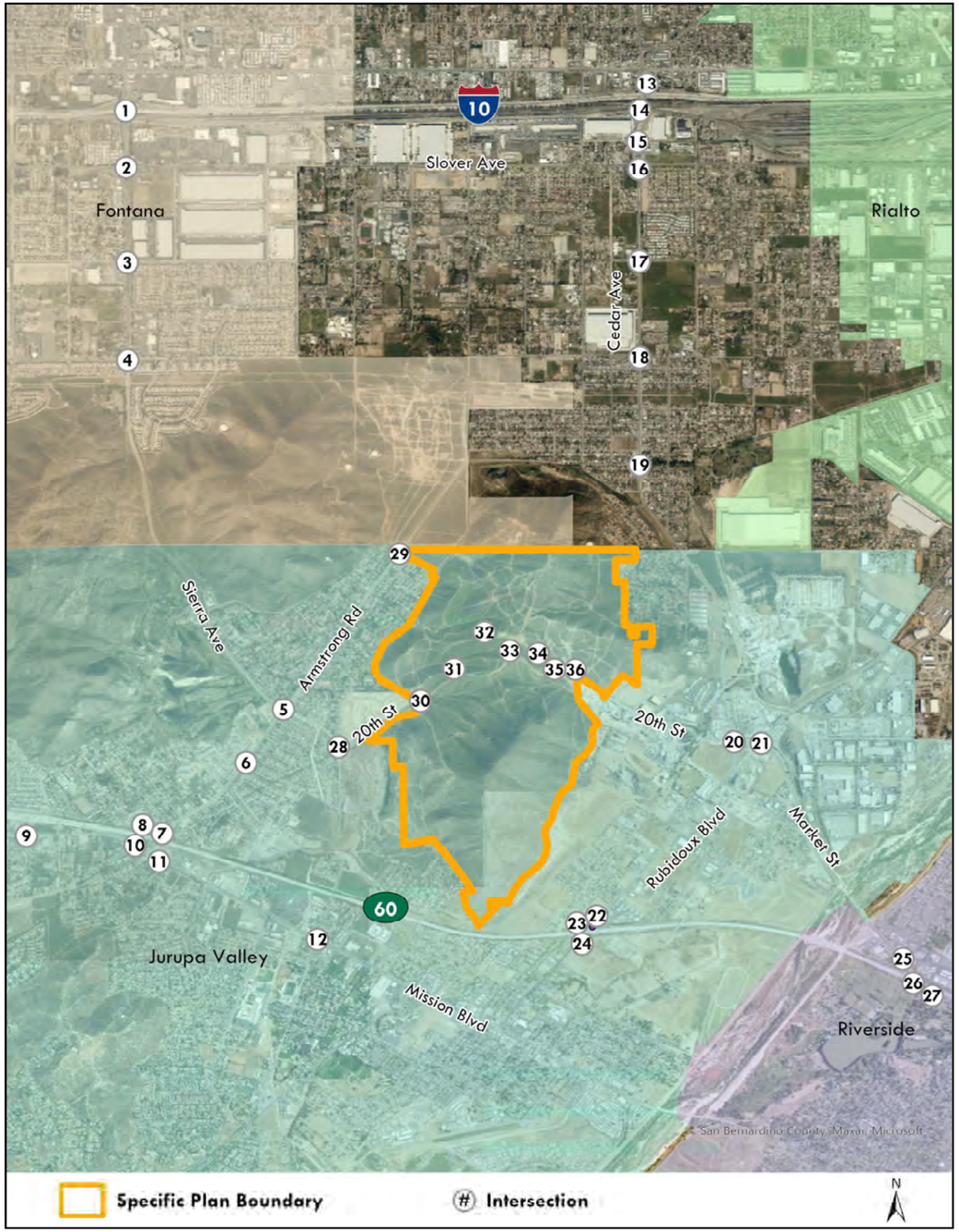


Figure 24a: General Plan Buildout plus Specific Plan PM Peak Hour Traffic Volumes



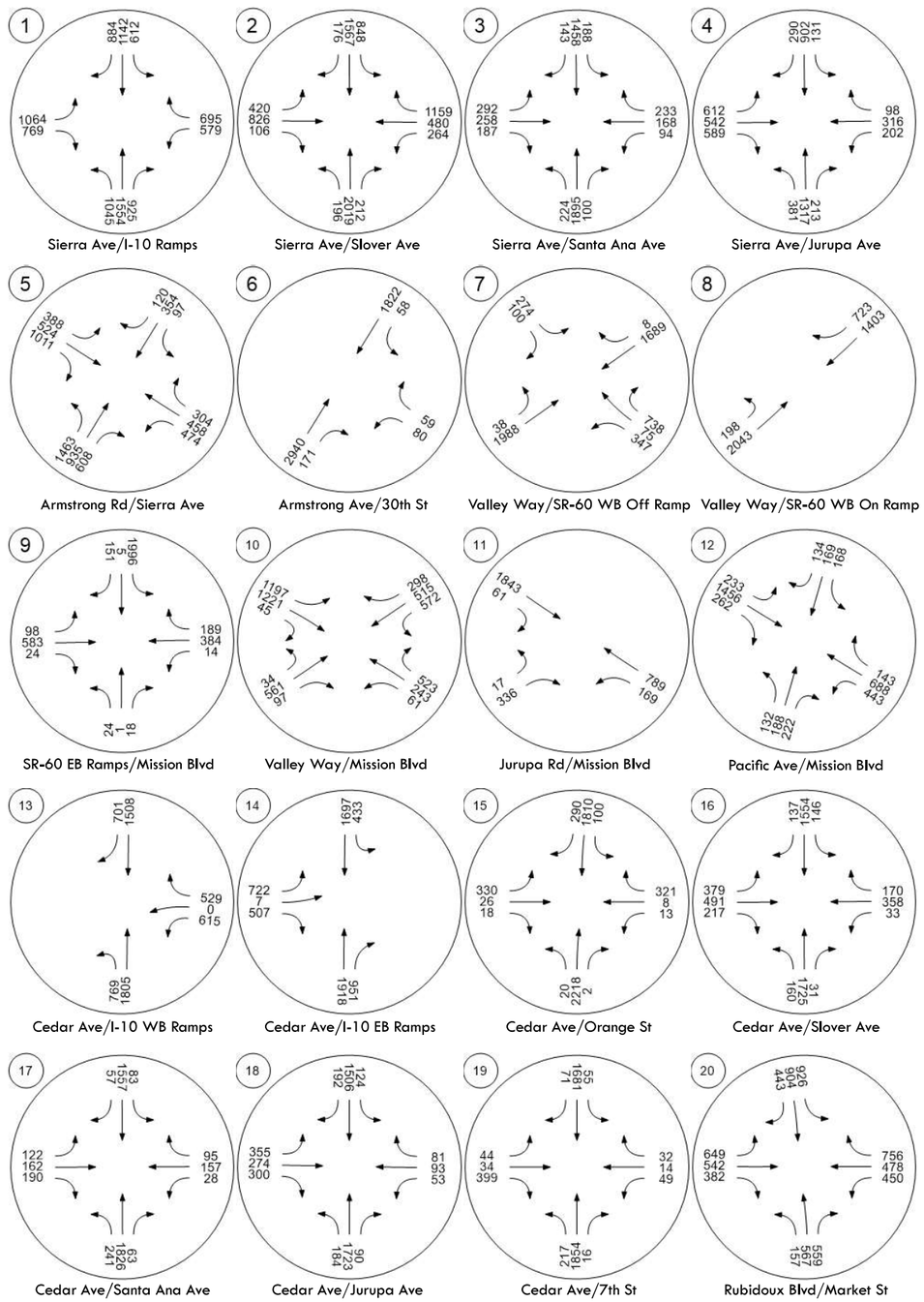
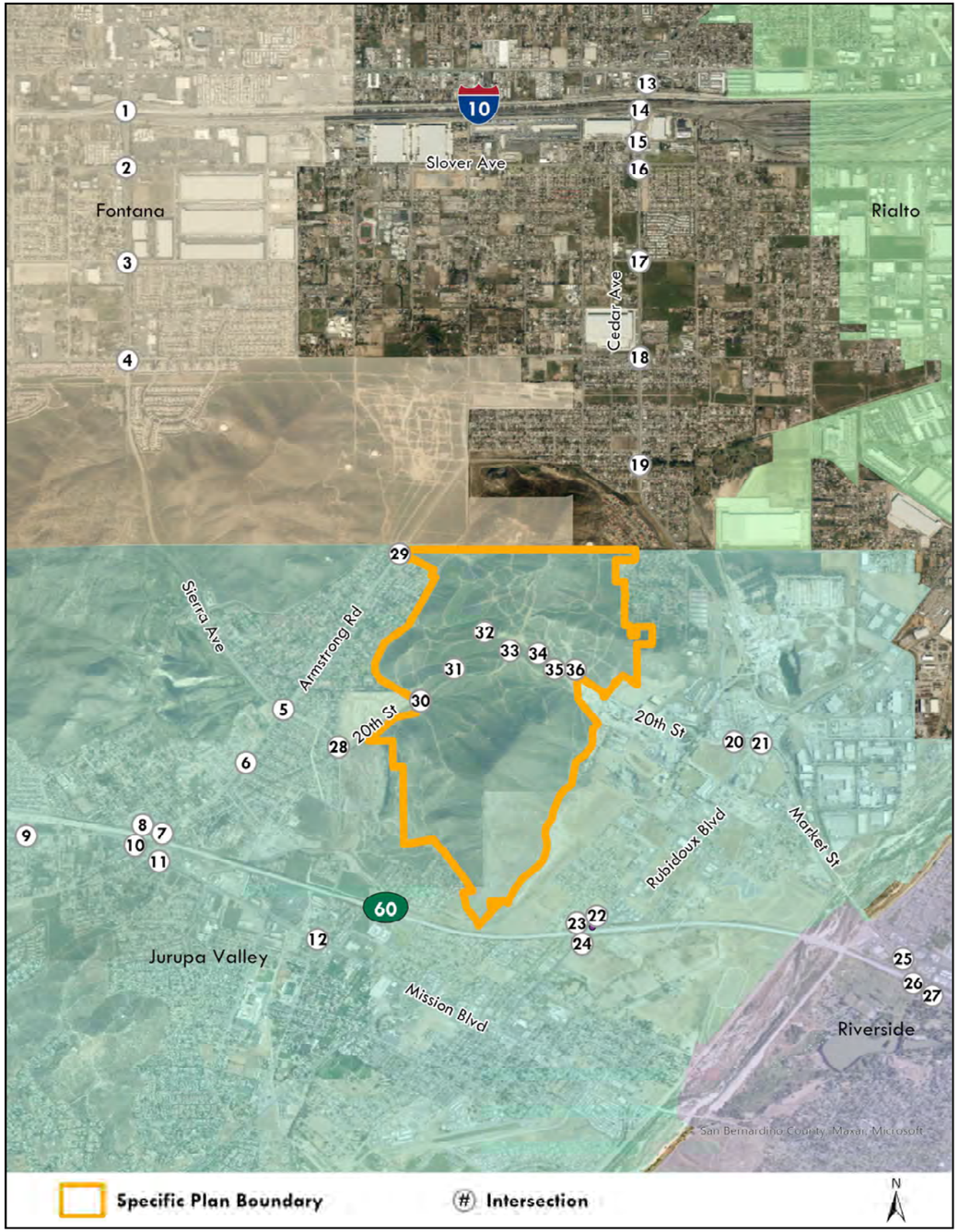


Figure 24b: General Plan Buildout plus Specific Plan PM Peak Hour Traffic Volumes



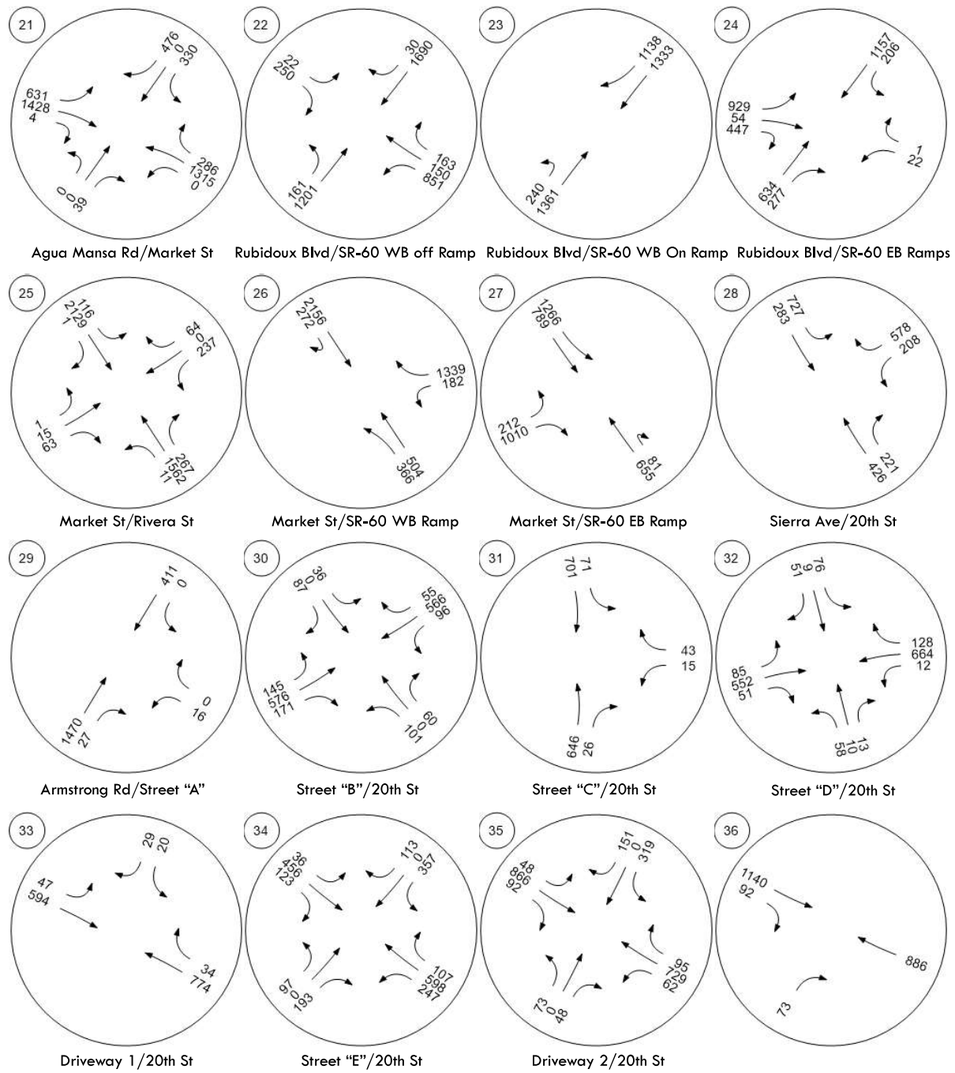


Table 23. General Plan Buildout Plus Specific Plan AM and PM Peak Hour Levels of Service

	Intersection	Location %	Signal Control	GPB 2045				GPB 2045 plus Project				Difference		Significant Difficiency?	
				AM Peak		PM Peak		AM Peak		PM Peak					
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM	AM	PM
1.	Sierra Ave/I-10 Ramps (Existing)	50F/50C	Signal	24.7	C	30.8	C	24.9	C	34.4	C	0.2	3.6	No	No
2.	Sierra Ave/Slover Ave (Existing)	100 F	Signal	41.6	D	58.6	E	40.5	D	65.4	E	-1.1	6.8	No	No
3.	Sierra Ave/Santa Ana Ave (Existing)	100 F	Signal	24.5	C	33.0	C	23.9	C	34.5	C	-0.6	1.5	No	No
4.	Sierra Ave/Jurupa Ave (Existing)	100 F	Signal	37.7	D	44.3	D	37.6	D	51.8	D	-0.1	7.5	No	Yes
5.	Armstrong Rd/Sierra Ave (Existing)	100 JV	Signal	69.7	E	>99	F	>99	F	>99	F	71.3	37.9	Yes	Yes
6.	Armstrong Rd/30th St (Existing)	100 JV	Signal	13.2	B	11.3	B	17.6	B	27.9	C	4.4	16.6	No	No
7.	Valley Way/SR-60 WB Off Ramp (Existing)	50JV/50C	Signal	>99	F	>99	F	>99	F	>99	F	38.6	82.0	Yes	Yes
8.	Valley Way/SR-60 WB On Ramp (Existing)	50JV/50C	Signal	12.6	B	8.1	A	13.3	B	9.0	A	0.7	0.9	No	No
9.	SR-60 EB Ramps/Mission Blvd (Existing)	50JV/50C	Signal	30.7	C	>99	F	38.1	D	>99	F	7.4	76.9	No	Yes
10.	Valley Way/Mission Blvd (Existing)	100 JV	Signal	41.1	D	47.2	D	59.6	E	89.5	F	18.5	42.3	Yes	Yes
11.	Jurupa Rd/Mission Blvd (Existing)	100 JV	TWSC	>99	F	>99	F	>99	F	>99	F	108.1	523.6	Yes	Yes
12.	Pacific Ave/Mission Blvd (Existing)	100 JV	Signal	28.1	C	48.4	D	28.8	C	63.6	E	0.7	15.2	No	Yes
13.	Cedar Ave/ I-10 WB Ramps (Existing)	50SB/50C	Signal	16.7	B	15.2	B	31.5	C	17.4	B	14.8	2.2	No	No
14.	Cedar Ave/ I-10 EB Ramps (Existing)	50SB/50C	Signal	40.3	D	24.5	C	69.3	E	41.4	D	29.0	16.9	No	No
15.	Cedar Ave/Orange St (Existing)	100 SB	Signal	35.1	D	48.9	D	93.2	F	>99	F	58.1	59.1	Yes	Yes
16.	Cedar Ave/Slover Ave (Existing)	100 SB	Signal	82.6	F	59.0	E	>99	F	94.4	F	75.5	35.4	Yes	Yes
17.	Cedar Ave/Santa Ana Ave (Existing)	100 SB	Signal	28.6	C	36.3	D	58.2	E	61.3	E	29.6	25.0	Yes	Yes
18.	Cedar Ave/Jurupa Ave (Existing)	100 SB	Signal	41.1	D	>99	F	82.8	F	>99	F	41.7	28.4	Yes	Yes
19.	Cedar Ave/7th St (Existing)	100 SB	Signal	16.3	B	30.1	C	22.0	C	46.3	D	5.7	16.2	No	No
20.	Rubidoux Blvd/Market St (Existing)	100 JV	Signal	>99	F	>99	F	>99	F	>99	F	65.3	96.4	Yes	Yes
21.	Agua Mansa Rd/Market St (Existing)	100 JV	Signal	>99	F	80.7	F	>99	F	>99	F	64.5	41.9	Yes	Yes
22.	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	50JV/50C	Signal	88.8	F	>99	F	92.9	F	>99	F	4.1	10.3	Yes	Yes
23.	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	50JV/50C	TWSC	>99	F	>99	F	>99	F	>99	F	103.3	157.0	Yes	Yes
24.	Rubidoux Blvd/SR-60 EB Ramps (Existing)	50JV/50C	Signal	95.3	F	75.0	E	>99	F	>99	F	57.9	29.8	Yes	Yes
25.	Market St/Rivera St (Existing)	100 R	Signal	15.8	B	18.6	B	17.9	B	21.5	C	2.1	2.9	No	No
26.	Market St/SR-60 WB Ramps (Existing)	50R/50C	Signal	14.1	B	26.8	C	16.4	B	55.3	E	2.3	28.5	No	Yes
27.	Market St/SR-60 EB Ramps (Existing)	50R/50C	Signal	44.8	D	>99	F	66.2	E	>99	F	21.4	49.7	Yes	Yes
28.	Sierra Ave/20th St (Existing)	100 JV	AWSC	19.0	B	8.3	A	52.8	D	64.7	E	33.8	56.4	Yes	Yes
29.	Armstrong Rd/Driveway 1 (Proposed)	100 JV	TWSC	-	-	-	-	14.4	B	31.0	D	N/A	N/A	No	No
30.	Driveway 2/20th St (Proposed)	100 JV	TWSC	-	-	-	-	10.0	B	6.6	A	N/A	N/A	No	No
31.	Street A/20th St (Proposed)	100 JV	TWSC	-	-	-	-	26.6	D	18.0	C	N/A	N/A	No	No
32.	Street B/20th St (Proposed)	100 JV	TWSC	-	-	-	-	11.6	B	5.8	A	N/A	N/A	No	No
33.	Street M/20th St (Proposed)	100 JV	TWSC	-	-	-	-	6.0	A	5.1	A	N/A	N/A	No	No
34.	Driveway 3/20th St (Proposed)	100 JV	TWSC	-	-	-	-	8.1	A	16.0	B	N/A	N/A	No	No
35.	Driveway 4/20th St (Proposed)	100 JV	TWSC	-	-	-	-	5.0	A	12.9	B	N/A	N/A	No	No
36.	Driveway 5/20th St (Proposed)	100 JV	TWSC	-	-	-	-	11.0	B	14.8	B	N/A	N/A	No	No

= Unsatisfactory Level of Service TWSC = Two-Way Stop Controlled AWSC = All Way Stop Controlled

F Fontana
C Caltrans
SB San Bernardino
JV Jurupa Valley
R Riverside

[1] Delay in Seconds

[2] Level of Service

Table 24. General Plan Buildout Plus Specific Plan AM and PM Peak Hour Levels of Service

					GPB 2045			GPB 2045 plus Project			Percent	Deficient?
	Roadway Segment	Type	# of Lanes	Capacity	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Increase	
1	Sierra Ave: Santa Ana Ave to Jurupa Ave	Major Highway	6	54,000	42,185	0.781	C	46,469	0.861	D	7.9%	No
2	Sierra Ave: Jurupa Ave to Armstrong Rd	Arterial	4	25,000	34,624	1.385	F	39,020	1.561	F	17.6%	Yes
3	Sierra Ave: Armstrong Rd to 20th Street	Arterial	2	18,000	8,933	0.496	A	21,557	1.198	F	70.1%	Yes
4	Sierra Ave: 20th Street to UPRR Tracks	Arterial	2	18,000	5,997	0.333	A	10,507	0.584	A	25.1%	No
5	Valley Way: Sierra Ave to 34th St	Major	4	34,100	49,540	1.453	F	57,463	1.685	F	23.2%	Yes
6	Valley Way: 34th St to Granite Hill	Major	4	34,100	50,283	1.475	F	57,194	1.677	F	20.3%	Yes
7	Cedar Ave: I-10 EB Ramps to Slover Ave	Major Hwy	4	33,000	51,316	1.555	F	60,685	1.839	F	28.4%	Yes
8	Cedar Ave: Slover Ave to Santa Ana Ave	Major Divided Hwy	4	37,500	41,807	1.115	F	51,176	1.365	F	25.0%	Yes
9	Cedar Ave: Santa Ana Ave to Jurupa Ave	Major Divided Hwy	4	37,500	43,480	1.159	F	52,849	1.409	F	25.0%	Yes
10	Cedar Ave: Jurupa Ave to 7th St	Major Divided Hwy	4	37,500	40,818	1.088	F	50,187	1.338	F	25.0%	Yes
11	Cedar Ave:7th St to El Rivino Rd	Major Divided Hwy	4	37,500	41,647	1.111	F	51,016	1.360	F	25.0%	Yes
12	Rubidoux Blvd: El Rivino Rd to Market St	Major	4	34,100	41,148	1.207	F	50,629	1.485	F	27.8%	Yes
13	Rubidoux Blvd: Market St to 28th St	Major	4	34,100	32,763	0.961	E	37,231	1.092	F	13.1%	Yes
14	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Arterial	4	25,000	35,991	1.440	E	40,325	1.613	F	17.3%	Yes
15	Market St: Agua Mansa Road to 24th St	Major	4	34,100	35,054	1.028	F	42,657	1.251	F	22.3%	Yes
16	Market St: 24th St to SR-60 WB Off Ramp	Major	4	34,100	47,904	1.405	F	55,507	1.628	F	22.3%	Yes
17	Mission Blvd: SR-60 EB Ramps to Valley Way	Arterial	4	25,000	29,693	1.188	F	33,062	1.322	F	13.5%	Yes
18	20th St: Driveway 2 to Street A	Arterial	4	25,000	Does not Exisit			14,630	0.585	A	N/A	No
19	20th St: Street A to Street B	Arterial	4	25,000	Does not Exisit			15,438	0.618	B	N/A	No
20	20th St: Street B to Street M	Arterial	4	25,000	Does not Exisit			15,698	0.628	B	N/A	No
21	20th St: Street M to Driveway 3	Arterial	4	25,000	Does not Exisit			16,938	0.678	B	N/A	No
22	20th St: Driveway 3 to Driveway 4	Arterial	4	25,000	Does not Exisit			19,763	0.791	C	N/A	No
23	20th St: Driveway 4 to Driveway 5	Arterial	4	25,000	Does not Exisit			21,118	0.845	D	N/A	No
24	20th St: Driveway 5 to Rubidoux Blvd	Arterial	4	25,000	Does not Exisit			15,154	0.606	B	N/A	No

5.4 General Plan (2045) Plus Specific Plan Queueing Analysis

A queueing analysis has been conducted for Caltrans right of way intersections that could be affected by a deficient queueing length for the General Plan (2045) Plus Project condition. The queuing analysis was done utilizing the 95th percentile available in the Vistro output sheets attached as Appendix C. As shown in Table 25, the Specific Plan would cause a queue deficiency at the following approaches in the General Plan (2045) Plus Specific Plan condition:

- Sierra Avenue/I-10 Ramps
  - Northbound left-turn lane
- SR-60 EB Ramps/Mission Boulevard
  - Southbound left-turn lane
  - Southbound right-turn lane
- Cedar Avenue/I-10 EB Ramp
  - Northbound right-turn lane
- Rubidoux Boulevard/SR-60 WB On Ramp
  - Northbound left-turn lane
- Rubidoux Boulevard/SR-60 EB Ramps
  - Southbound left-turn lane
  - Eastbound left-turn lane
- Market Street/SR-60 EB Ramp
  - Southbound left-turn lane

Improvements for the significantly deficient queues are discussed in Section 6 Project Improvements and Fair Share.

Table 25. General Plan (2045) Plus Specific Plan AM and PM Queueing Analysis

Intersection	Turning Movement	Available Queue Length (Ft)	General Plan Without Project		General Plan With Project		Project Deficiency?[2]		Queue Difference	
			AM	PM	AM	PM			AM	PM
			Required Queueing (Ft)	Required Queueing (Ft)	Required Queueing (Ft)	Required Queueing (Ft)	AM	PM	Queueing Difference (Ft)	Queueing Difference (Ft)
1. Sierra Ave/I-10 Ramps	NBL	565	310	485	363	668	No	Yes	-	183
	SBL	325	351	386	351	386	No	No	-	-
	EBL[1]	1205	464	536	464	535	No	No	-	-
	WBL[1]	1200	239	248	244	267	No	No	-	-
7. Valley Way/SR-60 WB Off Ramp	WBL[1]	880	266	405	266	405	No	No	-	-
	WBR	280	1985	1895	1985	1895	No	No	-	-
8. Valley Way/SR-60 WB On Ramp	NBL	115	406	311	406	311	No	No	-	-
9. SR-60 EB Ramps/Mission Blvd	SBL[1]	1120	430	1859	635	2797	No	Yes	-	938
	SBR	1550	427	1913	647	2846	No	Yes	-	933
	EBL	200	194	162	195	162	No	No	-	-
	WBR	340	83	38	83	38	No	No	-	-
13. Cedar Ave/I-10 WB Ramp	NBL	870	124	168	152	221	No	No	-	-
	SBR	450	208	159	251	190	No	No	-	-
	WBL[1]	1570	229	128	622	189	No	No	-	-
	WBR	485	117	143	112	140	No	No	-	-
14. Cedar Ave/I-10 EB Ramps	NBR	600	614	427	1037	1200	Yes	Yes	423	774
	SBL	535	413	286	413	286	No	No	-	-
	EBL	380	219	342	216	319	No	No	-	-
	EBR[1]	2350	606	299	1490	653	No	No	-	-
22. Rubidoux Blvd/SR-60 WB Off Ramp	WBL[1]	1280	2109	12	2109	3007	No	Yes	-	2995
	WBR	85	62	285	62	80	No	No	-	-
23. Rubidoux Blvd/SR-60 WB On Ramp	NBL	145	404	293	502	408	Yes	Yes	97	115
24. Rubidoux Blvd/SR-60 EB Ramps	NBR	1045	1061	527	1061	527	No	No	-	-
	SBL	145	491	247	889	489	Yes	Yes	398	242
	EBL[1]	1160	1359	1744	2409	2325	Yes	Yes	1050	580
	EBR	40	194	386	194	386	No	No	-	-
	WBL	750	13	33	13	33	No	No	-	-
	WBR	65	6	1	6	1	No	No	-	-
26. Market St/SR-60 WB Ramp	NBL	185	233	486	233	486	No	No	-	-
	WBL[1]	1345	171	273	171	273	No	No	-	-
27. Market St/SR-60 EB Ramp	SBL	155	906	1049	1486	2837	Yes	Yes	580	1788
	EBL	180	233	242	233	242	No	No	-	-
	EBR[1]	1630	401	1045	401	1045	No	No	-	-

Indicates queueing required greater than storage available

[1] Available queue length reflects the full ramp length.

[2] The project would cause a deficiency if: a) The addition of project trips causes the queue to exceed the storage length and b) The project adds one car length (25 feet) of queue to a queue that exceeds the storage length in the baseline condition.

6 PROJECT IMPROVEMENTS AND FAIR SHARE

6.1 Specific Plan Improvements

Interim Year 2030 Plus Specific Plan
Development of the Specific Plan would result in operational deficiencies at 14 intersections, 15 roadway segments, and nine queues in the Interim Year 2030 plus Project condition. Table 27 below shows the following improvements (if feasible) at the affected intersections and Table 27 below shows the following improvements (if any) at the affected roadway segments:

Table 26. Interim Year 2030 Plus Specific Plan Intersection Mitigation Summary

Intersection		Location %	Proposed Improvement
5.	Armstrong Rd/Sierra Ave (Existing)	100 JV	Change NBR from permissive to overlap
7.	Valley Way/SR-60 WB Off Ramp (Existing)	50JV/50C	Add a EB right-turn and restripe an exclusive left turn; Restripe a WB share thru-left and an exclusive right-turn
9.	SR-60 EB Ramps/Mission Blvd (Existing)	50JV/50C	No feasible mitigation
10.	Valley Way/Mission Blvd (Existing)	100 JV	No feasible mitigation
11.	Jurupa Rd/Mission Blvd (Existing)	100 JV	Restrict NB left turns
15.	Cedar Ave/Orange St (Existing)	100 SB	No feasible mitigation
16.	Cedar Ave/Slover Ave (Existing)	100 SB	Add 2nd EB left
17.	Cedar Ave/Santa Ana Ave (Existing)	100 SB	Add a EB left-turn and restripe a share thru-right; Add a WB left-turn and restripe a share thru-right
18.	Cedar Ave/Jurupa Ave (Existing)	100 SB	Add EB left, EB restripe thru-left to thru
20.	Rubidoux Blvd/Market St (Existing)	100 JV	Change NBR from permissive to overlap
21.	Agua Mansa Rd/Market St (Existing)	100 JV	Add 2nd EB left
22.	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	50JV/50C	Tight diamon alternative for the Rubidoux Blvd/SR-60 PSR
23.	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	50JV/50C	Tight diamon alternative for the Rubidoux Blvd/SR-60 PSR
24.	Rubidoux Blvd/SR-60 EB Ramps (Existing)	50JV/50C	Tight diamon alternative for the Rubidoux Blvd/SR-60 PSR
27.	Market St/SR-60 EB Ramps (Existing)	50R/50C	Add 2nd SB left

JV Jurupa Valley

SB San Bernardino

C Caltrans

R Riverside

NB - North Bound SB - South Bound EB - East Bound WB - West Bound

Table 27. Interim Year 2030 Plus Specific Plan Roadway Segment Mitigation Summary

	Roadway Segment	New Designation	# of Lanes/ MIT
2	Sierra Ave: Jurupa Ave to Armstrong Rd	Major	4
3	Sierra Ave: Armstrong Rd to 20th Street	Arterial	4
5	Valley Way: Sierra Ave to 34th St	No Change	4
7	Valley Way: 34th St to Granite Hill	No Change	4
8	Cedar Ave: I-10 EB Ramps to Slover Ave	No Change	4
8	Cedar Ave: Slover Ave to Santa Ana Ave	No Change	4
9	Cedar Ave: Santa Ana Ave to Jurupa Ave	No Change	4
10	Cedar Ave: Jurupa Ave to 7th St	No Change	4
11	Cedar Ave:7th St to El Rivino Rd	No Change	4
12	Rubidoux Blvd: El Rivino Rd to Market St	No Change	4
13	Rubidoux Blvd: Market St to 28th St	Major	4
14	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Major	4
15	Market St: Agua Mansa Road to 24th St	No Change	4
16	Market St: 24th St to SR-60 WB Off Ramp	No Change	4
17	Mission Blvd: SR-60 EB Ramps to Valley Way	Major	4
18	20th St: Driveway 2 to Street A	No Change	4
19	20th St: Street A to Street B	No Change	4
20	20th St: Street B to Street M	No Change	4
21	20th St: Street M to Driveway 3	No Change	4
22	20th St: Driveway 3 to Driveway 4	No Change	4
23	20th St: Driveway 4 to Driveway 5	No Change	4
24	20th St: Driveway 5 to Rubidoux Blvd	No Change	4

Table 30 shows the LOS at each affected intersection, Table 31 shows the LOS at each affected roadway segment, and Table 32 shows the queue lengths at Caltrans facilities with implementation of the proposed improvements. As seen in Table 31 and 32, intersections 5, 7, 9, 15, 16, and 20, and roadway segments 5-13, 15, and 16 remain significantly deficient. Additionally, the following queues would remain significantly deficient with mitigation implemented:

- Sierra Avenue/I-10 Ramps
  - Northbound left-turn lane
- SR-60 EB Ramps/Mission Boulevard
  - Southbound left-turn lane
  - Southbound right-turn lane
- Cedar Avenue/I-10 EB Ramp
  - Northbound right-turn lane

- Rubidoux Blvd/SR-60 WB Off Ramp
  - Westbound right-turn lane

- Rubidoux Boulevard/SR-60 WB On Ramp
  - Northbound left-turn lane

- Rubidoux Boulevard/SR-60 EB Ramps
  - Southbound left-turn lane

- Market Street/SR-60 EB Ramp
  - Southbound left-turn lane

As stated in the Jurupa Valley General Plan Mobility Element, the following roadways are expected to operate at a deficient LOS due to due to right of way (ROW) constraints:

5. Armstrong Road/Sierra Avenue (100% City of Jurupa Valley)
7. Valley Way/SR-60 WB Off Ramp (50% City of Jurupa Valley, 50% Caltrans)
9. SR-60 EB Ramps/Mission Boulevard (50% City of Jurupa Valley, 50% Caltrans)
10. Valley Way/Mission Boulevard (100% City of Jurupa Valley)
20. Rubidoux Boulevard/Market Street (100% City of Jurupa Valley)

For the intersections of Cedar Avenue/Orange Street and Cedar Avenue/Slover Avenue, ROW constraints also prevent the implementation of improvements to reduce the delay to a less than significant deficiency.

General Plan Buildout Plus Project
Development of the Specific Plan would result in operational deficiencies at 18 intersections, 15 roadway segments, and eight queues in the GPB 2045 plus Project condition. Table 28 below shows the following improvements (if any) at the affected intersections, and Table 29 below shows the following improvements (if any) at the affected roadway segments:

Table 28. General Plan Buildout 2045 Plus Specific Plan Intersection Mitigation Summary

Intersection		Location %	Proposed Improvement
5.	Armstrong Rd/Sierra Ave (Existing)	100 JV	Add 2nd NB and SB thru lane, change EB/WB phasing to ProtPerm
7.	Valley Way/SR-60 WB Off Ramp (Existing)	50JV/50C	Add WB thru and EB left, restripe EB shared thru-right to right turn lane
9.	SR-60 EB Ramps/Mission Blvd (Existing)	50JV/50C	Optimize Signal Timing
11.	Jurupa Rd/Mission Blvd (Existing)	100 JV	Restrict NB left turns
13.	Cedar Ave/ I-10 WB Ramps (Existing)	50SB/50C	Add NB left, restripe 3rd SB thru to SB shared thru-right
14.	Cedar Ave/ I-10 EB Ramps (Existing)	50SB/50C	Add SB right
15.	Cedar Ave/Orange St (Existing)	100 SB	Restripe WB leg to one thru-left and one right turn lane
16.	Cedar Ave/Slover Ave (Existing)	100 SB	Add 2nd EB left
18.	Cedar Ave/Jurupa Ave (Existing)	100 SB	Add EB left, EB restripe thru-left to thru
20.	Rubidoux Blvd/Market St (Existing)	100 JV	Add 2nd EB and 2nd WB thru, restripe WB thru-left to one left turn and one thru lane
21.	Agua Mansa Rd/Market St (Existing)	100 JV	Add 2nd EB left, widen Agua Mansa from Market Street to Wilson Street to accomidate second receiving lane
22.	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	50JV/50C	Restripe WB leg to one thru-right and one left turn lane
23.	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	50JV/50C	Install traffic signal
24.	Rubidoux Blvd/SR-60 EB Ramps (Existing)	50JV/50C	Add NB right and EB left lanes
27.	Market St/SR-60 EB Ramps (Existing)	50R/50C	Optimize Signal Timing
28.	Sierra Ave/20th St (Existing)	100 JV	Install traffic signal
29.	Armstrong Rd/Driveway 1 (Proposed)	100 JV	Add Two stage gap acceptance with 100ft of storage
30.	Driveway 2/20th St (Proposed)	100 JV	Add AWSC, Add 2nd EB and WB thru lane
31.	Street A/20th St (Proposed)	100 JV	Add 2nd NB and EB thru lane
32.	Street B/20th St (Proposed)	100 JV	Add AWSC, Add 2nd EB and WB thru lane
33.	Street M/20th St (Proposed)	100 JV	Add 2nd EB and WB thru lane
34.	Driveway 3/20th St (Proposed)	100 JV	Add AWSC, Add 2nd EB and WB thru lane
35.	Driveway 4/20th St (Proposed)	100 JV	Add 2nd EB and WB thru lane

JV Jurupa Valley

SB San Bernardino

C Caltrans

R Riverside

NB - North Bound SB - South Bound EB - East Bound WB - West Bound

Table 29. General Plan Buildout 2045 Plus Specific Plan Roadway Segment Mitigation Summary

	Roadway Segment	New Designation	# of Lanes/ MIT
2	Sierra Ave: Jurupa Ave to Armstrong Rd	Major	4
3	Sierra Ave: Armstrong Rd to 20th Street	Arterial	4
6	Valley Way: Sierra Ave to 34th St	No Change	4
7	Valley Way: 34th St to Granite Hill	No Change	4
8	Cedar Ave: I-10 EB Ramps to Slover Ave	No Change	4
9	Cedar Ave: Slover Ave to Santa Ana Ave	No Change	4
10	Cedar Ave: Santa Ana Ave to Jurupa Ave	No Change	4
11	Cedar Ave: Jurupa Ave to 7th St	No Change	4
12	Cedar Ave:7th St to El Rivino Rd	No Change	4
13	Rubidoux Blvd: El Rivino Rd to Market St	No Change	4
14	Rubidoux Blvd: Market St to 28th St	Major	4
15	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Major	4
16	Market St: Agua Mansa Road to 24th St	Arterial	4
17	Market St: 24th St to SR-60 WB Off Ramp	Arterial	4
18	Mission Blvd: SR-60 EB Ramps to Valley Way	Major	4
19	20th St: Street "B" to Street "C"	Arterial	4
20	20th St: Street "C" to Street "D"	Arterial	4
21	20th St: Street "D" to Street "E"	Arterial	4
22	20th St: Street "E" to Rubidoux Blvd	Arterial	4

Table 33 shows the LOS at each affected intersection, Table 34 shows the LOS at each affected roadway segment, and Table 35 shows the queue lengths at Caltrans facilities with implementation of the proposed improvements. As seen in Table 33 and Table 34, intersections 5, 7, 9, 15, 16, and 20, and roadway segments 5-13, 15, and 16 remain significantly deficient. Additionally, the following queues would remain significantly deficient with mitigation implemented:

- Sierra Avenue/I-10 Ramps
  - Northbound left-turn lane
- SR-60 EB Ramps/Mission Boulevard
  - Southbound left-turn lane
  - Southbound right-turn lane
- Cedar Avenue/I-10 EB Ramp
  - Northbound right-turn lane
- Rubidoux Boulevard/SR-60 WB On Ramp
  - Northbound left-turn lane

- Rubidoux Boulevard/SR-60 EB Ramps
  - Southbound left-turn lane
  - Eastbound left-turn lane

- Market Street/SR-60 EB Ramp
  - Southbound left-turn lane

As stated in the Jurupa Valley General Plan Mobility Element, the following roadways are expected to operate at a deficient LOS due to due to right of way (ROW) constraints:

5. Armstrong Road/Sierra Avenue (100% City of Jurupa Valley)
7. Valley Way/SR-60 WB Off Ramp (50% City of Jurupa Valley, 50% Caltrans)
9. SR-60 EB Ramps/Mission Boulevard (50% City of Jurupa Valley, 50% Caltrans)
10. Valley Way/Mission Boulevard (100% City of Jurupa Valley)
20. Rubidoux Boulevard/Market Street (100% City of Jurupa Valley)

For the following intersections, ROW constraints also prevent the implementation of improvements to reduce the delay to a less than significant deficiency:

4. Sierra Avenue/Jurupa Avenue (100% City of Fontana)
15. Cedar Avenue/Orange Street (100% County of San Bernardino)
16. Cedar Avenue/Slover Avenue (100% County of San Bernardino)
17. Cedar Avenue/Jurupa Avenue (100% County of San Bernardino)

Table 30. Interim Year Plus Project Intersection Mitigation LOS Table

	Intersection	Location %	Proposed Improvement	Interim Year 2030				IY 2030 plus Prject				IY 2030 plus Project MIT				MIT - IY 2030		Significant Difficiency?	
				AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]				
5.	Armstrong Rd/Sierra Ave (Existing)	100 JV	Change NBR from permissive to overlap	55.7	E	54.1	D	111.8	F	106	F	111.5	F	105.6	F	55.8	51.5	Yes	Yes
7.	Valley Way/SR-60 WB Off Ramp (Existing)	50JV/50C	Add a EB right-turn and restripe an exclusive left turn; Restripe a WB share thru-left and an exclusive right-turn	125.3	F	136.2	F	163.7	F	217.5	F	139.4	F	196.3	F	14.1	60.1	Yes	Yes
9.	SR-60 EB Ramps/Mission Blvd (Existing)	50JV/50C	No feasible mitigation	30.2	C	119.5	F	37.5	D	195.9	F	-	-	-	-	-	-	Yes	Yes
10.	Valley Way/Mission Blvd (Existing)	100 JV	No feasible mitigation	41.0	D	46.3	D	59.6	E	87.6	F	-	-	-	-	-	-	Yes	Yes
11.	Jurupa Rd/Mission Blvd (Existing)	100 JV	Restrict NB left turns	101.3	F	1413	F	140.5	F	1918	F	16.3	C	255.5	F	-85.0	-1157.2	No	No
15.	Cedar Ave/Orange St (Existing)	100 SB	No feasible mitigation	25	C	33.3	C	66.1	E	50.3	D	-	-	-	-	-	-	Yes	Yes
16.	Cedar Ave/Slover Ave (Existing)	100 SB	Add 2nd EB left	64.9	E	58.8	E	128.7	F	86	F	92.8	F	53.1	D	27.9	-5.7	Yes	No
17.	Cedar Ave/Santa Ana Ave (Existing)	100 SB	Add a EB left-turn and restripe a share thru-right; Add a WB left-turn and restripe a share thru-right	29.9	C	57.3	E	56.5	E	57.3	E	42.1	D	35.4	D	12.2	-21.9	No	No
18.	Cedar Ave/Jurupa Ave (Existing)	100 SB	Add EB left, EB restripe thru-left to thru	304.2	F	240.2	F	500.6	F	261.2	F	66.9	E	100.3	F	-237.3	-139.9	No	No
20.	Rubidoux Blvd/Market St (Existing)	100 JV	Change NBR from permissive to overlap	98.3	F	121.8	F	182.9	F	232.8	F	166.0	F	210.3	F	67.7	88.5	Yes	Yes
21.	Agua Mansa Rd/Market St (Existing)	100 JV	Add 2nd EB left	41.9	D	66.1	E	81.2	F	96.7	F	35.8	D	38.8	D	-6.1	-27.3	No	No
22.	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	50JV/50C	Tight diamon alternative for the Rubidoux Blvd/SR-60 PSR	33.4	C	64.3	E	36.3	D	77	E	12.1	B	41.9	D	-21.3	-22.4	No	No
23.	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	50JV/50C	Tight diamon alternative for the Rubidoux Blvd/SR-60 PSR	177	F	145.2	F	279.7	F	302.2	F	38.3	D	44.9	D	-138.7	-100.3	No	No
24.	Rubidoux Blvd/SR-60 EB Ramps (Existing)	50JV/50C	Tight diamon alternative for the Rubidoux Blvd/SR-60 PSR	95	F	75	E	152.8	F	105	F	29.5	C	17.8	B	-65.5	-57.2	No	No
27.	Market St/SR-60 EB Ramps (Existing)	50R/50C	Add 2nd SB left	45.2	D	116.3	F	66.8	E	166	F	35.0	D	40.7	D	-10.2	-75.6	No	No

Unsatisfactory Level of Service

JV Jurupa Valley

SB San Bernardino

C Caltrans

R Riverside

NB - North Bound SB - South Bound EB - East Bound WB - West Bound

[1] Delay in Seconds

[2] Level of Service

Table 31. Interim Year Plus Project Roadway Segment Mitigation LOS Table

						Interim Year (2030)			MIT				
	Roadway Segment	Type/MIT	# of Lanes/ MIT	Capacity	MIT	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Deficient?	Significant Deficiency?
2	Sierra Ave: Jurupa Ave to Armstrong Rd	Arterial/Major	4/4	25,000	34,100	34,624	1.385	F	39,020	1.144	F	Yes	No
3	Sierra Ave: Armstrong Rd to 20th Street	Arterial/Arterial	2/4	18,000	25,000	6,678	0.371	A	19,302	0.772	C	No	No
5	Valley Way: Sierra Ave to 34th St	Major/none	4/4	34,100	34,100	48,327	1.417	F	56,250	1.650	F	Yes	Yes
6	Valley Way: 34th St to Granite Hill	Major/none	4/4	34,100	34,100	48,716	1.429	F	55,627	1.631	F	Yes	Yes
7	Cedar Ave: I-10 EB Ramps to Slover Ave	Major Hwy/none	4/4	33,000	33,000	51,316	1.555	F	60,685	1.839	F	Yes	Yes
8	Cedar Ave: Slover Ave to Santa Ana Ave	MDH/none	4/4	37,500	37,500	41,807	1.115	F	51,176	1.365	F	Yes	Yes
9	Cedar Ave: Santa Ana Ave to Jurupa Ave	MDH/none	4/4	37,500	37,500	43,480	1.159	F	52,849	1.409	F	Yes	Yes
10	Cedar Ave: Jurupa Ave to 7th St	MDH/none	4/4	37,500	37,500	40,818	1.088	F	50,187	1.338	F	Yes	Yes
11	Cedar Ave:7th St to El Rivino Rd	MDH/none	4/4	37,500	37,500	41,647	1.111	F	51,016	1.360	F	Yes	Yes
12	Rubidoux Blvd: El Rivino Rd to Market St	Major/none	4/4	34,100	34,100	41,148	1.207	F	50,629	1.485	F	Yes	Yes
13	Rubidoux Blvd: Market St to 28th St	Major/none	4/4	34,100	34,100	32,763	0.961	E	37,231	1.092	F	Yes	Yes
14	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Arterial/Major	4/4	25,000	34,100	35,991	1.440	F	40,325	1.183	F	Yes	No
15	Market St: Agua Mansa Road to 24th St	Major/none	4/4	34,100	34,100	33,623	0.986	F	41,226	1.209	F	Yes	Yes
16	Market St: 24th St to SR-60 WB Off Ramp	Major/none	4/4	34,100	34,100	47,904	1.405	F	55,507	1.628	F	Yes	Yes
17	Mission Blvd: SR-60 EB Ramps to Valley Way	Arterial/Major	4/4	25,000	34,100	29,405	1.176	F	32,774	0.961	E	Yes	No

MDH = Major Divided Highway

Table 32. Interim Year Plus Project Queueing Mitigation Table

Intersection	Turning Movement	Available Queue Length (Ft)	Interim Year Without Project		Interim Year With Project		Project Deficiency?[2]		Queue Difference		Interim Year With Project		Less than Baseline?	
			AM	PM	AM	PM			AM	PM	AM	PM		
			Required Queueing (Ft)	Required Queueing (Ft)	Required Queueing (Ft)	Required Queueing (Ft)	AM	PM	Queueing Difference (Ft)	Queueing Difference (Ft)	With Mitigation Queueing (Ft)	With Mitigation Queueing (Ft)	AM	PM
1. Sierra Ave/I-10 Ramps	NBL	565	300	484	387	608	No	Yes	-	123	-	N/A	-	No
	SBL	325	351	365	351	365	No	No	-	-	-	-	-	-
	EBL[1]	1205	439	569	439	569	No	No	-	-	-	-	-	-
	WBL[1]	1200	227	261	232	282	No	No	-	-	-	-	-	-
7. Valley Way/SR-60 WB Off Ramp	WBL[1]	880	266	405	266	405	No	No	-	-	-	-	-	-
	WBR	280	1721	1809	1721	1809	No	No	-	-	-	-	-	-
8. Valley Way/SR-60 WB On Ramp	NBL	115	406	311	406	311	No	No	-	-	-	-	-	-
9. SR-60 EB Ramps/Mission Blvd	SBL[1]	1120	420	1765	626	2701	No	Yes	-	935	-	N/A	-	No
	SBR	1550	418	1811	635	2743	No	Yes	-	932	-	N/A	-	No
	EBL	200	186	162	187	162	No	No	-	-	-	-	-	-
	WBR	340	81	36	80	36	No	No	-	-	-	-	-	-
13. Cedar Ave/I-10 WB Ramp	NBL	870	129	168	176	225	No	No	-	-	-	-	-	-
	SBR	450	208	159	279	192	No	No	-	-	-	-	-	-
	WBL[1]	1570	221	128	364	188	No	No	-	-	-	-	-	-
	WBR	485	114	143	101	141	No	No	-	-	-	-	-	-
14. Cedar Ave/I-10 EB Ramps	NBR	600	613	402	1042	1208	Yes	Yes	429	806	N/A	N/A	No	No
	SBL	535	413	303	413	303	No	No	-	-	-	-	-	-
	EBL	380	196	281	193	263	No	No	-	-	-	-	-	-
	EBR[1]	2350	607	285	1490	714	No	No	-	-	-	-	-	-
22. Rubidoux Blvd/SR-60 WB Off Ramp	WBL[1]	1280	704	1440	704	1440	No	No	-	-	-	-	-	-
	WBR	85	63	93	77	150	No	Yes	-	57	-	See Int. 23	-	No
23. Rubidoux Blvd/SR-60 WB On Ramp	NBL	145	404	293	501	408	Yes	Yes	97	115	249	339	No	No
24. Rubidoux Blvd/SR-60 EB Ramps	NBR	1045	1061	527	1061	527	No	No	-	-	-	-	-	-
	SBL	145	491	247	884	489	Yes	Yes	393	242	338	137	No	Yes
	EBL[1]	1160	1350	1744	2404	2330	Yes	Yes	1054	585	333	243	Yes	Yes
	EBR	40	194	386	194	386	No	No	-	-	-	-	-	-
	WBL	750	13	33	13	33	No	No	-	-	-	-	-	-
	WBR	65	6	1	6	1	No	No	-	-	-	-	-	-
26. Market St/SR-60 WB Ramp	NBL	185	155	386	155	386	No	No	-	-	-	-	-	-
	WBL[1]	1345	64	163	64	163	No	No	-	-	-	-	-	-
27. Market St/SR-60 EB Ramp	SBL	155	906	1049	1486	2837	Yes	Yes	580	1788	275	716	No	No
	EBL	180	233	242	233	242	No	No	-	-	-	-	-	-
	EBR[1]	1630	401	1045	401	1045	No	No	-	-	-	-	-	-

Indicates queueing required greater than storage available

[1] Available queue length reflects the full ramp length.

[2] The project would cause a deficiency if: a) The addition of project trips causes the queue to exceed the storage length and b) The project adds one car length (25 feet) of queue to a queue that exceeds the storage length in the baseline condition.

Table 33. 2045 Plus Project Intersection Mitigation LOS Table

Intersection		Location %	Proposed Improvement	2045				2045 plus Prject				2045 plus Project MIT				MIT - 2045		Significant Difficiency?	
				AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]				
4.	Sierra Ave/Jurupa Ave (Existing)	100 F	No feasible mitigation	37.7	D	44.3	D	37.6	D	51.8	D	-	-	-	-	-	-	Yes	Yes
5.	Armstrong Rd/Sierra Ave (Existing)	100 JV	Change NBR from permissive to overlap	69.7	E	123.6	F	141	F	161.5	F	120.4	F	164.6	F	50.7	41.0	Yes	Yes
7.	Valley Way/SR-60 WB Off Ramp (Existing)	50JV/50C	Add a EB right-turn and restripe an exclusive left turn; Restripe a WB share thru-left and an exclusive right-turn	152.1	F	142.4	F	190.7	F	224.4	F	156.5	F	202.7	F	4.3	60.3	Yes	Yes
9.	SR-60 EB Ramps/Mission Blvd (Existing)	50JV/50C	No feasible mitigation	30.7	C	126.9	F	38.1	D	203.8	F	-	-	-	-	-	-	Yes	Yes
10.	Valley Way/Mission Blvd (Existing)	100 JV	No feasible mitigation	41.1	D	47.2	D	59.6	E	89.5	F	-	-	-	-	-	-	Yes	Yes
11.	Jurupa Rd/Mission Blvd (Existing)	100 JV	Restrict NB left turns	277.2	F	1445	F	385.3	F	1969	F	19.1	C	259.5	F	-258.1	-1185.5	No	No
15.	Cedar Ave/Orange St (Existing)	100 SB	No feasible mitigation	35.1	D	48.9	D	93.2	F	108	F	-	-	-	-	-	-	Yes	Yes
16.	Cedar Ave/Slover Ave (Existing)	100 SB	Add 2nd EB left	82.6	F	59	E	158.1	F	94.4	F	113.6	F	56.0	E	31.0	-3.0	Yes	No
17.	Cedar Ave/Santa Ana Ave (Existing)	100 SB	Add a EB and WB left-turn and restripe a share thru-right	28.6	C	36.3	D	58.2	E	61.3	E	37.9	D	46.5	D	9.3	10.2	No	No
18.	Cedar Ave/Jurupa Ave (Existing)	100 SB	Add EB left, EB restripe thru-left to thru	41.1	D	231.9	F	82.8	F	260.3	F	67.0	E	97.1	F	25.9	-134.8	Yes	No
20.	Rubidoux Blvd/Market St (Existing)	100 JV	Change NBR from permissive to overlap	103.9	F	129.1	F	169.2	F	225.5	F	153.5	F	193.3	F	49.6	64.2	Yes	Yes
21.	Agua Mansa Rd/Market St (Existing)	100 JV	Add 2nd EB left	118.5	F	80.7	F	183	F	122.6	F	36.4	D	55.0	D	-82.1	-25.7	No	No
22.	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	50JV/50C	Tight diamond alternative for the Rubidoux Blvd/SR-60 PSR	88.8	F	138.9	F	92.9	F	149.2	F	11.6	B	33.9	C	-77.2	-105.0	No	No
23.	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	50JV/50C	Tight diamond alternative for the Rubidoux Blvd/SR-60 PSR	177	F	145.2	F	280.3	F	302.2	F	34.3	C	52.9	D	-142.7	-92.3	No	No
24.	Rubidoux Blvd/SR-60 EB Ramps (Existing)	50JV/50C	Tight diamond alternative for the Rubidoux Blvd/SR-60 PSR	95.3	F	75	E	153.2	F	104.8	F	37.4	D	20.1	C	-57.9	-54.9	No	No
26.	Market St/SR-60 WB Ramps (Existing)	50R/50C	Add 2nd WB left	14.1	B	26.8	C	16.4	B	55.3	E	16.5	B	48.9	D	2.4	22.1	No	No
27.	Market St/SR-60 EB Ramps (Existing)	50R/50C	Add 2nd SB left	44.8	D	115.8	F	66.2	E	165.5	F	20.9	C	48.9	D	-23.9	-66.9	No	No
28.	Sierra Ave/20th St (Existing)	100 JV	Restripe left turn to a share left-right-turn	19	B	8.3	A	52.8	D	64.7	E	18.7	B	32.3	C	-0.3	24.0	No	No

Unsatisfactory Level of Service

JV Jurupa Valley

SB San Bernardino

C Caltrans

R Riverside

NB - North Bound SB - South Bound EB - East Bound WB - West Bound

[1] Delay in Seconds

[2] Level of Service

Table 34. 2045 Plus Project Roadway Segment Mitigation LOS Table

						GPB 2045			MIT				
	Roadway Segment	Type/MIT	# of Lanes/ MIT	Capacity	MIT	Volume	V/C Ratio	LOS	Volume	V/C Ratio	LOS	Deficient?	Significant Deficiency?
2	Sierra Ave: Jurupa Ave to Armstrong Rd	Arterial/Major	4/4	25,000	34,100	34,624	1.385	F	39,020	1.144	F	Yes	No
3	Sierra Ave: Armstrong Rd to 20th Street	Arterial/Arterial	2/4	18,000	25,000	8,933	0.496	A	21,557	0.862	D	No	No
5	Valley Way: Sierra Ave to 34th St	Major/none	4/4	34,100	34,100	49,540	1.453	F	57,463	1.685	F	Yes	Yes
6	Valley Way: 34th St to Granite Hill	Major/none	4/4	34,100	34,100	50,283	1.475	F	57,194	1.677	F	Yes	Yes
7	Cedar Ave: I-10 EB Ramps to Slover Ave	Major Hwy/none	4/4	33,000	33,000	51,316	1.555	F	60,685	1.839	F	Yes	Yes
8	Cedar Ave: Slover Ave to Santa Ana Ave	MDH/none	4/4	37,500	37,500	41,807	1.115	F	51,176	1.365	F	Yes	Yes
9	Cedar Ave: Santa Ana Ave to Jurupa Ave	MDH/none	4/4	37,500	37,500	43,480	1.159	F	52,849	1.409	F	Yes	Yes
10	Cedar Ave: Jurupa Ave to 7th St	MDH/none	4/4	37,500	37,500	40,818	1.088	F	50,187	1.338	F	Yes	Yes
11	Cedar Ave:7th St to El Rivino Rd	MDH/none	4/4	37,500	37,500	41,647	1.111	F	51,016	1.360	F	Yes	Yes
12	Rubidoux Blvd: El Rivino Rd to Market St	Major/none	4/4	34,100	34,100	41,148	1.207	F	50,629	1.485	F	Yes	Yes
13	Rubidoux Blvd: Market St to 28th St	Major/none	4/4	34,100	34,100	32,763	0.961	E	37,231	1.092	F	Yes	Yes
14	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Arterial/Major	4/4	25,000	34,100	35,991	1.440	E	40,325	1.183	F	Yes	No
15	Market St: Agua Mansa Road to 24th St	Major/none	4/4	34,100	34,100	35,054	1.028	F	42,657	1.251	F	Yes	Yes
16	Market St: 24th St to SR-60 WB Off Ramp	Major/none	4/4	34,100	34,100	47,904	1.405	F	55,507	1.628	F	Yes	Yes
17	Mission Blvd: SR-60 EB Ramps to Valley Way	Arterial/Major	4/4	25,000	34,100	29,693	1.188	F	33,062	0.970	E	Yes	No

MDH = Major Divided Highway

Table 35. 2045 Plus Project Queueing Mitigation Table

Intersection	Turning Movement	Available Queue Length (Ft)	General Plan Without Project		General Plan With Project		Project Deficiency?[2]		Queue Difference		General Plan With Project		Less than Baseline?	
			AM	PM	AM	PM			AM	PM	AM	PM		
			Required Queueing (Ft)	Required Queueing (Ft)	Required Queueing (Ft)	Required Queueing (Ft)	AM	PM	Queueing Difference (Ft)	Queueing Difference (Ft)	With Mitigation Queueing (Ft)	With Mitigation Queueing (Ft)	AM	PM
1. Sierra Ave/I-10 Ramps	NBL	565	310	485	363	668	No	Yes	-	183	-	N/A	-	No
	SBL	325	351	386	351	386	No	No	-	-	-	-	-	-
	EBL[1]	1205	464	536	464	535	No	No	-	-	-	-	-	-
	WBL[1]	1200	239	248	244	267	No	No	-	-	-	-	-	-
7. Valley Way/SR-60 WB Off Ramp	WBL[1]	880	266	405	266	405	No	No	-	-	-	-	-	-
	WBR	280	1985	1895	1985	1895	No	No	-	-	-	-	-	-
8. Valley Way/SR-60 WB On Ramp	NBL	115	406	311	406	311	No	No	-	-	-	-	-	-
9. SR-60 EB Ramps/Mission Blvd	SBL[1]	1120	430	1859	635	2797	No	Yes	-	938	-	N/A	-	No
	SBR	1550	427	1913	647	2846	No	Yes	-	933	-	N/A	-	No
	EBL	200	194	162	195	162	No	No	-	-	-	-	-	-
	WBR	340	83	38	83	38	No	No	-	-	-	-	-	-
13. Cedar Ave/I-10 WB Ramp	NBL	870	124	168	152	221	No	No	-	-	-	-	-	-
	SBR	450	208	159	251	190	No	No	-	-	-	-	-	-
	WBL[1]	1570	229	128	622	189	No	No	-	-	-	-	-	-
	WBR	485	117	143	112	140	No	No	-	-	-	-	-	-
14. Cedar Ave/I-10 EB Ramps	NBR	600	614	427	1037	1200	Yes	Yes	423	774	N/A	N/A	No	No
	SBL	535	413	286	413	286	No	No	-	-	-	-	-	-
	EBL	380	219	342	216	319	No	No	-	-	-	-	-	-
	EBR[1]	2350	606	299	1490	653	No	No	-	-	-	-	-	-
22. Rubidoux Blvd/SR-60 WB Off Ramp	WBL[1]	1280	2109	12	2109	3007	No	Yes	-	2995	-	See Int. 23	-	No
	WBR	85	62	285	62	80	No	No	-	-	-	-	-	-
23. Rubidoux Blvd/SR-60 WB On Ramp	NBL	145	404	293	502	408	Yes	Yes	97	115	389	347	No	No
24. Rubidoux Blvd/SR-60 EB Ramps	NBR	1045	1061	527	1061	527	No	No	-	-	-	-	-	-
	SBL	145	491	247	889	489	Yes	Yes	398	242	422	137	No	Yes
	EBL[1]	1160	1359	1744	2409	2325	Yes	Yes	1050	580	566	255	No	Yes
	EBR	40	194	386	194	386	No	No	-	-	-	-	-	-
	WBL	750	13	33	13	33	No	No	-	-	-	-	-	-
	WBR	65	6	1	6	1	No	No	-	-	-	-	-	-
26. Market St/SR-60 WB Ramp	NBL	185	233	486	233	486	No	No	-	-	-	-	-	-
	WBL[1]	1345	171	273	171	273	No	No	-	-	-	-	-	-
27. Market St/SR-60 EB Ramp	SBL	155	906	1049	1486	2837	Yes	Yes	580	1788	275	716	No	No
	EBL	180	233	242	233	242	No	No	-	-	-	-	-	-
	EBR[1]	1630	401	1045	401	1045	No	No	-	-	-	-	-	-

Indicates queueing required greater than storage available

[1] Available queue length reflects the full ramp length.

[2] The project would cause a deficiency if: a) The addition of project trips causes the queue to exceed the storage length and b) The project adds one car length (25 feet) of queue to a queue that exceeds the storage length in the baseline condition.

6.2 Fair Share for Specific Plan

The proposed SP has both direct significant effects and cumulative effects. For the Interim Year 2030 scenario, intersections and roadway segments that degrade from an acceptable LOS in the baseline scenario to an unacceptable LOS in the plus project scenario, the SP would be fully responsible for the mitigation. For intersections that operate at an unacceptable LOS in the baseline scenario, the SP would cause a cumulative deficiency and be responsible for the SP's fair share. For the General Plan Buildout 2045 scenario, all impacts are considered cumulative impacts. Table 36 shows the intersections and roadway segments with direct or cumulative impacts, and Table 37 identifies the project fair share of recommended intersection and roadway segment improvements for the SP.

Table 36. Specific Plan Project Impact Summary

Intersection		Impact
4.	Sierra Ave/Jurupa Ave (Existing)	Cumulative
5.	Armstrong Rd/Sierra Ave (Existing)	Cumulative
7.	Valley Way/SR-60 WB Off Ramp (Existing)	Cumulative
9.	SR-60 EB Ramps/Mission Blvd (Existing)	Cumulative
10.	Valley Way/Mission Blvd (Existing)	Direct
11.	Jurupa Rd/Mission Blvd (Existing)	Cumulative
15.	Cedar Ave/Orange St (Existing)	Direct
16.	Cedar Ave/Slover Ave (Existing)	Cumulative
17.	Cedar Ave/Santa Ana Ave (Existing)	Cumulative
18.	Cedar Ave/Jurupa Ave (Existing)	Cumulative
20.	Rubidoux Blvd/Market St (Existing)	Cumulative
21.	Agua Mansa Rd/Market St (Existing)	Cumulative
22.	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	Cumulative
23.	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	Cumulative
24.	Rubidoux Blvd/SR-60 EB Ramps (Existing)	Cumulative
26.	Market St/SR-60 WB Ramps (Existing)	Cumulative
27.	Market St/SR-60 EB Ramps (Existing)	Cumulative
Roadway Segment		
2.	Sierra Ave: Jurupa Ave to Armstrong Rd	Cumulative
3.	Sierra Ave: Armstrong Rd to 20th Street	Direct
5.	Valley Way: Sierra Ave to 34th St	Cumulative
6.	Valley Way: 34th St to Granite Hill	Cumulative
7.	Cedar Ave: I-10 EB Ramps to Slover Ave	Cumulative
10.	Cedar Ave: Jurupa Ave to 7th St	Cumulative
11.	Cedar Ave:7th St to El Rivino Rd	Cumulative
12.	Rubidoux Blvd: El Rivino Rd to Market St	Cumulative
13.	Rubidoux Blvd: Market St to 28th St	Cumulative
14.	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Cumulative
15.	Market St: Agua Mansa Road to 24th St	Cumulative
16.	Market St: 24th St to SR-60 WB Off Ramp	Cumulative
17.	Mission Blvd: SR-60 EB Ramps to Valley Way	Cumulative

Table 37. Specific Plan Fair Share

	Intersection/Segment	Proposed Improvemnts	Existing	Project	2045	2045 with Project	Total New Traffic	Project % of New Traffic
		AM Peak Hour						
4	Sierra Ave/Jurupa Ave (Existing)	No feasible mitigation	2818	374	4395	4769	1951	19.17%
5	Armstrong Rd/Sierra Ave (Existing)	Change NBR from permissive to overlap	2494	1332	4448	5780	3286	40.54%
7	Valley Way/SR-60 WB Off Ramp (Existing)	Add a EB right-turn and restripe an exclusive left turn; Restripe a WB share thru-left and an exclusive right-turn	2939	746	4137	4883	1944	38.37%
9	SR-60 EB Ramps/Mission Blvd (Existing)	No feasible mitigation	1471	367	2077	2444	973	37.72%
11	Jurupa Rd/Mission Blvd (Existing)	Restrict NB left turns	1779	51	2278	2329	550	9.27%
16	Cedar Ave/Slover Ave (Existing)	Add 2nd EB left	2790	900	4409	5309	2519	35.73%
17	Cedar Ave/Santa Ana Ave (Existing)	Add a EB and WB left-turn and restripe a share thru-right	2245	900	3544	4444	2199	40.93%
18	Cedar Ave/Jurupa Ave (Existing)	Add EB left, EB restripe thru-left to thru	2192	900	3680	4580	2388	37.69%
20	Rubidoux Blvd/Market St (Existing)	Change NBR from permissive to overlap	2562	2037	4152	6189	3627	56.16%
21	Agua Mansa Rd/Market St (Existing)	Add 2nd EB left	1922	678	3422	4100	2178	31.13%
22	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	Tight diamond alternative for the Rubidoux Blvd/SR-60 PSR	2220	384	3646	4030	1810	21.22%
23	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	Tight diamond alternative for the Rubidoux Blvd/SR-60 PSR	2313	384	3362	3746	1433	26.80%
24	Rubidoux Blvd/SR-60 EB Ramps (Existing)	Tight diamond alternative for the Rubidoux Blvd/SR-60 PSR	2334	277	3234	3511	1177	23.53%
26	Market St/SR-60 WB Ramps (Existing)	Add 2nd WB left	2328	678	3708	4386	2058	32.94%
27	Market St/SR-60 EB Ramps (Existing)	Add 2nd SB left	2186	200	2926	3126	940	21.28%
		PM Peak Hour						
4	Sierra Ave/Jurupa Ave (Existing)	No feasible mitigation	3664	413	5180	5593	1929	21.41%
5	Armstrong Rd/Sierra Ave (Existing)	Change NBR from permissive to overlap	3262	1247	5489	6736	3474	35.90%
7	Valley Way/SR-60 WB Off Ramp (Existing)	Add a EB right-turn and restripe an exclusive left turn; Restripe a WB share thru-left and an exclusive right-turn	3239	753	4504	5257	2018	37.31%
9	SR-60 EB Ramps/Mission Blvd (Existing)	No feasible mitigation	2436	348	3139	3487	1051	33.11%
11	Jurupa Rd/Mission Blvd (Existing)	Restrict NB left turns	2540	68	3147	3215	675	10.07%
16	Cedar Ave/Slover Ave (Existing)	Add 2nd EB left	2724	902	4499	5401	2677	33.69%
17	Cedar Ave/Santa Ana Ave (Existing)	Add a EB and WB left-turn and restripe a share thru-right	2231	902	3679	4581	2350	38.38%
18	Cedar Ave/Jurupa Ave (Existing)	Add EB left, EB restripe thru-left to thru	2339	902	4073	4975	2636	34.22%
20	Rubidoux Blvd/Market St (Existing)	Change NBR from permissive to overlap	2995	2089	4724	6813	3818	54.71%
21	Agua Mansa Rd/Market St (Existing)	Add 2nd EB left	2167	766	3743	4509	2342	32.71%
22	Rubidoux Blvd/SR-60 WB Off Ramp (Existing)	Tight diamond alternative for the Rubidoux Blvd/SR-60 PSR	2479	403	4115	4518	2039	19.76%
23	Rubidoux Blvd/SR-60 WB On Ramp (Existing)	Tight diamond alternative for the Rubidoux Blvd/SR-60 PSR	2493	404	3668	4072	1579	25.59%
24	Rubidoux Blvd/SR-60 EB Ramps (Existing)	Tight diamond alternative for the Rubidoux Blvd/SR-60 PSR	2674	160	3567	3727	1053	15.19%
26	Market St/SR-60 WB Ramps (Existing)	Add 2nd WB left	2563	766	4053	4819	2256	33.95%
27	Market St/SR-60 EB Ramps (Existing)	Add 2nd SB left	2548	370	3643	4013	1465	25.26%

	Roadway Segment							
2	Sierra Ave: Jurupa Ave to Armstrong Rd	Arterial 4 lane to Major 4 Lane	25899	4396	34624	39020	13121	33.50%
5	Valley Way: Sierra Ave to 34th St	Built Out, No Feasible Mitigation	34987	7923	49540	57463	22476	35.25%
6	Valley Way: 34th St to Granite Hill	Built Out, No Feasible Mitigation	33533	6911	50283	57194	23661	29.21%
7	Cedar Ave: I-10 EB Ramps to Slover Ave	Built Out, No Feasible Mitigation	27267	9369	51316	60685	33418	28.04%
10	Cedar Ave: Jurupa Ave to 7th St	Built Out, No Feasible Mitigation	26995	9369	40818	50187	23192	40.40%
11	Cedar Ave:7th St to El Rivino Rd	Built Out, No Feasible Mitigation	25657	9369	41647	51016	25359	36.95%
12	Rubidoux Blvd: El Rivino Rd to Market St	Built Out, No Feasible Mitigation	25575	9481	41148	50629	25054	37.84%
13	Rubidoux Blvd: Market St to 28th St	Built Out, No Feasible Mitigation	26065	4468	32763	37231	11166	40.01%
14	Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	Arterial 4 lane to Major 4 Lane	25258	4334	35991	40325	15067	28.76%
15	Market St: Agua Mansa Road to 24th St	Built Out, No Feasible Mitigation	20125	7603	35054	42657	22532	33.74%
16	Market St: 24th St to SR-60 WB Off Ramp	Built Out, No Feasible Mitigation	26156	7603	47904	55507	29351	25.90%
17	Mission Blvd: SR-60 EB Ramps to Valley Way	Arterial 4 lane to Major 4 Lane	22381	3369	29693	33062	10681	31.54%

Higher percent of fair share AM/PM

APPENDIX A – SCOPE OF WORK

A. City of Jurupa Valley Development Project Scoping Form

This scoping form shall be submitted to the City of Jurupa Valley to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Project Identification:

Case Number:	MA16045
Related Cases:	
SP No.	
EIR No.	
GPA No.	16001
CZ No.	16003
Project Name:	Rio Vista Specific Plan
Project Address:	APNs 175-080-010; 175-090-001, 002, 003, 004, 005; 175-060-001, 005, 007; 177-030-012, 014; 177-040-002, 008
Project Opening Year:	2030
Project Description:	Specific Plan with 1,697 single and multifamily homes, 1,269,774 sf of Industrial Park, 1,428,768 of Business Park, 18.4 acres of public park, and a public elementary and middle school (1,050 students)

	Consultant:	**Developer:**
Name:	EPD Solutions	Richland Planned Communities Inc.
Address:	2 Park Plaza Suite 1120	3161 Michelson Drive Suite 425
	Irvine, CA 92614	Irvine, CA 92612
Telephone:	949-794-1186	
Fax/Email:	meghan@epdsolutions.com	

Trip Generation Information:

Trip Generation Data Source: ITE Trip Generation Manual; 10th Edition

Current General Plan Land Use: Rio Vista SP No. 243

Current Zoning: OS-R, OS-C, various residential land use designarions

Proposed General Plan Land Use: Specific Plan No. 16001

Proposed Zoning: MHDR, HDR, VHDR, MDR, VLDR, LI, BP, PF, OS-R

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips				1,124	1,385	2,509
PM Trips				1,308	1,112	2,420

Internal Trip Capture: ☐ Yes ☑ No (_____% Trip Discount)

Pass-By Allowance: ☐ Yes ☑ No (_____% Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses?

Is the project screened from LOS assessment? ☐ Yes ☑ No

LOS screening justification (see Pages 2-3 of the guidelines): _____

Is the project screened from VMT assessment? ☐ Yes ☑ No

VMT screening justification (see Pages 13-16 of the guidelines): _____

Level of Service Scoping (See Attached)

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution): (Attached)
- Attach list of Approved and Pending Projects that need to be considered (provided by the Planning Department and adjacent agencies) (Attached)
- Attach list of study intersections/roadway segments (Attached)
- Attach site plan (Attached)
- Other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other _____
- Date of Traffic Counts 2021 (new counts)
- Attach proposed analysis scenarios (years plus proposed forecasting approach) (Attached)
- Attach proposed phasing approach (if the project is phased)

VMT Scoping

For projects that are not screened, identify the following: (See Attached)

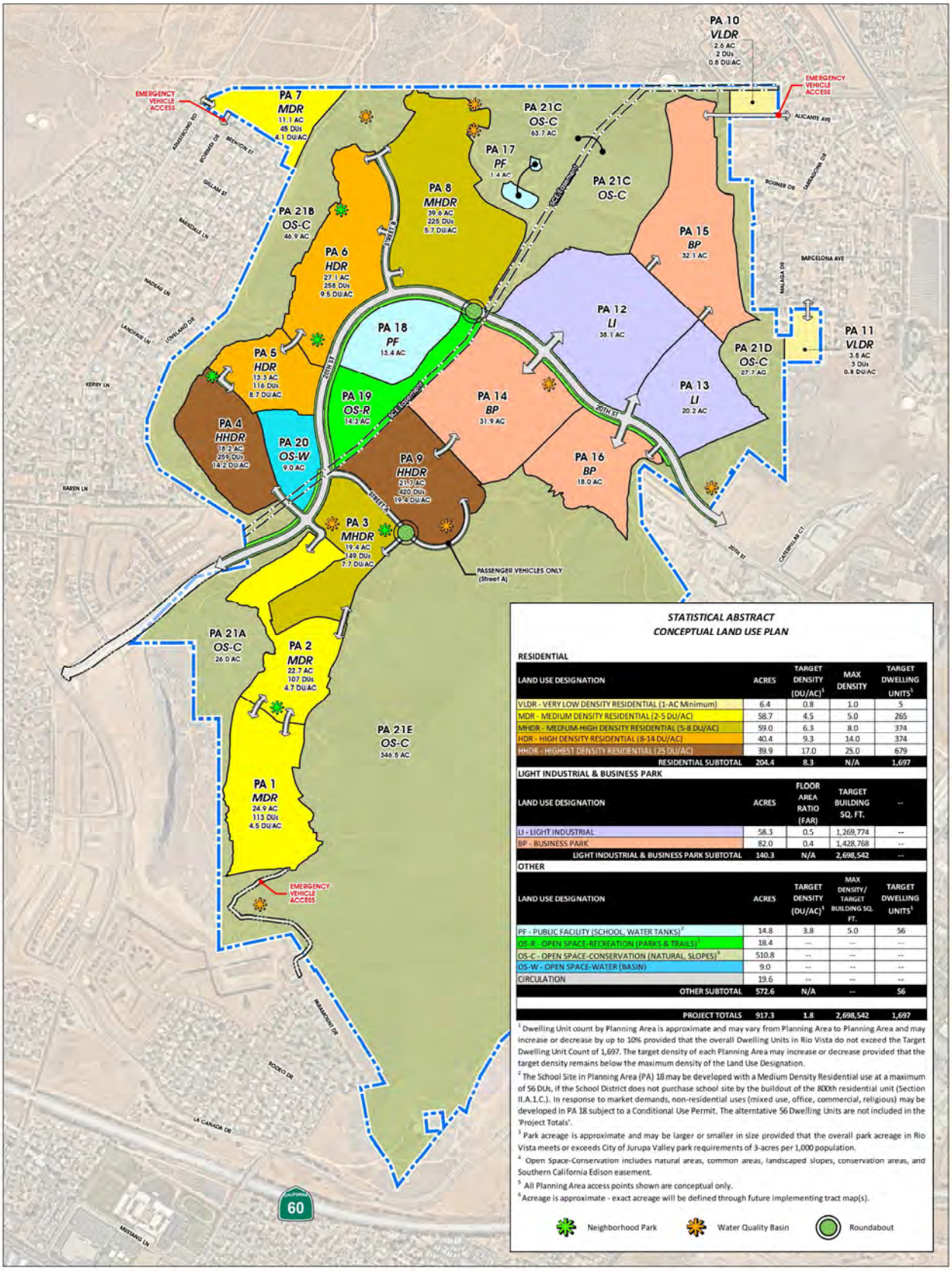
- Travel Demand Forecasting Model Used RivCOM (will compare with RivTAM outputs, and coordinate with city on appropriate model to use)
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

Signatures

TIA Preparer: Meghan Macias City (Approved by): _____

Date: 9/9/2021 Date: _____

RIOVISTA



STATISTICAL ABSTRACT
CONCEPTUAL LAND USE PLAN

RESIDENTIAL

LAND USE DESIGNATION	ACRES	TARGET DENSITY (DU/AC)[1]	MAX DENSITY	TARGET DWELLING UNITS[1]
VLDR - VERY LOW DENSITY RESIDENTIAL (1-AC Minimum)	6.4	0.8	1.0	5
MDR - MEDIUM DENSITY RESIDENTIAL (2-5 DU/AC)	58.7	4.5	5.0	265
MHDR - MEDIUM-HIGH DENSITY RESIDENTIAL (5-8 DU/AC)	59.0	6.3	8.0	374
HDR - HIGH DENSITY RESIDENTIAL (8-14 DU/AC)	40.4	9.3	14.0	374
HHDR - HIGHEST DENSITY RESIDENTIAL (25 DU/AC)	39.9	17.0	25.0	679
RESIDENTIAL SUBTOTAL	**204.4**	**8.3**	**N/A**	**1,697**

LIGHT INDUSTRIAL & BUSINESS PARK

LAND USE DESIGNATION	ACRES	FLOOR AREA RATIO (FAR)	TARGET BUILDING SQ. FT.	--
LI - LIGHT INDUSTRIAL	58.3	0.5	1,269,774	--
BP - BUSINESS PARK	82.0	0.4	1,428,768	--
LIGHT INDUSTRIAL & BUSINESS PARK SUBTOTAL	**140.3**	**N/A**	**2,698,542**	**--**

OTHER

LAND USE DESIGNATION	ACRES	TARGET DENSITY (DU/AC)[1]	MAX DENSITY/ TARGET BUILDING SQ. FT.	TARGET DWELLING UNITS[1]
PF - PUBLIC FACILITY (SCHOOL, WATER TANKS)[2]	14.8	3.8	5.0	56
OS-R - OPEN SPACE-RECREATION (PARKS & TRAILS)[3]	18.4	--	--	--
OS-C - OPEN SPACE-CONSERVATION (NATURAL, SLOPES)[4]	510.8	--	--	--
OS-W - OPEN SPACE-WATER (BASIN)	9.0	--	--	--
CIRCULATION	19.6	--	--	--
OTHER SUBTOTAL	**572.6**	**N/A**	**--**	**56**
PROJECT TOTALS	**917.3**	**1.8**	**2,698,542**	**1,697**

[1] Dwelling Unit count by Planning Area is approximate and may vary from Planning Area to Planning Area and may increase or decrease by up to 10% provided that the overall Dwelling Units in Rio Vista do not exceed the Target Dwelling Unit Count of 1,697. The target density of each Planning Area may increase or decrease provided that the target density remains below the maximum density of the Land Use Designation.

[2] The School Site in Planning Area (PA) 18 may be developed with a Medium Density Residential use at a maximum of 56 DUs, if the School District does not purchase school site by the buildout of the 800th residential unit (Section II.A.1.C.). In response to market demands, non-residential uses (mixed use, office, commercial, religious) may be developed in PA 18 subject to a Conditional Use Permit. The alternative 56 Dwelling Units are not included in the 'Project Totals'.

[3] Park acreage is approximate and may be larger or smaller in size provided that the overall park acreage in Rio Vista meets or exceeds City of Jurupa Valley park requirements of 3-acres per 1,000 population.

[4] Open Space-Conservation includes natural areas, common areas, landscaped slopes, conservation areas, and Southern California Edison easement.

[5] All Planning Area access points shown are conceptual only.

[6] Acreage is approximate - exact acreage will be defined through future implementing tract map(s).

Neighborhood Park Water Quality Basin Roundabout

Source(s): Nearmap Imagery (2020), RCTLMA (2020)
Composite: Hunsaker and Associates (07-22-2021)

0 225 450 900 Feet

Rio Vista Specific Plan Land Use Plan

SP 16001

Job #: 471-004
Date: August 5, 2021

Scoping Agreement Attachments

Level of Service Scoping Attachments:

Cumulative Projects:

County of San Bernardino

A. Alder Ave Industrial: 174,780sf Warehouse
B. Bloomington Business Center: 344,000sf Warehouse
C. Slover High Cube Warehouse: 708,240 High-Cube Warehouse
D. Chevron Slover: 13 Fuel Pump gas station
E. Slover Cactus Warehouse: 257,860 Warehouse

City of Fontana

F. Goodman Industrial Park: 895,568sf Warehouse/223,892sf High-Cube Cold Storage
G. Fontana Foothills Commerce Center: 754,408sf High-Cube Warehouse
H. West Logistics Center: 290,590sf Warehouse/3,183,100sf High-Cube Warehouse

City of Jurupa

I. Agua Mansa Commerce Park Specific Plan: 4,480,000sf of Industrial Uses 71.3 Acres of Regional Park
J. Agua Mansa Development Project: 335,000sf Industrial Buildings (2)
K. Rubidoux Commercial Development: 306,894sf business park (9 buildings)
L. Drive thru Restaurant and Gas Station/Conv. Store: 5,000sf (2,500sf each)
M. Wheeler Upfitters: 25,000sf Industrial building
N. Market Street Commercial: 3,098sf gas station/conv. Store, 4,750sf restaurant, 2,860sf drive thru restaurant, and 2,850 sf drive thru car wash
O. Kiewit Infrastructure West: 25,000sf and 38,000sf industrial buildings
P. Ice Box: 122,000sf warehouse
Q. Karcher Industrial Project: 190,594sf Warehouse
R. Emerald Ridge North: 184 single family units
S. Emerald Ridge South: 118 condo units, 97 single family units
T. TTM 33373: 97 single family units
U. Commercial Development: 18,800sf Trailer Supply Store and 5,910 of Drive Thru Restaurants (Starbucks & Carls Jr)
V. Highland Park Sunnyslope: 398 single family units
W. Highland Park 2: 34 single family units

Cumulative Trip Generation

Land Use		Units	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Trip Rates									
Industrial Park[1]		TSF	3.37	0.32	0.08	0.40	0.08	0.32	0.40
Gasoline Station with Convenience Market[2]		TSF	1440.20	38.75	37.24	75.99	45.06	43.29	88.35
Fast Food Restaurant with Drive-Through[3]		TSF	470.95	20.50	19.69	40.19	16.99	15.68	32.67
Warehouse[4]		TSF	1.740	0.131	0.039	0.170	0.051	0.139	0.190
Single Family Detached Housing[5]		TSF	9.440	0.185	0.555	0.740	0.624	0.366	0.990
Multifamily Housing (Low-Rise)[6]		TSF	7.320	0.106	0.354	0.460	0.353	0.207	0.560
Tracotr Supply Store[7]		TSF	-	-	-	-	0.658	0.742	1.400
County of San Bernardino									
A: Alder Ave Industrial PCE[8]	174.78	TSF	403	30	13	43	14	35	49
B: Bloomington Business Center PCE[8]	344	TSF	1604	107	30	137	35	108	143
C: Slover High Cube PCE[8]	708.24	TSF	629	50	24	74	6	38	44
D: Chevron Slover[8]	13	FP	1936	25	25	50	39	39	78
E: Slover Cactus Warehouse PCE[8]	257.855	TSF	587	44	13	57	17	47	64
City of Fontana									
F: Goodman Industrial Park PCE[8]	1,118.46	TSF	3144	206	62	268	73	194	267
G: Fontana Foothills Commerce Center PCE[8]	754.408	TSF	1640	74	22	96	32	85	117
H: West Logistics Center PCE[8]	3,473.69	TSF	7619	351	105	456	196	470	666
City of Jurupa Valley									
I: Agua Mansa Commerce Park Specific Plan Alt 1 PCE[8]	4,480/71.3	TSF/AC	11376	581	165	746	231	637	868
J: Agua Mansa Development Project PCE[8]	335.00	TSF	1670	209	58	267	90	202	292
K: Rubidoux Commercial Development PCE[1]	335.00	TSF	1590	153	36	189	40	149	189
L: Drive thru Restaurant and Gas Station/Conv. Store[2,3]	2.5/2.5	TSF	2185	64	61	125	70	67	137
M: Wheeler Upfitters[8]	25.00	TSF	120	39	3	42	3	39	42
N: Market Street Commercial[8]	7.42/18	TSF/FP	11617	124	118	242	117	110	227
O: Kiewit Infrastructure West[8]	63.00	TSF	248	30	9	39	13	29	42
P: Ice Box[8]	122.00	TSF	390	15	3	18	5	14	19
Q: Karcher Industrial Project PCE[4]	190.594	TSF	506	39	11	50	18	41	59
R: Emerald Ridge North[5]	184	DU	506	39	11	50	18	41	59
S: Emerald Ridge South[5,6]	97/118	DU	1779	30	96	126	102	60	162
T: TTM 33373[5]	97	DU	248	30	9	39	13	29	42
U: Commercial Development[7]	18.8/5.91	TSF	1419	62	60	122	62	61	123
V: Highland Park Sunnyslope[5]	398	DU	390	15	3	18	5	14	19
W: Highland Park 2[5]	24	DU	506	39	11	50	18	41	59
Total Project PCE Trip Generation			52112	2356	948	3304	1217	2550	3767

TSF = Thousand Square Feet
FP = Fuelling Positions
PCE = Passenger Car Equivalent

[1] Trip rates from the Institute of Transporation Engineers, Trip Generation,10th Edition, 2017. Land Use Code 130 - Industrial Park.

[2] Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 945 - Gasoline/Service Station With Convenience Market.

[3] Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 934 - Fast Food Restaurant with Drive Through.

[4] Trip rates from the Institute of Transporation Engineers, Trip Generation,10th Edition, 2017. Land Use Code 150 - Warehousing.

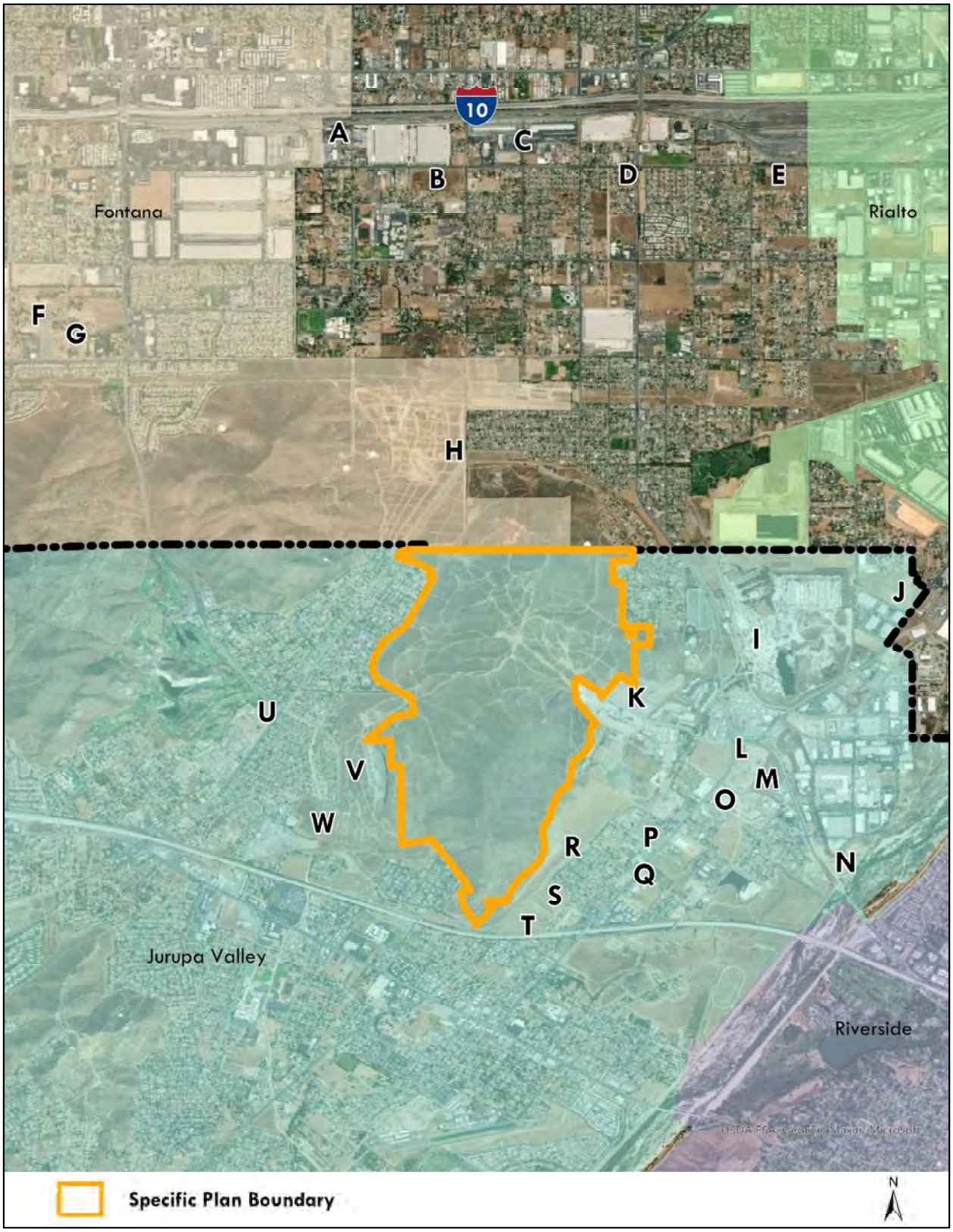
[5] Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 210 - Single Family Detached Housing.

[6] Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 220 - Multifamily Housing (Low-Rise).

[7] Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 810 - Tractor Supply Store.

[8] Trip Rates Taken From Project's Traffic Analysis Document

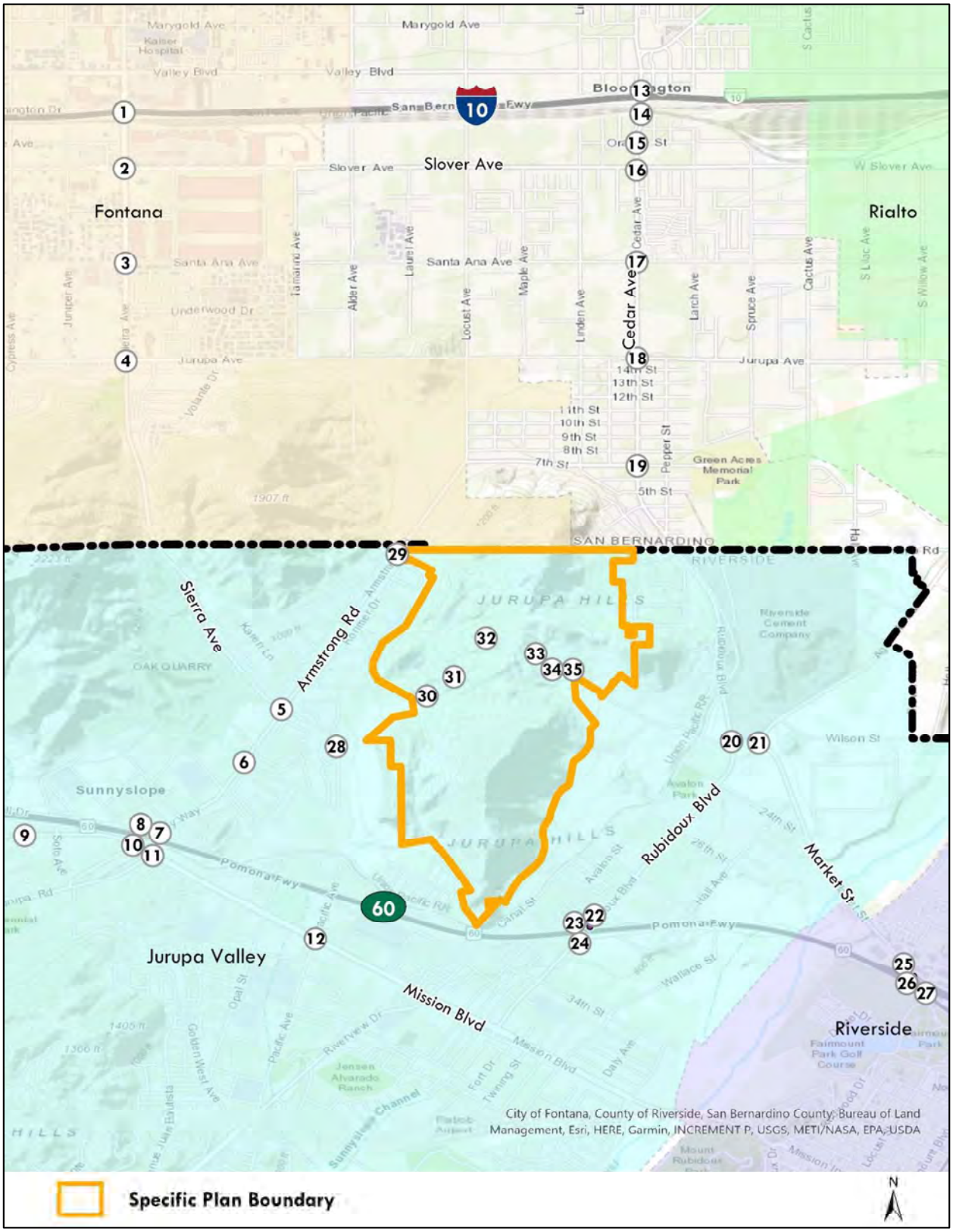
Cumulative Map



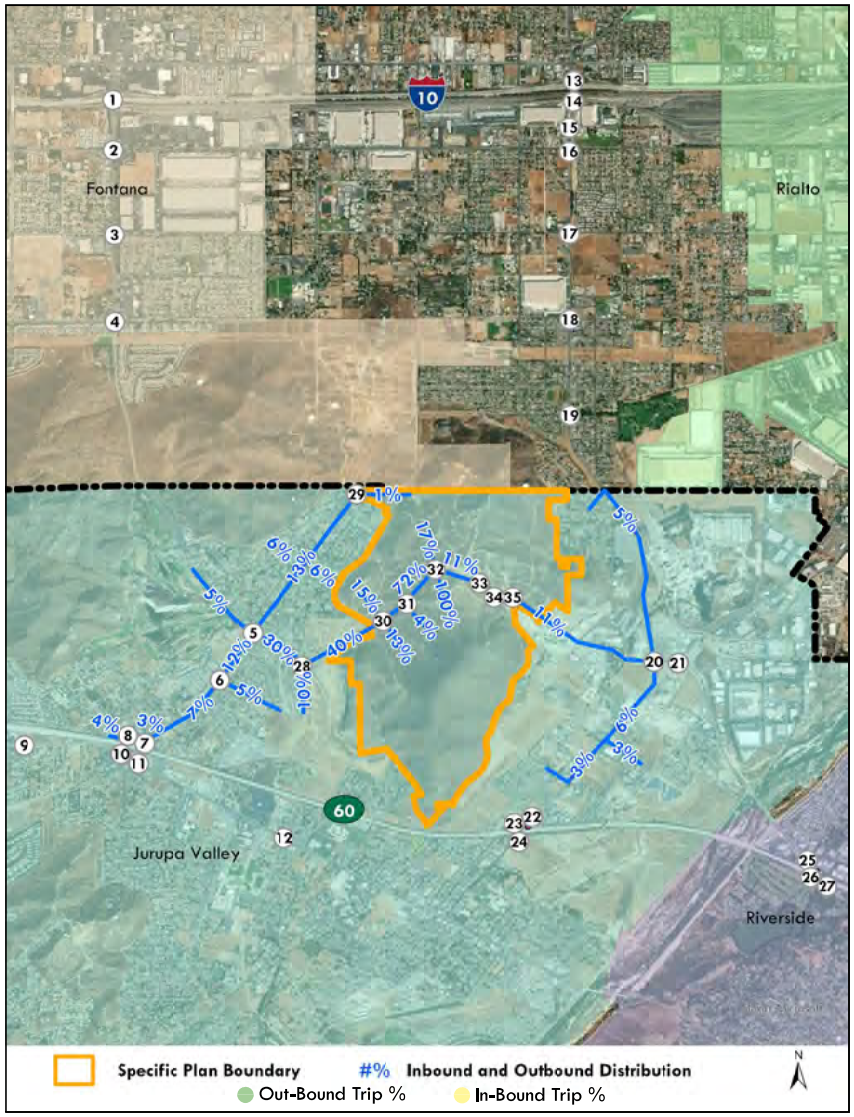
Intersections:

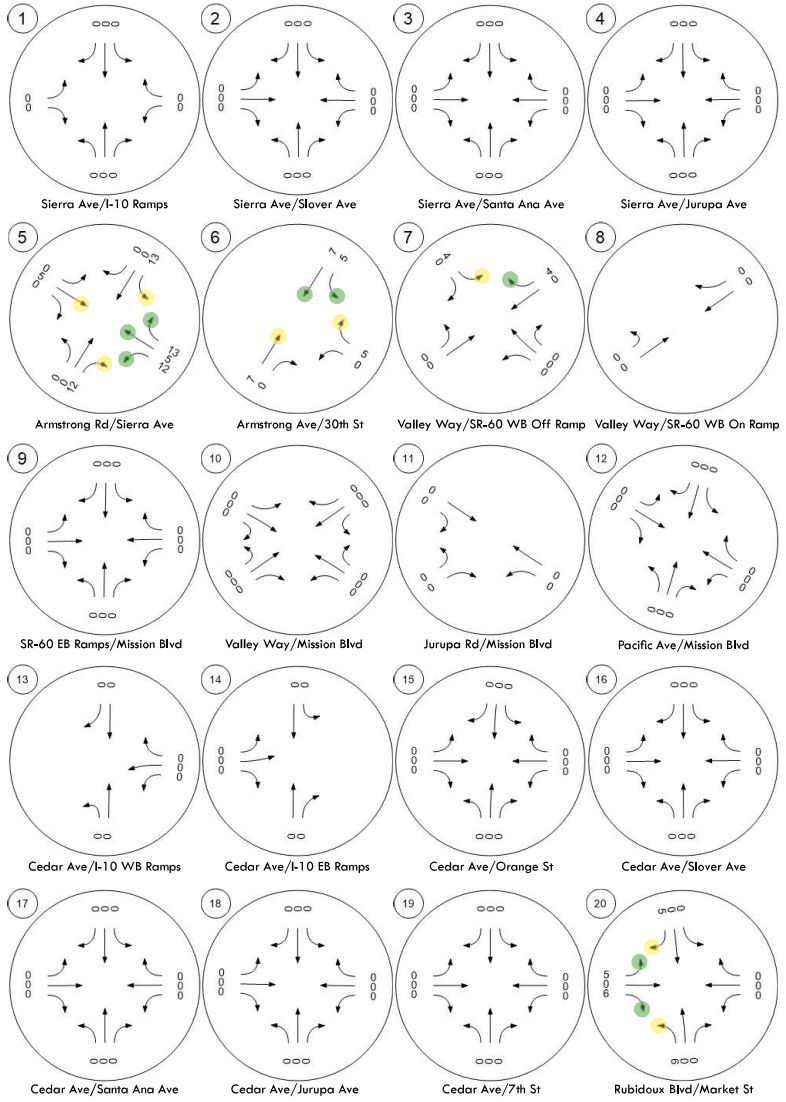
1. Sierra Avenue/I-10 Ramps
2. Sierra Avenue/Slover Avenue
3. Sierra Avenue/Santa Ana Avenue
4. Sierra Avenue/Jurupa Avenue
5. Armstrong Road/Sierra Avenue
6. Armstrong Road/30th Street
7. Valley Way/SR-60 WB Off Ramp
8. Valley Way/SR-60 WB On Ramp
9. SR-60 EB Ramps/Mission Boulevard
10. Valley Way/Mission Boulevard
11. Jurupa Road/Mission Boulevard
12. Pacific Avenue/Mission Boulevard
13. Cedar Avenue/I-10 WB Ramp
14. Cedar Avenue/I-10 EB Ramp
15. Cedar Avenue/Orange Street
16. Cedar Avenue/Slover Avenue
17. Cedar Avenue/Santa Ana Avenue
18. Cedar Avenue/Jurupa Avenue
19. Cedar Avenue/7th Street
20. Rubidoux Boulevard/Market Street
21. Agua Mansa Road/Market Street
22. Rubidoux Boulevard/SR-60 WB Off Ramp
23. Rubidoux Boulevard/SR-60 WB On Ramp
24. Rubidoux Boulevard/SR-60 EB Ramps
25. Market Street/Rivera Street
26. Market Street/SR-60 WB Ramp
27. Market Street/SR-60 EB Ramp
28. Sierra Avenue/20th Street
29. Armstrong Road/Street “A”
30. Street “B”/20th Street
31. Street “C”/20th Street
32. Street “D”/20th Street
33. Driveway 1/20th Street
34. Street “E”/20th Street
35. Driveway 2/20th Street

Study Area Map

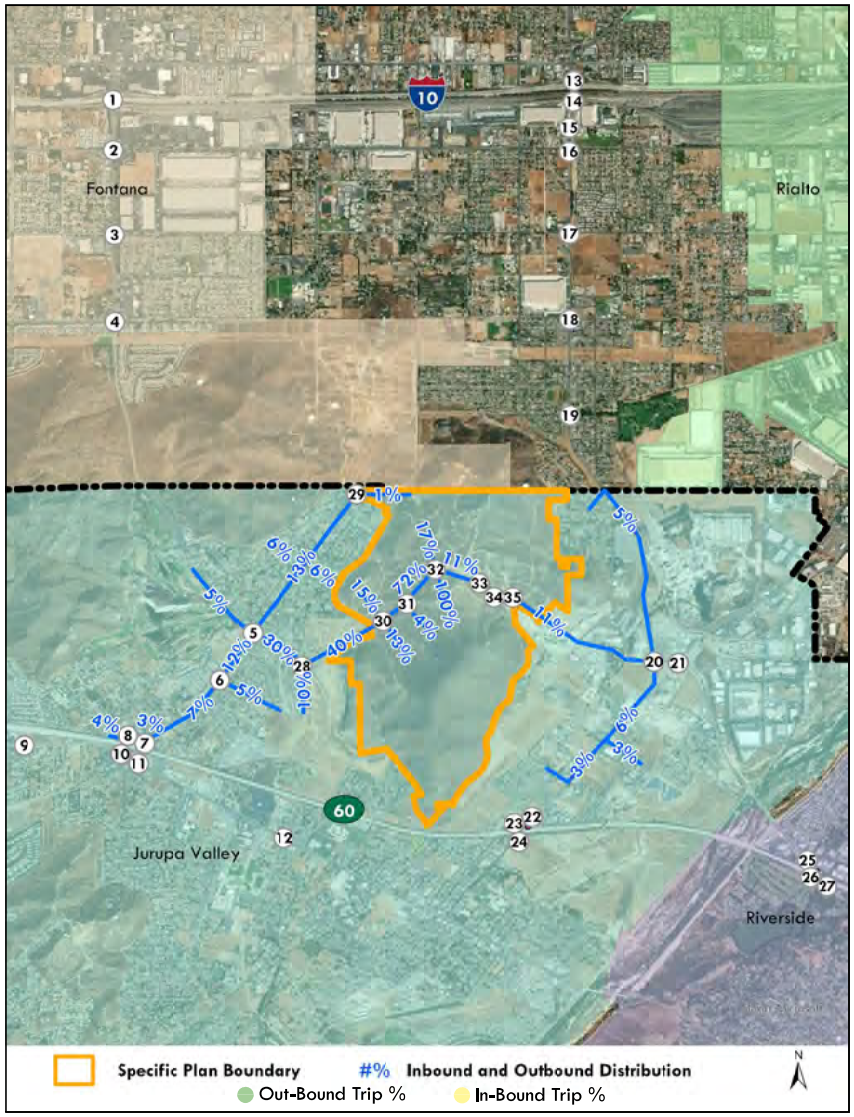


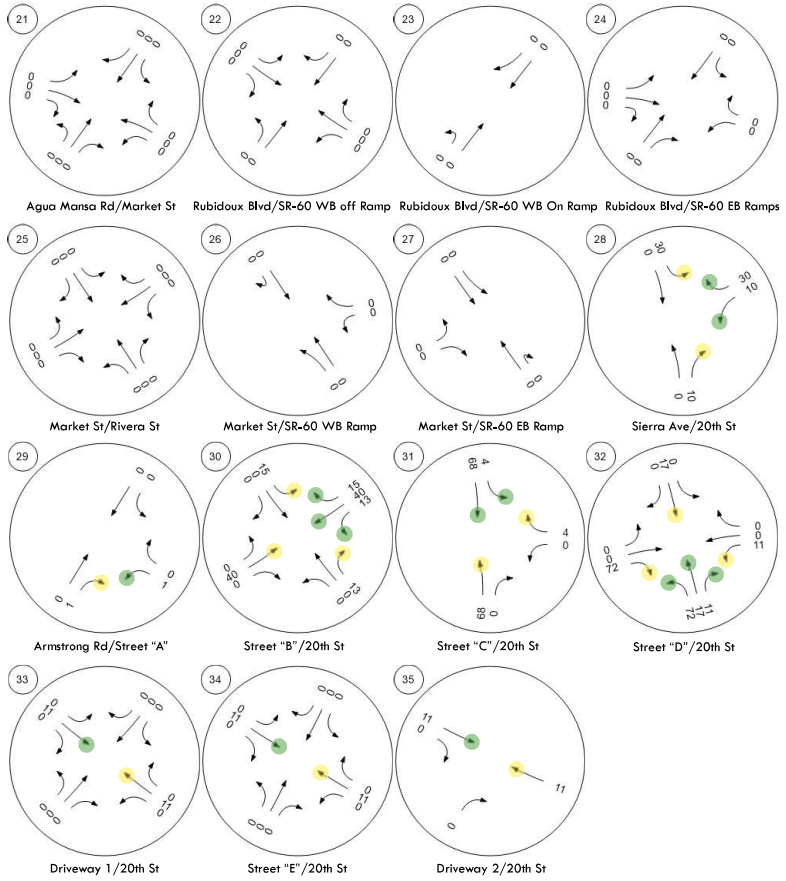
School/Park Distribution (A)



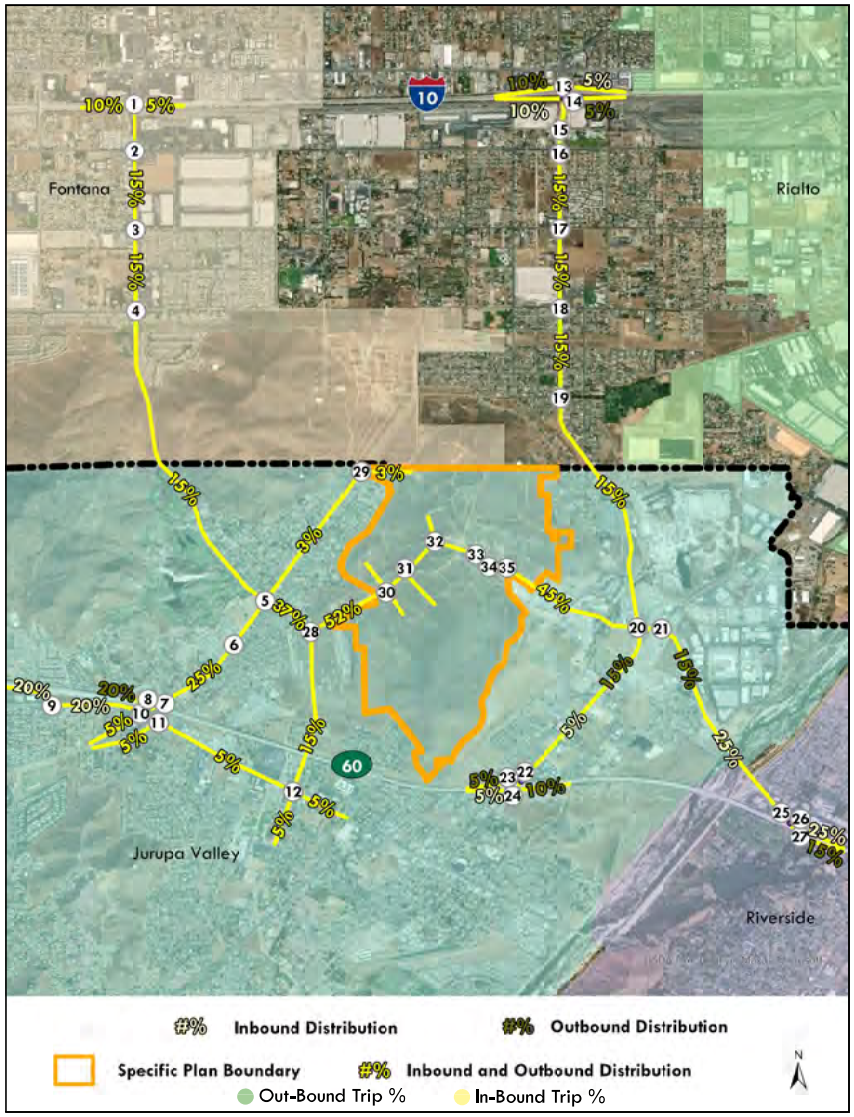


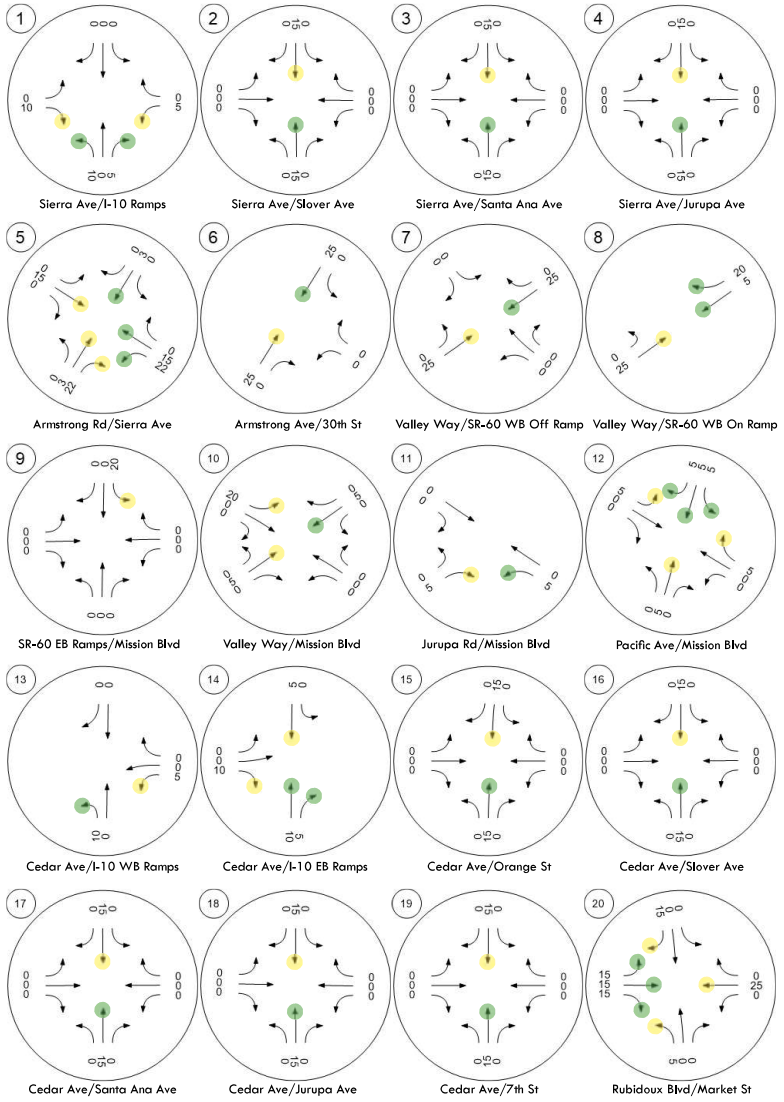
School/Park Distribution (B)



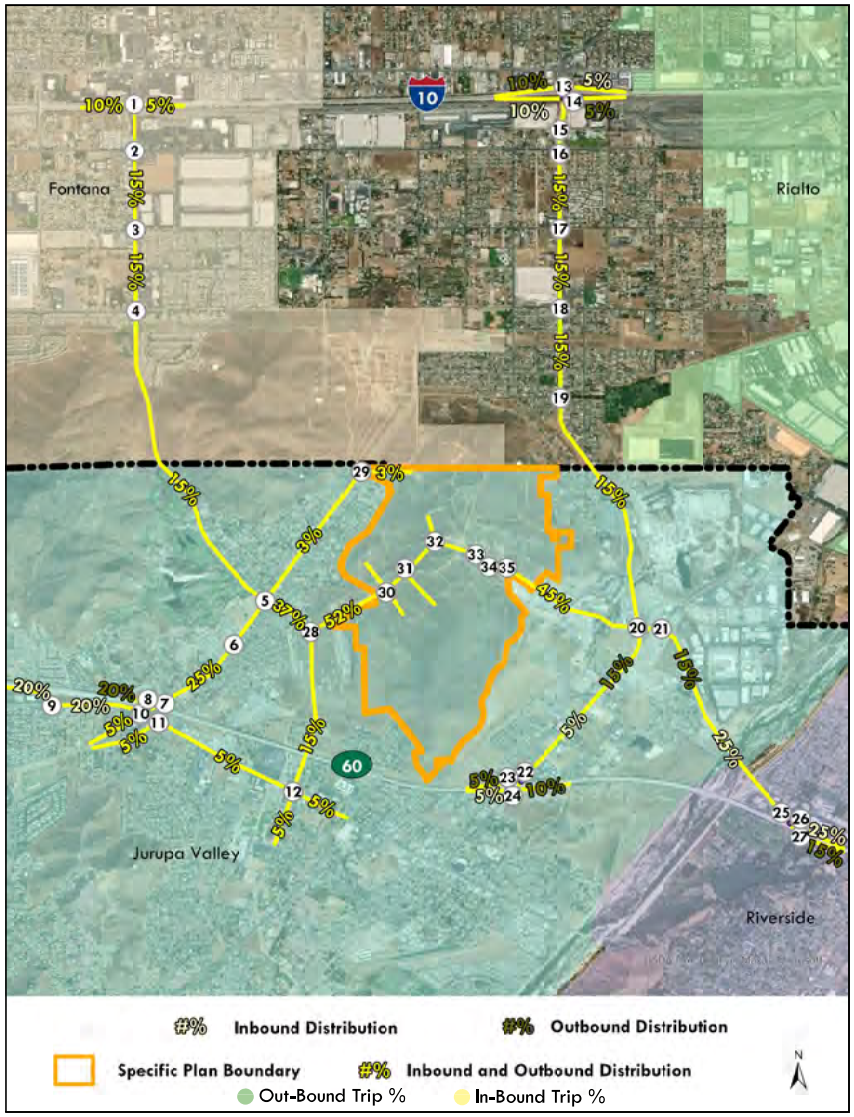


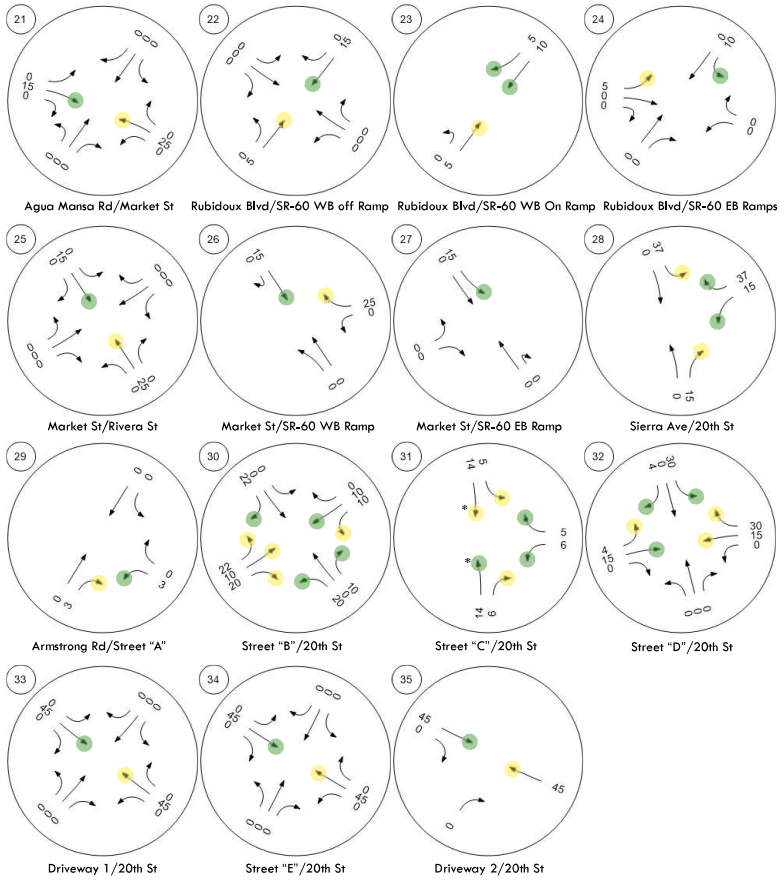
Residential Distribution (A)





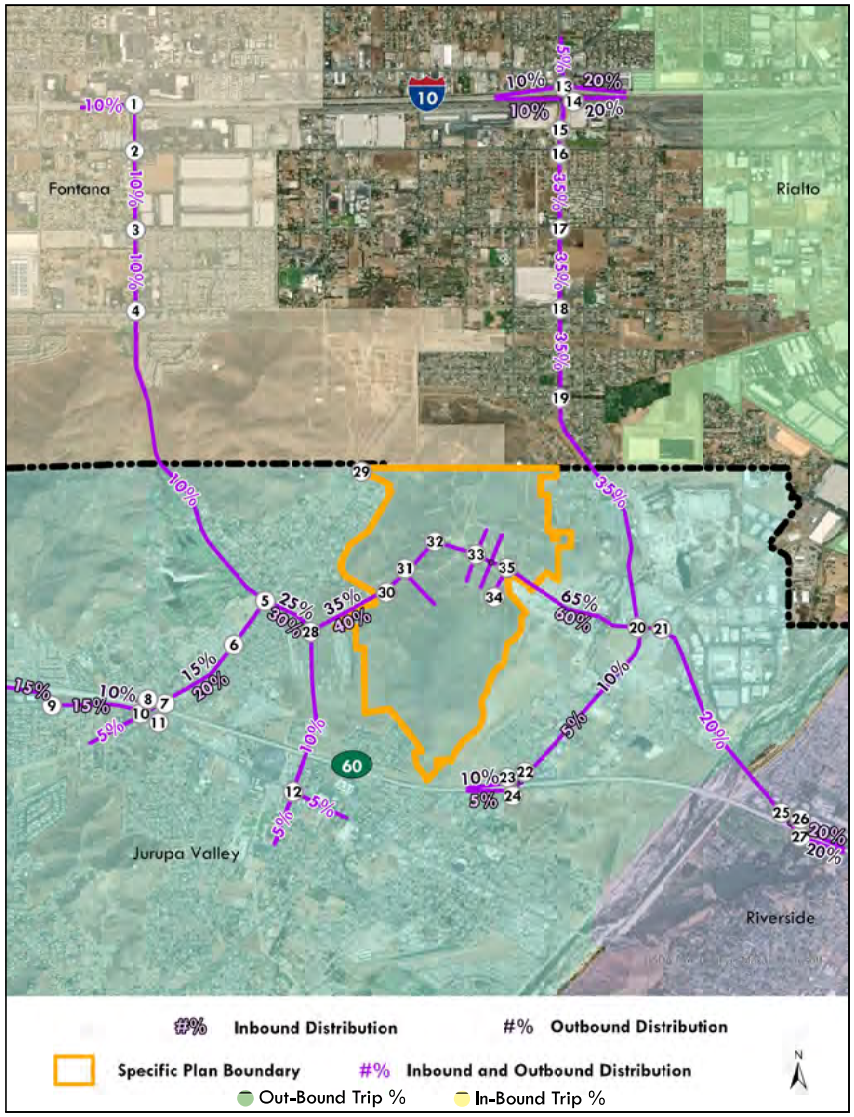
Residential Distribution (B)

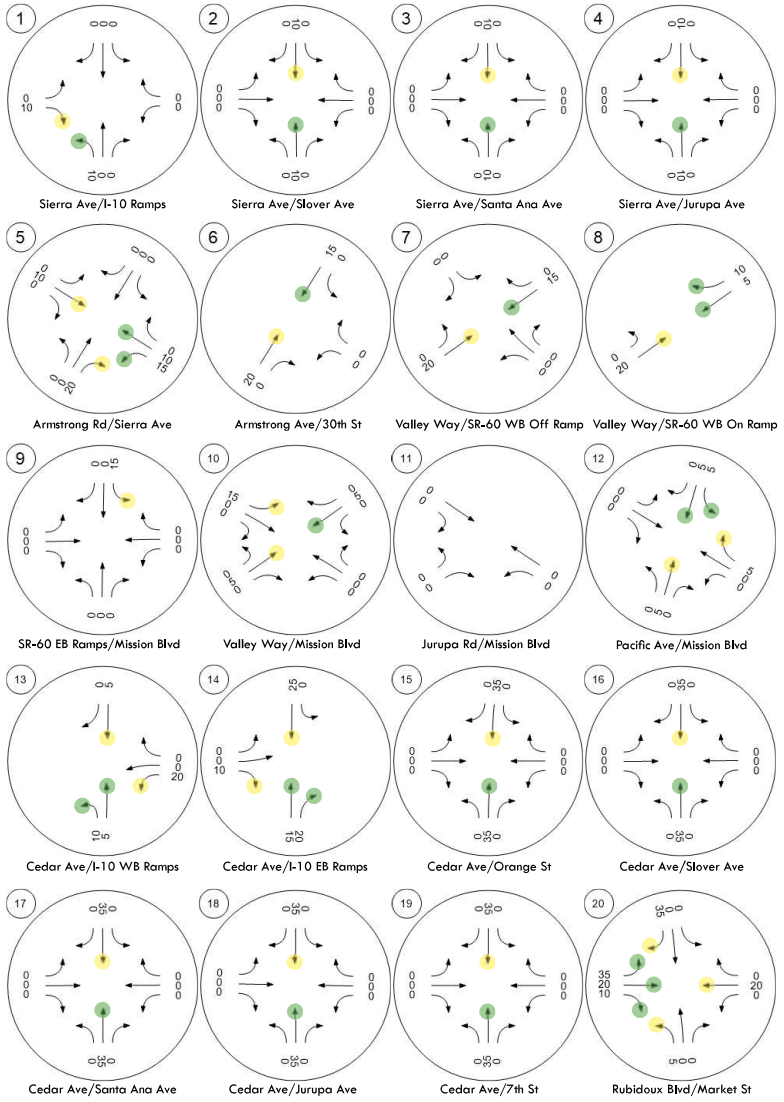




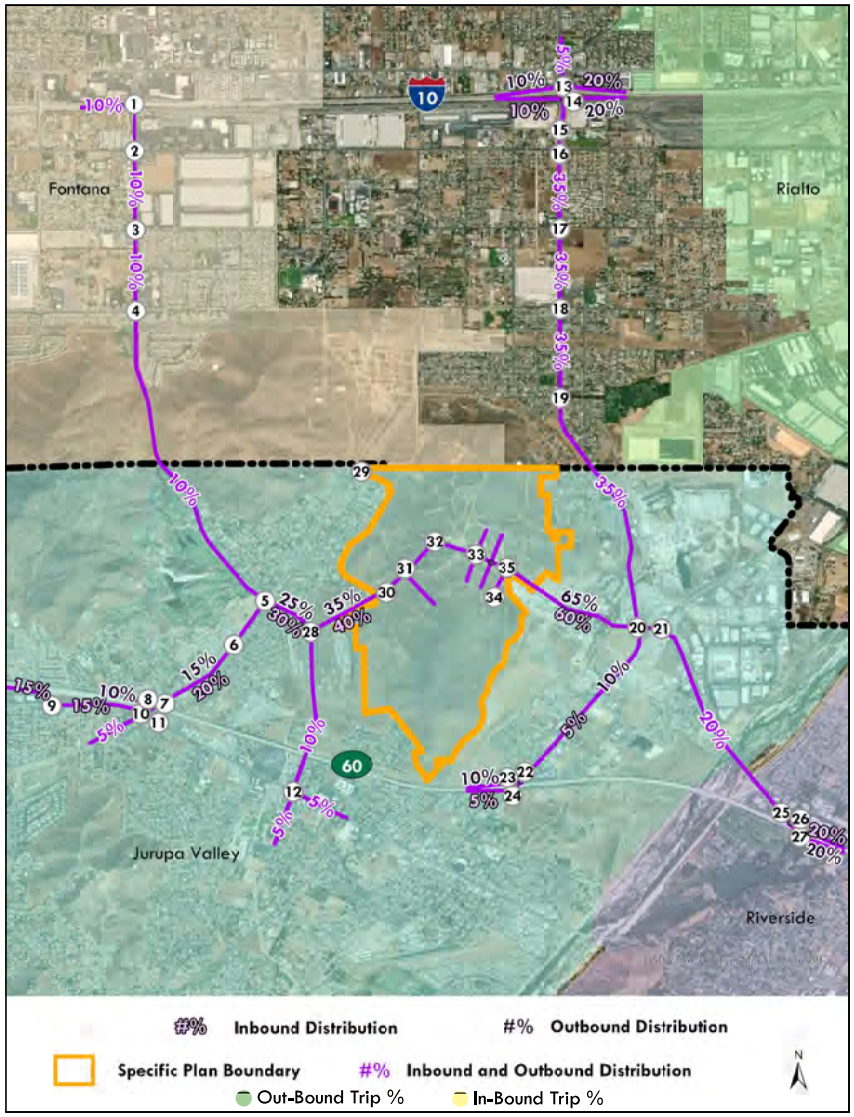
*Includes both in-bound and out-bound distribution

Industrial/Business Park Auto Distribution (A)





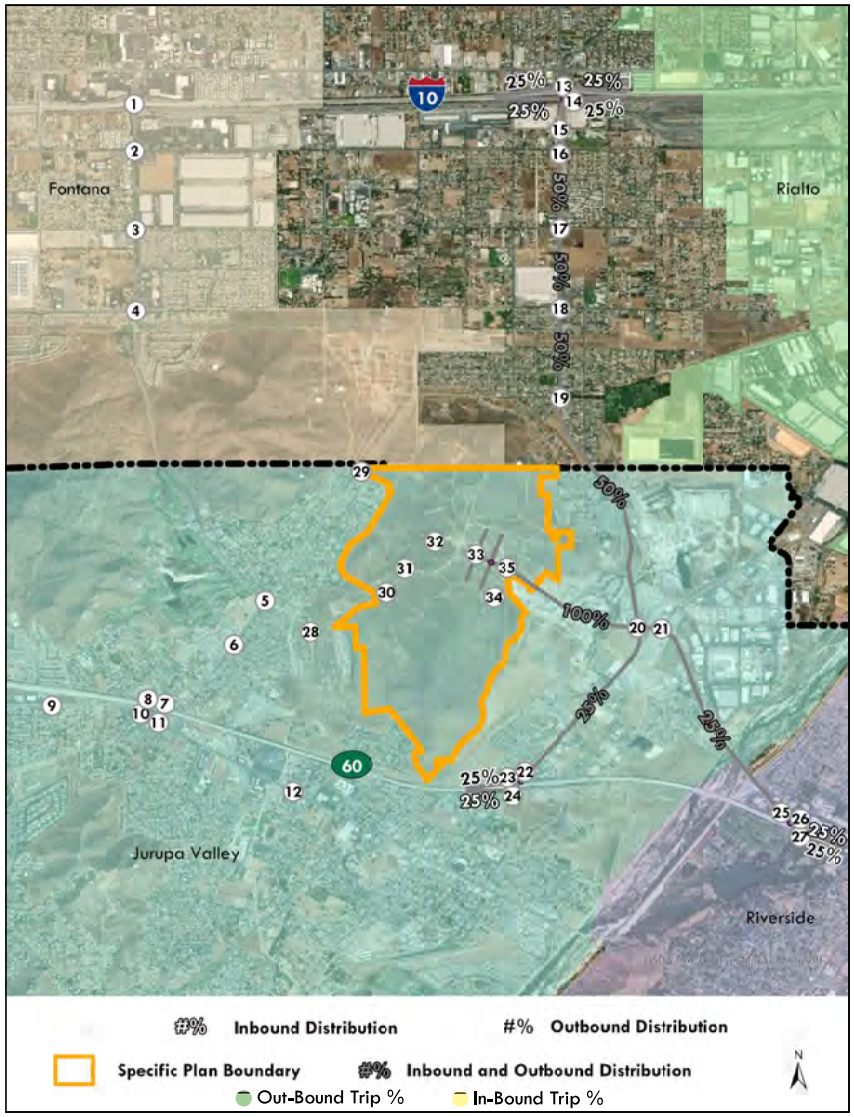
Industrial/Business Park Auto Distribution (B)

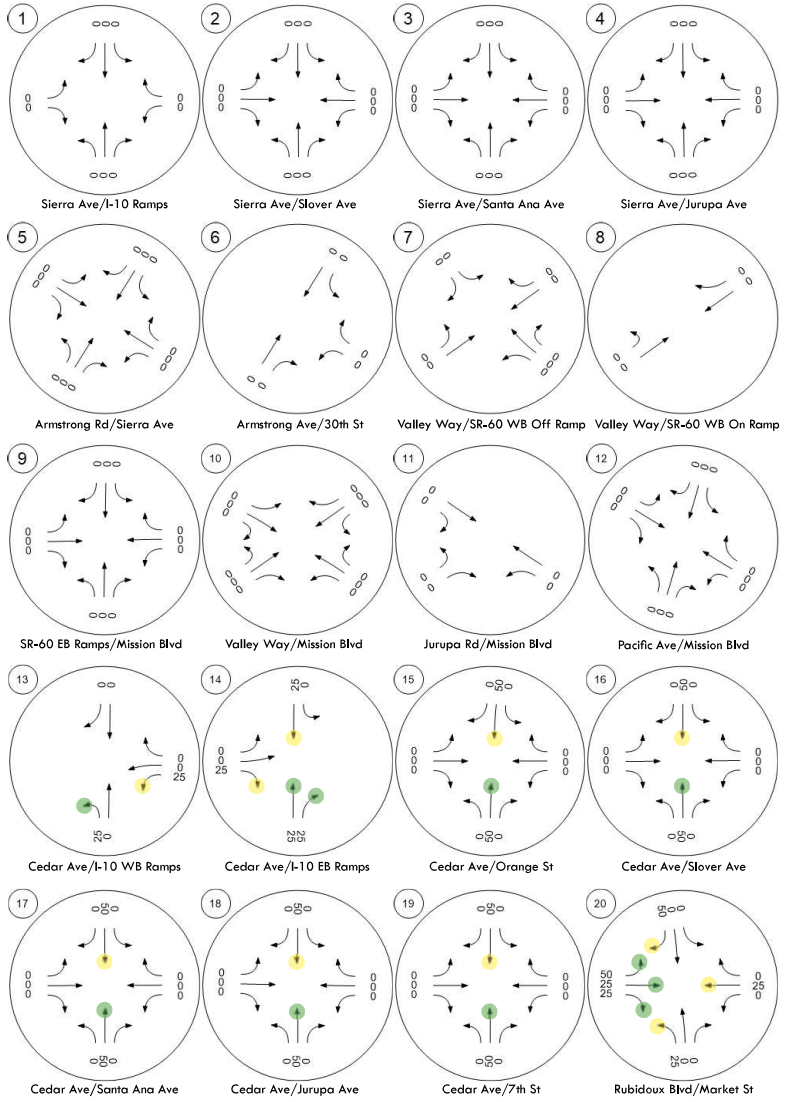




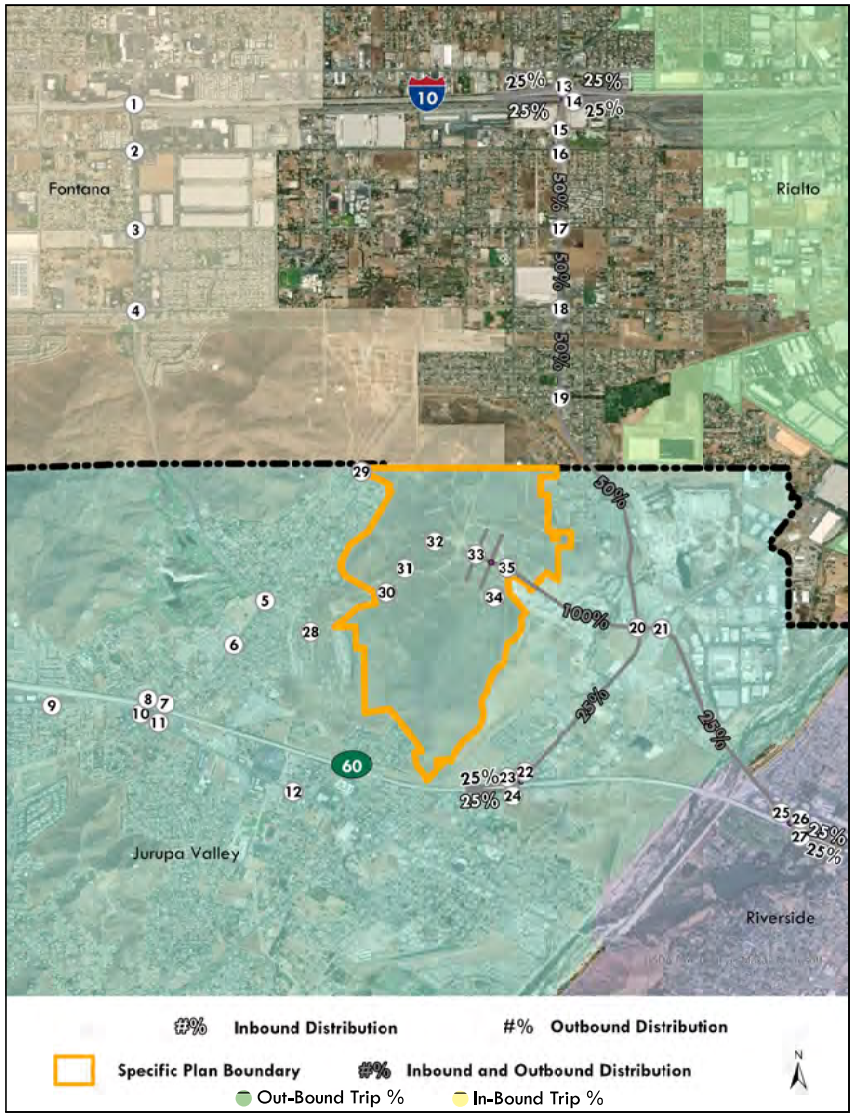
*Includes both in-bound and out-bound distribution

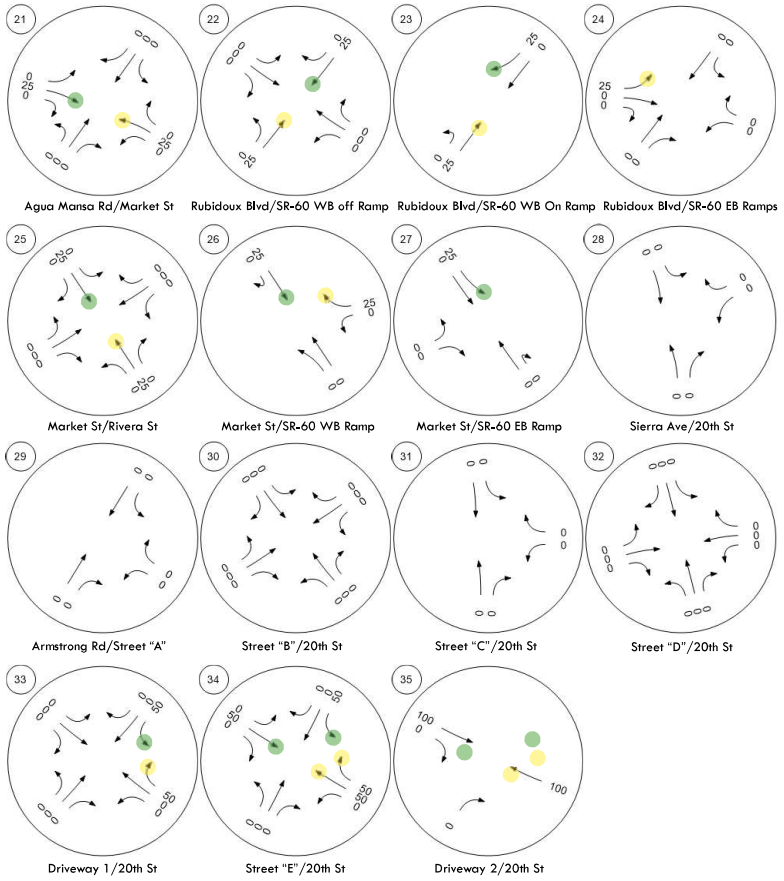
Industrial Truck Distribution (A)



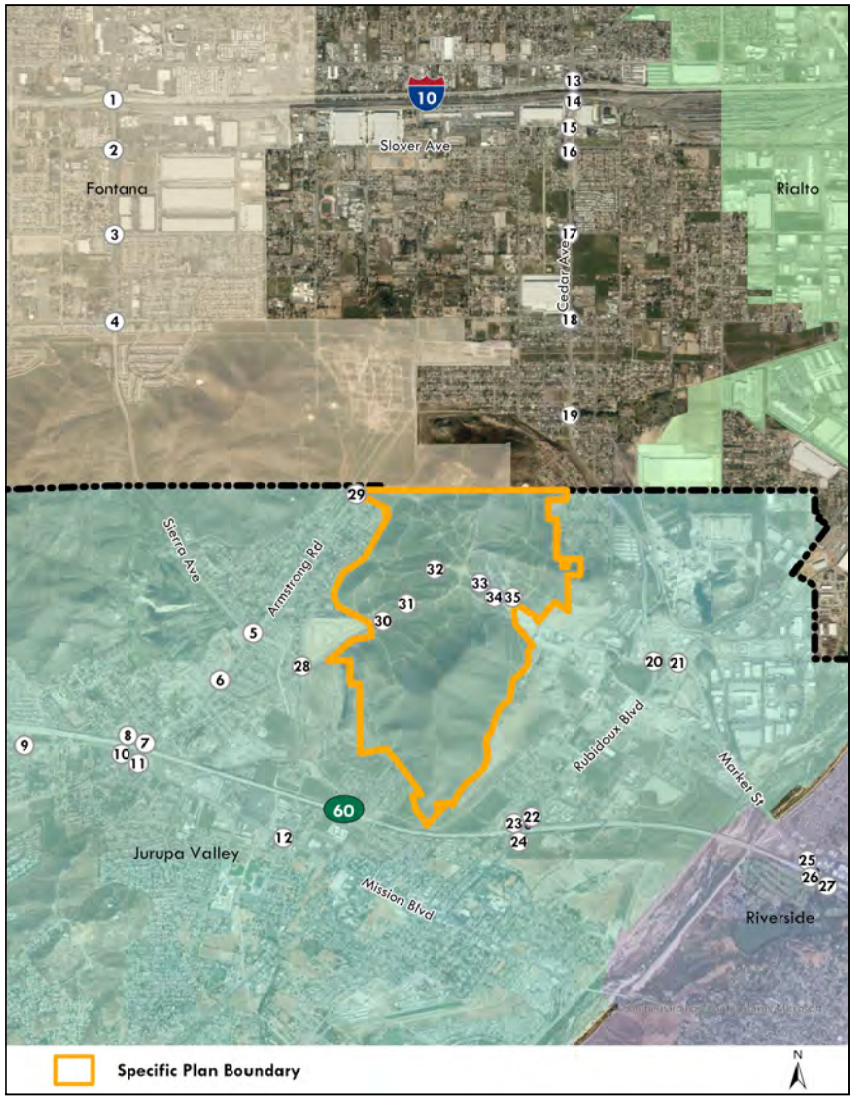


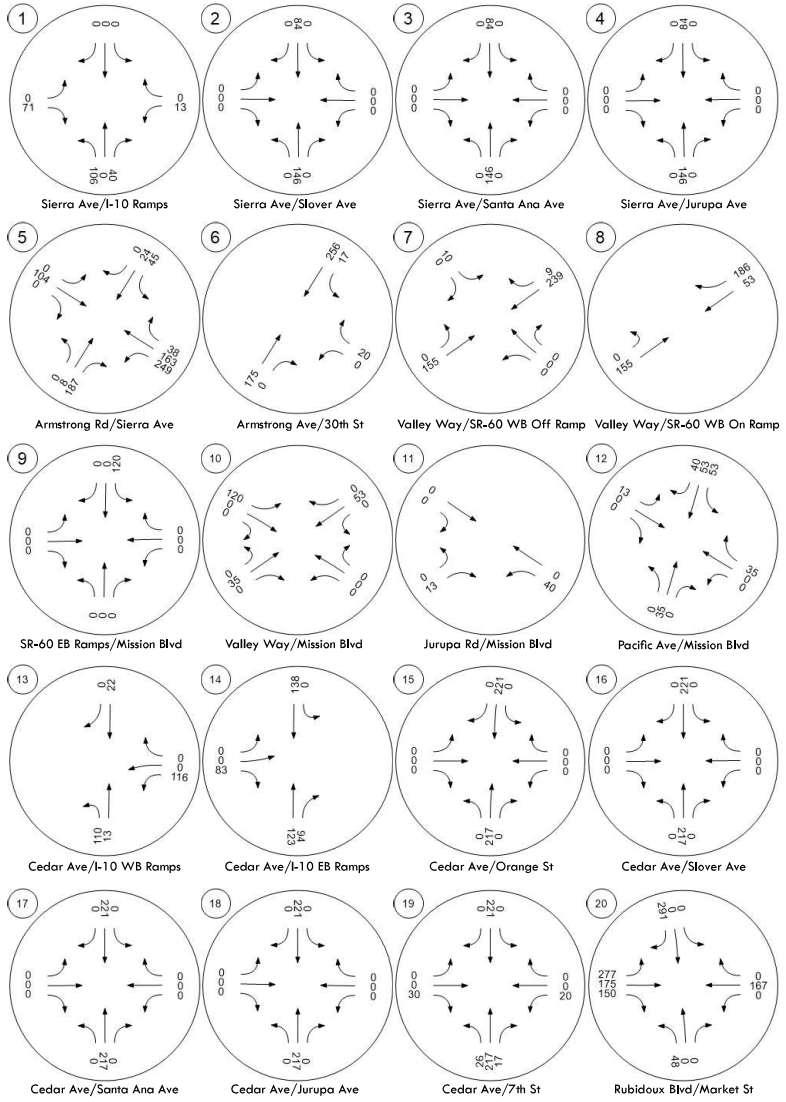
Industrial Truck Distribution (B)



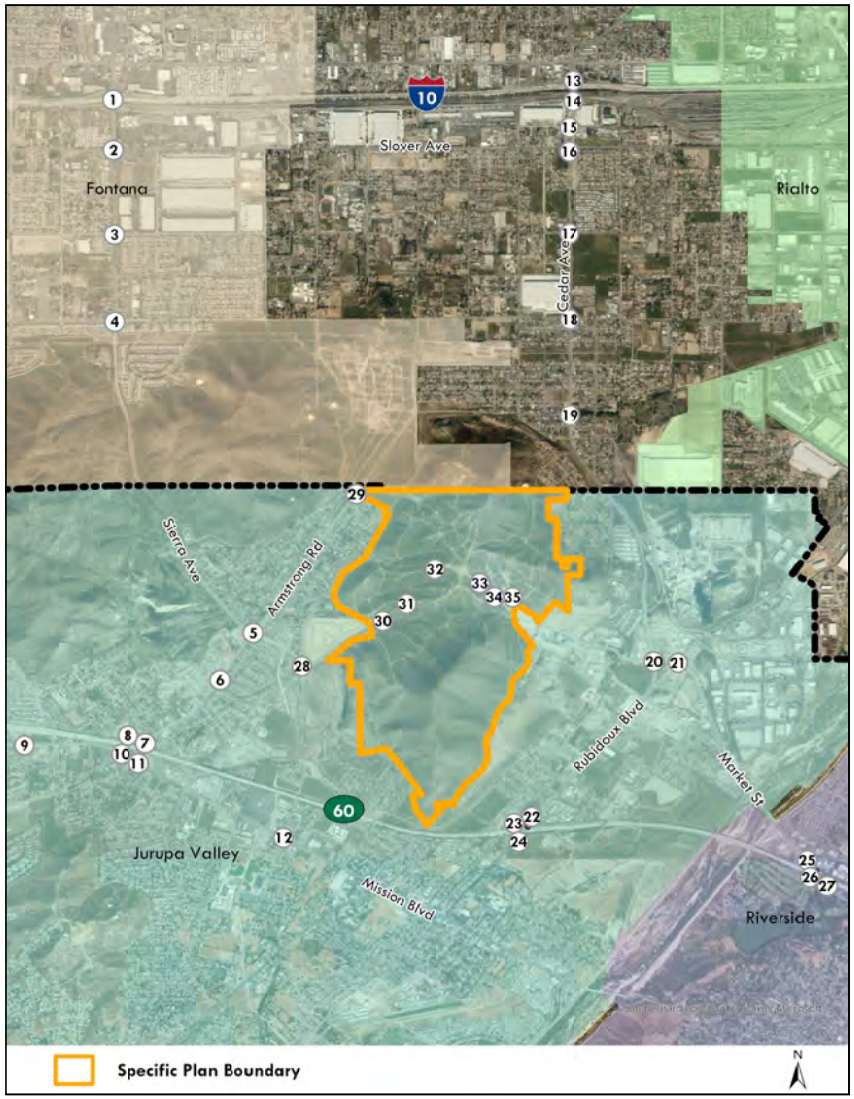


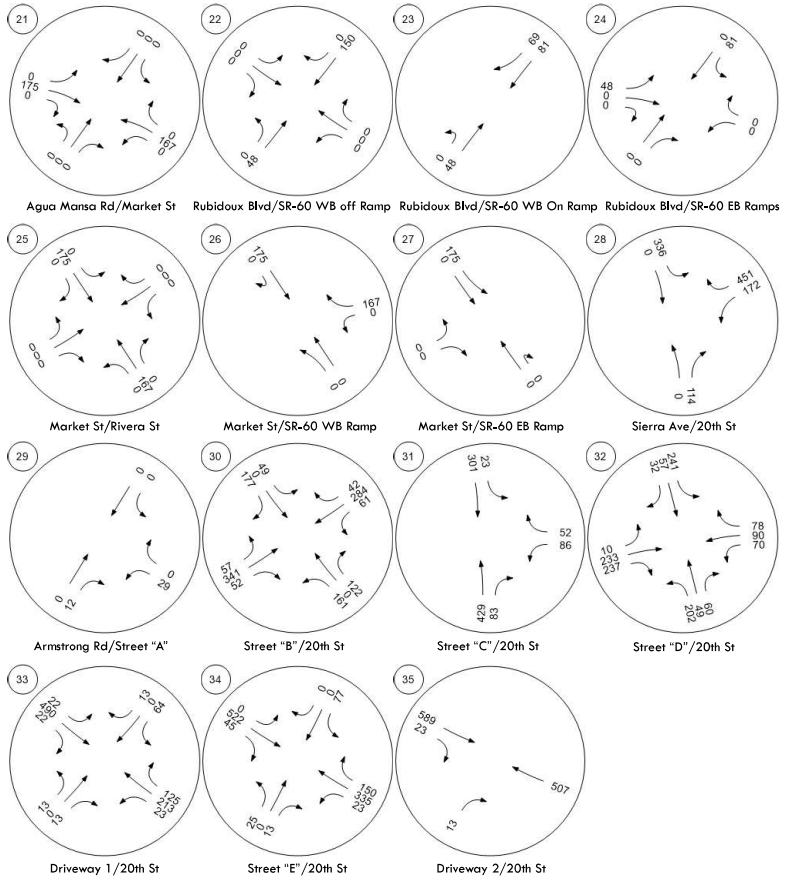
Total AM Assignment (A)



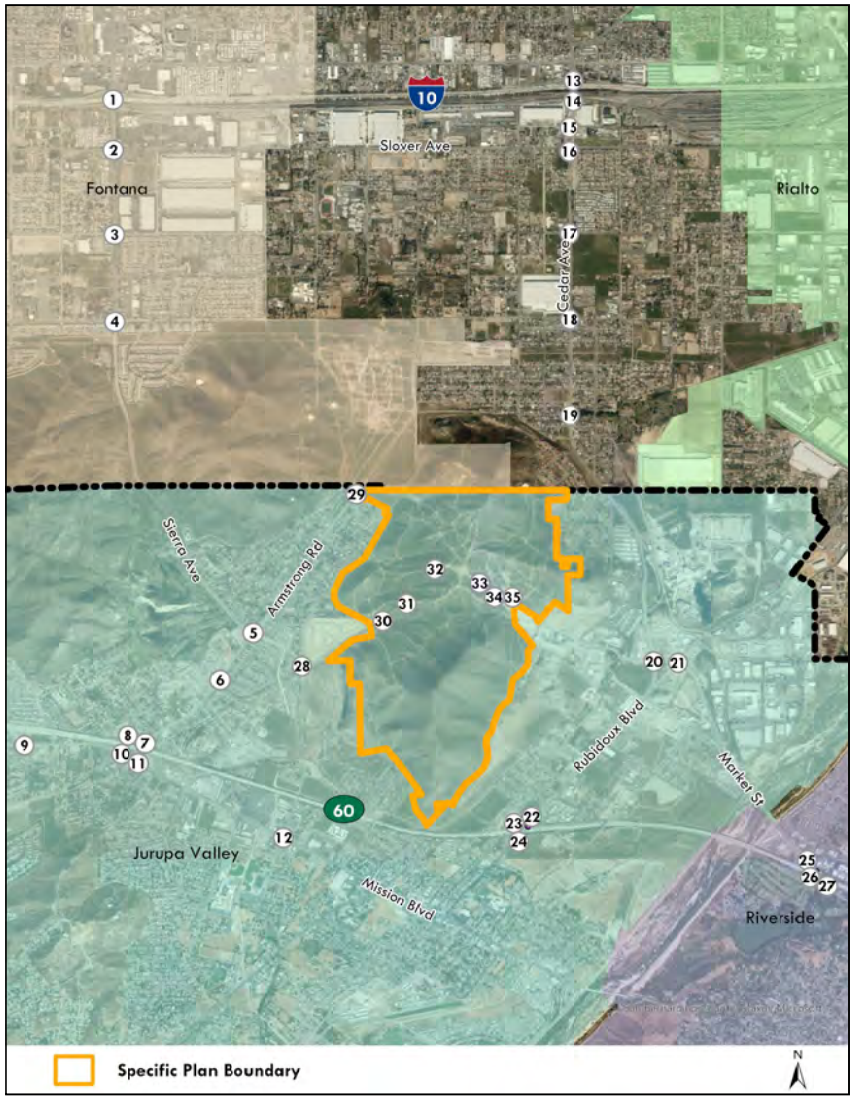


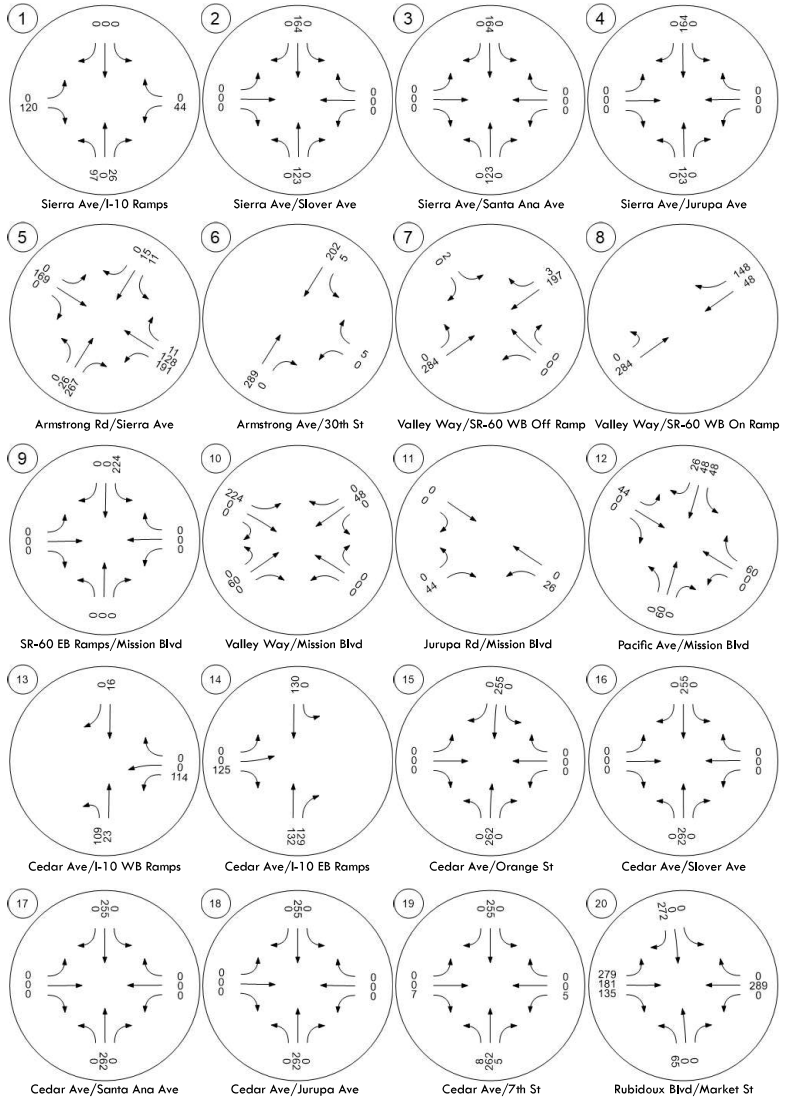
Total AM Assignment (B)



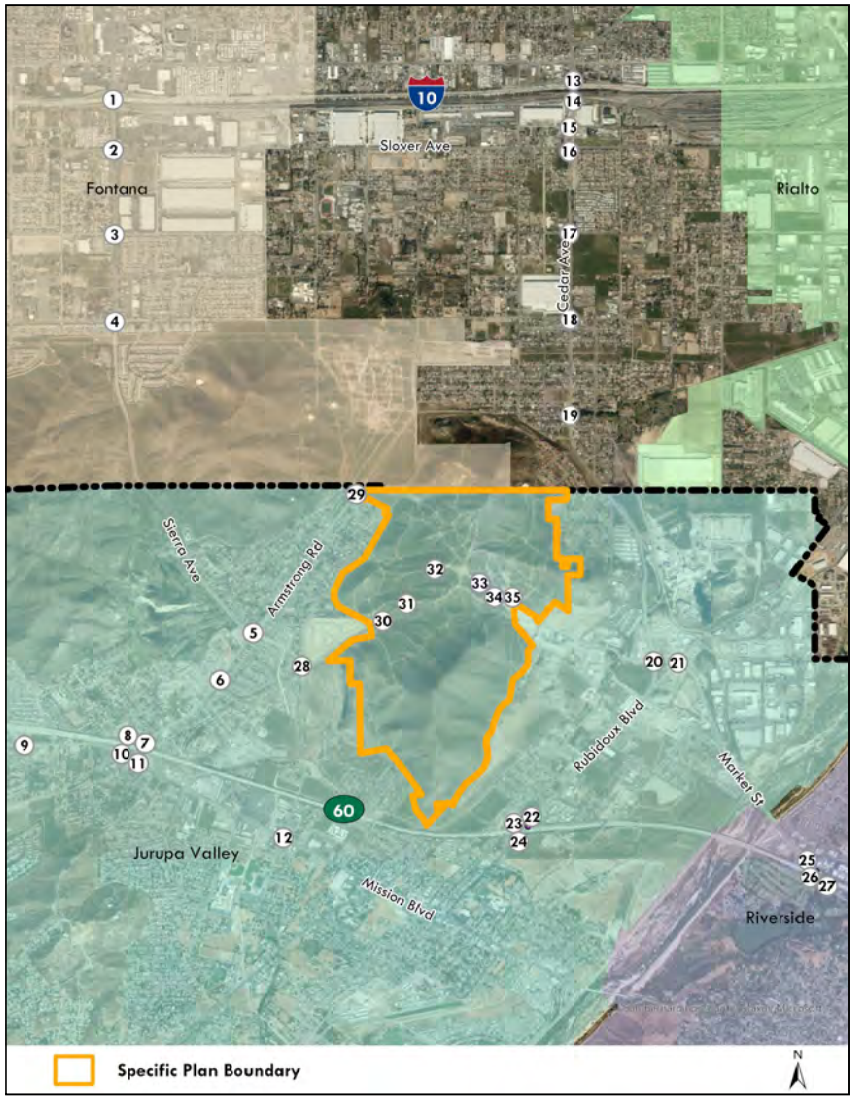


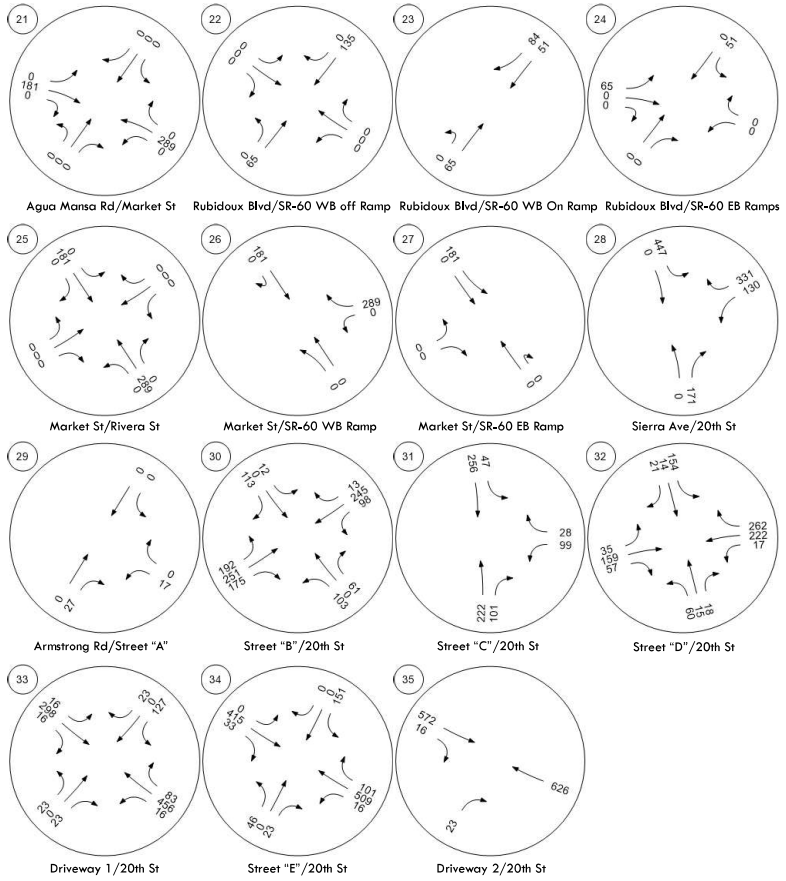
Total PM Assignment (A)





Total PM Assignment (B)





Roadway Segments:

1. Sierra Avenue: Santa Ana Avenue to Jurupa Avenue
2. Sierra Avenue: Jurupa Avenue to Armstrong Road
3. Sierra Avenue: Armstrong Road to 20th Street
4. Sierra Avenue: 20th Street to UPRR Tracks
5. Sierra Avenue: UPRR Tracks to Mission Boulevard
6. Valley Way: Sierra Avenue to 34th Street
7. Valley Way 34th Street to Granite Hill
8. Cedar Avenue: I-10 EB Ramps to Slover Ave
9. Cedar Avenue: Slover Avenue to Santa Ana Avenue
10. Cedar Avenue: Santa Ana Avenue to Jurupa Avenue
11. Cedar Avenue: Jurupa Avenue to 7th Street
12. Cedar Avenue: 7th Street to El Rivino Road
13. Rubidoux Boulevard: El Rivino to Market Street
14. Rubidoux Boulevard: Market Street to 28th Street
15. Rubidoux Boulevard: 28th Street to SR-60 WB Off-Ramp
16. Market Street: Agua Mansa Road to 24th Street
17. Market Street: 24th Street to SR-60 WB Off Ramp
18. Market Street: SR-60 EP Ramps to Valley Way
19. 20th Street: Street "B" to Street "C"
20. 20th Street: Street "C" to Street "D"
21. 20th Street: Street "D" to Street "E"
22. 20th Street: Street "E" to Rubidoux Boulevard

Analysis Scenarios:

- Existing Conditions
- Opening Year Background Conditions
- Opening Year Background Conditions Plus Project
- Opening Year Background Conditions Plus Project Plus Cumulative Project Conditions
- Buildout Horizon Year (2045): Horizon Year Volumes from previous study to be escalated to 2045.
- Buildout Horizon Year Plus Project (2045)

VMT Screening Scoping Attachments:

WRCOG Screening Tool:
The WRCOG Screening VMT Assessment output is not appropriate for this project because the project proposes a General Plan Land Use change and would not be consistent with the WRCOG Land Use analysis assumptions.

Model Land Use Inputs and Assumed Conversion Factors:
The Project would add to TAZ 404190293 the following inputs (conversion factor):

- 6,771 Residential Population (3.99 population per home) *California Department of Finance*
- 1,233 Industrial Employees (1,030sf/employee) *Riverside County General Plan*
- 2,381 Business Park Employees (600sf/employee) *County of Riverside GP Appendix E*
- 88 School Employees (12 students/employee) *Riverside County Education Report*
- 1050 K-12 students (no conversion factor)

Analysis Methodology:
It is anticipated that the VMT analysis will be prepared using the RIVCOM traffic model. The model output will be examined for accuracy and any concern with the new model will be discussed with the City. The RIVCOM TAZs will be modified to include the project socioeconomic data and the network will be modified as needed to include project roadways and access points. This task will calculate the base and future modeled VMT for comparison with project results. VMT calculations for the following scenarios will be conducted:

- Base Year without project
- Future Year without project
- Base Year with project
- Future Year with project

For each scenario the VMT/population (for residential uses) and VMT/employment (for employment uses) will be calculated. The project effect on VMT will be calculated using the boundary method for the base and future year without and with project conditions for the cumulative analysis.

APPENDIX B – COUNT SHEETS

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Fontana	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Sierra	LOCATION #:	1
THURSDAY	EAST & WEST:	I-10 Ramps	CONTROL:	SIGNAL

	NOTES:												
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N	
	Factor	1	1.5	2	3	2	2			PM MD	◄ W		E ►
										OTHER		S	
										OTHER		▼	

		NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND I-10 Ramps			WESTBOUND I-10 Ramps				U-TURNS				
	LANES:	NL 2	NT 3	NR 1	SL 2	ST 3	SR 1	EL 2	ET X	ER 1	WL 2	WT X	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	72	134	55	102	104	206	135	0	74	83	0	85	1,047					0
	6:45 AM	108	131	80	111	108	188	172	0	96	108	0	122	1,222					0
	7:00 AM	113	165	71	59	185	198	133	0	89	131	0	131	1,272					0
	7:15 AM	155	177	84	102	192	222	159	0	108	98	0	138	1,432					0
	7:30 AM	127	224	109	156	213	173	171	0	116	111	0	146	1,545					0
	7:45 AM	97	177	121	138	209	197	247	0	124	105	0	131	1,546					0
	8:00 AM	110	189	90	126	209	166	192	0	91	115	0	129	1,416					0
	8:15 AM	81	214	99	118	209	211	251	0	117	102	0	152	1,553					0
	8:30 AM	107	187	102	99	139	197	206	0	124	101	0	149	1,410					0
	8:45 AM	85	186	77	97	142	187	197	0	114	67	0	172	1,322					0
	VOLUMES	1,054	1,783	885	1,107	1,708	1,943	1,862	0	1,051	1,019	0	1,354	13,764	0	0	0	0	0
	APPROACH %	28%	48%	24%	23%	36%	41%	64%	0%	36%	43%	0%	57%						
	APP/DEPART	3,722	/	4,998	4,757	/	3,778	2,913	/	1,992	2,373	/	2,997	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	415	804	418	538	840	747	861	0	448	432	0	558	6,059					
	APPROACH %	25%	49%	26%	25%	40%	35%	66%	0%	34%	44%	0%	56%						
	PEAK HR FACTOR		0.891			0.976			0.882			0.965		0.976					
	APP/DEPART	1,637	/	2,223	2,124	/	1,720	1,309	/	956	990	/	1,162	0					
PM	03:30 PM	150	353	165	127	211	187	246	0	107	97	0	147	1,788					0
	3:45 PM	154	308	193	127	227	185	218	0	114	113	0	151	1,788					0
	4:00 PM	142	311	185	138	222	180	237	0	113	104	0	150	1,781					0
	4:15 PM	145	270	175	128	258	198	202	0	104	113	0	141	1,732					0
	4:30 PM	124	326	156	114	242	186	208	0	120	124	0	142	1,740					0
	4:45 PM	121	302	163	116	221	173	195	0	125	113	0	145	1,672					0
	5:00 PM	141	359	160	151	204	191	244	0	106	131	0	154	1,838					0
	5:15 PM	144	273	172	111	224	235	193	0	103	118	0	139	1,711					0
	5:30 PM	115	345	131	116	241	182	245	0	107	134	0	152	1,766					0
	5:45 PM	154	255	135	115	242	187	200	0	135	124	0	111	1,656					0
	VOLUMES	1,388	3,099	1,634	1,242	2,291	1,901	2,185	0	1,133	1,169	0	1,431	17,471	0	0	0	0	0
	APPROACH %	23%	51%	27%	23%	42%	35%	66%	0%	34%	45%	0%	55%						
	APP/DEPART	6,121	/	6,714	5,434	/	4,593	3,317	/	2,876	2,600	/	3,289	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	591	1,241	718	519	918	749	902	0	437	427	0	589	7,089					
	APPROACH %	23%	49%	28%	24%	42%	34%	67%	0%	33%	42%	0%	58%						
	PEAK HR FACTOR		0.954			0.937			0.950			0.962		0.991					
	APP/DEPART	2,549	/	2,732	2,185	/	1,781	1,339	/	1,237	1,016	/	1,339	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Fontana	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Sierra	LOCATION #:	2
THURSDAY	EAST & WEST:	Slover	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	◄ W	▲ N / S ▼ / E ►
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND Slover			WESTBOUND Slover				U-TURNS				
	LANES:	NL 2	NT 4	NR 0	SL 2	ST 3	SR 0	EL 2	ET 2	ER 1	WL 2	WT 2	WR 2	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	22	204	5	75	148	49	17	28	4	19	42	55	667					0
	6:45 AM	26	191	13	124	151	35	34	40	8	24	61	82	787					0
	7:00 AM	22	223	11	121	245	38	26	40	8	13	55	107	906					0
	7:15 AM	39	258	10	155	184	58	40	41	18	28	77	120	1,026					0
	7:30 AM	29	287	19	131	234	73	41	44	9	14	72	140	1,090					0
	7:45 AM	24	249	31	167	218	79	39	73	8	13	57	109	1,064					0
	8:00 AM	20	240	29	119	174	78	54	83	19	22	69	98	1,002					0
	8:15 AM	31	251	30	161	226	55	48	68	20	17	70	98	1,072					0
	8:30 AM	16	252	33	156	171	27	46	57	10	16	33	103	919					0
	8:45 AM	21	195	38	133	149	22	45	49	15	32	72	114	882					0
	VOLUMES	248	2,346	217	1,339	1,898	512	388	521	118	196	606	1,025	9,412	0	0	0	0	0
	APPROACH %	9%	83%	8%	36%	51%	14%	38%	51%	11%	11%	33%	56%						
	APP/DEPART	2,810	/	3,759	3,749	/	2,212	1,027	/	2,077	1,826	/	1,366	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	104	1,026	108	577	851	284	181	267	56	65	267	444	4,227					
	APPROACH %	8%	83%	9%	34%	50%	17%	36%	53%	11%	8%	34%	57%						
	PEAK HR FACTOR		0.926			0.923			0.810			0.861		0.969					
	APP/DEPART	1,237	/	1,650	1,712	/	972	504	/	952	775	/	654	0					
PM	03:30 PM	38	322	37	175	211	29	85	121	28	59	102	269	1,476					0
	3:45 PM	41	313	46	174	237	33	94	179	26	48	103	250	1,542					0
	4:00 PM	50	326	43	169	248	50	92	161	21	61	92	226	1,535					0
	4:15 PM	35	316	40	173	250	33	86	178	18	61	97	195	1,479					0
	4:30 PM	38	320	49	172	238	33	74	170	25	49	95	223	1,485					0
	4:45 PM	37	291	47	176	269	23	75	171	36	49	94	225	1,489					0
	5:00 PM	35	312	48	167	235	30	67	153	35	53	107	289	1,529					0
	5:15 PM	29	288	54	169	232	35	66	161	27	64	101	249	1,473					0
	5:30 PM	38	312	49	188	267	35	72	130	24	65	83	208	1,468					0
	5:45 PM	27	268	56	174	288	32	88	111	15	52	63	201	1,374					0
	VOLUMES	367	3,066	467	1,736	2,474	330	798	1,534	253	559	935	2,333	14,848	0	0	0	0	0
	APPROACH %	9%	79%	12%	38%	54%	7%	31%	59%	10%	15%	24%	61%						
	APP/DEPART	3,899	/	6,196	4,539	/	3,286	2,584	/	3,736	3,826	/	1,631	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	164	1,274	177	687	973	148	346	687	89	219	385	894	6,040					
	APPROACH %	10%	79%	11%	38%	54%	8%	31%	61%	8%	15%	26%	60%						
	PEAK HR FACTOR		0.965			0.970			0.939			0.934		0.979					
	APP/DEPART	1,614	/	2,513	1,807	/	1,280	1,122	/	1,551	1,497	/	696	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Fontana	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Sierra	LOCATION #:	3
THURSDAY	EAST & WEST:	Santa Ana	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N
	Factor	1	1.5	2	3	2	2			PM MD	◄ W	E ►
										OTHER		S ▼
										OTHER		

		NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND Santa Ana			WESTBOUND Santa Ana				U-TURNS				
	LANES:	NL 2	NT 3	NR 1	SL 2	ST 3	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	14	195	5	10	134	14	17	9	9	14	29	16	463					0
	6:45 AM	17	185	12	13	134	27	14	17	16	7	19	14	471					0
	7:00 AM	20	210	18	24	178	27	12	17	15	14	23	40	596					0
	7:15 AM	20	224	12	28	167	18	17	13	8	12	32	50	598					0
	7:30 AM	28	264	5	20	191	24	25	12	8	17	20	33	645					0
	7:45 AM	42	239	17	26	158	19	26	13	16	5	25	23	606					0
	8:00 AM	50	263	20	23	176	26	25	19	19	23	36	18	694					0
	8:15 AM	51	235	10	26	152	33	36	26	28	7	25	23	648					0
	8:30 AM	28	251	8	18	171	14	39	24	25	10	25	23	634					0
	8:45 AM	24	232	12	12	145	16	28	10	12	10	17	18	534					0
	VOLUMES	292	2,296	118	198	1,602	215	237	159	154	116	247	256	5,888	0	0	0	0	0
	APPROACH %	11%	85%	4%	10%	80%	11%	43%	29%	28%	19%	40%	41%						
	APP/DEPART	2,706	/	2,789	2,014	/	1,872	550	/	474	618	/	754	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	170	1,000	52	95	675	101	111	70	71	51	104	96	2,593					
	APPROACH %	14%	82%	4%	11%	78%	12%	44%	28%	28%	20%	42%	38%						
	PEAK HR FACTOR		0.921			0.928			0.709			0.824		0.934					
	APP/DEPART	1,222	/	1,207	870	/	796	251	/	216	251	/	375	0					
PM	03:30 PM	46	339	24	19	218	32	79	44	22	15	27	32	894					0
	3:45 PM	42	334	22	26	255	35	55	41	40	20	33	23	922					0
	4:00 PM	49	375	19	41	254	25	29	42	19	23	30	27	931					0
	4:15 PM	55	336	20	29	262	23	35	55	42	22	41	14	931					0
	4:30 PM	47	298	5	46	212	16	32	29	20	29	48	30	809					0
	4:45 PM	27	302	7	54	276	25	41	51	25	20	34	27	887					0
	5:00 PM	42	340	14	41	248	12	26	36	24	26	40	31	879					0
	5:15 PM	35	319	22	37	252	21	22	37	25	17	32	25	841					0
	5:30 PM	26	326	13	47	261	30	40	35	18	23	24	29	870					0
	5:45 PM	33	282	14	55	249	32	42	32	23	25	25	23	831					0
	VOLUMES	399	3,249	158	392	2,485	249	398	399	257	220	332	258	8,793	0	0	0	0	0
	APPROACH %	10%	85%	4%	13%	80%	8%	38%	38%	24%	27%	41%	32%						
	APP/DEPART	3,806	/	3,904	3,126	/	2,961	1,053	/	948	809	/	980	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	190	1,384	84	114	988	114	197	181	123	80	130	95	3,678					
	APPROACH %	11%	83%	5%	9%	81%	9%	39%	36%	25%	26%	43%	31%						
	PEAK HR FACTOR		0.936			0.951			0.868			0.952		0.988					
	APP/DEPART	1,657	/	1,675	1,216	/	1,191	500	/	378	305	/	434	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Fontana	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Sierra	LOCATION #:	4
THURSDAY	EAST & WEST:	Jurupa	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N
	Factor	1	1.5	2	3	2	2			PM MD	◄ W	E ►
										OTHER		S ▼
										OTHER		

		NORTHBOUND Sierra			SOUTHBOUND Sierra			EASTBOUND Jurupa			WESTBOUND Jurupa				U-TURNS				
	LANES:	NL 2	NT 2	NR 1	SL 2	ST 2	SR 1	EL 2	ET 2	ER 1	WL 2	WT 2	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	54	135	4	12	83	40	43	11	52	23	34	17	506					0
	6:45 AM	110	145	8	5	86	47	50	19	58	22	33	24	604					0
	7:00 AM	78	148	14	3	91	46	48	55	65	39	44	18	647					0
	7:15 AM	74	180	15	7	112	48	50	35	53	34	66	27	699					0
	7:30 AM	64	190	11	3	101	67	56	32	60	30	55	26	692					0
	7:45 AM	82	208	18	11	89	38	76	68	41	27	49	23	729					0
	8:00 AM	64	163	6	12	94	55	66	53	51	38	71	24	695					0
	8:15 AM	59	178	9	13	101	45	77	28	37	18	62	13	637					0
	8:30 AM	49	169	6	14	79	45	75	46	57	30	38	20	626					0
	8:45 AM	48	153	20	9	74	45	66	11	55	23	38	13	552					0
	VOLUMES	681	1,667	109	88	907	474	605	356	527	282	488	205	6,386	0	0	0	0	0
	APPROACH %	28%	68%	4%	6%	62%	32%	41%	24%	35%	29%	50%	21%						
	APP/DEPART	2,457	/	2,476	1,469	/	1,715	1,487	/	553	974	/	1,643	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	284	740	49	33	395	208	248	187	205	128	241	100	2,815					
	APPROACH %	26%	69%	5%	5%	62%	33%	39%	29%	32%	27%	51%	21%						
	PEAK HR FACTOR		0.872			0.935			0.864			0.886		0.966					
	APP/DEPART	1,072	/	1,088	636	/	727	639	/	269	468	/	732	0					
PM	03:30 PM	44	221	19	12	105	57	126	65	98	39	67	28	879					0
	3:45 PM	52	254	26	21	135	53	142	67	93	29	65	17	952					0
	4:00 PM	64	256	27	16	112	62	105	66	90	28	67	26	917					0
	4:15 PM	73	196	20	37	136	58	126	63	74	48	56	21	906					0
	4:30 PM	76	219	30	16	145	62	118	47	76	30	50	19	885					0
	4:45 PM	75	212	27	25	142	67	96	59	70	38	60	19	887					0
	5:00 PM	86	208	24	22	136	56	117	47	75	34	61	24	887					0
	5:15 PM	93	250	33	29	135	64	121	44	64	27	63	15	935					0
	5:30 PM	72	223	26	22	127	53	99	52	77	28	66	26	869					0
	5:45 PM	95	186	27	25	138	61	95	48	74	37	69	15	866					0
	VOLUMES	728	2,223	257	225	1,310	590	1,143	555	789	335	621	209	8,982	0	0	0	0	0
	APPROACH %	23%	69%	8%	11%	62%	28%	46%	22%	32%	29%	53%	18%						
	APP/DEPART	3,208	/	3,574	2,124	/	2,433	2,486	/	1,036	1,165	/	1,939	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	265	924	103	90	528	234	489	243	333	134	238	83	3,660					
	APPROACH %	20%	72%	8%	11%	62%	27%	46%	23%	31%	29%	52%	18%						
	PEAK HR FACTOR		0.931			0.923			0.884			0.912		0.961					
	APP/DEPART	1,291	/	1,495	851	/	994	1,064	/	435	454	/	736	0					

Sierra

NORTH SIDE

Jurupa WEST SIDE EAST SIDE **Jurupa**

SOUTH SIDE

Sierra

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Armstrong	LOCATION #:	5
THURSDAY	EAST & WEST:	Sierra	CONTROL:	SIGNAL

	NOTES:											▲ N	
PCE	Class	1	2	3	4	5	6			AM			
Adjusted	Factor	1	1.5	2	3	2	2			PM	◄ W		E ►
										MD			
										OTHER		S ▼	
										OTHER			

		NORTHBOUND Armstrong			SOUTHBOUND Armstrong			EASTBOUND Sierra			WESTBOUND Sierra				U-TURNS				
	LANES:	NL 2	NT 1	NR 1	SL 2	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	190	60	27	10	70	2	5	8	133	6	13	3	524					0
	6:45 AM	227	47	34	8	74	8	7	6	136	9	10	0	563					0
	7:00 AM	214	46	31	3	96	12	10	5	164	22	11	5	617					0
	7:15 AM	239	43	18	5	88	15	9	7	183	22	10	1	637					0
	7:30 AM	237	59	17	1	88	14	10	4	159	19	12	11	630					0
	7:45 AM	243	62	19	6	73	9	11	2	143	21	12	7	606					0
	8:00 AM	230	68	17	6	72	7	12	4	144	10	3	5	574					0
	8:15 AM	222	66	14	5	70	8	8	4	143	6	3	3	550					0
	8:30 AM	198	73	13	1	69	10	6	4	143	11	6	2	533					0
	8:45 AM	186	72	4	1	71	11	11	8	137	13	10	3	526					0
	VOLUMES	2,184	593	192	44	768	95	88	50	1,483	137	88	38	5,759	0	0	0	0	0
	APPROACH %	74%	20%	6%	5%	85%	10%	5%	3%	92%	52%	33%	14%						
	APP/DEPART	2,969	/	719	907	/	2,388	1,621	/	286	263	/	2,367	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	933	209	85	15	344	50	40	18	649	84	44	23	2,490					
	APPROACH %	76%	17%	7%	4%	84%	12%	6%	2%	92%	55%	29%	15%						
	PEAK HR FACTOR		0.949			0.923			0.891			0.907		0.978					
	APP/DEPART	1,226	/	271	408	/	1,076	706	/	117	151	/	1,026	0					
PM	03:30 PM	237	143	17	3	47	11	37	19	171	13	11	5	712					0
	3:45 PM	336	189	10	1	33	12	35	14	173	14	6	17	837					0
	4:00 PM	283	182	14	2	65	13	53	12	168	11	13	6	820					0
	4:15 PM	260	174	11	3	43	8	50	19	183	22	18	9	797					0
	4:30 PM	303	193	3	2	45	8	34	14	177	7	9	12	805					0
	4:45 PM	278	196	9	11	47	10	29	15	182	15	8	4	803					0
	5:00 PM	284	148	7	7	60	13	27	10	185	6	10	6	761					0
	5:15 PM	339	182	18	2	32	9	26	21	181	12	12	5	836					0
	5:30 PM	267	136	9	1	64	9	32	9	166	14	6	8	719					0
	5:45 PM	289	154	9	4	47	9	20	11	201	8	7	3	760					0
	VOLUMES	2,874	1,695	106	35	479	101	341	144	1,785	120	98	73	7,848	0	0	0	0	0
	APPROACH %	61%	36%	2%	6%	78%	16%	15%	6%	79%	41%	34%	25%						
	APP/DEPART	4,674	/	2,108	615	/	2,384	2,269	/	285	291	/	3,072	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	1,181	737	38	8	185	40	171	59	700	54	45	44	3,259					
	APPROACH %	60%	38%	2%	3%	80%	17%	18%	6%	75%	38%	32%	31%						
	PEAK HR FACTOR		0.915			0.730			0.925			0.724		0.973					
	APP/DEPART	1,956	/	951	232	/	938	929	/	105	142	/	1,265	0					

Armstrong

NORTH SIDE

Sierra WEST SIDE EAST SIDE **Sierra**

SOUTH SIDE

Armstrong

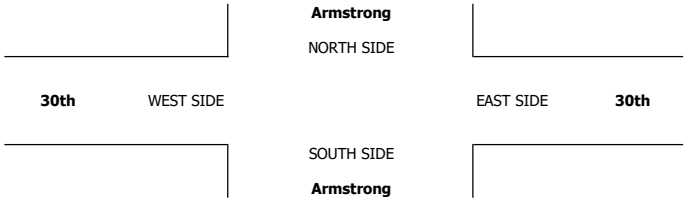
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Armstrong	LOCATION #:	6
THURSDAY	EAST & WEST:	30th	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N
	Factor	1	1.5	2	3	2	2			PM MD	◄ W	E ►
										OTHER		S ▼
										OTHER		

		NORTHBOUND Armstrong			SOUTHBOUND Armstrong			EASTBOUND 30th			WESTBOUND 30th				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	258	3	2	203	0	0	0	0	15	0	2	482					0
	6:45 AM	0	312	6	8	213	0	0	0	0	10	0	7	556					0
	7:00 AM	0	296	9	4	263	0	0	0	0	10	0	5	586					0
	7:15 AM	0	285	8	5	297	0	0	0	0	17	0	12	623					0
	7:30 AM	0	302	3	1	266	0	0	0	0	22	0	12	604					0
	7:45 AM	0	308	18	3	235	0	0	0	0	17	0	3	583					0
	8:00 AM	0	308	14	7	212	0	0	0	0	12	0	11	562					0
	8:15 AM	0	282	14	2	208	0	0	0	0	15	0	10	530					0
	8:30 AM	0	285	15	2	226	0	0	0	0	9	0	7	544					0
	8:45 AM	0	252	6	9	220	0	0	0	0	15	0	7	508					0
	VOLUMES	0	2,887	94	43	2,340	0	0	0	0	139	0	74	5,576	0	0	0	0	0
	APPROACH %	0%	97%	3%	2%	98%	0%	0%	0%	0%	65%	0%	35%						
	APP/DEPART	2,981	/	2,961	2,383	/	2,479	0	/	136	213	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	1,191	37	13	1,061	0	0	0	0	65	0	31	2,396					
	APPROACH %	0%	97%	3%	1%	99%	0%	0%	0%	0%	68%	0%	32%						
	PEAK HR FACTOR		0.942			0.888			0.000			0.727		0.961					
	APP/DEPART	1,227	/	1,222	1,073	/	1,126	0	/	49	96	/	0	0					
PM	03:30 PM	0	411	9	7	224	0	0	0	0	10	0	6	666					0
	3:45 PM	0	513	17	9	207	0	0	0	0	5	0	5	755					0
	4:00 PM	0	475	18	8	225	0	0	0	0	8	0	5	739					0
	4:15 PM	0	475	12	9	235	0	0	0	0	7	0	5	743					0
	4:30 PM	0	452	14	8	223	0	0	0	0	4	0	9	710					0
	4:45 PM	0	475	13	5	243	0	0	0	0	8	0	7	750					0
	5:00 PM	0	447	16	14	215	0	0	0	0	4	0	5	700					0
	5:15 PM	0	531	14	5	237	0	0	0	0	6	0	6	798					0
	5:30 PM	0	417	19	6	228	0	0	0	0	3	0	6	678					0
	5:45 PM	0	433	13	10	254	0	0	0	0	7	0	7	724					0
	VOLUMES	0	4,627	144	80	2,289	0	0	0	0	62	0	61	7,261	0	0	0	0	0
	APPROACH %	0%	97%	3%	3%	97%	0%	0%	0%	0%	50%	0%	50%						
	APP/DEPART	4,770	/	4,687	2,369	/	2,350	0	/	224	122	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	1,904	56	32	917	0	0	0	0	22	0	27	2,957					
	APPROACH %	0%	97%	3%	3%	97%	0%	0%	0%	0%	45%	0%	55%						
	PEAK HR FACTOR		0.901			0.958			0.000			0.817		0.927					
	APP/DEPART	1,960	/	1,931	949	/	939	0	/	88	49	/	0	0					



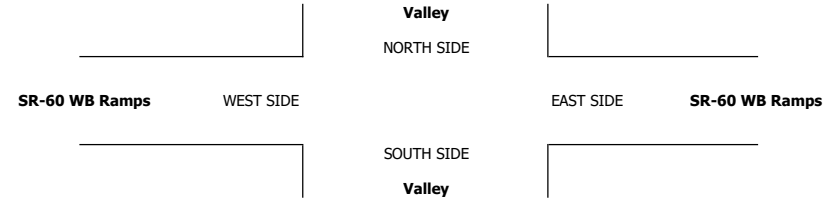
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Valley	LOCATION #:	7
THURSDAY	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

	NOTES:												
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N	
	Factor	1	1.5	2	3	2	2			PM MD	◄ W		E ►
										OTHER		S ▼	
										OTHER			

		NORTHBOUND Valley			SOUTHBOUND Valley			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0.5	ET X	ER 0.5	WL 1	WT 0.5	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	5	152	0	0	232	3	7	0	20	23	5	117	564					0
	6:45 AM	4	167	0	0	278	2	11	0	13	53	10	148	684					0
	7:00 AM	7	144	0	0	221	4	12	0	19	41	15	147	610					0
	7:15 AM	23	165	0	0	248	0	10	0	16	38	16	163	677					0
	7:30 AM	26	168	0	0	315	0	11	0	45	36	23	118	740					0
	7:45 AM	29	186	0	0	235	3	15	0	58	63	39	138	765					0
	8:00 AM	14	176	0	0	285	7	16	0	52	57	23	127	756					0
	8:15 AM	7	154	0	0	225	3	11	0	27	51	13	105	594					0
	8:30 AM	11	202	0	0	265	4	18	0	16	48	5	95	663					0
	8:45 AM	8	161	0	0	251	7	23	0	14	55	13	79	611					0
	VOLUMES	133	1,674	0	0	2,553	33	133	0	278	462	160	1,236	6,662	0	0	0	0	0
	APPROACH %	7%	93%	0%	0%	99%	1%	32%	0%	68%	25%	9%	67%						
	APP/DEPART	1,807	/	3,043	2,586	/	3,293	411	/	0	1,858	/	326	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	91	695	0	0	1,082	10	52	0	170	193	100	546	2,937					
	APPROACH %	12%	88%	0%	0%	99%	1%	23%	0%	77%	23%	12%	65%						
	PEAK HR FACTOR		0.913			0.868			0.767			0.875		0.960					
	APP/DEPART	786	/	1,292	1,092	/	1,445	221	/	0	838	/	201	0					
PM	03:30 PM	6	278	0	0	205	3	50	0	33	62	19	100	754					0
	3:45 PM	5	271	0	0	201	2	70	0	17	69	13	145	791					0
	4:00 PM	6	279	0	0	182	2	69	0	27	63	24	135	785					0
	4:15 PM	7	306	0	0	215	5	66	0	24	74	10	119	824					0
	4:30 PM	8	254	0	0	197	0	73	0	28	76	23	129	787					0
	4:45 PM	9	294	0	0	210	3	51	0	18	80	12	134	809					0
	5:00 PM	9	271	0	0	181	0	56	0	17	78	14	158	782					0
	5:15 PM	5	336	0	0	222	1	50	0	22	61	12	152	861					0
	5:30 PM	8	271	0	0	212	1	36	0	13	68	15	124	746					0
	5:45 PM	9	294	0	0	186	1	41	0	20	57	20	145	771					0
	VOLUMES	71	2,853	0	0	2,007	18	560	0	218	685	160	1,339	7,909	0	0	0	0	0
	APPROACH %	2%	98%	0%	0%	99%	1%	72%	0%	28%	31%	7%	61%						
	APP/DEPART	2,923	/	4,751	2,025	/	2,910	778	/	0	2,183	/	248	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	30	1,155	0	0	809	4	230	0	85	294	60	572	3,238					
	APPROACH %	3%	97%	0%	0%	100%	0%	73%	0%	27%	32%	6%	62%						
	PEAK HR FACTOR		0.868			0.911			0.777			0.928		0.940					
	APP/DEPART	1,185	/	1,956	813	/	1,188	314	/	0	926	/	94	0					



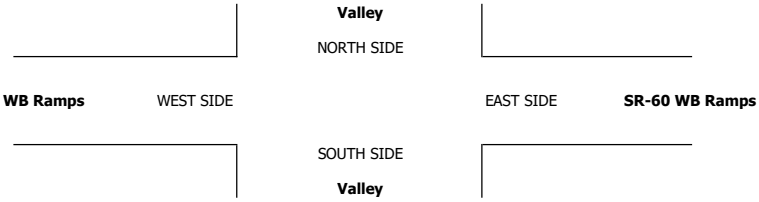
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Valley	LOCATION #:	8
THURSDAY	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	◄ W	▲ N / S ▼ / E ►
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Valley			SOUTHBOUND Valley			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL X	ET X	ER X	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	63	157	0	0	143	132	0	0	0	0	0	0	495					0
	6:45 AM	61	171	0	0	221	122	0	0	0	0	0	0	575					0
	7:00 AM	53	151	0	0	164	118	0	0	0	0	0	0	485					0
	7:15 AM	67	188	0	0	193	109	0	0	0	0	0	0	556					0
	7:30 AM	48	193	0	0	299	96	0	0	0	0	0	0	636					0
	7:45 AM	54	215	0	0	260	95	0	0	0	0	0	0	624					0
	8:00 AM	49	190	0	0	287	106	0	0	0	0	0	0	632					0
	8:15 AM	60	161	0	0	237	65	0	0	0	0	0	0	523					0
	8:30 AM	61	213	0	0	237	92	0	0	0	0	0	0	602					0
	8:45 AM	48	169	0	0	246	74	0	0	0	0	0	0	537					0
	VOLUMES	563	1,807	0	0	2,285	1,008	0	0	0	0	0	0	5,662	0	0	0	0	0
	APPROACH %	24%	76%	0%	0%	69%	31%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2,370	/	1,807	3,292	/	2,285	0	/	0	0	/	1,571	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	218	786	0	0	1,039	406	0	0	0	0	0	0	2,448					
	APPROACH %	22%	78%	0%	0%	72%	28%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.934			0.914			0.000			0.000		0.962					
	APP/DEPART	1,003	/	786	1,445	/	1,039	0	/	0	0	/	624	0					
PM	03:30 PM	43	284	0	0	240	60	0	0	0	0	0	0	626					0
	3:45 PM	43	276	0	0	246	41	0	0	0	0	0	0	605					0
	4:00 PM	39	287	0	0	224	48	0	0	0	0	0	0	597					0
	4:15 PM	36	313	0	0	260	52	0	0	0	0	0	0	661					0
	4:30 PM	34	262	0	0	236	65	0	0	0	0	0	0	596					0
	4:45 PM	45	302	0	0	256	52	0	0	0	0	0	0	655					0
	5:00 PM	35	280	0	0	235	40	0	0	0	0	0	0	589					0
	5:15 PM	42	341	0	0	255	51	0	0	0	0	0	0	688					0
	5:30 PM	47	279	0	0	237	55	0	0	0	0	0	0	617					0
	5:45 PM	32	303	0	0	226	36	0	0	0	0	0	0	597					0
	VOLUMES	395	2,925	0	0	2,412	498	0	0	0	0	0	0	6,229	0	0	0	0	0
	APPROACH %	12%	88%	0%	0%	83%	17%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	3,320	/	2,925	2,910	/	2,412	0	/	0	0	/	893	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	168	1,202	0	0	981	198	0	0	0	0	0	0	2,548					
	APPROACH %	12%	88%	0%	0%	83%	17%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.894			0.958			0.000			0.000		0.926					
	APP/DEPART	1,370	/	1,202	1,179	/	981	0	/	0	0	/	366	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
10/7/21	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
THURSDAY	NORTH & SOUTH:	SR-60 EB Ramps	LOCATION #:	10
	EAST & WEST:	Mission	CONTROL:	SIGNAL

	NOTES:												
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N	
	Factor	1	1.5	2	3	2	2			PM MD	◄ W		E ►
										OTHER		S	
										OTHER		▼	

		NORTHBOUND SR-60 EB Ramps			SOUTHBOUND SR-60 EB Ramps			EASTBOUND Mission			WESTBOUND Mission				U-TURNS				
	LANES:	NL 0.3	NT 0.3	NR 0.3	SL 1.3	ST 0.3	SR 0.3	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	4	1	1	78	0	5	23	23	0	2	58	67	261					0
	6:45 AM	0	0	1	94	0	8	27	22	0	2	59	58	270					0
	7:00 AM	0	1	2	83	0	13	21	42	0	2	78	58	300					0
	7:15 AM	7	0	3	90	0	9	25	29	0	1	52	61	276					0
	7:30 AM	2	1	0	88	0	10	39	47	1	3	55	97	343					0
	7:45 AM	3	0	0	110	2	10	21	56	0	0	69	77	347					0
	8:00 AM	4	1	1	103	0	7	27	49	1	1	57	58	307					0
	8:15 AM	5	0	2	89	0	10	18	77	1	1	71	57	329					0
	8:30 AM	0	1	0	73	4	11	28	96	2	0	107	67	386					0
	8:45 AM	3	0	1	100	0	18	31	117	2	3	121	53	446					0
	VOLUMES	28	5	11	905	6	99	258	555	7	15	724	651	3,263	0	0	0	0	0
	APPROACH %	63%	11%	25%	90%	1%	10%	31%	68%	1%	1%	52%	47%						
	APP/DEPART	44	/	914	1,010	/	28	820	/	1,471	1,390	/	851	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	12	2	4	364	4	45	103	338	6	5	354	234	1,468					
	APPROACH %	66%	11%	23%	88%	1%	11%	23%	76%	1%	1%	60%	39%						
	PEAK HR FACTOR		0.625			0.877			0.748			0.842		0.823					
	APP/DEPART	18	/	338	412	/	15	446	/	705	593	/	411	0					
PM	03:30 PM	6	0	4	343	1	23	14	97	4	3	75	35	602					0
	3:45 PM	6	0	3	330	0	28	30	124	6	5	62	24	617					0
	4:00 PM	2	1	4	302	0	25	26	133	6	2	93	31	624					0
	4:15 PM	6	0	4	299	3	32	14	120	4	2	82	26	591					0
	4:30 PM	2	1	3	269	3	22	8	127	6	2	77	26	545					0
	4:45 PM	2	0	2	343	2	10	12	113	3	0	72	13	570					0
	5:00 PM	1	1	3	297	2	24	19	117	4	6	84	27	582					0
	5:15 PM	2	1	4	266	7	22	16	102	3	3	75	27	526					0
	5:30 PM	3	3	2	239	4	18	18	82	2	1	66	13	449					0
	5:45 PM	3	1	3	299	0	23	14	95	0	3	77	15	531					0
	VOLUMES	33	8	31	2,986	22	226	169	1,106	37	26	760	236	5,637	0	0	0	0	0
	APPROACH %	46%	11%	43%	92%	1%	7%	13%	84%	3%	3%	74%	23%						
	APP/DEPART	71	/	412	3,234	/	85	1,311	/	4,123	1,021	/	1,018	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	20	1	15	1,274	4	108	83	472	20	12	312	115	2,434					
	APPROACH %	56%	3%	41%	92%	0%	8%	14%	82%	3%	3%	71%	26%						
	PEAK HR FACTOR		0.875			0.944			0.873			0.873		0.975					
	APP/DEPART	35	/	199	1,386	/	35	575	/	1,761	438	/	439	0					



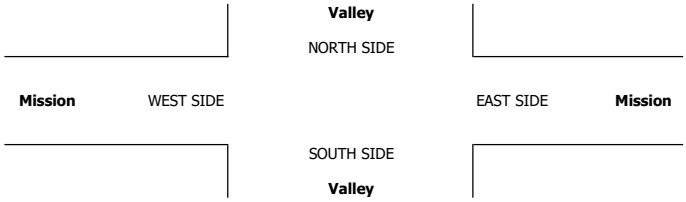
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Valley	LOCATION #:	12
THURSDAY	EAST & WEST:	Mission	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	◄ W	▲ N S ▼ E ►
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Valley			SOUTHBOUND Valley			EASTBOUND Mission			WESTBOUND Mission				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 2	ST 2	SR 2	EL 2	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	72	1	29	39	76	70	31	7	9	47	137	515					0
	6:45 AM	3	93	8	56	66	94	76	47	2	7	29	118	597					0
	7:00 AM	1	71	8	55	22	87	55	60	2	8	43	143	554					0
	7:15 AM	0	110	5	55	63	75	55	69	3	7	36	158	634					0
	7:30 AM	4	91	10	87	102	111	72	61	5	13	49	152	755					0
	7:45 AM	1	94	8	114	60	87	72	72	4	12	45	165	732					0
	8:00 AM	7	96	18	95	116	77	84	94	5	12	30	128	760					0
	8:15 AM	4	83	10	108	52	78	73	70	4	19	44	144	686					0
	8:30 AM	2	113	6	66	66	105	89	86	8	8	63	136	746					0
	8:45 AM	5	74	11	71	75	100	75	94	6	13	71	129	723					0
	VOLUMES	27	896	84	734	659	886	719	682	44	108	455	1,407	6,699	0	0	0	0	0
	APPROACH %	3%	89%	8%	32%	29%	39%	50%	47%	3%	5%	23%	71%						
	APP/DEPART	1,006	/	3,021	2,279	/	811	1,445	/	1,500	1,970	/	1,368	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	16	364	45	403	329	351	300	296	17	56	167	588	2,931					
	APPROACH %	4%	86%	11%	37%	30%	32%	49%	48%	3%	7%	21%	72%						
	PEAK HR FACTOR		0.882			0.906			0.839			0.915		0.965					
	APP/DEPART	425	/	1,252	1,083	/	402	613	/	744	811	/	534	0					
PM	03:30 PM	11	103	25	97	79	62	153	280	6	21	35	87	957					0
	3:45 PM	3	72	18	113	89	45	159	235	9	10	39	106	895					0
	4:00 PM	5	111	17	106	67	51	124	230	8	11	61	118	905					0
	4:15 PM	5	100	23	109	101	51	162	269	9	10	58	112	1,007					0
	4:30 PM	9	83	15	128	52	55	140	266	8	8	37	96	896					0
	4:45 PM	1	94	14	103	102	52	171	244	1	13	37	107	936					0
	5:00 PM	0	75	9	104	70	62	158	236	5	14	43	105	878					0
	5:15 PM	8	117	13	114	86	55	161	179	10	17	46	125	929					0
	5:30 PM	3	57	8	102	99	36	172	198	6	9	40	115	843					0
	5:45 PM	3	89	13	106	73	48	161	198	17	18	55	105	884					0
	VOLUMES	47	899	154	1,079	815	515	1,559	2,333	77	130	448	1,074	9,128	0	0	0	0	0
	APPROACH %	4%	82%	14%	45%	34%	21%	39%	59%	2%	8%	27%	65%						
	APP/DEPART	1,100	/	3,532	2,409	/	1,022	3,968	/	3,565	1,652	/	1,009	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	24	385	82	424	335	208	597	1,013	31	52	192	422	3,763					
	APPROACH %	5%	79%	17%	44%	35%	22%	36%	62%	2%	8%	29%	63%						
	PEAK HR FACTOR		0.888			0.930			0.933			0.880		0.934					
	APP/DEPART	490	/	1,404	967	/	418	1,641	/	1,519	665	/	423	0					



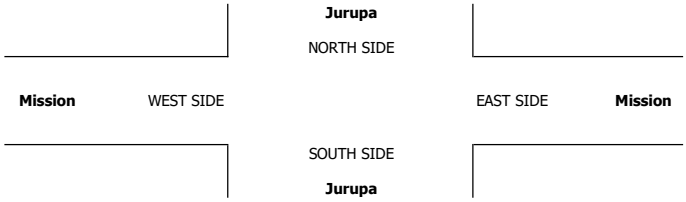
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Jurupa	LOCATION #:	13
THURSDAY	EAST & WEST:	Mission	CONTROL:	STOP N

	NOTES:										
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼
	Factor	1	1.5	2	3	2	2				

		NORTHBOUND Jurupa			SOUTHBOUND Jurupa			EASTBOUND Mission			WESTBOUND Mission				U-TURNS				
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 2	ER 1	WL 1	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	5	0	20	0	0	0	0	57	4	10	177	0	272					0
	6:45 AM	8	0	17	0	0	0	0	83	3	26	133	0	269					0
	7:00 AM	6	0	16	0	0	0	0	112	4	16	179	0	332					0
	7:15 AM	8	0	15	0	0	0	0	117	4	24	175	0	343					0
	7:30 AM	7	0	31	0	0	0	0	151	9	39	196	0	431					0
	7:45 AM	4	0	51	0	0	0	0	178	3	30	215	0	480					0
	8:00 AM	10	0	64	0	0	0	0	184	4	27	152	0	440					0
	8:15 AM	5	0	25	0	0	0	0	175	6	32	186	0	428					0
	8:30 AM	9	0	18	0	0	0	0	143	3	19	188	0	380					0
	8:45 AM	7	0	48	0	0	0	0	162	7	44	197	0	464					0
	VOLUMES	68	0	303	0	0	0	0	1,361	47	264	1,795	0	3,838	0	0	0	0	0
	APPROACH %	18%	0%	82%	0%	0%	0%	0%	97%	3%	13%	87%	0%						
	APP/DEPART	371	/	0	0	/	311	1,408	/	1,664	2,059	/	1,863	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	25	0	170	0	0	0	0	687	22	127	748	0	1,778					
	APPROACH %	13%	0%	87%	0%	0%	0%	0%	97%	3%	15%	85%	0%						
	PEAK HR FACTOR		0.666			0.000			0.943			0.894		0.926					
	APP/DEPART	195	/	0	0	/	149	709	/	857	875	/	773	0					
PM	03:30 PM	5	0	36	0	0	0	0	374	12	40	130	0	597					0
	3:45 PM	4	0	69	0	0	0	0	347	6	36	147	0	607					0
	4:00 PM	5	0	61	0	0	0	0	377	14	25	180	0	660					0
	4:15 PM	3	0	55	0	0	0	0	355	15	31	173	0	630					0
	4:30 PM	2	0	61	0	0	0	0	401	12	30	136	0	641					0
	4:45 PM	7	0	63	0	0	0	0	329	14	24	141	0	578					0
	5:00 PM	4	0	48	0	0	0	0	311	9	29	151	0	550					0
	5:15 PM	4	0	33	0	0	0	0	310	14	25	177	0	562					0
	5:30 PM	4	0	22	0	0	0	0	250	18	26	156	0	475					0
	5:45 PM	4	0	29	0	0	0	0	327	17	32	171	0	579					0
	VOLUMES	42	0	475	0	0	0	0	3,377	129	295	1,560	0	5,876	0	0	0	0	0
	APPROACH %	8%	0%	92%	0%	0%	0%	0%	96%	4%	16%	84%	0%						
	APP/DEPART	516	/	0	0	/	424	3,506	/	3,852	1,854	/	1,601	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	14	0	245	0	0	0	0	1,479	47	120	635	0	2,538					
	APPROACH %	5%	0%	95%	0%	0%	0%	0%	97%	3%	16%	84%	0%						
	PEAK HR FACTOR		0.890			0.000			0.923			0.925		0.961					
	APP/DEPART	258	/	0	0	/	167	1,525	/	1,723	755	/	648	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Pacific	LOCATION #:	14
THURSDAY	EAST & WEST:	Mission	CONTROL:	SIGNAL

	NOTES:									
PCE Adjusted	Class	1	2	3	4	5	6		AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼
	Factor	1	1.5	2	3	2	2			

		NORTHBOUND Pacific			SOUTHBOUND Pacific			EASTBOUND Mission			WESTBOUND Mission				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	25	0	9	3	1	13	6	43	6	6	98	4	214					0
	6:45 AM	22	3	12	2	2	13	4	66	15	2	95	7	242					0
	7:00 AM	35	1	10	0	5	13	3	72	14	7	98	5	261					0
	7:15 AM	22	3	17	4	7	22	14	96	6	7	110	8	314					0
	7:30 AM	30	7	7	10	7	28	17	113	14	8	123	5	367					0
	7:45 AM	29	9	15	9	5	41	25	149	20	6	117	8	432					0
	8:00 AM	21	8	22	5	9	30	28	194	22	15	137	10	499					0
	8:15 AM	30	5	16	4	7	15	31	129	13	20	125	6	400					0
	8:30 AM	31	7	23	1	19	14	16	135	12	41	147	1	445					0
	8:45 AM	30	19	41	4	33	27	19	149	19	78	191	5	613					0
	VOLUMES	272	62	170	42	94	213	161	1,145	138	189	1,240	59	3,783	0	0	0	0	0
	APPROACH %	54%	12%	34%	12%	27%	61%	11%	79%	10%	13%	83%	4%						
	APP/DEPART	504	/	282	349	/	421	1,444	/	1,357	1,487	/	1,724	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	111	39	102	14	68	85	93	606	65	153	600	22	1,955					
	APPROACH %	44%	16%	40%	8%	41%	51%	12%	79%	9%	20%	77%	3%						
	PEAK HR FACTOR		0.701			0.648			0.785			0.709		0.798					
	APP/DEPART	251	/	154	166	/	286	764	/	721	775	/	795	0					
PM	03:30 PM	23	6	15	10	8	25	12	326	30	62	156	8	680					0
	3:45 PM	21	10	24	6	12	16	35	347	49	50	141	7	716					0
	4:00 PM	22	7	14	5	2	21	47	262	37	27	141	4	587					0
	4:15 PM	25	13	14	8	5	16	43	299	46	31	146	8	653					0
	4:30 PM	17	4	15	7	10	15	19	320	40	23	132	4	604					0
	4:45 PM	14	5	19	2	12	15	27	304	32	22	113	4	566					0
	5:00 PM	11	10	15	8	5	19	24	298	39	20	136	10	593					0
	5:15 PM	33	10	19	6	11	12	22	225	44	22	160	5	567					0
	5:30 PM	19	9	26	11	17	12	30	183	34	31	157	7	534					0
	5:45 PM	19	8	23	9	8	16	31	201	41	30	140	3	527					0
	VOLUMES	202	82	182	72	89	165	287	2,763	390	317	1,419	59	6,025	0	0	0	0	0
	APPROACH %	43%	18%	39%	22%	27%	51%	8%	80%	11%	18%	79%	3%						
	APP/DEPART	465	/	428	326	/	796	3,440	/	3,016	1,795	/	1,786	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	91	36	66	29	27	77	136	1,234	161	170	583	27	2,635					
	APPROACH %	47%	18%	34%	22%	20%	58%	9%	81%	11%	22%	75%	3%						
	PEAK HR FACTOR		0.881			0.782			0.890			0.862		0.921					
	APP/DEPART	192	/	198	133	/	358	1,531	/	1,329	779	/	751	0					



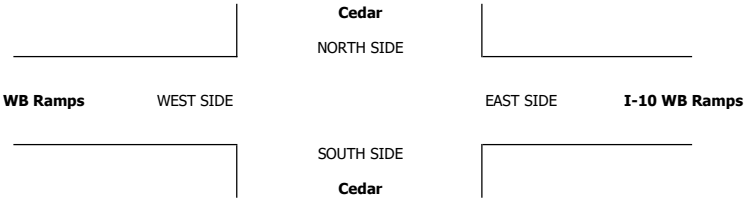
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Bloomington	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Cedar	LOCATION #:	15
THURSDAY	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

	NOTES:												
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N	
	Factor	1	1.5	2	3	2	2			PM MD	◄ W		E ►
										OTHER		S	
										OTHER		▼	

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 3	SR 1	EL X	ET X	ER X	WL 0.3	WT 0.3	WR 1.3	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	63	213	0	0	277	210	0	0	0	92	1	119	975					0
	6:45 AM	76	257	0	0	325	186	0	0	0	117	7	114	1,080					0
	7:00 AM	60	297	0	0	323	154	0	0	0	115	2	94	1,044					0
	7:15 AM	74	326	0	0	356	185	0	0	0	112	0	101	1,152					0
	7:30 AM	70	313	0	0	328	202	0	0	0	98	0	94	1,104					0
	7:45 AM	70	296	0	0	314	178	0	0	0	117	1	121	1,095					0
	8:00 AM	46	274	0	0	301	201	0	0	0	115	1	93	1,030					0
	8:15 AM	78	258	0	0	278	194	0	0	0	119	0	109	1,035					0
	8:30 AM	80	261	0	0	258	192	0	0	0	70	2	78	939					0
	8:45 AM	90	229	0	0	257	159	0	0	0	82	0	86	902					0
	VOLUMES	704	2,723	0	0	3,015	1,858	0	0	0	1,034	13	1,009	10,354	0	0	0	0	0
	APPROACH %	21%	79%	0%	0%	62%	38%	0%	0%	0%	50%	1%	49%						
	APP/DEPART	3,426	/	3,731	4,873	/	4,049	0	/	0	2,056	/	2,575	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	273	1,231	0	0	1,321	718	0	0	0	441	3	410	4,395					
	APPROACH %	18%	82%	0%	0%	65%	35%	0%	0%	0%	52%	0%	48%						
	PEAK HR FACTOR		0.942			0.943			0.000			0.894		0.954					
	APP/DEPART	1,504	/	1,641	2,038	/	1,761	0	/	0	853	/	993	0					
PM	03:30 PM	73	334	0	0	325	153	0	0	0	71	0	119	1,073					0
	3:45 PM	49	315	0	0	309	153	0	0	0	69	0	118	1,012					0
	4:00 PM	48	363	0	0	270	130	0	0	0	69	0	114	992					0
	4:15 PM	52	338	0	0	282	158	0	0	0	78	0	97	1,003					0
	4:30 PM	52	346	0	0	315	154	0	0	0	69	0	129	1,064					0
	4:45 PM	39	306	0	0	266	134	0	0	0	50	2	89	884					0
	5:00 PM	33	332	0	0	307	141	0	0	0	66	1	112	991					0
	5:15 PM	58	329	0	0	305	118	0	0	0	60	0	94	963					0
	5:30 PM	44	303	0	0	284	157	0	0	0	85	0	111	982					0
	5:45 PM	46	343	0	0	266	139	0	0	0	83	1	85	963					0
	VOLUMES	491	3,307	0	0	2,926	1,435	0	0	0	697	4	1,066	9,924	0	0	0	0	0
	APPROACH %	13%	87%	0%	0%	67%	33%	0%	0%	0%	39%	0%	60%						
	APP/DEPART	3,798	/	4,372	4,361	/	3,623	0	/	0	1,766	/	1,930	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	221	1,349	0	0	1,185	594	0	0	0	285	0	448	4,080					
	APPROACH %	14%	86%	0%	0%	67%	33%	0%	0%	0%	39%	0%	61%						
	PEAK HR FACTOR		0.957			0.931			0.000			0.966		0.950					
	APP/DEPART	1,569	/	1,796	1,778	/	1,470	0	/	0	733	/	814	0					



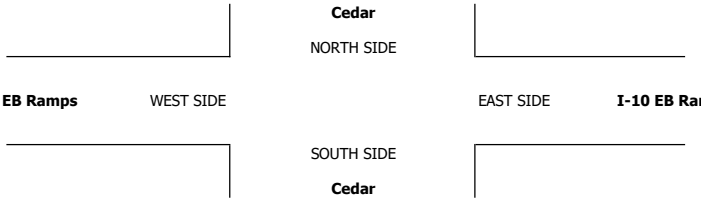
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Bloomington	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Cedar	LOCATION #:	16
THURSDAY	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	◄ W	▲ N S ▼ E ►
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
	LANES:	NL X	NT 3	NR 1	SL 1	ST 2	SR X	EL 1.3	ET 0.3	ER 0.3	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	172	83	99	270	0	104	0	100	0	0	0	827					0
	6:45 AM	0	213	73	107	335	0	120	0	107	0	0	0	954					0
	7:00 AM	0	231	90	86	353	0	126	2	88	0	0	0	974					0
	7:15 AM	0	307	97	104	363	0	93	2	78	0	0	0	1,042					0
	7:30 AM	0	263	113	114	311	0	121	0	97	0	0	0	1,018					0
	7:45 AM	0	229	105	116	313	0	137	0	111	0	0	0	1,010					0
	8:00 AM	0	185	70	124	291	0	135	2	117	0	0	0	923					0
	8:15 AM	0	190	76	107	288	0	147	0	70	0	0	0	876					0
	8:30 AM	0	223	112	82	246	0	119	0	67	0	0	0	847					0
	8:45 AM	0	224	73	107	231	0	95	3	87	0	0	0	819					0
	VOLUMES	0	2,235	889	1,045	2,998	0	1,194	8	920	0	0	0	9,287	0	0	0	0	0
	APPROACH %	0%	72%	28%	26%	74%	0%	56%	0%	43%	0%	0%	0%						
	APP/DEPART	3,124	/	3,428	4,043	/	3,918	2,121	/	1,942	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	1,029	404	420	1,339	0	476	3	373	0	0	0	4,043					
	APPROACH %	0%	72%	28%	24%	76%	0%	56%	0%	44%	0%	0%	0%						
	PEAK HR FACTOR		0.889			0.942			0.860			0.000		0.970					
	APP/DEPART	1,433	/	1,505	1,758	/	1,712	852	/	827	0	/	0	0					
PM	03:30 PM	0	284	87	93	303	0	122	1	50	0	0	0	939					0
	3:45 PM	0	220	95	95	282	0	145	0	66	0	0	0	901					0
	4:00 PM	0	267	94	75	264	0	144	4	29	0	0	0	876					0
	4:15 PM	0	245	75	105	254	0	146	1	42	0	0	0	867					0
	4:30 PM	0	253	80	108	276	0	145	1	55	0	0	0	917					0
	4:45 PM	0	205	65	88	228	0	140	2	31	0	0	0	758					0
	5:00 PM	0	229	79	100	272	0	138	2	56	0	0	0	874					0
	5:15 PM	0	251	101	92	272	0	137	0	44	0	0	0	896					0
	5:30 PM	0	202	56	80	288	0	146	0	15	0	0	0	785					0
	5:45 PM	0	243	103	89	260	0	147	1	26	0	0	0	867					0
	VOLUMES	0	2,397	833	921	2,697	0	1,407	12	413	0	0	0	8,678	0	0	0	0	0
	APPROACH %	0%	74%	26%	25%	75%	0%	77%	1%	23%	0%	0%	0%						
	APP/DEPART	3,229	/	3,804	3,618	/	3,109	1,831	/	1,765	0	/	0	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	0	1,015	350	367	1,102	0	556	6	187	0	0	0	3,582					
	APPROACH %	0%	74%	26%	25%	75%	0%	74%	1%	25%	0%	0%	0%						
	PEAK HR FACTOR		0.921			0.929			0.889			0.000		0.954					
	APP/DEPART	1,365	/	1,571	1,469	/	1,289	749	/	722	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Bloomington	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Cedar	LOCATION #:	17
THURSDAY	EAST & WEST:	Orange	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N
	Factor	1	1.5	2	3	2	2			PM MD	◄ W	E ►
										OTHER		S ▼
										OTHER		

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Orange			WESTBOUND Orange				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 1	ET 0.5	ER 0.5	WL 1	WT 0.5	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	1	210	0	25	268	63	32	0	0	0	0	13	611					0
	6:45 AM	1	240	0	24	299	109	29	0	3	0	0	18	720					0
	7:00 AM	1	220	1	18	265	171	66	1	1	0	0	35	777					0
	7:15 AM	1	293	1	33	287	119	88	0	3	0	0	23	847					0
	7:30 AM	1	263	1	15	308	80	63	3	5	0	1	50	789					0
	7:45 AM	1	250	0	42	284	87	56	1	4	0	0	28	752					0
	8:00 AM	3	206	3	43	314	66	33	1	0	0	0	16	684					0
	8:15 AM	1	217	3	27	241	80	35	3	1	0	0	14	621					0
	8:30 AM	0	278	3	21	233	61	37	0	1	2	2	20	656					0
	8:45 AM	1	242	0	43	240	37	33	5	8	2	0	23	631					0
	VOLUMES	11	2,417	12	289	2,737	871	468	14	26	4	3	239	7,087	0	0	0	0	0
	APPROACH %	0%	99%	0%	7%	70%	22%	92%	3%	5%	1%	1%	98%						
	APP/DEPART	2,439	/	3,124	3,896	/	2,766	507	/	314	245	/	884	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	4	1,026	3	107	1,143	456	272	5	13	0	1	136	3,165					
	APPROACH %	0%	99%	0%	6%	67%	27%	94%	2%	4%	0%	1%	99%						
	PEAK HR FACTOR		0.876			0.942			0.800			0.672		0.934					
	APP/DEPART	1,033	/	1,433	1,706	/	1,156	290	/	115	137	/	461	0					
PM	03:30 PM	1	223	0	32	237	66	63	6	6	6	1	85	724					0
	3:45 PM	2	178	0	27	276	76	72	7	3	2	2	65	708					0
	4:00 PM	4	236	1	9	221	48	71	1	5	1	2	54	652					0
	4:15 PM	3	177	1	17	222	57	74	8	1	2	2	69	632					0
	4:30 PM	0	195	0	18	268	43	64	7	13	1	0	74	682					0
	4:45 PM	0	153	1	7	211	59	61	4	4	7	0	56	562					0
	5:00 PM	2	197	4	26	214	57	59	0	1	4	0	53	616					0
	5:15 PM	0	206	3	19	276	51	74	7	7	0	0	72	715					0
	5:30 PM	0	166	0	12	211	56	49	1	3	2	2	47	548					0
	5:45 PM	0	218	0	10	238	58	64	6	7	0	1	62	663					0
	VOLUMES	12	1,947	10	177	2,372	568	650	46	50	25	10	635	6,499	0	0	0	0	0
	APPROACH %	1%	99%	1%	6%	76%	18%	87%	6%	7%	4%	1%	95%						
	APP/DEPART	1,968	/	3,231	3,116	/	2,447	746	/	233	669	/	589	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	10	814	2	85	955	246	280	22	15	11	7	272	2,715					
	APPROACH %	1%	99%	0%	7%	74%	19%	88%	7%	5%	4%	2%	94%						
	PEAK HR FACTOR		0.856			0.849			0.952			0.788		0.938					
	APP/DEPART	825	/	1,365	1,286	/	981	316	/	109	289	/	262	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Bloomington	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Cedar	LOCATION #:	18
THURSDAY	EAST & WEST:	Slover	CONTROL:	SIGNAL

	NOTES:									
PCE	Class	1	2	3	4	5	6			AM
Adjusted	Factor	1	1.5	2	3	2	2			PM
										MD
										OTHER
										OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Slover			WESTBOUND Slover				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1.5	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	13	187	5	38	208	28	30	12	14	1	28	26	587					0
	6:45 AM	34	169	1	18	237	55	34	32	8	5	53	18	662					0
	7:00 AM	57	188	3	21	157	52	46	29	24	0	66	27	667					0
	7:15 AM	43	185	7	25	230	34	75	63	26	1	44	30	759					0
	7:30 AM	30	193	3	40	228	24	56	31	16	13	42	27	701					0
	7:45 AM	18	152	8	32	249	34	38	22	13	1	41	37	641					0
	8:00 AM	18	143	2	40	245	28	28	23	13	2	24	21	585					0
	8:15 AM	22	158	3	18	188	32	41	34	9	4	39	40	585					0
	8:30 AM	16	177	5	28	178	16	48	15	18	5	34	64	602					0
	8:45 AM	10	151	4	33	202	26	52	21	9	0	30	28	564					0
	VOLUMES	259	1,699	40	291	2,120	326	446	280	148	31	399	315	6,352	0	0	0	0	0
	APPROACH %	13%	85%	2%	11%	77%	12%	51%	32%	17%	4%	54%	42%						
	APP/DEPART	1,998	/	2,460	2,737	/	2,299	874	/	611	744	/	984	0					
	BEGIN PEAK HR		6:45 AM																
	VOLUMES	163	734	14	103	851	163	211	154	73	19	204	101	2,789					
	APPROACH %	18%	81%	2%	9%	76%	15%	48%	35%	17%	6%	63%	31%						
	PEAK HR FACTOR		0.922			0.904			0.673			0.873		0.918					
	APP/DEPART	911	/	1,045	1,117	/	943	438	/	271	323	/	530	0					
PM	03:30 PM	32	149	8	36	193	28	59	62	29	2	51	47	696					0
	3:45 PM	18	138	4	27	223	14	27	92	29	9	64	23	666					0
	4:00 PM	27	138	9	26	165	30	53	108	31	4	71	37	698					0
	4:15 PM	19	116	4	27	192	17	51	94	47	4	76	19	664					0
	4:30 PM	28	135	13	34	197	27	42	127	23	9	64	20	715					0
	4:45 PM	21	115	10	27	189	13	41	91	31	8	67	17	627					0
	5:00 PM	46	136	10	30	159	23	37	105	39	2	62	26	674					0
	5:15 PM	17	139	10	40	215	18	43	104	34	10	52	30	712					0
	5:30 PM	20	121	2	19	175	24	44	78	37	4	53	29	603					0
	5:45 PM	18	139	14	22	188	18	46	65	33	7	42	18	607					0
	VOLUMES	245	1,326	83	287	1,894	210	441	923	330	58	600	264	6,658	0	0	0	0	0
	APPROACH %	15%	80%	5%	12%	79%	9%	26%	55%	19%	6%	65%	29%						
	APP/DEPART	1,653	/	2,030	2,391	/	2,281	1,693	/	1,293	921	/	1,054	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	96	541	25	116	773	89	189	355	135	19	261	125	2,722					
	APPROACH %	14%	82%	4%	12%	79%	9%	28%	52%	20%	5%	64%	31%						
	PEAK HR FACTOR		0.875			0.926			0.885			0.908		0.976					
	APP/DEPART	662	/	855	978	/	926	678	/	496	405	/	446	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Bloomington	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Cedar	LOCATION #:	19
THURSDAY	EAST & WEST:	Santa Ana	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N
	Factor	1	1.5	2	3	2	2			PM MD	◄ W	E ►
										OTHER		S ▼
										OTHER		

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Santa Ana			WESTBOUND Santa Ana				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	9	185	1	15	198	8	14	10	21	6	21	9	495					0
	6:45 AM	15	180	7	12	198	16	7	10	12	7	18	5	486					0
	7:00 AM	37	210	7	14	157	15	12	21	14	10	39	10	544					0
	7:15 AM	23	196	1	6	219	16	19	20	20	11	21	14	563					0
	7:30 AM	15	207	8	18	258	13	28	26	30	16	12	16	646					0
	7:45 AM	10	147	4	8	240	11	7	16	17	11	17	5	490					0
	8:00 AM	17	142	7	9	207	11	14	12	10	10	16	3	455					0
	8:15 AM	14	157	2	12	195	13	7	13	13	2	12	11	448					0
	8:30 AM	12	168	6	2	163	13	15	17	10	7	14	10	433					0
	8:45 AM	11	154	7	5	191	11	6	12	14	5	15	14	442					0
	VOLUMES	161	1,742	48	100	2,025	125	127	155	160	83	183	94	5,001	0	0	0	0	0
	APPROACH %	8%	89%	2%	4%	90%	6%	29%	35%	36%	23%	51%	26%						
	APP/DEPART	1,951	/	1,963	2,249	/	2,267	441	/	302	360	/	469	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	84	759	20	46	874	55	66	82	80	47	88	44	2,242					
	APPROACH %	10%	88%	2%	5%	90%	6%	29%	36%	35%	26%	49%	25%						
	PEAK HR FACTOR		0.850			0.843			0.677			0.769		0.868					
	APP/DEPART	862	/	868	974	/	1,001	228	/	147	179	/	226	0					
PM	03:30 PM	41	169	15	23	168	10	18	27	33	5	39	14	559					0
	3:45 PM	34	150	10	15	231	14	14	47	25	5	35	8	587					0
	4:00 PM	42	135	14	20	154	9	16	26	28	4	34	4	482					0
	4:15 PM	31	178	15	13	214	15	15	35	37	8	25	18	602					0
	4:30 PM	38	168	19	14	178	13	11	35	29	7	32	2	543					0
	4:45 PM	33	136	22	10	221	14	14	34	36	9	28	6	560					0
	5:00 PM	38	162	10	10	171	12	17	25	26	9	25	22	524					0
	5:15 PM	31	156	11	13	220	19	14	35	28	4	30	6	565					0
	5:30 PM	40	151	20	14	186	12	15	36	17	5	25	7	526					0
	5:45 PM	25	164	13	17	184	20	10	38	29	7	30	9	544					0
	VOLUMES	352	1,565	147	146	1,923	137	142	335	286	62	301	95	5,489	0	0	0	0	0
	APPROACH %	17%	76%	7%	7%	87%	6%	19%	44%	37%	14%	66%	21%						
	APP/DEPART	2,064	/	1,801	2,206	/	2,271	762	/	628	458	/	790	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	148	631	53	70	765	48	62	135	122	22	132	43	2,229					
	APPROACH %	18%	76%	6%	8%	87%	5%	19%	42%	38%	11%	67%	22%						
	PEAK HR FACTOR		0.930			0.851			0.915			0.860		0.926					
	APP/DEPART	831	/	736	883	/	909	319	/	258	196	/	327	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Bloomington	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Cedar	LOCATION #:	20
THURSDAY	EAST & WEST:	Jurupa	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	◄ W	▲ N S ▼ E ►
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND Jurupa			WESTBOUND Jurupa				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	5	176	5	13	207	4	8	9	3	6	19	5	459					0
	6:45 AM	7	171	5	13	180	9	18	16	9	4	19	17	465					0
	7:00 AM	12	212	5	13	163	12	13	16	9	8	24	30	515					0
	7:15 AM	9	180	18	25	239	3	14	21	15	11	12	45	590					0
	7:30 AM	8	154	15	26	266	4	14	19	12	16	18	46	594					0
	7:45 AM	7	133	6	23	234	2	9	19	17	8	20	15	492					0
	8:00 AM	5	149	6	25	190	14	4	17	8	9	12	13	450					0
	8:15 AM	5	164	13	19	192	6	4	14	8	12	13	13	460					0
	8:30 AM	3	146	9	18	161	8	18	7	6	10	14	13	411					0
	8:45 AM	3	147	8	18	156	11	16	17	13	9	8	14	418					0
	VOLUMES	62	1,631	88	191	1,986	73	116	153	99	91	156	209	4,852	0	0	0	0	0
	APPROACH %	3%	92%	5%	8%	88%	3%	32%	42%	27%	20%	34%	46%						
	APP/DEPART	1,781	/	1,956	2,250	/	2,175	367	/	432	455	/	290	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	36	678	43	87	901	21	50	73	53	42	72	136	2,190					
	APPROACH %	5%	90%	6%	9%	89%	2%	28%	42%	30%	17%	29%	54%						
	PEAK HR FACTOR		0.828			0.855			0.884			0.795		0.922					
	APP/DEPART	757	/	863	1,009	/	996	175	/	203	250	/	129	0					
PM	03:30 PM	13	180	8	23	176	10	14	28	11	11	22	17	509					0
	3:45 PM	18	164	21	18	213	22	12	40	13	16	19	10	563					0
	4:00 PM	25	180	19	22	184	12	12	42	17	18	13	13	555					0
	4:15 PM	21	187	24	23	230	10	13	45	18	5	17	24	615					0
	4:30 PM	24	198	14	26	175	15	13	68	19	11	16	16	592					0
	4:45 PM	10	172	20	35	211	8	14	44	19	12	18	17	576					0
	5:00 PM	18	185	16	31	187	16	15	41	19	9	19	5	559					0
	5:15 PM	27	176	14	23	211	12	10	49	17	16	27	14	593					0
	5:30 PM	22	178	23	21	175	14	17	47	14	17	34	23	582					0
	5:45 PM	17	180	15	29	185	12	10	41	21	8	25	6	546					0
	VOLUMES	192	1,797	172	248	1,946	129	127	444	166	120	207	143	5,688	0	0	0	0	0
	APPROACH %	9%	83%	8%	11%	84%	6%	17%	60%	23%	25%	44%	30%						
	APP/DEPART	2,161	/	2,067	2,322	/	2,231	736	/	863	470	/	528	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	78	736	76	105	800	45	51	198	72	45	64	69	2,337					
	APPROACH %	9%	83%	9%	11%	84%	5%	16%	62%	22%	25%	36%	39%						
	PEAK HR FACTOR		0.946			0.904			0.811			0.965		0.950					
	APP/DEPART	890	/	856	949	/	917	321	/	379	178	/	186	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Bloomington	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Cedar	LOCATION #:	21
THURSDAY	EAST & WEST:	7th	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N
	Factor	1	1.5	2	3	2	2			PM MD	◄ W	E ►
										OTHER		S ▼
										OTHER		

		NORTHBOUND Cedar			SOUTHBOUND Cedar			EASTBOUND 7th			WESTBOUND 7th				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	16	152	0	4	206	6	4	1	12	5	2	3	409					0
	6:45 AM	12	167	2	1	193	4	8	0	19	12	4	0	421					0
	7:00 AM	13	187	0	7	160	11	7	2	24	9	8	8	434					0
	7:15 AM	10	176	1	7	239	3	6	4	39	9	1	1	495					0
	7:30 AM	5	134	3	4	270	3	4	3	28	12	1	3	469					0
	7:45 AM	11	110	2	5	232	4	6	0	40	4	4	1	417					0
	8:00 AM	11	142	1	4	206	6	12	2	29	4	3	3	421					0
	8:15 AM	13	160	2	9	173	5	8	7	22	4	3	4	407					0
	8:30 AM	14	126	1	8	160	4	7	3	23	2	5	3	353					0
	8:45 AM	17	139	1	8	169	8	8	4	14	8	4	6	384					0
	VOLUMES	121	1,490	13	56	2,005	53	68	25	248	68	35	30	4,210	0	0	0	0	0
	APPROACH %	7%	92%	1%	3%	95%	3%	20%	7%	73%	51%	26%	23%						
	APP/DEPART	1,623	/	1,588	2,114	/	2,320	341	/	94	133	/	209	0					
	BEGIN PEAK HR		6:45 AM																
	VOLUMES	40	663	6	19	861	21	25	9	110	42	14	12	1,819					
	APPROACH %	6%	94%	1%	2%	96%	2%	17%	6%	77%	62%	21%	17%						
	PEAK HR FACTOR		0.888			0.812			0.730			0.684		0.919					
	APP/DEPART	709	/	700	900	/	1,012	143	/	33	67	/	75	0					
PM	03:30 PM	29	181	1	15	190	6	10	6	64	13	4	6	523					0
	3:45 PM	25	189	3	17	204	1	2	10	69	7	3	7	535					0
	4:00 PM	29	184	5	20	168	6	12	9	83	9	4	7	534					0
	4:15 PM	26	215	1	15	182	6	7	9	82	6	8	5	560					0
	4:30 PM	21	209	5	11	203	5	7	7	81	11	2	9	568					0
	4:45 PM	36	182	3	19	214	11	9	11	68	11	6	3	570					0
	5:00 PM	37	201	0	7	158	13	8	5	77	8	2	11	525					0
	5:15 PM	32	185	4	9	223	5	6	7	68	10	2	4	553					0
	5:30 PM	24	180	5	17	171	5	10	9	45	17	3	8	492					0
	5:45 PM	23	181	3	11	181	7	10	10	53	10	4	4	494					0
	VOLUMES	280	1,905	30	137	1,890	63	80	81	688	101	38	62	5,353	0	0	0	0	0
	APPROACH %	13%	86%	1%	7%	90%	3%	9%	10%	81%	50%	19%	31%						
	APP/DEPART	2,215	/	2,046	2,090	/	2,679	849	/	248	201	/	381	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	125	776	12	45	796	33	30	29	293	40	12	26	2,216					
	APPROACH %	14%	85%	1%	5%	91%	4%	9%	8%	83%	51%	15%	33%						
	PEAK HR FACTOR		0.961			0.901			0.935			0.907		0.972					
	APP/DEPART	913	/	832	874	/	1,129	352	/	86	78	/	170	0					



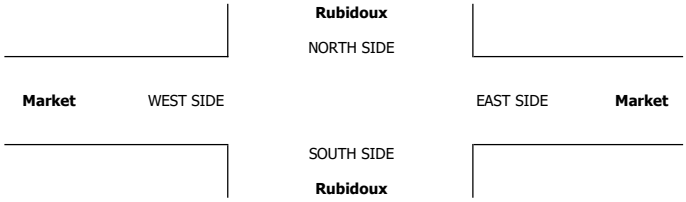
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Rubidoux	LOCATION #:	22
THURSDAY	EAST & WEST:	Market	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N
	Factor	1	1.5	2	3	2	2			PM MD	◄ W	E ►
										OTHER		S ▼
										OTHER		

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND Market			WESTBOUND Market				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	10	54	41	106	71	15	17	39	3	57	19	94	523					0
	6:45 AM	2	71	69	124	103	11	35	13	14	84	16	116	656					0
	7:00 AM	3	53	38	99	94	18	11	49	6	54	16	107	546					0
	7:15 AM	0	51	54	141	109	14	37	13	15	53	17	104	605					0
	7:30 AM	5	57	94	126	159	28	12	16	12	92	8	103	710					0
	7:45 AM	2	56	67	133	148	25	11	24	26	57	7	93	646					0
	8:00 AM	2	65	63	121	129	21	4	20	10	60	9	99	598					0
	8:15 AM	0	53	76	101	90	20	21	25	8	58	33	105	585					0
	8:30 AM	10	68	72	86	80	23	5	32	8	64	30	86	562					0
	8:45 AM	9	76	67	104	92	15	16	24	5	69	20	77	570					0
	VOLUMES	41	601	637	1,139	1,073	189	168	251	104	645	173	980	5,998	0	0	0	0	0
	APPROACH %	3%	47%	50%	47%	45%	8%	32%	48%	20%	36%	10%	55%						
	APP/DEPART	1,278	/	1,748	2,400	/	1,822	523	/	2,026	1,798	/	402	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	8	228	277	520	544	88	64	72	62	261	41	397	2,558					
	APPROACH %	1%	44%	54%	45%	47%	8%	32%	36%	31%	37%	6%	57%						
	PEAK HR FACTOR		0.828			0.919			0.770			0.862		0.901					
	APP/DEPART	512	/	688	1,151	/	866	197	/	868	698	/	136	0					
PM	03:30 PM	4	61	117	84	122	15	10	21	14	70	33	104	652					0
	3:45 PM	13	68	93	116	181	17	13	32	10	81	15	137	774					0
	4:00 PM	4	100	93	116	135	9	9	20	13	51	15	133	694					0
	4:15 PM	3	91	132	129	117	11	13	28	3	68	23	150	764					0
	4:30 PM	5	96	116	108	172	16	14	31	4	77	8	116	761					0
	4:45 PM	10	91	98	133	138	12	11	11	0	51	12	117	681					0
	5:00 PM	2	78	102	117	128	8	7	20	6	80	25	123	693					0
	5:15 PM	3	85	98	132	131	7	8	10	1	75	1	126	675					0
	5:30 PM	3	99	104	105	124	6	8	8	1	86	16	129	688					0
	5:45 PM	1	97	86	122	97	9	4	15	5	57	14	109	612					0
	VOLUMES	46	862	1,037	1,160	1,343	108	94	194	56	694	160	1,240	6,992	0	0	0	0	0
	APPROACH %	2%	44%	53%	44%	51%	4%	27%	57%	16%	33%	8%	59%						
	APP/DEPART	1,945	/	2,196	2,611	/	2,092	343	/	2,391	2,093	/	314	0					
	BEGIN PEAK HR		3:45 PM																
	VOLUMES	25	354	433	469	604	52	47	111	29	276	60	535	2,992					
	APPROACH %	3%	44%	53%	42%	54%	5%	25%	59%	16%	32%	7%	61%						
	PEAK HR FACTOR		0.900			0.898			0.856			0.908		0.967					
	APP/DEPART	812	/	936	1,124	/	909	187	/	1,012	870	/	136	0					



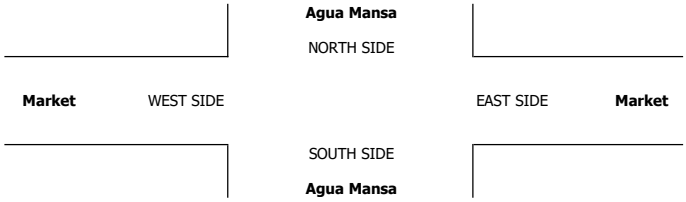
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Agua Mansa	LOCATION #:	23
THURSDAY	EAST & WEST:	Market	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	◄ W	▲ N S ▼ E ►
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND Agua Mansa			SOUTHBOUND Agua Mansa			EASTBOUND Market			WESTBOUND Market				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	0	0	39	0	61	59	124	2	0	108	38	429					0
	6:45 AM	0	0	0	40	0	85	75	130	0	0	131	46	505					0
	7:00 AM	0	0	0	29	0	62	57	129	0	0	115	58	448					0
	7:15 AM	0	1	0	23	0	77	66	142	0	0	96	53	456					0
	7:30 AM	0	2	0	32	0	89	86	147	3	0	114	41	512					0
	7:45 AM	2	0	0	32	0	57	81	143	0	0	100	56	469					0
	8:00 AM	3	0	0	25	1	69	80	117	6	0	95	54	449					0
	8:15 AM	3	5	0	35	0	69	72	129	0	0	123	62	496					0
	8:30 AM	0	0	5	26	0	68	63	123	3	0	113	44	444					0
	8:45 AM	0	0	0	23	0	68	70	124	0	0	97	58	439					0
	VOLUMES	8	7	5	301	1	704	707	1,305	14	0	1,089	507	4,645	0	0	0	0	0
	APPROACH %	38%	36%	26%	30%	0%	70%	35%	64%	1%	0%	68%	32%						
	APP/DEPART	20	/	1,220	1,006	/	15	2,025	/	1,611	1,595	/	1,800	0					
	BEGIN PEAK HR		6:45 AM																
	VOLUMES	0	3	0	123	0	312	283	547	3	0	455	196	1,921					
	APPROACH %	0%	100%	0%	28%	0%	72%	34%	66%	0%	0%	70%	30%						
	PEAK HR FACTOR		0.417			0.873			0.883			0.925		0.938					
	APP/DEPART	3	/	481	435	/	3	832	/	670	651	/	767	0					
PM	03:30 PM	0	0	0	61	0	105	115	107	0	1	101	52	542					0
	3:45 PM	0	0	0	47	0	93	121	119	0	1	140	72	591					0
	4:00 PM	0	0	0	37	0	64	86	142	0	0	135	65	527					0
	4:15 PM	0	0	0	18	0	75	148	141	0	0	165	61	606					0
	4:30 PM	0	0	0	37	0	86	107	148	0	0	118	26	522					0
	4:45 PM	0	0	0	36	0	56	109	133	0	0	123	41	498					0
	5:00 PM	0	0	0	30	0	99	128	111	0	0	129	46	541					0
	5:15 PM	0	1	1	25	0	90	96	144	0	0	111	39	507					0
	5:30 PM	0	1	0	40	0	109	99	117	0	0	122	47	534					0
	5:45 PM	0	0	0	25	0	56	100	123	0	0	124	34	460					0
	VOLUMES	0	2	1	355	0	832	1,105	1,282	0	2	1,266	481	5,325	0	0	0	0	0
	APPROACH %	0%	67%	33%	30%	0%	70%	46%	54%	0%	0%	72%	27%						
	APP/DEPART	3	/	1,588	1,187	/	2	2,387	/	1,638	1,748	/	2,097	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	0	0	120	0	316	491	532	0	0	534	174	2,166					
	APPROACH %	0%	0%	0%	28%	0%	72%	48%	52%	0%	0%	75%	25%						
	PEAK HR FACTOR		0.000			0.851			0.888			0.786		0.893					
	APP/DEPART	0	/	665	436	/	0	1,023	/	652	708	/	850	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Rubidoux	LOCATION #:	24
THURSDAY	EAST & WEST:	SR-60 WB Off-Ramp	CONTROL:	SIGNAL

	NOTES:												
PCE	Class	1	2	3	4	5	6			AM		▲ N	
Adjusted	Factor	1	1.5	2	3	2	2			PM MD	◄ W		E ►
										OTHER		S ▼	
										OTHER			

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND SR-60 WB Off-Ramp			WESTBOUND SR-60 WB Off-Ramp				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	11	123	0	0	158	1	3	0	47	42	23	21	427					0
	6:45 AM	12	149	0	0	184	1	9	0	44	71	16	23	507					0
	7:00 AM	13	80	0	0	169	4	3	0	46	61	20	26	420					0
	7:15 AM	16	129	0	0	187	1	3	0	43	81	20	32	509					0
	7:30 AM	8	148	0	0	236	8	4	0	50	83	12	16	563					0
	7:45 AM	8	146	0	0	236	3	4	0	42	106	20	20	584					0
	8:00 AM	9	144	0	0	215	3	3	0	37	108	25	27	569					0
	8:15 AM	13	150	0	0	186	4	5	0	30	90	10	16	502					0
	8:30 AM	9	139	0	0	147	1	2	0	47	79	18	27	467					0
	8:45 AM	16	149	0	0	180	5	5	0	22	90	9	38	513					0
	VOLUMES	113	1,354	0	0	1,896	30	40	0	406	808	171	244	5,060	0	0	0	0	0
	APPROACH %	8%	92%	0%	0%	98%	2%	9%	0%	91%	66%	14%	20%						
	APP/DEPART	1,467	/	1,637	1,926	/	3,109	445	/	0	1,223	/	314	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	37	587	0	0	872	18	16	0	158	386	67	79	2,218					
	APPROACH %	6%	94%	0%	0%	98%	2%	9%	0%	91%	73%	13%	15%						
	PEAK HR FACTOR		0.962			0.913			0.811			0.835		0.949					
	APP/DEPART	624	/	681	890	/	1,416	174	/	0	531	/	121	0					
PM	03:30 PM	11	162	0	0	208	1	3	0	48	124	18	46	618					0
	3:45 PM	11	193	0	0	231	2	4	0	44	110	15	26	635					0
	4:00 PM	14	185	0	0	211	6	2	0	38	111	17	42	625					0
	4:15 PM	20	214	0	0	190	4	3	0	42	115	19	18	624					0
	4:30 PM	6	172	0	0	223	2	2	0	30	105	10	27	576					0
	4:45 PM	15	203	0	0	203	2	5	0	32	107	19	16	601					0
	5:00 PM	17	182	0	0	208	4	4	0	38	101	22	17	593					0
	5:15 PM	16	189	0	0	225	1	2	0	36	117	18	31	635					0
	5:30 PM	13	209	0	0	227	5	2	0	29	123	13	28	648					0
	5:45 PM	10	189	0	0	184	2	4	0	38	118	25	16	584					0
	VOLUMES	131	1,896	0	0	2,108	29	31	0	373	1,130	175	265	6,137	0	0	0	0	0
	APPROACH %	6%	94%	0%	0%	99%	1%	8%	0%	92%	72%	11%	17%						
	APP/DEPART	2,027	/	2,192	2,137	/	3,610	404	/	0	1,570	/	335	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	61	783	0	0	863	12	13	0	135	448	72	92	2,477					
	APPROACH %	7%	93%	0%	0%	99%	1%	9%	0%	91%	73%	12%	15%						
	PEAK HR FACTOR		0.949			0.942			0.878			0.921		0.955					
	APP/DEPART	843	/	887	875	/	1,445	148	/	0	612	/	145	0					

Rubidoux

NORTH SIDE

SR-60 WB Off-Ramp WEST SIDE EAST SIDE **SR-60 WB Off-Ramp**

SOUTH SIDE

Rubidoux

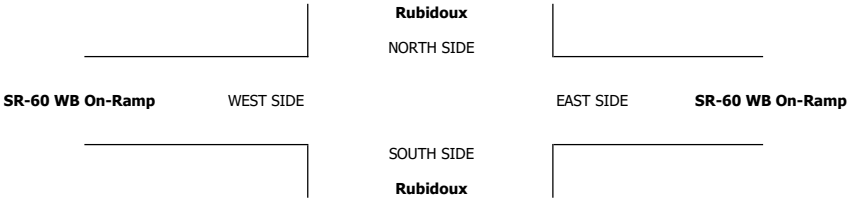
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Rubidoux	LOCATION #:	25
THURSDAY	EAST & WEST:	SR-60 WB On-Ramp	CONTROL:	NO CONTROL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N
	Factor	1	1.5	2	3	2	2			PM MD	◄ W	E ►
										OTHER		S ▼
										OTHER		

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND SR-60 WB On-Ramp			WESTBOUND SR-60 WB On-Ramp				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL X	ET X	ER X	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	80	134	0	0	126	121	0	0	0	0	0	0	459					0
	6:45 AM	70	160	0	0	134	165	0	0	0	0	0	0	528					0
	7:00 AM	62	93	0	0	167	109	0	0	0	0	0	0	430					0
	7:15 AM	68	144	0	0	157	154	0	0	0	0	0	0	522					0
	7:30 AM	88	155	0	0	195	173	0	0	0	0	0	0	611					0
	7:45 AM	65	154	0	0	204	181	0	0	0	0	0	0	604					0
	8:00 AM	64	153	0	0	206	154	0	0	0	0	0	0	576					0
	8:15 AM	55	162	0	0	171	134	0	0	0	0	0	0	522					0
	8:30 AM	56	148	0	0	161	111	0	0	0	0	0	0	476					0
	8:45 AM	46	165	0	0	163	130	0	0	0	0	0	0	503					0
	VOLUMES	651	1,466	0	0	1,682	1,431	0	0	0	0	0	0	5,229	0	0	0	0	0
	APPROACH %	31%	69%	0%	0%	54%	46%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2,117	/	1,466	3,112	/	1,682	0	/	0	0	/	2,082	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	271	624	0	0	776	642	0	0	0	0	0	0	2,312					
	APPROACH %	30%	70%	0%	0%	55%	45%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.922			0.920			0.000			0.000		0.947					
	APP/DEPART	895	/	624	1,418	/	776	0	/	0	0	/	913	0					
PM	03:30 PM	50	172	0	0	243	136	0	0	0	0	0	0	601					0
	3:45 PM	40	204	0	0	245	141	0	0	0	0	0	0	629					0
	4:00 PM	46	199	0	0	221	139	0	0	0	0	0	0	604					0
	4:15 PM	51	234	0	0	226	121	0	0	0	0	0	0	631					0
	4:30 PM	46	178	0	0	222	136	0	0	0	0	0	0	581					0
	4:45 PM	49	217	0	0	215	128	0	0	0	0	0	0	609					0
	5:00 PM	59	199	0	0	241	107	0	0	0	0	0	0	605					0
	5:15 PM	52	205	0	0	247	132	0	0	0	0	0	0	635					0
	5:30 PM	44	222	0	0	251	128	0	0	0	0	0	0	644					0
	5:45 PM	36	199	0	0	240	99	0	0	0	0	0	0	574					0
	VOLUMES	471	2,027	0	0	2,349	1,264	0	0	0	0	0	0	6,111	0	0	0	0	0
	APPROACH %	19%	81%	0%	0%	65%	35%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2,498	/	2,027	3,613	/	2,349	0	/	0	0	/	1,735	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	203	843	0	0	953	494	0	0	0	0	0	0	2,493					
	APPROACH %	19%	81%	0%	0%	66%	34%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.984			0.956			0.000			0.000		0.968					
	APP/DEPART	1,046	/	843	1,447	/	953	0	/	0	0	/	697	0					



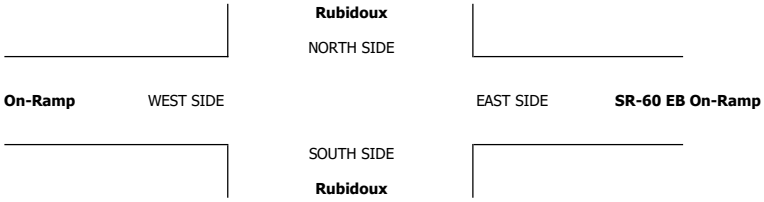
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Rubidoux	LOCATION #:	26
THURSDAY	EAST & WEST:	SR-60 EB On-Ramp	CONTROL:	SIGNAL

	NOTES:													
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N		
	Factor	1	1.5	2	3	2	2			PM MD	◄ W		E ►	
										OTHER		S ▼		
										OTHER				

		NORTHBOUND Rubidoux			SOUTHBOUND Rubidoux			EASTBOUND SR-60 EB On-Ramp			WESTBOUND SR-60 EB On-Ramp				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0	ET 1	ER 0	WL 1	WT X	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	143	126	36	90	0	68	0	20	0	0	2	484					0
	6:45 AM	0	118	121	46	88	0	112	5	29	0	0	0	518					0
	7:00 AM	0	112	136	40	127	0	46	1	29	2	0	0	492					0
	7:15 AM	0	118	139	43	114	0	93	2	56	2	0	1	566					0
	7:30 AM	0	153	134	41	154	0	89	3	44	1	0	1	620					0
	7:45 AM	0	129	109	30	175	0	90	4	42	4	0	0	581					0
	8:00 AM	0	106	102	36	170	0	110	1	40	1	0	1	566					0
	8:15 AM	0	113	128	20	147	0	104	3	48	0	0	0	562					0
	8:30 AM	0	114	113	36	125	0	89	2	50	0	0	1	530					0
	8:45 AM	0	101	107	28	135	0	108	12	44	0	0	1	535					0
	VOLUMES	0	1,205	1,211	355	1,323	0	908	33	401	10	0	7	5,452	0	0	0	0	0
	APPROACH %	0%	50%	50%	21%	79%	0%	68%	2%	30%	59%	0%	41%						
	APP/DEPART	2,416	/	2,120	1,678	/	1,734	1,341	/	1,598	17	/	0	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	505	483	149	612	0	382	10	182	8	0	3	2,332					
	APPROACH %	0%	51%	49%	20%	80%	0%	67%	2%	32%	73%	0%	27%						
	PEAK HR FACTOR		0.860			0.926			0.949			0.688		0.941					
	APP/DEPART	987	/	889	761	/	802	573	/	642	11	/	0	0					
PM	03:30 PM	0	104	58	30	213	0	118	10	76	3	0	1	611					0
	3:45 PM	0	111	67	30	212	0	131	12	69	4	0	1	636					0
	4:00 PM	0	140	53	23	198	0	108	13	141	6	0	1	681					0
	4:15 PM	0	159	56	23	203	0	121	7	93	4	0	5	670					0
	4:30 PM	0	121	60	19	204	0	102	20	93	2	0	1	620					0
	4:45 PM	0	139	56	13	202	0	126	10	102	2	0	1	650					0
	5:00 PM	0	130	54	14	227	0	129	12	81	2	0	0	647					0
	5:15 PM	0	132	54	15	232	0	125	6	98	7	0	0	668					0
	5:30 PM	0	119	60	12	239	0	146	12	92	7	0	1	687					0
	5:45 PM	0	103	68	20	220	0	132	17	108	3	0	0	670					0
	VOLUMES	0	1,256	584	198	2,149	0	1,235	117	950	40	0	11	6,537	0	0	0	0	0
	APPROACH %	0%	68%	32%	8%	92%	0%	54%	5%	41%	79%	0%	21%						
	APP/DEPART	1,840	/	2,502	2,346	/	3,138	2,301	/	898	50	/	0	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	484	235	61	918	0	531	46	379	19	0	1	2,671					
	APPROACH %	0%	67%	33%	6%	94%	0%	56%	5%	40%	95%	0%	5%						
	PEAK HR FACTOR		0.965			0.974			0.931			0.625		0.973					
	APP/DEPART	718	/	1,015	978	/	1,315	955	/	341	20	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Market	LOCATION #:	27
THURSDAY	EAST & WEST:	Rivera	CONTROL:	SIGNAL

	NOTES:												
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N	
	Factor	1	1.5	2	3	2	2			PM MD	◄ W		E ►
										OTHER		S	
										OTHER		▼	

		NORTHBOUND Market			SOUTHBOUND Market			EASTBOUND Rivera			WESTBOUND Rivera				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 1.5	WT 0.5	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	12	183	17	2	179	2	5	2	9	36	3	5	453					0
	6:45 AM	12	228	26	8	193	0	0	0	8	37	0	2	512					0
	7:00 AM	16	217	36	2	182	1	0	0	4	40	0	8	506					0
	7:15 AM	5	167	33	9	192	2	0	0	6	65	2	12	491					0
	7:30 AM	3	179	51	6	207	0	0	0	8	69	0	4	526					0
	7:45 AM	6	157	104	12	221	1	0	0	11	70	1	13	594					0
	8:00 AM	3	207	71	8	178	0	0	0	5	57	0	23	550					0
	8:15 AM	0	203	66	12	166	0	0	0	0	48	0	17	511					0
	8:30 AM	6	174	53	15	186	2	0	0	5	44	0	16	499					0
	8:45 AM	0	176	38	11	171	0	0	0	5	38	0	12	450					0
	VOLUMES	63	1,888	493	83	1,873	8	5	2	59	502	6	111	5,090	0	0	0	0	0
	APPROACH %	3%	77%	20%	4%	95%	0%	8%	2%	90%	81%	1%	18%						
	APP/DEPART	2,444	/	2,004	1,964	/	2,433	65	/	578	618	/	77	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	17	709	259	35	797	3	0	0	29	259	3	52	2,160					
	APPROACH %	2%	72%	26%	4%	96%	0%	0%	0%	100%	83%	1%	16%						
	PEAK HR FACTOR		0.877			0.893			0.679			0.937		0.910					
	APP/DEPART	984	/	760	835	/	1,085	29	/	293	313	/	23	0					
PM	03:30 PM	8	200	71	17	234	5	0	1	10	48	0	9	601					0
	3:45 PM	5	210	62	25	258	0	0	1	4	38	0	17	619					0
	4:00 PM	8	213	59	29	273	1	0	3	10	33	0	20	646					0
	4:15 PM	0	181	55	18	242	0	0	1	5	45	0	9	554					0
	4:30 PM	0	155	57	20	243	0	0	9	35	55	0	9	582					0
	4:45 PM	1	180	57	23	250	0	1	0	3	69	0	13	595					0
	5:00 PM	0	165	51	23	196	0	1	0	17	62	0	14	528					0
	5:15 PM	0	169	64	24	211	0	0	1	3	54	0	13	538					0
	5:30 PM	0	154	62	18	198	0	1	0	14	44	0	13	502					0
	5:45 PM	2	162	57	21	205	0	0	1	5	38	0	1	490					0
	VOLUMES	23	1,788	592	215	2,307	6	3	17	105	483	0	115	5,652	0	0	0	0	0
	APPROACH %	1%	74%	25%	9%	91%	0%	2%	14%	84%	81%	0%	19%						
	APP/DEPART	2,403	/	1,906	2,527	/	2,894	125	/	824	597	/	29	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	9	729	226	89	1,006	1	1	13	53	201	0	50	2,376					
	APPROACH %	1%	76%	23%	8%	92%	0%	2%	20%	79%	80%	0%	20%						
	PEAK HR FACTOR		0.864			0.907			0.382			0.773		0.920					
	APP/DEPART	963	/	780	1,096	/	1,259	67	/	328	251	/	10	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Market	LOCATION #:	28
THURSDAY	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	◄ W	▲ N S ▼ E ►
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND (Market)			SOUTHBOUND (Market)			EASTBOUND (SR-60 WB Ramps)			WESTBOUND (SR-60 WB Ramps)				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1	WT X	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	44	42	0	0	196	26	0	0	0	7	0	172	486					0
	6:45 AM	35	72	0	0	201	38	0	0	0	12	0	193	551					0
	7:00 AM	28	97	0	0	209	19	0	0	0	17	0	172	541					0
	7:15 AM	48	63	0	0	229	34	0	0	0	12	0	142	527					0
	7:30 AM	55	73	0	0	236	48	0	0	0	18	0	160	589					0
	7:45 AM	47	96	0	0	274	27	0	0	0	20	0	170	633					0
	8:00 AM	39	98	0	0	206	33	0	0	0	21	0	183	579					0
	8:15 AM	34	66	0	0	178	36	0	0	0	21	0	204	538					0
	8:30 AM	32	70	0	0	202	34	0	0	0	11	0	163	511					0
	8:45 AM	26	67	0	0	187	28	0	0	0	26	0	147	479					0
	VOLUMES	387	743	0	0	2,114	321	0	0	0	164	0	1,704	5,430	0	0	0	0	0
	APPROACH %	34%	66%	0%	0%	87%	13%	0%	0%	0%	9%	0%	91%						
	APP/DEPART	1,129	/	2,446	2,434	/	2,277	0	/	0	1,867	/	707	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	188	330	0	0	944	141	0	0	0	70	0	655	2,327					
	APPROACH %	36%	64%	0%	0%	87%	13%	0%	0%	0%	10%	0%	90%						
	PEAK HR FACTOR		0.905			0.902			0.000			0.888		0.919					
	APP/DEPART	518	/	984	1,085	/	1,014	0	/	0	725	/	329	0					
PM	03:30 PM	59	91	0	0	249	46	0	0	0	12	0	189	644					0
	3:45 PM	57	85	0	0	250	50	0	0	0	15	0	192	647					0
	4:00 PM	68	98	0	0	278	38	0	0	0	17	0	181	678					0
	4:15 PM	60	84	0	0	253	39	0	0	0	30	0	152	616					0
	4:30 PM	65	85	0	0	277	55	0	0	0	20	0	127	628					0
	4:45 PM	57	75	0	0	265	57	0	0	0	23	0	166	641					0
	5:00 PM	93	84	0	0	222	52	0	0	0	20	0	132	603					0
	5:15 PM	80	93	0	0	217	51	0	0	0	16	0	141	597					0
	5:30 PM	74	90	0	0	218	38	0	0	0	9	0	126	554					0
	5:45 PM	49	75	0	0	216	31	0	0	0	18	0	146	534					0
	VOLUMES	659	857	0	0	2,442	454	0	0	0	178	0	1,549	6,139	0	0	0	0	0
	APPROACH %	43%	57%	0%	0%	84%	16%	0%	0%	0%	10%	0%	90%						
	APP/DEPART	1,516	/	2,406	2,896	/	2,620	0	/	0	1,727	/	1,113	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	249	341	0	0	1,071	187	0	0	0	89	0	626	2,562					
	APPROACH %	42%	58%	0%	0%	85%	15%	0%	0%	0%	12%	0%	88%						
	PEAK HR FACTOR		0.892			0.950			0.000			0.904		0.945					
	APP/DEPART	589	/	966	1,258	/	1,160	0	/	0	715	/	436	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Market	LOCATION #:	29
THURSDAY	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

	NOTES:										
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼
	Factor	1	1.5	2	3	2	2				

		NORTHBOUND (Market)			SOUTHBOUND (Market)			EASTBOUND (SR-60 EB Ramps)			WESTBOUND (SR-60 EB Ramps)				U-TURNS				
	LANES:	NL X	NT 2	NR 1	SL 1	ST 2	SR X	EL 1	ET X	ER 2	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	75	20	136	67	0	12	0	68	0	0	0	376					0
	6:45 AM	0	87	24	151	62	0	20	0	77	0	0	0	420					0
	7:00 AM	0	101	31	141	85	0	25	0	77	0	0	0	458					0
	7:15 AM	0	86	33	146	94	0	25	0	107	0	0	0	490					0
	7:30 AM	0	108	34	163	91	0	21	0	134	0	0	0	550					0
	7:45 AM	0	101	46	138	156	0	45	0	151	0	0	0	636					0
	8:00 AM	0	114	28	154	73	0	23	0	120	0	0	0	511					0
	8:15 AM	0	71	29	135	64	0	29	1	100	0	0	0	428					0
	8:30 AM	0	82	17	142	71	0	20	3	69	0	0	0	403					0
	8:45 AM	0	71	28	123	89	0	21	0	107	0	0	0	438					0
	VOLUMES	0	893	288	1,428	849	0	239	4	1,008	0	0	0	4,708	0	0	0	0	0
	APPROACH %	0%	76%	24%	63%	37%	0%	19%	0%	81%	0%	0%	0%						
	APP/DEPART	1,181	/	1,132	2,276	/	1,857	1,251	/	1,720	0	/	0	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	408	141	601	412	0	113	0	511	0	0	0	2,185					
	APPROACH %	0%	74%	26%	59%	41%	0%	18%	0%	82%	0%	0%	0%						
	PEAK HR FACTOR		0.933			0.864			0.798			0.000		0.860					
	APP/DEPART	549	/	521	1,013	/	923	624	/	742	0	/	0	0					
PM	03:30 PM	0	113	10	122	139	0	37	0	188	0	0	0	608					0
	3:45 PM	0	114	7	132	133	0	28	0	185	0	0	0	598					0
	4:00 PM	0	137	6	132	163	0	28	1	181	0	0	0	647					0
	4:15 PM	0	109	10	127	156	0	35	3	187	0	0	0	626					0
	4:30 PM	0	119	10	112	185	0	31	0	197	0	0	0	653					0
	4:45 PM	0	107	14	117	170	0	28	0	193	0	0	0	629					0
	5:00 PM	0	135	14	88	155	0	42	0	235	0	0	0	668					0
	5:15 PM	0	139	12	101	128	0	34	3	194	0	0	0	610					0
	5:30 PM	0	134	19	87	140	0	30	0	234	0	0	0	644					0
	5:45 PM	0	92	14	68	166	0	32	0	204	0	0	0	575					0
	VOLUMES	0	1,197	115	1,084	1,533	0	323	7	1,998	0	0	0	6,255	0	0	0	0	0
	APPROACH %	0%	91%	9%	41%	59%	0%	14%	0%	86%	0%	0%	0%						
	APP/DEPART	1,312	/	1,520	2,616	/	3,530	2,328	/	1,205	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	514	59	393	592	0	134	3	856	0	0	0	2,550					
	APPROACH %	0%	90%	10%	40%	60%	0%	13%	0%	86%	0%	0%	0%						
	PEAK HR FACTOR		0.935			0.858			0.896			0.000		0.955					
	APP/DEPART	573	/	648	985	/	1,448	993	/	454	0	/	0	0					



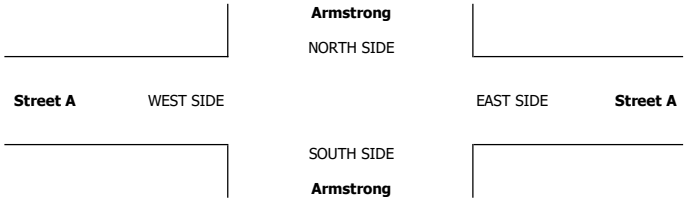
INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Jurupa Valley	PROJECT #:	SC3110
10/7/21	NORTH & SOUTH:	Armstrong	LOCATION #:	30
THURSDAY	EAST & WEST:	Street A	CONTROL:	STOP E/W

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM		▲ N
	Factor	1	1.5	2	3	2	2			PM MD	◄ W	E ►
										OTHER		S ▼
										OTHER		

		NORTHBOUND Armstrong			SOUTHBOUND Armstrong			EASTBOUND Street A			WESTBOUND Street A				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	6:30 AM	0	44	0	0	70	0	0	0	0	0	0	0	114					0
	6:45 AM	0	58	0	0	74	0	0	0	0	1	0	0	133					0
	7:00 AM	0	64	0	0	63	0	0	0	0	0	0	0	126					0
	7:15 AM	0	60	0	0	101	0	0	0	0	0	0	0	160					0
	7:30 AM	0	55	0	0	70	0	0	0	0	0	0	0	124					0
	7:45 AM	0	71	0	0	68	0	0	0	1	0	0	0	140					0
	8:00 AM	0	70	0	0	60	0	0	0	0	0	0	0	130					0
	8:15 AM	0	75	0	0	49	0	0	0	0	0	0	0	123					0
	8:30 AM	1	64	0	0	46	0	0	0	1	0	0	0	112					0
	8:45 AM	0	69	0	0	61	0	0	0	3	0	0	0	132					0
	VOLUMES	1	627	0	0	660	0	0	0	5	1	0	0	1,293	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	APP/DEPART	628	/	627	660	/	666	5	/	0	1	/	1	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	255	0	0	298	0	0	0	1	0	0	0	554					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.896			0.741			0.250			0.000		0.865					
	APP/DEPART	255	/	255	298	/	299	1	/	0	0	/	0	0					
PM	03:30 PM	3	134	0	0	60	0	1	0	0	0	0	0	198					0
	3:45 PM	0	159	0	0	53	0	0	0	0	0	0	0	212					0
	4:00 PM	0	193	0	0	53	0	0	0	0	0	0	0	246					0
	4:15 PM	1	233	0	0	58	1	0	0	0	0	0	0	293					0
	4:30 PM	0	207	0	0	48	0	0	0	0	0	0	0	255					0
	4:45 PM	0	218	0	0	59	0	0	0	0	0	0	0	277					0
	5:00 PM	0	211	0	0	59	0	0	0	0	0	0	0	270					0
	5:15 PM	0	175	0	0	58	0	0	0	0	0	0	0	233					0
	5:30 PM	0	186	0	0	40	0	1	0	0	0	0	0	226					0
	5:45 PM	1	157	0	0	63	0	0	0	0	0	0	0	221					0
	VOLUMES	5	1,871	0	0	548	1	2	0	0	0	0	0	2,427	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%						
	APP/DEPART	1,876	/	1,873	549	/	548	2	/	0	0	/	6	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	1	868	0	0	224	1	0	0	0	0	0	0	1,094					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.928			0.951			0.000			0.000		0.935					
	APP/DEPART	869	/	868	225	/	224	0	/	0	0	/	2	0					



A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Fontana
LOCATION: CLASS1 Sierra between Santa Ana and Jurupa

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	24	3	0	0	0	0	0	0	0	0	0	0	27
0:15	0	19	0	0	1	0	0	0	0	0	0	0	0	20
0:30	0	18	1	0	1	1	0	0	1	0	0	0	0	22
0:45	0	17	4	0	0	0	0	0	3	0	0	0	0	24
1:00	0	23	4	0	0	0	0	0	0	0	0	0	0	27
1:15	0	29	2	0	0	0	0	0	0	0	0	0	0	31
1:30	0	19	1	0	0	0	0	0	1	0	0	0	0	21
1:45	0	12	1	0	0	1	0	0	2	0	0	0	0	16
2:00	0	14	1	0	1	0	0	0	1	0	0	0	0	17
2:15	0	15	6	0	3	0	0	0	1	0	0	0	0	25
2:30	0	13	2	0	0	0	0	0	0	0	0	0	0	15
2:45	0	14	4	0	2	0	0	0	2	0	0	0	0	22
3:00	0	19	2	0	1	0	0	0	0	0	0	0	0	22
3:15	0	22	2	0	0	0	0	0	3	0	0	0	0	27
3:30	0	30	8	0	0	1	0	0	0	0	0	0	0	39
3:45	1	29	11	0	1	0	0	0	1	0	0	0	0	43
4:00	0	29	3	0	0	2	0	0	1	0	0	0	0	35
4:15	0	39	12	0	0	0	0	0	0	0	0	0	0	51
4:30	0	51	8	0	2	0	0	0	0	0	0	0	0	61
4:45	0	81	16	0	1	0	0	0	0	0	0	0	0	98
5:00	0	61	12	1	1	0	0	0	0	0	0	0	0	75
5:15	0	68	20	0	5	0	0	1	0	0	0	0	0	94
5:30	0	105	19	0	5	0	0	0	0	0	0	0	0	129
5:45	0	105	33	0	6	2	0	0	1	0	0	0	0	147
6:00	0	93	21	0	3	1	0	0	0	0	0	0	0	118
6:15	0	95	25	0	2	0	0	0	0	0	0	0	0	122
6:30	1	167	30	4	3	0	0	1	1	0	0	0	0	207
6:45	0	160	30	5	1	0	0	0	1	0	0	0	0	197
7:00	1	178	45	2	4	0	0	0	1	0	0	0	0	231
7:15	1	198	36	1	4	2	0	0	1	0	0	0	0	243
7:30	0	230	45	0	8	1	0	0	1	0	0	0	0	285
7:45	1	219	46	0	6	1	0	0	2	0	0	0	0	275
8:00	2	250	56	1	6	2	0	0	1	0	0	0	0	318
8:15	1	217	58	3	5	1	0	0	0	0	0	0	0	285
8:30	0	238	26	0	8	0	0	0	1	0	0	0	0	273
8:45	1	198	42	0	5	3	0	0	1	0	0	0	0	250
9:00	1	173	40	1	6	2	0	0	4	0	0	0	0	227
9:15	0	171	46	1	7	0	0	0	3	0	0	0	0	228
9:30	0	186	37	1	6	0	0	0	3	0	0	0	0	233
9:45	0	174	43	0	11	1	0	0	1	0	0	0	0	230
10:00	0	171	33	0	4	0	0	0	2	0	0	0	0	210
10:15	0	175	36	1	1	2	0	0	2	0	0	0	0	217
10:30	0	181	52	0	5	0	0	2	6	0	0	0	0	246
10:45	0	178	43	0	6	1	0	1	2	0	0	0	0	231
11:00	0	192	28	0	6	0	0	0	1	0	0	0	0	227
11:15	0	185	49	1	4	0	0	1	1	0	0	0	0	241
11:30	0	188	31	0	5	5	0	0	1	0	0	0	0	230
11:45	0	169	45	0	6	0	0	1	1	0	0	0	0	222
TOTAL	10	5,242	1,118	22	152	29	0	7	54	0	0	0	0	6,634

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,163

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	204	48	0	9	3	0	0	3	0	0	0	0	267
12:15	0	203	51	0	6	0	0	0	6	0	0	0	0	266
12:30	0	197	50	2	7	1	0	1	4	0	0	0	0	262
12:45	1	187	48	1	3	1	0	0	1	0	0	0	0	242
13:00	0	203	52	1	7	1	0	0	2	0	0	0	0	266
13:15	0	191	49	0	5	0	0	2	2	0	0	0	0	249
13:30	1	190	37	3	7	0	0	0	1	0	0	0	0	239
13:45	1	221	54	1	9	4	0	0	7	0	0	0	0	297
14:00	1	219	43	2	4	3	0	0	5	0	0	0	0	277
14:15	2	236	54	2	6	1	0	0	3	0	0	0	0	304
14:30	0	230	46	1	0	1	0	1	2	0	0	0	0	281
14:45	1	269	58	0	5	0	0	0	2	0	0	0	0	335
15:00	1	230	54	1	5	0	0	2	3	0	0	0	0	296
15:15	1	297	74	0	10	0	0	0	2	0	0	0	0	384
15:30	1	304	63	3	9	1	0	0	2	0	0	0	0	383
15:45	0	299	67	2	9	0	0	1	1	0	0	0	0	379
16:00	0	322	75	0	8	0	0	0	5	0	0	0	0	410
16:15	1	311	77	0	6	1	0	0	3	0	0	0	0	399
16:30	0	281	51	2	5	1	0	1	2	0	0	0	0	343
16:45	1	264	48	0	5	0	0	0	2	0	0	0	0	320
17:00	0	287	58	0	2	5	0	4	5	0	0	0	0	361
17:15	1	279	49	1	3	0	0	0	10	0	0	0	0	343
17:30	1	298	36	0	4	1	0	2	2	0	0	0	0	344
17:45	1	263	39	2	4	0	0	0	3	0	0	0	0	312
18:00	0	260	43	1	2	2	0	1	3	0	0	0	0	312
18:15	0	224	40	0	1	1	0	0	3	0	0	0	0	269
18:30	1	243	34	1	3	1	0	0	0	0	0	0	0	283
18:45	0	224	32	0	0	0	0	0	1	0	0	0	0	257
19:00	0	239	36	1	3	0	0	0	0	0	0	0	0	279
19:15	0	144	17	0	2	0	0	0	3	0	0	0	0	166
19:30	0	162	17	0	3	0	0	0	1	0	0	0	0	183
19:45	0	137	23	0	3	0	0	0	1	0	0	0	0	164
20:00	0	131	17	0	5	0	0	1	0	0	0	0	0	154
20:15	0	128	11	2	0	1	0	0	1	0	0	0	0	143
20:30	1	96	14	1	2	1	0	0	3	0	0	0	0	118
20:45	0	86	7	0	0	0	0	0	0	0	0	0	0	93
21:00	1	97	16	0	2	1	0	0	2	0	0	0	0	119
21:15	2	106	7	0	0	0	0	0	1	0	0	0	0	116
21:30	0	96	6	0	0	2	0	0	1	0	0	0	0	105
21:45	0	67	8	0	1	0	0	0	0	0	0	0	0	76
22:00	0	64	4	0	1	0	0	0	0	0	0	0	0	69
22:15	1	62	7	0	0	0	0	0	0	0	0	0	0	70
22:30	0	50	5	0	0	0	0	0	2	0	0	0	0	57
22:45	1	38	2	0	1	0	0	0	0	0	0	0	0	42
23:00	0	32	4	0	0	0	0	0	2	0	0	0	0	38
23:15	0	40	4	0	1	0	0	0	0	0	0	0	0	45
23:30	0	28	0	0	0	1	0	0	0	0	0	0	0	29
23:45	0	24	3	0	0	0	0	0	2	0	0	0	0	29
TOTAL	22	8,763	1,638	30	168	34	0	16	104	0	0	0	0	10,775

PM PEAK HOUR	3:30 PM
PM PEAK VOLUME	1,571

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	32	14,005	2,756	52	320	63	0	23	158	0	0	0	0	17,409
% OF TOTAL	0.2%	80.4%	15.8%	0.3%	1.8%	0.4%	0.0%	0.1%	0.9%	0.0%	0.0%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	59	26,603	5,226	82	678	146	1	37	377	0	3	0	0	33,212
% OF TOTAL	0.3%	152.8%	30.0%	0.5%	3.9%	0.8%	0.0%	0.2%	2.2%	0.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Fontana
LOCATION: CLASS1 Sierra between Santa Ana and Jurupa

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	31	0	0	1	0	0	0	2	0	0	0	0	34
0:15	1	25	1	0	1	1	0	0	3	0	0	0	0	32
0:30	0	18	4	0	1	2	0	0	0	0	0	0	0	25
0:45	0	23	3	0	0	0	0	0	0	0	0	0	0	26
1:00	0	26	1	0	0	0	0	0	1	0	0	0	0	28
1:15	0	19	2	0	1	3	0	0	1	0	0	0	0	26
1:30	0	18	1	0	0	0	0	0	1	0	1	0	0	21
1:45	0	14	2	0	1	1	0	0	0	0	0	0	0	18
2:00	0	10	1	0	1	2	0	0	0	0	0	0	0	14
2:15	0	23	1	0	0	0	0	0	1	0	0	0	0	25
2:30	0	11	4	0	0	1	0	0	1	0	0	0	0	17
2:45	0	21	6	0	0	0	0	0	2	0	0	0	0	29
3:00	0	17	2	0	0	1	0	0	1	0	0	0	0	21
3:15	0	17	3	0	0	0	0	0	0	0	0	0	0	20
3:30	0	24	4	0	0	0	0	0	0	0	0	0	0	28
3:45	0	33	6	0	1	1	0	0	1	0	0	0	0	42
4:00	1	23	4	0	0	0	0	0	0	0	0	0	0	28
4:15	0	40	8	0	1	1	0	0	1	0	0	0	0	51
4:30	0	50	7	0	1	0	0	0	2	0	0	0	0	60
4:45	0	56	16	0	2	1	0	0	2	0	0	0	0	77
5:00	0	49	9	1	1	2	0	0	0	0	0	0	0	62
5:15	0	50	15	0	4	0	0	1	1	0	0	0	0	71
5:30	0	79	23	0	1	3	0	0	1	0	0	0	0	107
5:45	0	86	31	0	2	1	0	0	2	0	0	0	0	122
6:00	0	77	12	0	5	1	0	0	1	0	0	0	0	96
6:15	0	73	14	0	6	2	0	0	0	0	0	0	0	95
6:30	0	116	25	0	8	0	0	0	2	0	0	0	0	151
6:45	0	114	23	0	8	0	0	0	2	0	0	0	0	147
7:00	0	152	39	1	6	0	0	0	3	0	0	0	0	201
7:15	0	143	23	2	11	3	0	0	0	0	0	0	0	182
7:30	1	133	36	0	14	3	0	0	7	0	0	0	0	194
7:45	0	135	28	0	6	0	0	0	4	0	0	0	0	173
8:00	0	156	35	2	6	2	0	0	7	0	0	0	0	208
8:15	0	135	36	1	5	3	0	0	1	0	0	0	0	181
8:30	0	145	30	2	6	2	0	0	4	0	0	0	0	189
8:45	2	122	25	0	11	1	0	0	3	0	0	0	0	164
9:00	0	151	28	1	5	1	0	0	2	0	0	0	0	188
9:15	0	125	42	0	11	0	1	0	4	0	0	0	0	183
9:30	0	148	35	0	10	2	0	1	4	0	0	0	0	200
9:45	0	147	34	0	4	0	0	0	9	0	0	0	0	194
10:00	0	164	35	1	11	4	0	1	2	0	1	0	0	219
10:15	0	145	33	0	10	0	0	2	6	0	0	0	0	196
10:30	0	183	36	0	7	2	0	0	4	0	0	0	0	232
10:45	0	143	39	0	6	0	0	0	4	0	0	0	0	192
11:00	0	157	36	1	6	2	0	0	2	0	0	0	0	204
11:15	1	189	48	0	8	0	0	0	2	0	0	0	0	248
11:30	0	192	37	0	5	2	0	0	7	0	0	0	0	243
11:45	0	207	52	0	4	2	0	0	6	0	0	0	0	271
TOTAL	6	4,215	935	12	198	52	1	5	109	0	2	0	0	5,535

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	966

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	199	55	1	7	1	0	1	3	0	0	0	0	267
12:15	0	166	34	0	8	2	0	0	4	0	0	0	0	214
12:30	1	191	41	0	5	0	0	0	6	0	0	0	0	244
12:45	0	198	47	0	8	1	0	1	7	0	0	0	0	262
13:00	0	189	44	2	6	2	0	1	5	0	0	0	0	249
13:15	1	186	46	0	12	1	0	0	4	0	0	0	0	250
13:30	1	201	50	0	10	3	0	0	2	0	0	0	0	267
13:45	0	213	51	1	7	0	0	1	2	0	0	0	0	275
14:00	0	201	40	0	6	2	0	2	4	0	0	0	0	255
14:15	1	191	45	0	13	3	0	0	5	0	0	0	0	258
14:30	1	191	43	1	6	0	0	0	0	0	0	0	0	242
14:45	0	246	52	0	7	0	0	1	3	0	0	0	0	309
15:00	0	217	43	0	4	1	0	0	1	0	0	0	0	266
15:15	1	226	59	2	8	0	0	0	2	0	0	0	0	298
15:30	1	202	43	0	2	0	0	0	2	0	0	0	0	250
15:45	0	247	59	1	4	0	0	0	2	0	0	0	0	313
16:00	1	238	42	1	2	0	0	0	3	0	0	0	0	287
16:15	1	271	54	2	7	0	0	1	2	0	0	0	0	338
16:30	1	212	43	0	2	0	0	0	1	0	0	0	0	259
16:45	1	256	44	1	4	1	0	0	4	0	0	0	0	311
17:00	1	236	48	2	2	1	0	0	4	0	0	0	0	294
17:15	1	246	33	0	3	0	0	0	4	0	1	0	0	288
17:30	1	257	41	0	1	0	0	1	1	0	0	0	0	302
17:45	0	243	42	0	4	0	0	0	1	0	0	0	0	290
18:00	1	247	33	0	0	4	0	0	1	0	0	0	0	286
18:15	0	227	29	1	3	1	0	0	4	0	0	0	0	265
18:30	1	221	31	0	1	1	0	0	2	0	0	0	0	257
18:45	1	211	22	0	1	1	0	0	1	0	0	0	0	237
19:00	0	207	27	0	1	0	0	0	1	0	0	0	0	236
19:15	1	183	25	0	1	1	0	0	2	0	0	0	0	213
19:30	0	195	34	1	1	1	0	0	1	0	0	0	0	233
19:45	0	179	23	0	1	0	0	0	3	0	0	0	0	206
20:00	2	178	21	0	3	1	0	0	2	0	0	0	0	207
20:15	0	139	23	1	1	1	0	0	0	0	0	0	0	165
20:30	0	163	23	0	0	0	0	0	1	0	0	0	0	187
20:45	0	133	19	0	1	1	0	0	0	0	0	0	0	154
21:00	1	119	22	0	2	0	0	0	0	0	0	0	0	144
21:15	0	111	6	1	0	0	0	0	2	0	0	0	0	120
21:30	0	89	16	0	0	0	0	0	1	0	0	0	0	106
21:45	0	93	12	0	1	1	0	0	2	0	0	0	0	109
22:00	0	95	10	0	2	0	0	0	1	0	0	0	0	108
22:15	0	79	10	0	0	0	0	0	1	0	0	0	0	90
22:30	0	61	7	0	0	0	0	0	0	0	0	0	0	68
22:45	0	58	15	0	1	0	0	0	4	0	0	0	0	78
23:00	0	60	11	0	1	0	0	0	4	0	0	0	0	76
23:15	0	45	7	0	0	0	0	0	4	0	0	0	0	56
23:30	0	31	6	0	0	0	0	0	1	0	0	0	0	38
23:45	0	36	4	0	1	0	0	0	0	0	0	0	0	41
TOTAL	21	8,383	1,535	18	160	31	0	9	110	0	1	0	0	10,268

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	1,202

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	27	####	2,470	30	358	83	1	14	219	0	3	0	0	15,803
% OF TOTAL	0.2%	79.7%	15.6%	0.2%	2.3%	0.5%	0.0%	0.1%	1.4%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS2 Sierra between Jurupa and Armstrong

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	19	4	0	0	0	0	0	0	0	0	0	0	23
0:15	0	18	1	0	0	0	0	0	0	0	0	0	0	19
0:30	0	19	3	0	0	0	0	0	0	0	0	0	0	22
0:45	0	13	3	0	0	0	0	0	0	0	0	0	0	16
1:00	0	17	2	0	0	0	0	0	0	0	0	0	0	19
1:15	0	20	3	0	0	0	0	0	0	0	0	0	0	23
1:30	1	17	4	0	0	0	0	0	0	0	0	0	0	22
1:45	0	12	2	0	1	0	0	0	0	0	0	0	0	15
2:00	0	11	5	0	0	0	0	0	1	0	0	0	0	17
2:15	0	11	3	0	2	0	0	0	0	0	0	0	0	16
2:30	0	11	1	0	1	1	0	0	1	0	0	0	0	15
2:45	0	20	3	0	0	0	0	0	0	0	0	0	0	23
3:00	0	17	1	0	1	0	0	0	0	0	0	0	0	19
3:15	0	21	5	0	0	0	0	0	0	0	0	0	0	26
3:30	1	27	6	0	0	0	0	0	0	0	0	0	0	34
3:45	0	27	9	0	2	1	0	0	1	0	0	0	0	40
4:00	0	28	3	0	0	0	0	0	1	0	0	0	0	32
4:15	0	37	15	0	2	0	0	0	1	0	0	0	0	55
4:30	0	68	14	0	1	0	0	0	0	0	0	0	0	83
4:45	0	84	20	0	2	1	0	0	0	0	0	0	0	107
5:00	0	60	19	0	1	0	0	0	0	0	0	0	0	80
5:15	0	65	22	0	2	0	0	0	0	0	0	0	0	89
5:30	0	102	35	0	3	0	0	0	0	0	0	0	0	140
5:45	0	101	22	0	4	1	0	0	0	0	0	0	0	128
6:00	2	91	28	0	7	1	0	0	0	0	0	0	0	129
6:15	1	89	36	0	3	0	0	0	0	0	0	0	0	129
6:30	0	157	32	0	4	0	0	0	1	0	0	0	0	194
6:45	1	177	52	0	6	0	0	0	0	0	0	0	0	236
7:00	2	177	36	1	5	1	0	0	0	0	0	0	0	222
7:15	0	202	37	1	8	3	0	0	1	0	0	0	0	252
7:30	1	187	49	0	6	2	0	0	1	0	0	0	0	246
7:45	0	194	57	0	3	0	0	0	0	0	0	0	0	254
8:00	1	181	45	0	3	0	0	0	1	0	0	0	0	231
8:15	1	165	46	0	5	2	0	0	1	0	0	0	0	220
8:30	0	169	33	0	3	1	0	0	1	0	0	0	0	207
8:45	1	151	38	2	7	1	0	0	0	0	0	0	0	200
9:00	1	120	34	0	4	1	0	0	2	0	0	0	0	162
9:15	0	116	40	0	6	1	0	0	0	0	0	0	0	163
9:30	1	151	28	0	9	0	0	0	0	0	0	0	0	189
9:45	0	122	40	0	5	1	0	0	2	0	0	0	0	170
10:00	1	96	26	0	4	0	0	0	0	0	0	0	0	127
10:15	0	113	22	0	3	0	0	0	2	0	0	0	0	140
10:30	0	118	34	0	4	1	0	1	1	0	0	0	0	159
10:45	0	110	32	0	3	2	0	0	0	0	0	0	0	147
11:00	0	131	32	0	5	0	0	0	0	0	0	0	0	168
11:15	0	105	26	0	1	0	0	0	0	0	0	0	0	132
11:30	0	131	37	0	6	0	0	0	2	0	0	0	0	176
11:45	0	128	36	0	2	0	0	0	0	0	0	0	0	166
TOTAL	15	4,206	1,081	4	134	21	0	1	20	0	0	0	0	5,482

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	983

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	130	25	0	3	1	0	0	0	0	0	0	0	159
12:15	0	157	35	0	5	0	0	0	0	0	0	0	0	197
12:30	0	118	32	0	4	0	0	0	2	0	0	0	0	156
12:45	1	127	44	0	8	0	0	0	0	0	0	0	0	180
13:00	0	131	32	0	6	2	0	0	1	0	0	0	0	172
13:15	0	119	28	0	7	0	0	0	0	0	0	0	0	154
13:30	1	123	23	0	8	0	0	0	0	0	0	0	0	155
13:45	0	154	42	0	6	1	0	0	0	0	0	0	0	203
14:00	0	152	32	0	9	0	0	0	2	0	0	0	0	195
14:15	0	167	37	2	7	1	0	0	0	0	0	0	0	214
14:30	0	147	46	0	5	1	0	0	1	0	0	0	0	200
14:45	1	184	50	0	8	0	0	0	0	0	0	0	0	243
15:00	0	225	47	0	7	1	0	0	1	0	0	0	0	281
15:15	1	208	50	1	14	0	0	0	0	0	0	0	0	274
15:30	0	181	51	1	8	2	0	0	0	0	0	0	0	243
15:45	0	255	71	0	7	0	0	0	2	0	0	0	0	335
16:00	0	210	71	0	7	0	0	0	0	0	0	0	0	288
16:15	2	201	60	0	4	0	0	0	1	0	0	0	0	268
16:30	1	222	66	0	8	1	0	0	1	0	0	0	0	299
16:45	0	222	53	0	6	2	0	0	0	0	0	0	0	283
17:00	0	234	56	0	6	2	0	0	0	0	0	0	0	298
17:15	1	283	56	0	4	1	0	0	1	0	0	0	0	346
17:30	1	227	41	1	3	0	0	0	0	0	0	0	0	273
17:45	0	239	49	0	8	1	0	0	1	0	0	0	0	298
18:00	0	239	41	0	3	1	0	0	0	0	0	0	0	284
18:15	1	200	46	0	2	0	0	0	1	0	0	0	0	250
18:30	0	161	29	0	3	0	0	0	1	0	0	0	0	194
18:45	1	153	31	0	2	0	0	0	0	0	0	0	0	187
19:00	1	127	32	0	4	0	0	0	1	0	0	0	0	165
19:15	0	123	25	0	2	0	0	0	0	0	0	0	0	150
19:30	0	104	15	0	2	0	0	0	0	0	0	0	0	121
19:45	0	94	20	0	1	0	0	0	0	0	0	0	0	115
20:00	0	106	19	0	1	1	0	1	0	0	0	0	0	128
20:15	1	94	10	0	0	1	0	0	1	0	0	0	0	107
20:30	0	89	14	0	1	0	0	0	0	0	0	0	0	104
20:45	0	75	8	0	2	0	0	0	0	0	0	0	0	85
21:00	3	78	16	0	1	1	0	0	0	0	0	0	0	99
21:15	0	79	14	0	1	1	0	0	0	0	0	0	0	95
21:30	0	51	11	0	0	1	0	0	1	0	0	0	0	64
21:45	0	59	13	0	1	0	0	0	0	0	0	0	0	73
22:00	0	53	5	0	1	0	0	0	0	0	0	0	0	59
22:15	0	58	8	0	0	0	0	0	0	0	0	0	0	66
22:30	0	45	7	0	0	0	0	0	0	0	0	0	0	52
22:45	0	38	3	0	0	0	0	0	0	0	0	0	0	41
23:00	0	34	3	0	0	0	0	0	0	0	0	0	0	37
23:15	0	44	4	0	1	0	0	0	0	0	0	0	0	49
23:30	0	25	2	0	0	1	0	0	0	0	0	0	0	28
23:45	0	21	5	0	0	0	0	0	2	0	0	0	0	28
TOTAL	16	6,566	1,478	5	186	23	0	1	20	0	0	0	0	8,295

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	1,226

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: AM+PM	31	10,772	2,559	9	320	44	0	2	40	0	0	0	0	13,777
% OF TOTAL	0.2%	78.2%	18.6%	0.1%	2.3%	0.3%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	100.0%
Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	56	19,833	4,740	11	586	76	0	3	71	0	0	0	0	25,376
% OF TOTAL	0.4%	144.0%	34.4%	0.1%	4.3%	0.6%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS2 Sierra between Jurupa and Armstrong

AM	SOUTHBOUND														PM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	11	5	0	1	0	0	0	0	0	0	0	0	17	12:00	1	135	35	0	5	1	0	0	1	0	0	0	0	178
0:15	0	32	1	0	0	0	0	0	0	0	0	0	0	33	12:15	0	123	34	0	3	0	0	0	1	0	0	0	0	161
0:30	0	15	3	0	0	0	0	0	1	0	0	0	0	19	12:30	0	111	22	0	6	0	0	0	0	0	0	0	0	139
0:45	0	17	1	0	0	0	0	0	0	0	0	0	0	18	12:45	0	117	20	0	3	0	0	0	2	0	0	0	0	142
1:00	0	14	1	0	0	0	0	0	0	0	0	0	0	15	13:00	0	120	32	0	5	1	0	0	0	0	0	0	0	158
1:15	0	15	2	0	0	0	0	0	1	0	0	0	0	18	13:15	0	125	32	0	7	0	0	0	1	0	0	0	0	165
1:30	0	10	1	0	1	0	0	0	0	0	0	0	0	12	13:30	1	146	38	0	12	0	0	0	0	0	0	0	0	197
1:45	0	14	3	0	0	0	0	0	1	0	0	0	0	18	13:45	0	165	41	0	7	1	0	0	0	0	0	0	0	214
2:00	0	14	2	0	0	1	0	0	1	0	0	0	0	18	14:00	0	142	29	1	4	0	0	0	0	0	0	0	0	176
2:15	0	20	2	0	0	0	0	0	0	0	0	0	0	22	14:15	0	135	42	1	4	0	0	0	3	0	0	0	0	185
2:30	0	11	4	0	1	1	0	0	0	0	0	0	0	17	14:30	1	137	34	0	2	0	0	0	0	0	0	0	0	174
2:45	0	12	1	0	0	1	0	0	0	0	0	0	0	14	14:45	0	155	42	0	7	1	0	0	0	0	0	0	0	205
3:00	0	19	1	0	0	0	0	0	1	0	0	0	0	21	15:00	0	150	47	0	2	0	0	0	0	0	0	0	0	199
3:15	0	15	3	0	0	0	0	0	0	0	0	0	0	18	15:15	1	136	48	0	5	0	0	0	0	0	0	0	0	190
3:30	0	32	6	0	0	0	0	0	0	0	0	0	0	38	15:30	1	168	41	0	6	1	0	0	0	0	0	0	0	217
3:45	0	39	6	0	3	0	0	0	0	0	0	0	0	48	15:45	0	167	48	0	2	0	0	0	0	0	0	0	0	217
4:00	0	34	10	0	1	0	0	0	0	0	0	0	0	45	16:00	0	171	46	0	5	0	0	0	0	0	0	0	0	222
4:15	0	38	15	0	1	0	0	0	0	0	0	0	0	54	16:15	1	178	53	0	2	1	0	0	2	0	0	0	0	237
4:30	0	51	16	0	3	2	0	0	0	0	0	0	0	72	16:30	0	165	37	0	8	1	0	0	0	0	0	0	0	211
4:45	0	73	30	0	3	0	0	0	0	0	0	0	0	106	16:45	1	169	51	0	3	1	0	0	0	0	0	0	0	225
5:00	0	71	11	0	5	0	0	0	0	0	0	0	0	87	17:00	0	159	44	0	5	0	0	0	0	0	0	0	0	208
5:15	0	71	31	0	1	0	0	0	0	0	0	0	0	103	17:15	3	179	36	0	3	1	0	0	0	0	0	0	0	222
5:30	1	86	33	0	4	2	0	0	1	0	0	0	0	127	17:30	0	174	27	0	2	0	0	0	0	0	0	0	0	203
5:45	0	79	25	0	4	1	0	0	1	0	0	0	0	110	17:45	0	183	41	0	2	0	0	1	0	0	0	0	0	227
6:00	2	80	24	0	3	0	0	0	0	0	0	0	0	109	18:00	0	175	35	0	3	0	0	0	0	0	0	0	0	213
6:15	0	76	24	0	5	1	0	0	1	0	0	0	0	107	18:15	2	149	24	0	1	0	0	0	1	0	0	0	0	177
6:30	0	101	28	0	8	0	0	0	0	0	0	0	0	137	18:30	1	150	28	0	2	1	0	0	0	0	0	0	0	182
6:45	0	103	27	0	5	0	0	0	0	0	0	0	0	135	18:45	2	142	24	0	0	0	0	0	0	0	0	0	0	168
7:00	0	130	40	0	3	0	0	0	1	0	0	0	0	174	19:00	0	112	21	0	0	0	0	0	1	0	0	0	0	134
7:15	0	143	34	0	8	1	0	0	0	0	0	0	0	186	19:15	2	127	31	0	1	0	0	0	0	0	0	0	0	161
7:30	0	130	32	0	5	0	0	0	0	0	0	0	0	167	19:30	0	99	26	0	0	0	0	0	0	0	0	0	0	125
7:45	1	116	22	0	4	1	0	0	1	0	0	0	0	145	19:45	0	114	19	0	1	0	0	0	0	0	0	0	0	134
8:00	0	114	32	0	6	1	0	0	0	0	0	0	0	153	20:00	0	125	17	0	1	1	0	0	0	0	0	0	0	144
8:15	0	109	31	0	3	1	0	0	1	0	0	0	0	145	20:15	0	93	19	0	2	1	0	0	0	0	0	0	0	115
8:30	0	108	29	0	8	1	0	0	0	0	0	0	0	146	20:30	0	92	21	0	2	0	0	0	0	0	0	0	0	115
8:45	1	108	35	0	3	0	0	0	0	0	0	0	0	147	20:45	0	102	18	0	0	0	0	0	0	0	0	0	0	120
9:00	0	95	25	0	2	1	0	0	0	0	0	0	0	123	21:00	0	90	12	0	0	0	0	0	0	0	0	0	0	102
9:15	0	101	20	0	6	0	0	0	0	0	0	0	0	127	21:15	0	83	17	0	1	0	0	0	0	0	0	0	0	101
9:30	0	114	24	0	6	1	0	0	0	0	0	0	0	145	21:30	0	75	7	0	0	0	0	0	0	0	0	0	0	82
9:45	0	88	28	0	3	0	0	0	1	0	0	0	0	120	21:45	0	69	19	0	1	0	0	0	1	0	0	0	0	90
10:00	1	90	28	0	4	1	0	0	1	0	0	0	0	125	22:00	1	59	9	0	1	0	0	0	0	0	0	0	0	70
10:15	0	100	25	0	4	1	0	0	1	0	0	0	0	131	22:15	0	57	6	0	0	1	0	0	0	0	0	0	0	64
10:30	0	111	20	0	2	0	0	0	0	0	0	0	0	133	22:30	0	53	5	0	0	0	0	0	0	0	0	0	0	58
10:45	0	102	32	0	5	1	0	0	0	0	0	0	0	140	22:45	0	44	4	0	2	0	0	0	1	0	0	0	0	51
11:00	0	99	25	0	5	0	0	0	1	0	0	0	0	130	23:00	0	39	4	0	0	0	0	0	0	0	0	0	0	43
11:15	0	99	26	0	4	0	0	0	0	0	0	0	0	129	23:15	0	30	3	0	0	0	0	0	1	0	0	0	0	34
11:30	0	83	30	0	2	0	0	0	1	0	0	0	0	116	23:30	0	27	4	0	0	0	0	0	0	0	0	0	0	31
11:45	1	125	29	0	6	0	0	0	0	0	0	0	0	161	23:45	0	27	5	0	0	0	0	0	0	0	0	0	0	32
TOTAL	7	3,318	883	0	138	19	0	0	16	0	0	0	0	4,381	TOTAL	18	5,743	1,298	2	128	13	0	1	15	0	0	0	0	7,218

AM PEAK HOUR	7:00 AM
AM PEAK VOLUME	672

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	895

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	25	9,061	2,181	2	266	32	0	1	31	0	0	0	0	11,599
% OF TOTAL	0.2%	78.1%	18.8%	0.0%	2.3%	0.3%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS3 Sierra between Armstrong and 20th

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
0:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
5:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:30	0	7	0	0	0	0	0	0	0	0	0	0	0	7
5:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
6:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
6:15	0	6	0	0	0	0	0	0	0	0	0	0	0	6
6:30	0	10	0	0	0	0	0	0	0	0	0	0	0	10
6:45	0	10	2	0	0	0	0	0	0	0	0	0	0	12
7:00	0	18	2	0	1	0	0	0	0	0	0	0	0	21
7:15	0	10	6	0	1	0	0	0	0	0	0	0	0	17
7:30	0	16	6	1	1	0	0	0	0	0	0	0	0	24
7:45	0	14	4	0	2	1	0	0	1	0	0	0	0	22
8:00	0	6	3	0	1	1	0	0	0	0	0	0	0	11
8:15	0	7	1	0	0	0	0	0	0	0	0	0	0	8
8:30	0	9	5	1	0	0	0	0	0	0	0	0	0	15
8:45	0	9	4	0	0	0	0	0	0	0	0	0	0	13
9:00	0	5	3	0	0	0	0	0	0	0	0	0	0	8
9:15	0	6	5	0	0	2	0	0	0	0	0	0	0	13
9:30	0	9	4	0	2	1	0	0	0	0	0	0	0	16
9:45	0	7	3	0	0	1	0	0	1	0	0	0	0	12
10:00	0	7	6	1	0	0	0	0	0	0	0	0	0	14
10:15	0	8	4	0	0	0	0	0	0	0	0	0	0	12
10:30	0	4	4	0	1	0	0	0	0	0	0	0	0	9
10:45	0	8	3	0	2	0	0	0	0	0	0	0	0	13
11:00	0	5	13	0	0	0	0	0	0	0	0	0	0	18
11:15	0	8	7	0	2	0	0	0	0	0	0	0	0	17
11:30	0	11	4	0	1	1	0	0	1	0	0	0	0	18
11:45	0	12	5	0	2	0	0	0	0	0	0	0	0	19
TOTAL	0	254	94	3	16	7	0	0	3	0	0	0	0	377

Peak Hour

AM PEAK HOUR 7:00 AM
AM PEAK VOLUME 84

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	16	8	1	1	0	0	0	0	0	0	0	0	26
12:15	0	13	3	0	0	0	0	0	0	0	0	0	0	16
12:30	0	11	9	0	2	0	0	0	0	0	0	0	0	22
12:45	0	8	8	0	1	1	0	0	0	0	0	0	0	18
13:00	0	14	5	0	2	0	0	0	0	0	0	0	0	21
13:15	0	9	4	0	1	0	0	0	0	0	0	0	0	14
13:30	0	6	3	0	0	1	0	0	0	0	0	0	0	10
13:45	0	13	10	0	0	0	0	0	1	0	0	0	0	24
14:00	0	12	7	0	2	1	0	0	0	0	0	0	0	22
14:15	0	14	10	0	0	2	0	0	0	0	0	0	0	26
14:30	0	9	4	0	0	0	0	0	0	0	0	0	0	13
14:45	0	9	5	0	1	1	0	0	0	0	0	0	0	16
15:00	0	20	8	1	2	1	0	0	0	0	0	0	0	32
15:15	0	9	11	0	2	0	0	0	1	0	0	0	0	23
15:30	0	11	9	0	1	0	0	0	0	0	0	0	0	21
15:45	0	10	8	1	1	1	0	0	0	0	0	0	0	21
16:00	0	17	10	0	0	0	0	0	0	0	0	0	0	27
16:15	0	16	9	0	2	0	0	0	0	0	0	0	0	27
16:30	0	4	1	0	0	0	0	0	0	0	0	0	0	5
16:45	0	15	3	0	3	0	0	0	0	0	0	0	0	21
17:00	0	8	2	0	1	0	0	0	0	0	0	0	0	11
17:15	0	11	2	0	2	0	0	0	1	0	0	0	0	16
17:30	0	11	4	0	0	0	0	0	0	0	0	0	0	15
17:45	0	7	5	0	0	0	0	0	0	0	0	0	0	12
18:00	0	11	6	0	1	0	0	0	1	0	0	0	0	19
18:15	0	10	1	0	0	0	0	0	0	0	0	0	0	11
18:30	0	8	1	0	0	0	0	0	0	0	0	0	0	9
18:45	0	7	2	0	0	0	0	0	0	0	0	0	0	9
19:00	0	10	4	0	0	0	0	0	0	0	0	0	0	14
19:15	0	7	1	0	0	0	0	0	0	0	0	0	0	8
19:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
19:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6
20:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
20:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
20:30	0	2	1	0	0	0	0	0	0	0	0	0	0	3
20:45	0	1	2	0	2	0	0	0	1	0	0	0	0	6
21:00	1	2	0	0	0	0	0	0	0	0	0	0	0	3
21:15	0	8	0	0	0	0	0	0	0	0	0	0	0	8
21:30	0	7	0	0	0	0	0	0	0	0	0	0	0	7
21:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
22:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
22:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
22:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
22:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
TOTAL	1	388	166	3	27	8	0	0	5	0	0	0	0	598

PM PEAK HOUR 3:00 PM
PM PEAK VOLUME 97

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	1	642	260	6	43	15	0	0	8	0	0	0	0	975
% OF TOTAL	0.1%	65.8%	26.7%	0.6%	4.4%	1.5%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	2	1,306	512	6	82	31	0	0	17	0	0	0	0	1,956
% OF TOTAL	0.2%	133.9%	52.5%	0.6%	8.4%	3.2%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS3 Sierra between Armstrong and 20th

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
0:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	1	0	0	0	0	0	0	1	0	0	0	0	2
5:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:30	0	6	1	0	0	0	0	0	0	0	0	0	0	7
5:45	0	10	0	0	0	0	0	0	0	0	0	0	0	10
6:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
6:15	0	21	3	0	1	0	0	0	0	0	0	0	0	25
6:30	0	20	5	0	1	1	0	0	2	0	0	0	0	29
6:45	0	19	10	0	2	2	0	0	1	0	0	0	0	34
7:00	0	12	17	0	0	0	0	0	0	0	0	0	0	29
7:15	0	9	13	0	3	0	0	0	0	0	0	0	0	25
7:30	0	8	6	0	2	0	0	0	0	0	0	0	0	16
7:45	0	4	10	0	0	1	0	0	1	0	0	0	0	16
8:00	0	9	4	0	2	1	0	0	0	0	0	0	0	16
8:15	0	10	6	0	0	1	0	0	0	0	0	0	0	17
8:30	0	6	3	0	0	0	0	0	1	0	0	0	0	10
8:45	0	8	2	0	0	0	0	0	0	0	0	0	0	10
9:00	0	2	3	0	0	0	0	0	0	0	0	0	0	5
9:15	0	10	6	0	4	0	0	0	0	0	0	0	0	20
9:30	0	7	6	0	0	0	0	0	0	0	0	0	0	13
9:45	0	4	7	0	0	0	0	0	0	0	0	0	0	11
10:00	0	5	5	0	2	0	0	0	0	0	0	0	0	12
10:15	0	7	2	0	1	0	0	0	0	0	0	0	0	10
10:30	0	7	6	0	3	0	0	0	0	0	0	0	0	16
10:45	0	7	9	0	0	0	0	0	0	0	0	0	0	16
11:00	0	5	10	0	0	1	0	0	0	0	0	0	0	16
11:15	0	13	8	0	3	0	0	0	0	0	0	0	0	24
11:30	0	10	6	0	3	0	0	0	0	0	0	0	0	19
11:45	0	7	6	0	0	1	0	0	0	0	0	0	0	14
TOTAL	0	248	155	0	27	8	0	0	6	0	0	0	0	444

AM PEAK HOUR	6:30 AM
AM PEAK VOLUME	117

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	13	5	0	0	1	0	0	1	0	0	0	0	20
12:15	0	10	2	0	2	0	0	0	0	0	0	0	0	14
12:30	0	6	5	0	1	0	0	0	0	0	0	0	0	12
12:45	0	7	6	0	0	0	0	0	0	0	0	0	0	13
13:00	0	11	6	0	0	0	0	0	0	0	0	0	0	17
13:15	0	14	7	0	0	1	0	0	0	0	0	0	0	22
13:30	0	8	6	0	0	0	0	0	0	0	0	0	0	14
13:45	0	6	4	0	0	0	0	0	0	0	0	0	0	10
14:00	0	10	7	0	0	2	0	0	0	0	0	0	0	19
14:15	0	11	4	0	1	1	0	0	0	0	0	0	0	17
14:30	0	5	2	0	2	0	0	0	0	0	0	0	0	9
14:45	0	9	2	0	0	1	0	0	0	0	0	0	0	12
15:00	0	9	0	0	0	0	0	0	1	0	0	0	0	10
15:15	0	12	0	0	0	0	0	0	0	0	0	0	0	12
15:30	0	19	1	0	1	1	0	0	0	0	0	0	0	22
15:45	0	13	3	0	0	0	0	0	0	0	0	0	0	16
16:00	0	7	5	0	0	0	0	0	0	0	0	0	0	12
16:15	0	14	1	0	0	0	0	0	0	0	0	0	0	15
16:30	0	11	2	0	1	0	0	0	0	0	0	0	0	14
16:45	0	4	6	0	0	1	0	0	1	0	0	0	0	12
17:00	0	10	1	0	2	0	0	0	0	0	0	0	0	13
17:15	0	18	2	0	1	0	0	0	0	0	0	0	0	21
17:30	0	14	0	0	0	0	0	0	0	0	0	0	0	14
17:45	0	9	1	0	0	0	0	0	0	0	0	0	0	10
18:00	0	14	3	0	0	0	0	0	0	0	0	0	0	17
18:15	0	10	1	0	0	0	0	0	0	0	0	0	0	11
18:30	0	12	3	0	0	0	0	0	0	0	0	0	0	15
18:45	0	15	0	0	0	0	0	0	0	0	0	0	0	15
19:00	0	15	2	0	0	0	0	0	0	0	0	0	0	17
19:15	1	13	1	0	0	0	0	0	0	0	0	0	0	15
19:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5
19:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6
20:00	0	14	0	0	0	0	0	0	0	0	0	0	0	14
20:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
20:30	0	8	0	0	1	0	0	0	0	0	0	0	0	9
20:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
21:00	0	8	2	0	0	0	0	0	0	0	0	0	0	10
21:15	0	9	1	0	0	0	0	0	0	0	0	0	0	10
21:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5
21:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
22:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
22:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6
22:30	0	3	3	0	0	0	0	0	0	0	0	0	0	6
22:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1
23:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
23:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
23:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
23:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
TOTAL	1	416	97	0	12	8	0	0	3	0	0	0	0	537

PM PEAK HOUR	12:45 PM
PM PEAK VOLUME	66

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	1	664	252	0	39	16	0	0	9	0	0	0	0	981
% OF TOTAL	0.1%	67.7%	25.7%	0.0%	4.0%	1.6%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS4 Sierra between 20th and UPRR Tracks

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
6:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6
7:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
7:15	0	1	2	0	0	0	0	0	0	0	0	0	0	3
7:30	0	3	2	1	0	0	0	0	0	0	0	0	0	6
7:45	0	2	1	0	0	0	0	0	0	0	0	0	0	3
8:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
8:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
8:30	0	1	0	1	0	0	0	0	0	0	0	0	0	2
8:45	0	2	3	0	0	0	0	0	0	0	0	0	0	5
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	2	1	0	1	0	0	0	0	0	0	0	0	4
9:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
10:00	0	1	2	1	0	0	0	0	0	0	0	0	0	4
10:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
10:30	0	2	1	0	0	0	0	0	0	0	0	0	0	3
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:15	0	0	0	0	1	0	0	0	0	0	0	0	0	1
11:30	0	0	1	0	1	0	0	0	0	0	0	0	0	2
11:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
TOTAL	0	49	19	3	3	0	0	0	0	0	0	0	0	74

AM PEAK HOUR	6:45 AM
AM PEAK VOLUME	21

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	3	1	1	0	0	0	0	0	0	0	0	0	5
12:15	0	4	1	0	1	0	0	0	0	0	0	0	0	6
12:30	0	3	3	0	0	0	0	0	0	0	0	0	0	6
12:45	0	2	1	0	0	0	0	0	0	0	0	0	0	3
13:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
13:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
13:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
13:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
14:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
14:15	0	4	0	0	1	0	0	0	0	0	0	0	0	5
14:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
14:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
15:00	0	3	2	1	0	0	0	0	0	0	0	0	0	6
15:15	0	0	2	0	0	0	0	0	0	0	0	0	0	2
15:30	0	1	1	0	0	0	0	0	0	0	0	0	0	2
15:45	0	1	0	1	0	0	0	0	0	0	0	0	0	2
16:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
16:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
16:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
16:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
17:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
17:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4
17:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
17:45	0	0	2	0	0	0	0	0	0	0	0	0	0	2
18:00	0	2	0	0	1	0	0	0	0	0	0	0	0	3
18:15	0	2	1	0	0	0	0	0	0	0	0	0	0	3
18:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4
18:45	0	3	1	0	0	0	0	0	0	0	0	0	0	4
19:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
19:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
19:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
19:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
20:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
20:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
20:30	0	2	1	0	0	0	0	0	0	0	0	0	0	3
20:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
21:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL	0	89	21	3	3	0	0	0	0	0	0	0	0	116

PM PEAK HOUR	12:00 PM
PM PEAK VOLUME	20

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	0	138	40	6	6	0	0	0	0	0	0	0	0	190
% OF TOTAL	0.0%	72.6%	21.1%	3.2%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	0	292	80	6	11	1	0	0	0	0	0	0	0	390
% OF TOTAL	0.0%	153.7%	42.1%	3.2%	5.8%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS4 Sierra between 20th and UPRR Tracks

AM	SOUTHBOUND														PM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	12:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:30	0	5	2	0	0	0	0	0	0	0	0	0	0	7
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:45	0	2	2	0	0	0	0	0	0	0	0	0	0	4
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:30	0	7	1	0	0	0	0	0	0	0	0	0	0	8
3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:45	0	3	2	0	0	0	0	0	0	0	0	0	0	5
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6
4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:30	0	3	2	0	0	0	0	0	0	0	0	0	0	5
4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:45	0	2	3	0	0	1	0	0	0	0	0	0	0	6
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
5:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1	17:15	0	8	0	0	1	0	0	0	0	0	0	0	0	9
5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:30	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18:15	0	4	1	0	0	0	0	0	0	0	0	0	0	5
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18:30	0	8	1	0	0	0	0	0	0	0	0	0	0	9
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
7:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4
7:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1	19:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1	19:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	20:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
8:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1	20:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
8:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1	20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2	20:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
9:15	0	2	0	0	2	0	0	0	0	0	0	0	0	4	21:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
9:30	0	2	2	0	0	0	0	0	0	0	0	0	0	4	21:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
10:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3	22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
10:30	0	4	0	0	1	0	0	0	0	0	0	0	0	5	22:30	0	1	2	0	0	0	0	0	0	0	0	0	0	3
10:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1	22:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	4	2	0	0	0	0	0	0	0	0	0	0	6	23:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
11:30	0	0	1	0	1	0	0	0	0	0	0	0	0	2	23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1	23:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
TOTAL	0	25	10	0	4	0	0	0	0	0	0	0	0	39	TOTAL	0	129	30	0	1	1	0	0	0	0	0	0	0	161

AM PEAK HOUR	10:30 AM
AM PEAK VOLUME	13

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	26

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	0	154	40	0	5	1	0	0	0	0	0	0	0	200
% OF TOTAL	0.0%	77.0%	20.0%	0.0%	2.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS6 Sierra between UPRR Tracks and Mission

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
0:15	0	3	2	0	0	0	0	0	0	0	0	0	0	5
0:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
0:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:30	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:45	0	2	1	0	0	0	0	0	0	0	0	0	0	3
3:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4
3:30	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
5:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:15	0	7	1	0	0	0	0	0	1	0	0	0	0	9
5:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5
5:45	0	12	2	0	0	0	0	0	0	0	0	0	0	14
6:00	0	13	4	0	0	0	0	0	0	0	0	0	0	17
6:15	0	11	2	0	0	0	0	0	0	0	0	0	0	13
6:30	0	7	2	0	0	0	0	0	0	0	0	0	0	9
6:45	0	12	2	0	0	0	0	0	0	0	0	0	0	14
7:00	0	7	0	0	0	1	0	0	0	0	0	0	0	8
7:15	0	13	4	0	0	0	0	0	0	0	0	0	0	17
7:30	0	20	1	1	0	0	0	0	0	0	0	0	0	22
7:45	0	31	6	1	0	0	0	0	0	0	0	0	0	38
8:00	0	34	4	0	0	0	0	0	0	0	0	0	0	38
8:15	0	24	10	0	0	0	0	0	0	0	0	0	0	34
8:30	0	13	4	0	0	0	0	0	0	0	0	0	0	17
8:45	0	26	5	0	0	0	0	0	0	0	0	0	0	31
9:00	0	29	4	0	0	0	0	0	0	0	0	0	0	33
9:15	0	13	3	0	0	0	0	0	0	0	0	0	0	16
9:30	0	11	1	0	1	0	0	0	0	0	0	0	0	13
9:45	0	9	5	0	0	1	0	0	0	0	0	0	0	15
10:00	0	14	1	0	0	0	0	0	0	0	0	0	0	15
10:15	0	9	1	0	1	0	0	0	0	0	0	0	0	11
10:30	0	18	3	0	0	0	0	0	0	0	0	0	0	21
10:45	0	20	0	0	1	0	0	0	0	0	0	0	0	21
11:00	0	18	4	0	0	1	0	0	0	0	0	0	0	23
11:15	0	21	4	0	0	0	0	0	0	0	0	0	0	25
11:30	0	17	10	0	0	0	0	0	0	0	0	0	0	27
11:45	0	14	4	1	0	0	0	0	0	0	0	0	0	19
TOTAL	0	475	97	3	3	3	0	0	1	0	0	0	0	582

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	132

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	10	1	0	0	0	0	0	0	0	0	0	0	11
12:15	0	21	4	0	3	0	0	0	0	0	0	0	0	28
12:30	0	17	2	0	0	0	0	0	0	0	0	0	0	19
12:45	0	22	2	0	0	0	0	0	0	0	0	0	0	24
13:00	0	11	3	0	1	1	0	0	0	0	0	0	0	16
13:15	0	10	4	1	0	0	0	0	0	0	0	0	0	15
13:30	0	21	2	0	0	0	0	0	0	0	0	0	0	23
13:45	0	13	5	0	0	0	0	0	0	0	0	0	0	18
14:00	0	18	5	0	0	0	0	0	0	0	0	0	0	23
14:15	0	39	9	1	2	0	0	0	0	0	0	0	0	51
14:30	0	32	6	0	1	0	0	0	0	0	0	0	0	39
14:45	0	48	9	1	0	0	0	0	0	0	0	0	0	58
15:00	0	31	3	0	1	0	0	0	0	0	0	0	0	35
15:15	0	32	4	0	0	0	0	0	0	0	0	0	0	36
15:30	0	18	4	0	0	0	0	0	0	0	0	0	0	22
15:45	0	27	10	0	0	1	0	0	0	0	0	0	0	38
16:00	0	37	10	0	0	0	0	0	0	0	0	0	0	47
16:15	0	41	11	0	0	0	0	0	0	0	0	0	0	52
16:30	0	20	5	0	0	0	0	0	0	0	0	0	0	25
16:45	0	13	9	0	1	0	0	0	0	0	0	0	0	23
17:00	0	25	8	0	2	0	0	0	0	0	0	0	0	35
17:15	0	23	7	0	0	0	0	0	0	0	0	0	0	30
17:30	0	26	8	0	0	0	0	0	0	0	0	0	0	34
17:45	2	24	5	0	1	0	0	0	0	0	0	0	0	32
18:00	0	18	4	0	1	0	0	0	0	0	0	0	0	23
18:15	0	23	1	0	1	0	0	0	0	0	0	0	0	25
18:30	0	15	5	0	0	0	0	0	0	0	0	0	0	20
18:45	0	29	2	0	0	0	0	0	0	0	0	0	0	31
19:00	0	25	5	0	0	0	0	0	0	0	0	0	0	30
19:15	0	28	3	0	1	0	0	0	0	0	0	0	0	32
19:30	0	19	3	0	0	0	0	0	0	0	0	0	0	22
19:45	0	16	6	0	0	0	0	0	0	0	0	0	0	22
20:00	0	15	1	0	0	0	0	0	0	0	0	0	0	16
20:15	0	14	8	0	0	0	0	0	0	0	0	0	0	22
20:30	0	9	1	0	0	0	0	0	0	0	0	0	0	10
20:45	0	6	5	0	0	0	0	0	0	0	0	0	0	11
21:00	0	10	2	0	0	0	0	0	1	0	0	0	0	13
21:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6
21:30	0	14	2	0	0	0	0	0	0	0	0	0	0	16
21:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6
22:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
22:15	0	8	1	0	0	0	0	0	0	0	0	0	0	9
22:30	0	9	0	0	0	0	0	0	0	0	0	0	0	9
22:45	0	7	0	0	0	0	0	0	0	0	0	0	0	7
23:00	0	12	1	0	2	0	0	0	0	0	0	0	0	15
23:15	0	4	2	0	0	0	0	0	0	0	0	0	0	6
23:30	0	4	1	0	0	0	0	0	0	0	0	0	0	5
23:45	1	2	1	0	0	0	0	0	0	0	0	0	0	4
TOTAL	3	881	193	3	17	2	0	0	1	0	0	0	0	1,100

PM PEAK HOUR	2:15 PM
PM PEAK VOLUME	183

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	3	1,356	290	6	20	5	0	0	2	0	0	0	0	1,682
% OF TOTAL	0.2%	80.6%	17.2%	0.4%	1.2%	0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	100.0%
Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	6	2,852	619	9	43	10	0	1	2	0	0	0	0	3,542
% OF TOTAL	0.4%	169.6%	36.8%	0.5%	2.6%	0.6%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS6 Sierra between UPRR Tracks and Mission

AM	SOUTHBOUND														PM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3	12:00	0	18	1	0	0	0	0	0	0	0	0	0	0	19
0:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5	12:15	0	15	3	0	0	0	0	0	0	0	0	0	0	18
0:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2	12:30	0	25	3	0	3	0	0	0	0	0	0	0	0	31
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	0	23	3	0	1	0	0	0	0	0	0	0	0	27
1:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3	13:00	1	17	4	0	0	1	0	0	0	0	0	0	0	23
1:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1	13:15	0	20	7	0	0	0	0	0	0	0	0	0	0	27
1:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1	13:30	0	16	2	1	0	0	0	0	0	0	0	0	0	19
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	0	26	6	0	0	0	0	0	0	0	0	0	0	32
2:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	14:00	0	42	7	0	1	0	0	0	0	0	0	0	0	50
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:15	0	36	9	0	1	0	0	0	0	0	0	0	0	46
2:30	0	3	3	0	0	0	0	0	0	0	0	0	0	6	14:30	0	40	5	0	2	0	0	0	0	0	0	0	0	47
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14:45	0	37	6	1	1	0	0	0	0	0	0	0	0	45
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:00	0	22	4	0	1	0	0	0	0	0	0	0	0	27
3:15	0	2	1	0	0	0	0	0	0	0	0	0	0	3	15:15	0	31	5	0	0	0	0	0	0	0	0	0	0	36
3:30	0	6	4	0	0	1	0	0	0	0	0	0	0	11	15:30	0	32	7	0	0	1	0	0	0	0	0	0	0	40
3:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3	15:45	0	27	7	0	0	0	0	0	0	0	0	0	0	34
4:00	0	3	3	0	0	0	0	0	0	0	0	0	0	6	16:00	0	20	7	0	0	0	0	0	0	0	0	0	0	27
4:15	0	9	3	0	1	0	0	0	0	0	0	0	0	13	16:15	0	26	3	0	0	0	0	0	0	0	0	0	0	29
4:30	0	9	0	0	0	0	0	0	0	0	0	0	0	9	16:30	0	23	8	0	0	0	0	0	0	0	0	0	0	31
4:45	0	5	2	0	0	0	0	0	0	0	0	0	0	7	16:45	0	19	8	0	0	0	0	0	0	0	0	0	0	27
5:00	0	7	3	0	0	0	0	0	0	0	0	0	0	10	17:00	0	25	6	0	0	0	0	0	0	0	0	0	0	31
5:15	0	11	3	0	0	0	0	0	0	0	0	0	0	14	17:15	0	25	4	0	0	0	0	0	0	0	0	0	0	29
5:30	0	19	6	0	0	0	0	0	0	0	0	0	0	25	17:30	2	29	9	0	0	0	0	0	0	0	0	0	0	40
5:45	0	9	6	0	0	0	0	0	0	0	0	0	0	15	17:45	0	26	6	0	0	0	0	0	0	0	0	0	0	32
6:00	0	13	5	0	0	0	0	0	0	0	0	0	0	18	18:00	0	22	5	0	0	0	0	0	0	0	0	0	0	27
6:15	0	20	0	0	0	0	0	0	0	0	0	0	0	20	18:15	0	28	6	0	1	0	0	0	0	0	0	0	0	35
6:30	0	14	3	0	0	0	0	0	0	0	0	0	0	17	18:30	0	17	4	0	0	0	0	0	0	0	0	0	0	21
6:45	0	13	2	0	1	0	0	0	0	0	0	0	0	16	18:45	0	17	3	0	0	0	0	0	0	0	0	0	0	20
7:00	0	14	3	0	0	0	0	0	0	0	0	0	0	17	19:00	0	16	3	0	0	0	0	0	0	0	0	0	0	19
7:15	0	19	11	0	0	1	0	0	0	0	0	0	0	31	19:15	0	16	2	0	0	0	0	0	0	0	0	0	0	18
7:30	0	35	6	1	0	0	0	0	0	0	0	0	0	42	19:30	0	9	2	0	0	0	0	0	0	0	0	0	0	11
7:45	0	41	9	0	0	0	0	1	0	0	0	0	0	51	19:45	0	9	1	0	0	0	0	0	0	0	0	0	0	10
8:00	0	33	8	0	1	0	0	0	0	0	0	0	0	42	20:00	0	16	2	0	0	0	0	0	0	0	0	0	0	18
8:15	0	23	2	0	0	0	0	0	0	0	0	0	0	25	20:15	0	3	4	0	0	0	0	0	0	0	0	0	0	7
8:30	0	25	7	0	0	0	0	0	0	0	0	0	0	32	20:30	0	7	1	0	0	0	0	0	0	0	0	0	0	8
8:45	0	56	8	0	0	0	0	0	0	0	0	0	0	64	20:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6
9:00	0	32	2	0	0	0	0	0	0	0	0	0	0	34	21:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
9:15	0	14	5	0	1	0	0	0	0	0	0	0	0	20	21:15	0	14	4	0	0	0	0	0	0	0	0	0	0	18
9:30	0	16	3	0	0	0	0	0	0	0	0	0	0	19	21:30	0	7	1	0	0	0	0	0	0	0	0	0	0	8
9:45	0	16	6	0	1	1	0	0	0	0	0	0	0	24	21:45	0	8	0	0	0	0	0	0	0	0	0	0	0	8
10:00	0	17	4	0	0	0	0	0	0	0	0	0	0	21	22:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
10:15	0	13	0	0	0	0	0	0	0	0	0	0	0	13	22:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
10:30	0	23	4	0	0	0	0	0	0	0	0	0	0	27	22:30	0	9	0	0	0	0	0	0	0	0	0	0	0	9
10:45	0	14	2	0	1	0	0	0	0	0	0	0	0	17	22:45	0	7	0	0	0	0	0	0	0	0	0	0	0	7
11:00	0	14	5	0	2	0	0	0	0	0	0	0	0	21	23:00	0	4	0	0	1	0	0	0	0	0	0	0	0	5
11:15	0	20	7	0	1	0	0	0	0	0	0	0	0	28	23:15	0	7	0	0	1	0	0	0	0	0	0	0	0	8
11:30	0	14	9	0	0	0	0	0	0	0	0	0	0	23	23:30	0	10	3	0	0	0	0	0	0	0	0	0	0	13
11:45	0	20	9	0	1	0	0	0	0	0	0	0	0	30	23:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
TOTAL	0	622	155	1	10	3	0	1	0	0	0	0	0	792	TOTAL	3	874	174	2	13	2	0	0	0	0	0	0	0	1,068

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	166
PM PEAK HOUR	2:00 PM
PM PEAK VOLUME	188

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	3	1,496	329	3	23	5	0	1	0	0	0	0	0	1,860
% OF TOTAL	0.2%	80.4%	17.7%	0.2%	1.2%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS7 Armstrong between Sierra and 34th

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	34	7	0	0	0	0	0	0	0	0	0	0	41
0:15	0	22	7	0	0	0	0	0	0	0	0	0	0	29
0:30	0	20	10	0	1	0	0	0	0	0	0	0	0	31
0:45	0	18	2	0	0	0	0	0	0	0	0	0	0	20
1:00	0	25	4	0	0	0	0	0	1	0	0	0	0	30
1:15	0	24	12	0	0	0	0	0	0	0	0	0	0	36
1:30	1	26	5	0	1	0	0	0	1	0	0	0	0	34
1:45	0	15	6	0	1	0	0	0	0	0	0	0	0	22
2:00	0	16	8	0	0	0	0	0	1	0	0	0	0	25
2:15	0	12	6	0	2	1	0	0	0	0	0	0	0	21
2:30	0	17	3	0	1	1	0	0	1	0	0	0	0	23
2:45	0	24	7	0	0	0	0	0	0	0	0	0	0	31
3:00	0	20	2	0	2	0	0	0	0	0	0	0	0	24
3:15	1	27	3	0	0	0	0	0	0	0	0	0	0	31
3:30	1	35	8	0	1	0	0	0	0	0	0	0	0	45
3:45	0	31	5	0	2	1	0	0	0	0	0	0	0	39
4:00	0	38	2	0	0	0	0	0	1	0	0	0	0	41
4:15	0	57	12	0	2	1	0	0	1	0	0	0	0	73
4:30	0	74	21	0	2	0	0	0	0	0	0	0	0	97
4:45	0	99	27	0	2	1	0	0	0	0	0	0	0	129
5:00	0	66	20	0	3	1	0	0	2	0	0	0	0	92
5:15	0	78	27	0	2	0	0	0	0	0	0	0	0	107
5:30	0	120	35	0	5	1	0	0	0	0	0	0	0	161
5:45	0	127	23	0	8	0	0	0	1	0	0	0	0	159
6:00	3	105	39	0	8	2	0	0	0	0	0	0	0	157
6:15	1	122	50	0	12	1	0	0	1	0	0	0	0	187
6:30	0	177	55	0	8	2	0	0	2	0	1	0	0	245
6:45	0	180	47	0	6	1	0	0	1	0	0	0	0	235
7:00	2	219	55	0	12	2	0	0	1	0	0	0	0	291
7:15	0	217	45	2	11	1	0	0	1	0	1	0	0	278
7:30	1	229	60	1	10	2	0	0	1	0	0	0	0	304
7:45	0	227	61	0	12	1	0	0	1	0	0	0	0	302
8:00	2	227	57	0	8	2	0	0	4	0	1	0	0	301
8:15	1	213	59	0	6	4	0	0	0	0	0	0	0	283
8:30	0	213	55	1	7	3	0	0	3	0	0	0	0	282
8:45	2	184	48	1	7	0	0	0	3	0	0	0	0	245
9:00	0	154	49	0	6	2	0	0	3	0	0	0	0	214
9:15	0	141	49	0	12	0	0	0	2	0	0	0	0	204
9:30	0	173	37	1	8	1	0	0	1	0	0	0	0	221
9:45	0	142	52	0	9	1	0	1	3	0	1	0	0	209
10:00	1	119	33	1	13	2	0	0	0	0	0	0	0	169
10:15	0	142	30	0	5	0	0	0	3	0	1	0	0	181
10:30	0	151	43	0	7	2	0	1	2	0	0	0	0	206
10:45	0	139	43	0	7	2	0	0	1	0	0	0	0	192
11:00	0	167	40	0	5	0	0	0	2	0	0	0	0	214
11:15	0	156	45	0	5	1	0	0	0	0	0	0	0	207
11:30	0	154	35	0	7	1	0	0	2	0	0	0	0	199
11:45	0	182	45	0	3	0	0	0	1	0	0	0	0	231
TOTAL	16	5,158	1,394	7	229	40	0	2	47	0	5	0	0	6,898

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,190

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	171	45	0	2	2	0	0	6	0	0	0	0	226
12:15	0	175	46	0	12	0	0	0	0	0	0	0	0	233
12:30	0	157	49	0	6	1	0	0	4	0	1	0	0	218
12:45	1	152	52	0	9	1	0	0	3	0	0	0	0	218
13:00	0	167	53	0	7	4	0	0	2	0	0	0	0	233
13:15	1	151	45	0	8	3	0	1	0	0	1	0	0	210
13:30	1	156	54	0	16	3	0	0	1	0	0	0	0	231
13:45	0	193	62	0	7	3	0	0	1	0	2	0	0	268
14:00	0	199	54	0	15	1	0	0	2	0	0	0	0	271
14:15	0	209	51	3	15	2	0	0	1	0	1	0	0	282
14:30	0	211	68	0	12	4	0	0	1	0	0	0	0	296
14:45	1	269	85	2	13	2	0	0	2	0	0	0	0	374
15:00	0	276	64	0	12	3	0	0	1	0	1	0	0	357
15:15	2	275	86	0	18	2	0	0	0	0	0	0	0	383
15:30	0	289	91	0	12	4	0	0	2	0	0	0	0	398
15:45	0	344	104	0	20	3	0	0	4	0	2	0	0	477
16:00	0	306	108	0	15	4	0	1	3	0	0	0	0	437
16:15	2	334	94	1	19	1	0	0	2	0	0	0	0	453
16:30	1	295	100	0	18	4	0	1	4	0	1	0	0	424
16:45	0	331	94	0	16	5	0	0	1	0	2	0	0	449
17:00	1	308	97	0	15	2	0	0	4	0	0	0	0	427
17:15	1	394	101	0	13	2	0	1	1	0	1	0	0	514
17:30	1	309	78	1	13	2	0	0	1	0	0	0	0	405
17:45	0	326	74	0	12	2	0	1	2	0	0	0	0	417
18:00	0	311	76	0	5	3	0	0	0	0	0	0	0	395
18:15	1	259	66	1	5	0	0	0	2	0	0	0	0	334
18:30	0	214	55	0	9	0	0	0	3	0	0	0	0	281
18:45	1	203	55	0	3	0	0	0	0	0	0	0	0	262
19:00	1	178	42	0	4	0	0	0	2	0	0	0	0	227
19:15	0	166	34	0	2	0	0	0	0	0	0	0	0	202
19:30	0	137	26	0	7	0	0	0	1	0	0	0	0	171
19:45	0	118	29	0	2	0	0	0	1	0	0	0	0	150
20:00	0	152	28	0	1	1	0	1	1	0	0	0	0	184
20:15	1	124	15	0	3	2	0	1	2	0	0	0	0	148
20:30	0	115	23	0	1	0	0	0	1	0	0	0	0	140
20:45	0	103	14	0	1	0	0	0	0	0	0	0	0	118
21:00	2	100	18	0	1	2	0	0	0	0	0	0	0	123
21:15	0	106	20	0	1	1	0	0	0	0	0	0	0	128
21:30	0	70	12	0	0	1	0	0	1	0	0	0	0	84
21:45	0	81	15	0	1	0	0	0	0	0	0	0	0	97
22:00	0	67	5	0	2	0	0	0	0	0	0	0	0	74
22:15	0	82	11	0	0	0	0	0	0	0	0	0	0	93
22:30	0	66	7	0	0	0	0	0	0	0	0	0	0	73
22:45	0	45	7	0	1	0	0	1	0	0	0	0	0	54
23:00	0	48	10	0	0	0	0	0	0	0	0	0	0	58
23:15	0	61	6	0	2	0	0	0	0	0	0	0	0	69
23:30	0	36	9	0	0	1	0	0	0	0	0	0	0	46
23:45	0	32	4	0	0	0	0	0	3	0	0	0	0	39
TOTAL	18	8,871	2,342	8	356	71	0	8	65	0	12	0	0	11,751

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	1,814

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	34	14,029	3,736	15	585	111	0	10	112	0	17	0	0	18,649
% OF TOTAL	0.2%	75.2%	20.0%	0.1%	3.1%	0.6%	0.0%	0.1%	0.6%	0.0%	0.1%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	62	25,159	6,572	30	984	171	0	15	195	0	24	0	0	33,212
% OF TOTAL	0.3%	134.9%	35.2%	0.2%	5.3%	0.9%	0.0%	0.1%	1.0%	0.0%	0.1%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS7 Armstrong between Sierra and 34th

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	22	4	0	0	0	0	0	0	0	0	0	0	26
0:15	0	35	2	0	0	0	0	0	0	0	0	0	0	37
0:30	0	16	3	0	0	0	0	0	1	0	0	0	0	20
0:45	0	19	1	0	0	0	0	0	1	0	0	0	0	21
1:00	0	14	4	0	0	0	0	0	0	0	0	0	0	18
1:15	0	22	2	0	1	0	0	0	1	0	0	0	0	26
1:30	0	17	0	0	1	0	0	0	1	0	0	0	0	19
1:45	0	18	2	0	0	0	0	0	1	0	0	0	0	21
2:00	0	19	1	0	0	0	0	0	1	0	0	0	0	21
2:15	0	30	1	0	0	0	0	0	0	0	0	0	0	31
2:30	0	15	5	0	1	1	0	0	0	0	0	0	0	22
2:45	0	18	3	0	0	1	0	0	1	0	0	0	0	23
3:00	0	28	2	0	0	0	0	0	1	0	1	0	0	32
3:15	0	31	5	0	1	0	0	0	0	0	0	0	0	37
3:30	1	61	5	0	0	0	0	0	0	0	2	0	0	69
3:45	0	72	4	0	2	0	0	0	2	0	0	0	0	80
4:00	0	64	12	0	4	0	0	0	0	0	0	0	0	80
4:15	0	83	14	0	0	0	0	0	0	0	0	0	0	97
4:30	0	112	17	0	8	2	0	0	2	0	3	0	0	144
4:45	0	124	36	0	4	1	0	0	0	0	0	0	0	165
5:00	1	104	28	0	8	1	0	0	2	0	0	0	0	144
5:15	0	119	41	0	6	1	0	0	2	0	0	0	0	169
5:30	1	143	63	0	6	3	0	0	2	0	0	0	0	218
5:45	0	125	48	0	8	2	0	0	0	0	1	0	0	184
6:00	2	120	44	0	11	3	0	0	3	0	0	0	0	183
6:15	0	120	47	0	6	0	0	0	1	0	0	0	0	174
6:30	0	142	49	0	6	0	0	0	0	0	0	0	0	197
6:45	0	170	38	0	2	0	0	0	0	0	0	0	0	210
7:00	1	191	49	0	8	0	0	0	3	0	0	0	0	252
7:15	0	196	59	0	16	2	0	0	2	0	0	0	0	275
7:30	0	183	53	3	8	0	0	0	2	0	0	0	0	249
7:45	1	181	30	0	8	1	0	0	2	0	0	0	0	223
8:00	0	147	44	0	7	3	0	0	1	0	0	0	0	202
8:15	0	146	46	0	6	0	0	0	1	0	0	0	0	199
8:30	0	162	34	1	13	1	0	1	1	0	0	0	0	213
8:45	2	146	45	1	6	2	0	0	3	0	0	0	0	205
9:00	0	130	30	0	6	1	0	0	2	0	0	0	0	169
9:15	0	117	25	0	9	2	0	0	1	0	0	0	0	154
9:30	0	137	46	0	10	1	0	2	0	0	0	0	0	196
9:45	0	114	37	0	8	0	0	1	0	0	0	0	0	160
10:00	1	111	32	0	4	2	0	0	3	0	0	0	0	153
10:15	0	132	31	2	6	1	0	1	4	0	0	0	0	177
10:30	0	115	33	0	3	0	0	0	1	0	0	0	0	152
10:45	0	141	37	0	4	1	0	0	1	0	0	0	0	184
11:00	0	129	39	0	3	0	0	0	1	0	0	0	0	172
11:15	1	138	37	0	7	0	0	0	0	0	0	0	0	183
11:30	0	124	33	0	4	0	0	0	2	0	0	0	0	163
11:45	1	151	42	0	8	0	0	0	0	0	0	0	0	202
TOTAL	12	4,754	1,263	7	219	32	0	4	53	0	7	0	0	6,351

AM PEAK HOUR	7:00 AM
AM PEAK VOLUME	999

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	161	38	0	7	1	0	0	1	0	0	0	0	208
12:15	0	149	48	1	5	3	0	0	2	0	0	0	0	208
12:30	0	136	36	0	9	0	0	0	3	0	0	0	0	184
12:45	0	141	25	0	4	2	0	0	2	0	0	0	0	174
13:00	0	154	42	0	9	1	0	0	0	0	0	0	0	206
13:15	1	154	41	0	9	0	0	0	2	0	0	0	0	207
13:30	1	175	43	0	18	0	0	0	1	0	0	0	0	238
13:45	0	195	54	0	10	1	0	0	0	0	0	0	0	260
14:00	0	188	50	1	10	0	0	0	3	0	0	0	0	252
14:15	0	159	49	1	3	1	0	0	2	0	0	0	0	215
14:30	1	153	45	1	2	0	0	0	2	0	0	0	0	204
14:45	0	165	60	0	8	2	0	0	0	0	0	0	0	235
15:00	0	157	60	2	6	0	0	0	0	0	0	0	0	225
15:15	0	141	62	0	7	0	0	0	0	0	0	0	0	210
15:30	1	165	51	0	6	1	0	0	0	0	0	0	0	224
15:45	0	160	49	0	4	0	0	0	0	0	0	0	0	213
16:00	0	166	46	1	4	3	0	0	0	0	0	0	0	220
16:15	1	163	61	0	4	2	0	0	0	0	0	0	0	231
16:30	0	168	47	1	4	0	0	0	0	0	0	0	0	220
16:45	0	176	48	0	7	0	0	0	1	0	0	0	0	232
17:00	0	159	48	0	6	1	0	0	0	0	0	0	0	214
17:15	2	179	47	0	4	0	0	0	1	0	0	0	0	233
17:30	0	180	40	0	4	0	0	0	0	0	0	0	0	224
17:45	0	196	51	0	4	1	0	1	0	0	0	0	0	253
18:00	0	172	46	0	4	0	0	0	0	0	0	0	0	222
18:15	2	160	31	0	1	0	0	0	1	0	0	0	0	195
18:30	2	166	40	0	3	1	0	0	0	0	0	0	0	212
18:45	1	163	33	0	1	1	0	0	0	0	0	0	0	199
19:00	0	131	27	0	0	1	0	0	1	0	0	0	0	160
19:15	1	137	35	0	2	0	0	0	0	0	0	0	0	175
19:30	1	112	34	0	3	0	0	0	0	0	0	0	0	150
19:45	0	135	23	0	1	1	0	0	0	0	0	0	0	160
20:00	0	146	24	0	2	1	0	0	0	0	0	0	0	173
20:15	0	104	14	0	3	0	0	0	0	0	0	0	0	121
20:30	0	106	20	0	1	0	0	0	1	0	0	0	0	128
20:45	0	123	18	0	1	1	0	0	0	0	0	0	0	143
21:00	1	97	9	0	1	0	0	0	0	0	0	0	0	108
21:15	0	86	18	0	0	0	0	0	0	0	0	0	0	104
21:30	0	90	8	0	1	0	0	0	0	0	0	0	0	99
21:45	0	80	12	0	1	0	0	0	2	0	0	0	0	95
22:00	1	85	9	0	0	0	0	0	1	0	0	0	0	96
22:15	0	69	5	0	0	1	0	0	0	0	0	0	0	75
22:30	0	59	7	0	1	0	0	0	0	0	0	0	0	67
22:45	0	54	2	0	0	1	0	0	1	0	0	0	0	58
23:00	0	44	7	0	0	1	0	0	2	0	0	0	0	54
23:15	0	44	2	0	0	0	0	0	1	0	0	0	0	47
23:30	0	35	3	0	0	0	0	0	0	0	0	0	0	38
23:45	0	38	5	0	0	0	0	0	0	0	0	0	0	43
TOTAL	16	6,376	1,573	8	180	28	0	1	30	0	0	0	0	8,212

PM PEAK HOUR	1:30 PM
PM PEAK VOLUME	965

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	28	####	2,836	15	399	60	0	5	83	0	7	0	0	14,563
% OF TOTAL	0.2%	76.4%	19.5%	0.1%	2.7%	0.4%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS8 Armstrong between 34th and Granite Hill

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	36	7	0	0	0	0	0	0	0	0	0	0	43
0:15	0	21	7	0	0	0	0	0	0	0	0	0	0	28
0:30	0	21	10	0	1	0	0	0	0	0	0	0	0	32
0:45	0	19	2	0	0	0	0	0	0	0	0	0	0	21
1:00	0	28	4	0	0	0	0	0	1	0	0	0	0	33
1:15	0	24	12	0	0	0	0	0	0	0	0	0	0	36
1:30	1	24	5	0	1	0	0	0	1	0	0	0	0	32
1:45	0	17	5	0	1	0	0	0	0	0	0	0	0	23
2:00	0	15	8	0	0	0	0	0	1	0	0	0	0	24
2:15	0	11	6	0	2	1	0	0	0	0	0	0	0	20
2:30	0	17	3	0	1	1	0	0	1	0	0	0	0	23
2:45	0	24	7	0	0	0	0	0	0	0	0	0	0	31
3:00	0	20	2	0	2	0	0	0	0	0	0	0	0	24
3:15	1	29	3	0	0	0	0	0	0	0	0	0	0	33
3:30	1	35	5	0	1	0	0	0	0	0	0	0	0	42
3:45	0	31	5	0	2	1	0	0	0	0	0	0	0	39
4:00	0	37	2	0	0	0	0	0	1	0	0	0	0	40
4:15	0	58	11	0	2	1	0	0	1	0	0	0	0	73
4:30	0	75	21	0	2	0	0	0	0	0	0	0	0	98
4:45	0	100	27	0	2	1	0	0	0	0	0	0	0	130
5:00	0	66	19	0	3	2	0	0	2	0	0	0	0	92
5:15	0	76	27	0	2	0	0	0	0	0	0	0	0	105
5:30	0	118	36	0	6	1	0	0	0	0	0	0	0	161
5:45	0	125	23	0	8	0	0	0	1	0	0	0	0	157
6:00	3	105	39	0	8	2	0	0	0	0	0	0	0	157
6:15	1	121	50	0	12	1	0	0	1	0	0	0	0	186
6:30	0	172	55	0	8	2	0	0	2	0	1	0	0	240
6:45	0	239	51	0	5	1	0	0	1	0	0	0	0	297
7:00	2	213	56	0	13	2	0	0	1	0	0	0	0	287
7:15	0	209	45	2	10	1	0	0	1	0	1	0	0	269
7:30	1	214	60	1	10	2	0	0	1	0	0	0	0	289
7:45	0	233	63	0	12	1	0	0	1	0	0	0	0	310
8:00	2	227	54	0	7	2	0	0	4	0	1	0	0	297
8:15	1	204	61	1	6	3	0	0	0	0	0	0	0	276
8:30	0	210	57	1	8	3	0	0	3	0	0	0	0	282
8:45	2	177	48	1	6	0	0	0	3	0	0	0	0	237
9:00	0	162	50	0	6	2	0	0	3	0	0	0	0	223
9:15	0	142	51	0	12	0	0	0	2	0	0	0	0	207
9:30	0	171	37	1	8	1	0	0	1	0	0	0	0	219
9:45	0	148	54	0	9	1	0	1	3	0	1	0	0	217
10:00	1	114	33	2	13	3	0	0	0	0	0	0	0	166
10:15	0	138	32	0	5	0	0	0	3	0	1	0	0	179
10:30	0	151	44	0	7	2	0	1	2	0	0	0	0	207
10:45	0	142	45	0	7	2	0	0	1	0	0	0	0	197
11:00	0	168	43	0	6	0	0	0	2	0	0	0	0	219
11:15	0	162	45	0	6	1	0	0	0	0	0	0	0	214
11:30	0	154	34	0	7	1	0	0	2	0	0	0	0	198
11:45	0	191	43	0	3	0	0	0	1	0	0	0	0	238
TOTAL	16	5,194	1,407	9	230	41	0	2	47	0	5	0	0	6,951

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,172

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	167	48	0	2	2	0	0	6	0	0	0	0	225
12:15	0	174	48	0	12	0	0	0	0	0	0	0	0	234
12:30	0	160	49	0	6	1	0	0	4	0	1	0	0	221
12:45	1	151	54	0	9	1	0	0	3	0	0	0	0	219
13:00	0	172	54	0	8	4	0	0	2	0	0	0	0	240
13:15	1	151	47	0	8	3	0	1	0	0	1	0	0	212
13:30	1	163	53	0	16	3	0	0	1	0	0	0	0	237
13:45	0	197	64	0	7	3	0	0	1	0	2	0	0	274
14:00	0	195	54	0	16	1	0	0	2	0	0	0	0	268
14:15	0	213	52	3	15	2	0	0	1	0	1	0	0	287
14:30	0	223	70	1	12	5	0	0	1	0	0	0	0	312
14:45	1	278	85	2	13	2	0	0	2	0	0	0	0	383
15:00	0	278	68	0	11	3	0	0	1	0	1	0	0	362
15:15	1	273	86	0	18	2	0	0	0	0	0	0	0	380
15:30	0	289	93	0	12	4	0	0	2	0	0	0	0	400
15:45	0	350	107	1	20	3	0	0	4	0	2	0	0	487
16:00	0	315	111	0	15	4	0	1	3	0	0	0	0	449
16:15	2	337	97	1	19	1	0	0	2	0	0	0	0	459
16:30	1	305	101	0	18	4	0	1	4	0	1	0	0	435
16:45	0	334	96	0	16	5	0	0	1	0	2	0	0	454
17:00	1	316	100	0	15	2	0	0	4	0	0	0	0	438
17:15	1	399	102	0	13	2	0	1	1	0	1	0	0	520
17:30	1	323	78	1	13	2	0	0	1	0	0	0	0	419
17:45	0	333	73	0	12	2	0	1	2	0	0	0	0	423
18:00	0	317	78	0	5	3	0	0	0	0	0	0	0	403
18:15	1	262	71	1	5	0	0	0	2	0	0	0	0	342
18:30	0	218	57	0	9	0	0	0	3	0	0	0	0	287
18:45	1	214	56	0	3	0	0	0	0	0	0	0	0	274
19:00	1	186	43	0	4	0	0	0	2	0	0	0	0	236
19:15	0	171	36	0	2	0	0	0	0	0	0	0	0	209
19:30	0	145	28	0	7	0	0	0	1	0	0	0	0	181
19:45	0	128	30	0	2	1	0	0	2	0	0	0	0	163
20:00	0	157	28	0	2	1	0	1	1	0	0	0	0	190
20:15	1	128	17	0	3	2	0	1	2	0	0	0	0	154
20:30	0	120	23	0	1	0	0	0	1	0	0	0	0	145
20:45	0	110	15	0	1	0	0	0	0	0	0	0	0	126
21:00	2	107	19	0	1	2	0	0	0	0	0	0	0	131
21:15	0	110	21	0	1	1	0	0	0	0	0	0	0	133
21:30	0	76	13	0	0	1	0	0	1	0	0	0	0	91
21:45	0	84	15	0	1	0	0	0	0	0	0	0	0	100
22:00	0	71	7	0	2	0	0	0	0	0	0	0	0	80
22:15	0	84	13	0	0	0	0	0	0	0	0	0	0	97
22:30	0	68	8	0	0	0	0	0	0	0	0	0	0	76
22:45	0	45	7	0	1	0	0	1	0	0	0	0	0	54
23:00	0	49	10	0	0	0	0	0	0	0	0	0	0	59
23:15	0	62	6	0	2	0	0	0	0	0	0	0	0	70
23:30	0	36	9	0	0	1	0	0	0	0	0	0	0	46
23:45	0	30	5	0	0	0	0	0	3	0	0	0	0	38
TOTAL	17	9,074	2,405	10	358	73	0	8	66	0	12	0	0	12,023

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	1,847

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	33	14,268	3,812	19	588	114	0	10	113	0	17	0	0	18,974
% OF TOTAL	0.2%	75.2%	20.1%	0.1%	3.1%	0.6%	0.0%	0.1%	0.6%	0.0%	0.1%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	61	25,586	6,724	33	1,003	177	0	15	197	0	24	0	0	33,820
% OF TOTAL	0.3%	134.8%	35.4%	0.2%	5.3%	0.9%	0.0%	0.1%	1.0%	0.0%	0.1%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS8 Armstrong between 34th and Granite Hill

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	22	4	0	0	0	0	0	0	0	0	0	0	26
0:15	0	35	2	0	0	0	0	0	0	0	0	0	0	37
0:30	0	16	3	0	0	0	0	0	1	0	0	0	0	20
0:45	0	19	1	0	0	0	0	0	1	0	0	0	0	21
1:00	0	14	4	0	0	0	0	0	0	0	0	0	0	18
1:15	0	22	2	0	1	0	0	0	1	0	0	0	0	26
1:30	0	16	0	0	1	0	0	0	1	0	0	0	0	18
1:45	0	18	2	0	0	0	0	0	1	0	0	0	0	21
2:00	0	19	1	0	0	0	0	0	1	0	0	0	0	21
2:15	0	30	1	0	0	0	0	0	0	0	0	0	0	31
2:30	0	15	5	0	1	1	0	0	0	0	0	0	0	22
2:45	0	18	4	0	0	1	0	0	1	0	0	0	0	24
3:00	0	28	3	0	0	0	0	0	1	0	1	0	0	33
3:15	0	33	7	0	1	0	0	0	0	0	0	0	0	41
3:30	1	64	8	0	0	0	0	0	0	0	2	0	0	75
3:45	0	74	6	0	2	1	0	0	2	0	0	0	0	85
4:00	0	67	13	0	4	0	0	0	0	0	0	0	0	84
4:15	0	88	18	0	0	0	0	0	0	0	0	0	0	106
4:30	0	119	19	0	9	2	0	0	2	0	3	0	0	154
4:45	0	127	42	0	4	1	0	0	0	0	0	0	0	174
5:00	1	109	30	0	9	2	0	0	2	0	0	0	0	153
5:15	0	131	44	0	6	1	0	0	2	0	0	0	0	184
5:30	1	149	65	0	7	3	0	0	2	0	0	0	0	227
5:45	0	128	49	0	8	2	0	0	0	0	1	0	0	188
6:00	2	122	48	0	11	3	0	0	3	0	0	0	0	189
6:15	0	124	49	0	7	0	0	0	1	0	0	0	0	181
6:30	0	152	51	0	6	0	0	0	0	0	0	0	0	209
6:45	0	158	46	0	9	0	0	0	0	0	0	0	0	213
7:00	1	196	50	0	8	0	0	0	3	0	0	0	0	258
7:15	0	200	62	0	16	2	0	0	2	0	0	0	0	282
7:30	0	201	55	3	8	0	0	0	2	0	0	0	0	269
7:45	1	195	31	0	8	1	0	0	2	0	0	0	0	238
8:00	0	152	45	0	7	3	0	0	1	0	0	0	0	208
8:15	0	158	46	0	7	0	0	0	1	0	0	0	0	212
8:30	0	169	35	1	13	1	0	1	1	0	0	0	0	221
8:45	2	151	47	0	7	2	0	0	3	0	0	0	0	212
9:00	0	130	31	0	6	1	0	0	2	0	0	0	0	170
9:15	0	119	25	0	9	2	0	0	1	0	0	0	0	156
9:30	0	142	45	0	10	1	0	2	0	0	0	0	0	200
9:45	0	115	41	0	8	0	0	0	1	0	0	0	0	165
10:00	1	116	32	0	4	2	0	0	4	0	0	0	0	159
10:15	0	130	36	2	6	1	0	1	4	0	0	0	0	180
10:30	0	117	35	0	3	0	0	0	1	0	0	0	0	156
10:45	0	144	36	0	3	1	0	0	1	0	0	0	0	185
11:00	0	130	39	0	3	0	0	0	1	0	0	0	0	173
11:15	1	139	37	0	7	0	0	0	0	0	0	0	0	184
11:30	0	125	34	0	4	0	0	0	2	0	0	0	0	165
11:45	1	149	45	0	8	0	0	0	0	0	0	0	0	203
TOTAL	12	4,895	1,334	6	231	34	0	4	54	0	7	0	0	6,577

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	161	38	0	8	1	0	0	1	0	0	0	0	209
12:15	0	144	50	1	5	3	0	0	2	0	0	0	0	205
12:30	0	137	37	0	9	0	0	0	3	0	0	0	0	186
12:45	0	144	25	0	4	2	0	0	2	0	0	0	0	177
13:00	0	150	44	0	9	2	0	0	0	0	0	0	0	205
13:15	1	160	44	0	9	0	0	0	2	0	0	0	0	216
13:30	1	177	42	0	18	0	0	0	1	0	0	0	0	239
13:45	0	206	54	0	10	1	0	0	0	0	0	0	0	271
14:00	0	196	53	1	10	0	0	0	3	0	0	0	0	263
14:15	0	166	49	1	3	1	0	0	2	0	0	0	0	222
14:30	1	153	46	1	3	0	0	0	2	0	0	0	0	206
14:45	0	174	56	0	8	2	0	0	0	0	0	0	0	240
15:00	0	156	61	2	6	0	0	0	0	0	0	0	0	225
15:15	0	143	65	0	7	0	0	0	0	0	0	0	0	215
15:30	1	169	50	0	6	1	0	0	0	0	0	0	0	227
15:45	0	158	46	0	5	0	0	0	0	0	0	0	0	209
16:00	0	167	45	1	4	3	0	0	0	0	0	0	0	220
16:15	1	162	60	0	4	2	0	0	0	0	0	0	0	229
16:30	0	167	45	1	4	0	0	0	0	0	0	0	0	217
16:45	0	176	50	0	7	0	0	0	1	0	0	0	0	234
17:00	0	157	44	0	6	1	0	0	0	0	0	0	0	208
17:15	2	176	49	0	4	0	0	0	1	0	0	0	0	232
17:30	0	178	40	0	4	0	0	0	0	0	0	0	0	222
17:45	0	194	50	0	4	1	0	1	0	0	0	0	0	250
18:00	0	170	46	0	4	0	0	0	0	0	0	0	0	220
18:15	2	166	31	0	1	0	0	0	1	0	0	0	0	201
18:30	2	169	43	0	4	1	0	0	0	0	0	0	0	219
18:45	1	162	34	0	1	1	0	0	0	0	0	0	0	199
19:00	0	126	28	0	0	1	0	0	1	0	0	0	0	156
19:15	1	137	32	0	2	0	0	0	0	0	0	0	0	172
19:30	1	115	36	0	3	0	0	0	0	0	0	0	0	155
19:45	0	133	22	0	1	1	0	0	0	0	0	0	0	157
20:00	0	147	24	0	2	1	0	0	0	0	0	0	0	174
20:15	0	109	14	0	3	0	0	0	0	0	0	0	0	126
20:30	0	107	21	0	1	0	0	0	1	0	0	0	0	130
20:45	0	123	19	0	1	1	0	0	0	0	0	0	0	144
21:00	1	99	9	0	1	0	0	0	0	0	0	0	0	110
21:15	0	86	18	0	0	0	0	0	0	0	0	0	0	104
21:30	0	94	8	0	1	0	0	0	0	0	0	0	0	103
21:45	0	85	14	0	1	0	0	0	2	0	0	0	0	102
22:00	1	84	9	0	0	0	0	0	1	0	0	0	0	95
22:15	0	68	4	0	0	1	0	0	0	0	0	0	0	73
22:30	0	57	7	0	1	0	0	0	0	0	0	0	0	65
22:45	0	56	2	0	0	1	0	0	1	0	0	0	0	60
23:00	0	44	5	0	0	1	0	0	2	0	0	0	0	52
23:15	0	44	2	0	0	0	0	0	1	0	0	0	0	47
23:30	0	35	2	0	0	0	0	0	0	0	0	0	0	37
23:45	0	36	5	0	0	0	0	0	0	0	0	0	0	41
TOTAL	16	6,423	1,578	8	184	29	0	1	30	0	0	0	0	8,269

AM PEAK HOUR	7:00 AM
AM PEAK VOLUME	1,047
PM PEAK HOUR	1:30 PM
PM PEAK VOLUME	995

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	28	####	2,912	14	415	63	0	5	84	0	7	0	0	14,846
% OF TOTAL	0.2%	76.2%	19.6%	0.1%	2.8%	0.4%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A42621

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021 **CITY#** Bloomington

JOB #: SC3110 CLASS9 Cedar between I-10 EB Ramps and Slover

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	61	6	0	1	0	0	0	3	0	0	0	0	71
0:15	0	50	9	0	1	0	0	0	1	0	3	0	0	64
0:30	0	41	5	0	1	2	0	1	1	0	0	0	0	51
0:45	0	45	4	0	0	1	0	1	1	0	0	0	0	52
1:00	0	50	5	0	2	2	0	1	2	0	0	0	0	62
1:15	0	37	5	0	1	0	0	0	3	0	3	0	0	49
1:30	0	37	4	0	0	0	0	0	1	0	2	0	0	44
1:45	1	25	3	0	1	2	0	0	3	0	2	0	0	37
2:00	0	32	3	0	0	0	0	0	0	0	1	0	0	36
2:15	0	20	4	0	3	1	0	0	2	0	4	0	0	34
2:30	0	38	8	0	1	1	0	1	4	0	2	0	0	55
2:45	0	27	1	0	0	1	0	0	3	0	0	0	0	32
3:00	0	29	7	0	1	0	0	0	2	0	2	0	0	41
3:15	0	33	6	0	1	2	0	0	4	0	1	0	0	47
3:30	0	50	10	0	4	0	0	1	2	0	0	0	0	67
3:45	0	43	13	0	2	1	0	0	6	0	1	0	0	66
4:00	1	70	12	0	1	3	0	0	6	0	2	0	0	95
4:15	1	71	17	0	2	2	0	2	5	0	2	0	0	102
4:30	0	110	17	0	3	3	0	1	8	0	0	0	0	142
4:45	0	82	18	0	3	1	0	2	2	0	1	0	0	109
5:00	0	84	17	0	3	3	0	2	5	0	1	0	0	115
5:15	1	87	23	0	5	4	0	0	2	0	4	0	0	126
5:30	1	124	17	0	4	3	0	3	2	0	1	0	0	155
5:45	0	111	20	0	6	6	0	3	7	0	3	0	0	156
6:00	1	78	13	0	2	4	0	0	9	0	0	0	0	107
6:15	0	104	18	0	10	6	0	0	10	0	1	0	0	149
6:30	1	146	32	1	5	4	0	0	7	0	4	0	0	200
6:45	0	146	23	2	6	6	1	0	2	0	4	0	0	190
7:00	0	155	41	1	13	5	0	0	6	0	1	0	0	222
7:15	0	178	38	2	10	7	0	0	8	0	2	0	0	245
7:30	0	169	45	3	14	4	0	1	3	0	2	0	0	241
7:45	0	127	48	0	5	3	0	3	3	0	4	0	0	193
8:00	0	95	41	0	12	4	0	0	4	0	3	0	0	159
8:15	0	135	43	0	8	1	0	2	10	0	0	0	0	199
8:30	0	123	46	2	12	11	1	6	14	0	1	0	0	216
8:45	0	123	25	3	18	4	0	0	10	0	2	0	0	185
9:00	0	120	31	0	13	4	0	1	7	0	4	0	0	180
9:15	0	132	33	2	15	6	0	0	12	0	4	0	0	204
9:30	0	123	37	1	22	5	0	4	8	0	2	0	0	202
9:45	0	133	30	0	23	2	1	3	9	0	2	0	0	203
10:00	0	110	22	1	18	2	0	1	7	0	0	0	0	161
10:15	2	127	31	0	9	3	0	1	12	0	1	0	0	186
10:30	0	109	25	0	11	3	0	5	10	0	3	0	0	166
10:45	0	120	20	0	7	4	0	3	11	0	4	0	0	169
11:00	0	122	28	0	11	3	0	2	10	0	4	1	0	181
11:15	0	133	26	0	10	8	0	2	12	0	1	0	0	192
11:30	0	160	36	0	11	4	0	4	12	0	3	0	0	230
11:45	0	129	35	0	10	3	0	3	3	0	2	0	0	185
TOTAL	9	4,454	1,001	18	321	144	3	59	274	0	89	1	0	6,373

AM PEAK HOUR	7:00 AM
AM PEAK VOLUME	901

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	136	34	0	14	6	0	2	9	0	1	0	0	202
12:15	1	129	36	0	8	2	0	0	13	0	2	0	0	191
12:30	0	152	36	0	7	3	0	0	5	0	1	0	0	204
12:45	0	135	35	0	10	8	0	1	10	0	5	0	0	204
13:00	0	145	22	1	4	3	0	2	8	0	1	0	0	186
13:15	0	141	36	0	15	3	0	2	12	0	2	0	0	211
13:30	0	169	30	0	15	5	0	0	9	0	0	0	0	228
13:45	0	195	37	0	9	3	0	3	7	0	2	0	0	256
14:00	0	188	36	0	4	4	0	4	3	0	4	0	0	243
14:15	1	180	26	1	10	7	0	2	3	0	0	0	0	230
14:30	0	211	37	1	10	7	0	0	6	0	0	0	0	272
14:45	1	179	34	0	13	4	0	1	7	0	2	0	0	241
15:00	0	160	41	0	14	3	0	4	8	0	0	0	0	230
15:15	1	143	30	1	4	0	0	2	8	0	0	0	0	189
15:30	1	181	28	0	9	1	0	1	5	0	1	0	0	227
15:45	1	112	30	0	4	4	0	1	7	0	0	0	0	159
16:00	1	144	37	0	4	0	0	1	8	0	1	0	0	196
16:15	0	111	35	0	10	1	0	2	2	0	0	0	0	161
16:30	0	132	26	1	3	2	0	0	7	0	0	0	0	171
16:45	0	130	21	0	5	1	0	1	1	0	0	0	0	159
17:00	0	144	16	1	4	3	0	2	4	0	0	0	0	174
17:15	0	134	34	0	5	1	0	2	7	0	0	0	0	183
17:30	0	129	25	0	4	2	0	2	7	0	0	0	0	169
17:45	0	162	18	0	4	0	0	2	2	0	1	0	0	189
18:00	0	165	43	1	5	1	0	0	5	0	1	0	0	221
18:15	0	214	44	0	7	3	0	0	6	0	0	0	0	274
18:30	0	176	48	0	1	1	0	3	2	0	1	0	0	232
18:45	1	188	30	0	4	3	0	1	5	0	3	0	0	235
19:00	1	146	26	0	2	3	0	3	5	0	1	0	0	187
19:15	0	166	23	0	0	1	0	1	3	0	0	0	0	194
19:30	0	145	22	0	2	2	0	0	3	0	0	0	0	174
19:45	0	164	23	0	2	0	0	4	6	0	0	0	0	199
20:00	0	102	23	0	1	3	0	1	6	0	0	0	0	136
20:15	0	140	17	0	1	2	0	1	1	0	0	0	0	162
20:30	0	121	22	0	0	2	0	2	6	0	0	0	0	153
20:45	1	133	19	0	1	2	0	0	4	0	2	0	0	162
21:00	1	119	18	0	2	1	0	1	3	0	1	0	0	146
21:15	0	126	14	0	2	1	0	0	2	0	1	0	0	146
21:30	1	117	12	0	3	0	0	1	2	0	1	0	0	137
21:45	0	101	8	0	1	1	0	1	3	0	1	0	0	116
22:00	0	145	16	0	0	2	0	0	5	0	0	0	0	168
22:15	0	96	16	0	0	1	0	0	3	0	0	0	0	116
22:30	0	86	15	0	0	1	0	2	4	0	1	0	0	109
22:45	0	78	9	0	2	1	0	0	1	0	3	0	0	94
23:00	0	64	8	0	0	5	0	0	1	0	0	0	0	78
23:15	0	54	5	0	1	3	0	1	1	0	0	0	0	65
23:30	0	53	8	0	2	1	0	0	5	0	0	0	0	69
23:45	0	51	12	0	0	2	0	0	2	0	0	0	0	67
TOTAL	12	6,592	1,221	7	228	115	0	59	242	0	39	0	0	8,515

PM PEAK HOUR	1:45 PM
PM PEAK VOLUME	1,001

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	21	11,046	2,222	25	549	259	3	118	516	0	128	1	0	14,888
% OF TOTAL	0.1%	74.2%	14.9%	0.2%	3.7%	1.7%	0.0%	0.8%	3.5%	0.0%	0.9%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	46	22,026	4,234	55	1,010	572	5	224	###	0	259	5	1	29,438
% OF TOTAL	0.2%	74.8%	14.4%	0.2%	3.4%	1.9%	0.0%	0.8%	3.4%	0.0%	0.9%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY# Bloomington
CLASS9 Cedar between I-10 EB Ramps and Slover

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	27	3	0	1	1	0	0	3	0	2	0	0	37
0:15	0	46	4	0	0	3	0	1	1	0	0	0	0	55
0:30	0	19	5	0	1	3	0	0	5	0	3	0	0	36
0:45	0	28	5	0	0	2	0	2	2	0	0	0	0	39
1:00	0	27	1	0	0	2	0	0	3	0	0	0	0	33
1:15	0	26	4	0	0	2	0	2	1	0	1	0	0	36
1:30	0	26	2	0	0	1	0	0	1	0	3	1	0	34
1:45	0	40	6	0	0	1	0	0	2	0	1	0	0	50
2:00	0	18	1	0	1	0	0	1	1	0	0	0	0	22
2:15	0	21	1	0	0	0	0	0	3	0	0	0	0	25
2:30	0	40	4	0	0	1	0	0	4	0	0	0	0	49
2:45	0	35	8	0	1	0	0	1	1	0	1	0	0	47
3:00	0	35	8	0	2	1	0	0	1	0	0	0	0	47
3:15	0	41	9	0	0	0	0	0	0	0	1	0	0	51
3:30	1	48	11	0	0	0	0	0	1	0	2	0	0	63
3:45	0	60	16	0	2	1	0	0	2	0	1	0	0	82
4:00	0	49	13	0	2	1	0	0	2	0	1	0	0	68
4:15	0	88	18	0	0	2	0	0	2	0	0	0	0	110
4:30	1	94	20	0	2	3	0	1	1	0	3	0	0	125
4:45	0	128	29	0	3	1	0	1	2	0	0	1	0	165
5:00	0	74	20	0	3	2	0	1	2	0	1	0	0	103
5:15	1	105	15	0	6	2	0	0	6	0	4	1	0	140
5:30	0	156	22	0	7	2	0	0	9	0	3	0	0	199
5:45	0	179	37	1	5	3	0	0	3	0	1	0	0	229
6:00	0	119	30	1	6	3	0	1	1	0	4	0	0	165
6:15	0	132	36	0	3	3	1	0	4	0	8	0	0	187
6:30	0	184	29	2	5	2	0	1	6	0	6	0	0	235
6:45	2	225	25	3	9	3	0	0	6	0	1	0	0	274
7:00	1	149	37	1	9	3	0	0	4	0	1	0	0	205
7:15	0	202	40	1	5	4	0	1	3	0	3	0	0	259
7:30	1	179	47	0	7	6	0	4	4	0	2	0	0	250
7:45	0	220	31	0	7	4	0	2	6	0	3	0	0	273
8:00	0	177	41	0	7	10	0	0	8	0	7	0	0	250
8:15	0	153	33	0	7	4	0	0	5	0	4	0	0	206
8:30	1	147	29	0	6	3	0	1	5	0	3	0	0	195
8:45	0	153	31	1	8	9	0	1	6	0	5	0	0	214
9:00	0	125	36	0	8	5	0	2	7	0	3	0	0	186
9:15	0	128	32	1	2	4	0	1	10	0	2	0	0	180
9:30	1	121	30	0	7	7	0	2	12	0	0	0	0	180
9:45	0	134	26	0	9	5	0	3	6	0	2	0	0	185
10:00	0	150	27	0	7	4	0	1	11	0	3	0	0	203
10:15	0	137	28	0	11	4	0	1	4	0	3	0	0	188
10:30	0	150	34	0	11	4	0	0	7	0	5	0	0	211
10:45	0	143	24	1	8	8	0	1	10	0	0	0	0	195
11:00	1	125	23	1	9	7	0	6	7	0	1	0	0	180
11:15	1	127	33	0	5	10	0	0	9	0	5	0	0	190
11:30	0	132	20	0	8	5	0	1	14	0	0	0	0	180
11:45	0	132	19	0	10	6	0	3	6	0	2	1	0	179
TOTAL	11	5,054	1,003	13	210	157	1	42	219	0	101	4	0	6,815

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,032

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	113	27	0	15	5	1	0	10	0	1	0	0	172
12:15	0	122	30	0	8	3	0	1	12	0	2	0	0	178
12:30	0	125	31	0	8	3	0	2	11	0	2	0	0	182
12:45	0	124	25	0	7	7	0	2	5	0	1	0	0	171
13:00	0	128	26	1	8	6	0	3	11	0	1	0	0	184
13:15	0	158	16	1	12	6	0	1	8	0	0	0	0	202
13:30	1	156	25	1	12	3	0	3	10	0	4	0	0	215
13:45	0	160	22	1	10	6	0	2	11	0	4	0	0	216
14:00	2	134	21	1	7	5	0	2	8	0	0	0	0	180
14:15	1	175	30	1	13	6	0	0	8	0	3	0	0	237
14:30	0	166	18	1	10	3	0	1	12	0	0	0	1	212
14:45	0	178	28	1	8	4	0	0	9	0	0	0	0	228
15:00	0	168	23	0	12	2	0	1	2	0	2	0	0	210
15:15	0	168	22	2	9	8	0	3	7	0	0	0	0	219
15:30	0	163	29	0	6	7	0	2	10	0	0	0	0	217
15:45	1	192	20	0	6	4	0	1	6	0	1	0	0	231
16:00	0	151	22	1	10	2	0	2	5	0	0	0	0	193
16:15	0	155	26	1	10	8	0	0	6	0	0	0	0	206
16:30	1	157	29	1	9	7	0	3	6	0	1	0	0	214
16:45	0	164	28	0	8	3	0	2	3	0	0	0	0	208
17:00	0	140	24	1	7	4	0	3	5	0	0	0	0	184
17:15	1	174	32	1	13	5	0	2	7	0	1	0	0	236
17:30	1	149	22	0	6	1	0	2	6	0	1	0	0	188
17:45	0	163	25	1	3	4	0	1	5	0	0	0	0	202
18:00	1	118	38	1	8	3	0	2	4	0	0	0	0	175
18:15	1	154	33	0	5	2	0	3	5	0	0	0	0	203
18:30	1	104	33	0	1	1	0	2	3	0	0	0	0	145
18:45	1	140	22	0	3	2	0	2	8	0	0	0	0	178
19:00	0	135	22	0	0	4	0	1	3	0	0	0	0	165
19:15	0	155	24	0	0	1	0	1	1	0	1	0	0	183
19:30	0	132	25	0	2	1	0	0	2	0	0	0	0	162
19:45	0	142	19	0	3	3	0	1	2	0	0	0	0	170
20:00	0	108	19	0	0	4	0	1	4	0	1	0	0	137
20:15	1	109	17	0	2	2	0	1	6	0	0	0	0	138
20:30	0	93	23	0	2	1	0	1	6	0	0	0	0	126
20:45	0	109	12	0	1	0	0	3	2	0	0	0	0	127
21:00	0	85	10	0	2	1	0	0	4	0	0	0	0	102
21:15	0	90	15	0	2	1	0	0	8	0	1	0	0	117
21:30	0	104	17	0	1	1	0	0	5	0	1	0	0	129
21:45	0	86	15	0	0	0	0	0	0	0	1	0	0	102
22:00	0	51	8	0	1	3	0	2	2	0	0	0	0	67
22:15	1	71	7	0	1	2	0	1	4	0	0	0	0	87
22:30	0	51	10	0	0	1	0	1	4	0	0	0	0	67
22:45	0	46	11	0	0	3	0	1	3	0	0	0	0	64
23:00	0	43	6	0	0	3	0	0	1	0	0	0	0	53
23:15	0	41	5	0	0	2	0	0	2	0	0	0	0	50
23:30	0	35	8	0	0	2	0	2	1	0	0	0	0	48
23:45	0	41	9	0	0	1	0	0	3	0	1	0	0	55
TOTAL	14	5,926	1,009	17	251	156	1	64	266	0	30	0	1	7,735

PM PEAK HOUR	2:15 PM
PM PEAK VOLUME	887

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	25	####	2,012	30	461	313	2	106	485	0	131	4	1	14,550
% OF TOTAL	0.2%	75.5%	13.8%	0.2%	3.2%	2.2%	0.0%	0.7%	3.3%	0.0%	0.9%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13

A42621

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021 **CITY#** Bloomington

JOB #: SC3110 CLASS9 Cedar between I-10 EB Ramps and Slover

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	38	4	0	0	0	0	0	2	0	0	0	0	44
0:15	0	35	4	0	1	0	0	0	0	0	2	0	0	42
0:30	0	21	3	0	1	1	0	1	0	0	0	0	0	27
0:45	0	27	1	0	0	1	0	1	1	0	0	0	0	31
1:00	0	31	3	0	2	2	0	1	3	0	0	0	0	42
1:15	0	28	3	0	0	0	0	0	2	0	2	0	0	35
1:30	0	25	3	0	0	0	0	0	2	0	0	0	0	30
1:45	0	21	2	0	1	0	0	0	2	0	1	0	0	27
2:00	0	23	2	0	0	0	0	0	0	0	2	0	0	27
2:15	0	11	2	0	3	0	0	0	1	0	2	0	0	19
2:30	0	19	3	0	1	1	0	0	3	0	1	0	0	28
2:45	0	15	2	0	0	1	0	0	1	0	0	0	0	19
3:00	0	18	4	0	1	0	0	0	0	0	0	0	0	23
3:15	0	25	3	0	1	1	0	0	1	0	0	0	0	31
3:30	0	37	10	0	3	0	0	1	0	0	0	0	0	51
3:45	0	29	9	0	1	0	0	0	2	0	0	0	0	41
4:00	0	47	8	0	0	1	0	0	4	0	0	0	0	60
4:15	0	44	13	0	1	1	0	1	3	0	0	0	0	63
4:30	0	65	10	0	2	3	0	0	2	0	0	0	0	82
4:45	1	51	8	0	2	1	0	0	1	0	0	0	0	64
5:00	0	63	8	0	2	1	0	1	2	0	0	0	0	77
5:15	0	54	13	0	5	2	0	0	2	0	4	0	0	80
5:30	1	105	16	0	4	1	0	1	1	0	1	0	0	130
5:45	0	100	14	0	3	5	0	0	3	0	2	0	0	127
6:00	0	72	11	0	2	6	0	0	1	0	0	0	0	92
6:15	0	105	11	0	7	4	0	0	3	0	1	0	0	131
6:30	0	129	26	1	6	2	0	0	4	0	4	0	0	172
6:45	0	135	23	1	8	5	1	0	1	0	3	0	0	177
7:00	0	160	35	1	11	4	0	0	4	0	1	0	0	216
7:15	0	157	24	1	8	4	0	0	6	0	2	0	0	202
7:30	0	137	34	2	12	2	0	0	5	0	2	0	0	194
7:45	0	117	38	0	5	2	0	0	0	0	2	0	0	164
8:00	0	90	32	0	6	3	0	0	5	0	2	0	0	138
8:15	0	107	36	1	6	1	0	0	6	0	0	0	0	157
8:30	0	101	38	1	8	4	1	0	6	0	1	0	0	160
8:45	0	94	19	1	11	2	0	0	6	0	2	0	0	135
9:00	0	103	28	0	11	2	0	0	6	0	4	0	0	154
9:15	0	106	28	0	13	3	0	0	14	0	4	0	0	168
9:30	0	100	27	0	10	4	0	2	6	0	1	0	0	150
9:45	0	116	23	0	15	5	1	2	7	0	0	0	0	169
10:00	0	101	25	1	11	3	0	1	5	0	0	0	0	147
10:15	1	110	23	0	6	4	0	0	6	0	1	0	0	151
10:30	0	78	21	0	9	2	0	3	7	0	2	0	0	122
10:45	0	97	16	0	8	1	0	3	6	0	2	0	0	133
11:00	0	114	25	0	7	5	0	2	7	0	4	0	0	164
11:15	0	111	21	0	6	8	1	1	10	0	1	0	0	159
11:30	0	132	34	0	6	4	0	1	8	0	3	0	0	188
11:45	0	106	29	0	10	3	0	1	5	0	2	0	0	156
TOTAL	3	3,610	775	10	236	105	4	23	172	0	61	0	0	4,999

AM PEAK HOUR	6:45 AM
AM PEAK VOLUME	789

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	103	29	0	6	3	0	1	4	0	1	0	0	147
12:15	1	97	29	0	6	2	0	0	8	0	2	0	0	145
12:30	1	128	28	0	5	1	0	0	3	0	1	0	0	167
12:45	0	117	25	0	9	8	0	0	9	0	5	0	0	173
13:00	0	116	17	1	4	3	0	0	10	0	1	0	0	152
13:15	0	113	26	0	9	5	0	0	11	0	3	0	0	167
13:30	0	142	18	0	13	4	0	0	5	0	0	0	0	182
13:45	0	178	28	0	5	2	0	1	5	0	2	1	0	222
14:00	0	163	21	0	3	3	0	0	2	0	3	0	0	195
14:15	0	156	22	1	11	6	0	2	6	0	0	0	0	204
14:30	0	157	15	0	6	2	0	0	9	0	0	0	0	189
14:45	0	139	26	0	9	3	0	0	7	0	2	0	0	186
15:00	0	106	23	0	9	3	0	2	7	0	0	0	0	150
15:15	1	109	19	0	2	0	0	2	7	0	0	0	0	140
15:30	1	121	18	0	9	2	0	1	6	0	1	0	0	159
15:45	1	98	24	0	4	3	0	0	6	0	0	0	0	136
16:00	1	121	27	0	1	1	0	1	3	0	0	0	0	155
16:15	0	84	24	0	7	2	0	1	2	0	0	0	0	120
16:30	0	103	20	0	5	2	0	1	12	0	0	0	0	143
16:45	1	112	16	0	3	0	0	0	3	0	0	0	0	135
17:00	0	122	18	1	4	4	0	1	9	0	0	0	0	159
17:15	0	121	19	0	2	0	0	2	5	0	0	0	0	149
17:30	0	110	13	0	1	0	0	1	5	0	0	0	0	130
17:45	0	129	16	0	2	1	0	3	3	0	1	0	0	155
18:00	0	135	38	0	6	3	0	1	7	0	1	0	0	191
18:15	0	175	31	0	5	4	0	0	6	0	0	0	0	221
18:30	0	138	42	0	1	0	0	3	1	0	1	0	0	186
18:45	0	149	26	0	4	5	0	0	1	0	1	0	0	186
19:00	1	114	19	0	1	3	0	3	1	0	0	0	0	142
19:15	0	133	15	0	0	1	0	1	1	0	0	0	0	151
19:30	0	117	14	0	2	2	0	0	2	0	0	0	0	137
19:45	0	136	17	0	1	0	0	2	3	0	0	0	0	159
20:00	0	79	15	1	1	2	0	1	2	0	0	0	0	101
20:15	0	125	16	0	1	2	0	0	2	0	0	0	0	146
20:30	0	97	16	0	0	0	0	1	4	0	0	0	0	118
20:45	0	95	12	0	0	0	0	0	2	0	0	0	0	109
21:00	0	74	12	0	1	1	0	1	0	0	0	0	0	89
21:15	0	88	5	0	2	0	0	0	2	0	0	0	0	97
21:30	1	73	11	0	2	0	0	1	0	0	0	0	0	88
21:45	0	73	5	0	1	1	0	1	2	0	0	0	0	83
22:00	0	85	8	0	0	1	0	0	5	0	0	0	0	99
22:15	0	70	8	0	0	1	0	0	2	0	0	0	0	81
22:30	0	55	12	0	0	0	0	1	2	0	0	0	0	70
22:45	0	53	8	0	1	1	0	0	0	0	0	0	0	63
23:00	0	41	5	0	0	4	0	0	0	0	0	0	0	50
23:15	0	39	5	0	0	2	0	0	1	0	0	0	0	47
23:30	0	28	7	0	0	0	0	0	2	0	0	0	0	37
23:45	0	36	5	0	0	2	0	0	1	0	0	0	0	44
TOTAL	9	5,153	873	4	164	95	0	35	196	0	25	1	0	6,555

PM PEAK HOUR	1:45 PM
PM PEAK VOLUME	810

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	12	8,763	1,648	14	400	200	4	58	368	0	86	1	0	11,554
% OF TOTAL	0.1%	75.8%	14.3%	0.1%	3.5%	1.7%	0.0%	0.5%	3.2%	0.0%	0.7%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	34	18,793	3,512	36	762	421	5	100	695	0	159	3	1	24,521
% OF TOTAL	0.1%	76.6%	14.3%	0.1%	3.1%	1.7%	0.0%	0.4%	2.8%	0.0%	0.6%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY# Bloomington
CLASS9 Cedar between I-10 EB Ramps and Slover

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	28	3	0	1	0	0	0	2	0	0	0	0	34
0:15	0	40	5	0	0	1	0	1	0	0	0	0	0	47
0:30	0	16	5	0	0	1	0	0	2	0	2	0	0	26
0:45	0	27	3	0	0	1	0	1	0	0	0	0	0	32
1:00	0	21	1	0	0	1	0	0	3	0	0	0	0	26
1:15	0	19	4	0	0	0	0	1	0	0	1	0	0	25
1:30	0	19	1	0	0	0	0	0	1	0	1	0	0	22
1:45	0	30	4	0	0	1	0	0	1	0	0	0	0	36
2:00	0	18	0	0	1	0	0	1	1	0	0	0	0	21
2:15	0	17	1	0	0	0	0	0	0	0	0	0	0	18
2:30	0	34	5	0	0	1	0	0	3	0	0	0	0	43
2:45	0	26	5	0	0	0	0	1	1	0	0	0	0	33
3:00	0	25	7	0	2	1	0	0	1	0	0	0	0	36
3:15	0	33	8	0	0	0	0	0	0	0	0	0	0	41
3:30	0	45	9	0	0	0	0	0	1	0	0	0	0	55
3:45	0	45	10	0	2	0	0	0	1	0	0	0	0	58
4:00	0	42	12	0	2	1	0	0	2	0	0	0	0	59
4:15	0	87	17	0	0	2	0	0	0	0	0	0	0	106
4:30	1	85	16	0	0	2	0	0	0	0	1	0	0	105
4:45	0	112	26	0	3	1	0	0	2	0	0	1	0	145
5:00	0	58	16	0	3	0	0	0	2	0	0	0	0	79
5:15	0	91	15	0	5	2	0	0	5	0	1	1	0	120
5:30	0	119	17	0	6	1	0	0	3	0	2	0	0	148
5:45	0	124	28	1	3	2	0	0	3	0	0	0	0	161
6:00	0	100	28	1	5	3	0	1	3	0	1	0	0	142
6:15	0	100	30	0	6	3	1	0	4	0	8	0	0	152
6:30	0	168	24	1	3	3	0	1	3	0	0	0	0	203
6:45	2	177	21	3	7	2	0	0	7	0	1	0	0	220
7:00	1	120	32	2	5	1	0	0	2	0	1	0	0	164
7:15	0	191	40	1	2	2	0	0	1	0	2	0	0	239
7:30	1	162	41	0	7	5	0	2	4	0	2	0	0	224
7:45	0	195	25	0	5	2	0	2	3	0	2	0	0	234
8:00	0	151	33	0	6	6	0	0	9	0	4	0	0	209
8:15	0	127	26	0	9	4	0	0	4	0	3	0	0	173
8:30	1	139	23	0	6	2	0	1	4	0	2	0	0	178
8:45	0	127	22	1	6	10	0	0	4	0	4	0	0	174
9:00	0	104	31	0	8	3	0	2	4	0	3	0	0	155
9:15	0	119	27	1	2	2	0	0	5	0	0	0	0	156
9:30	1	116	26	0	3	4	0	1	10	0	0	0	0	161
9:45	0	107	17	0	4	3	0	2	5	0	0	0	0	138
10:00	0	125	25	0	7	2	0	1	5	0	3	0	0	168
10:15	0	117	23	0	8	1	0	1	3	0	2	0	0	155
10:30	0	121	31	0	8	2	0	0	5	0	3	0	0	170
10:45	0	121	26	0	6	5	0	0	7	0	0	0	0	165
11:00	0	107	19	1	8	5	0	3	5	0	1	0	0	149
11:15	0	119	27	0	2	5	0	0	3	0	4	0	0	160
11:30	0	115	21	0	8	5	0	0	8	0	0	0	0	157
11:45	0	135	20	0	8	5	0	0	7	0	1	0	0	176
TOTAL	7	4,324	856	12	167	103	1	22	149	0	55	2	0	5,698

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	906

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	96	25	1	9	3	0	0	6	0	1	0	0	141
12:15	0	108	32	0	4	3	0	1	5	0	1	0	0	154
12:30	0	112	28	0	10	3	0	1	9	0	2	0	0	165
12:45	0	118	24	0	6	7	0	1	4	0	1	0	0	161
13:00	0	119	21	0	5	4	0	2	5	0	1	0	0	157
13:15	0	149	19	0	14	4	0	1	6	0	0	0	0	193
13:30	1	154	20	0	10	1	0	2	3	0	2	0	0	193
13:45	0	143	22	1	5	4	0	1	9	0	3	0	0	188
14:00	2	130	17	0	8	5	0	0	4	0	0	0	0	166
14:15	0	166	31	1	11	2	0	0	4	0	2	0	0	217
14:30	0	174	27	0	9	3	0	1	3	0	0	0	1	218
14:45	0	185	30	1	6	2	0	0	5	0	0	0	0	229
15:00	0	156	22	0	8	1	0	0	5	0	1	0	0	193
15:15	0	160	23	1	5	7	0	0	9	0	0	0	0	205
15:30	0	153	28	0	6	6	0	0	6	0	0	0	0	199
15:45	1	196	25	0	5	4	0	0	5	0	0	0	0	236
16:00	0	143	23	1	9	2	0	0	3	0	0	0	0	181
16:15	1	160	29	1	8	7	0	0	7	0	0	0	0	213
16:30	1	149	29	1	5	6	0	0	5	0	1	0	0	197
16:45	0	172	25	0	5	3	0	0	4	0	0	0	0	209
17:00	0	143	24	1	5	4	0	0	4	0	0	0	0	181
17:15	2	170	34	0	8	5	0	1	6	0	1	0	0	227
17:30	0	146	30	0	2	1	0	1	6	0	1	0	0	187
17:45	0	159	28	1	3	3	0	0	6	0	0	0	0	200
18:00	1	116	36	0	6	2	0	0	4	0	0	0	0	165
18:15	1	159	35	0	3	2	0	3	3	0	0	0	0	206
18:30	1	104	32	0	1	0	0	0	0	0	0	0	0	138
18:45	0	130	21	0	3	0	0	1	6	0	0	0	0	161
19:00	0	125	19	0	0	3	0	0	3	0	0	0	0	150
19:15	1	144	24	0	1	1	0	1	0	0	0	0	0	172
19:30	0	124	25	0	2	1	0	0	1	0	0	0	0	153
19:45	0	113	23	0	2	1	0	0	0	0	0	0	0	139
20:00	1	104	20	0	0	2	0	1	2	0	0	0	0	130
20:15	1	97	16	0	1	2	0	0	3	0	0	0	0	120
20:30	0	90	22	0	2	1	0	1	3	0	0	0	0	119
20:45	0	112	11	0	1	1	0	1	0	0	0	0	0	126
21:00	0	75	11	0	2	1	0	0	3	0	0	0	0	92
21:15	0	92	12	0	2	0	0	0	5	0	0	0	0	111
21:30	0	107	17	0	0	1	0	0	3	0	0	0	0	128
21:45	0	91	11	0	1	0	0	0	0	0	0	0	0	103
22:00	0	51	8	0	1	2	0	0	1	0	0	0	0	63
22:15	1	62	7	0	1	1	0	0	2	0	0	0	0	74
22:30	0	50	8	0	0	1	0	0	3	0	0	0	0	62
22:45	0	48	9	0	0	1	0	0	1	0	0	0	0	59
23:00	0	42	5	0	0	3	0	0	1	0	0	0	0	51
23:15	0	40	6	0	0	0	0	0	1	0	0	0	0	47
23:30	0	31	8	0	0	1	0	0	1	0	0	0	0	41
23:45	0	38	6	0	0	1	0	0	3	0	1	0	0	49
TOTAL	15	5,706	1,008	10	195	118	0	20	178	0	18	0	1	7,269

PM PEAK HOUR	2:15 PM
PM PEAK VOLUME	857

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	22	####	1,864	22	362	221	1	42	327	0	73	2	1	12,967
% OF TOTAL	0.2%	77.4%	14.4%	0.2%	2.8%	1.7%	0.0%	0.3%	2.5%	0.0%	0.6%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A42621

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021 **CITY#** Bloomington

JOB #: SC3110 CLASS11 Cedar between Santa Ana and Jurupa

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	34	2	0	0	0	0	0	0	0	2	0	0	38
0:15	0	30	2	0	1	1	0	0	0	0	0	0	0	34
0:30	0	24	4	0	1	1	0	0	3	0	0	0	0	33
0:45	0	25	3	0	0	0	0	1	1	0	0	0	0	30
1:00	0	25	2	0	1	2	0	0	3	0	0	0	0	33
1:15	0	27	7	0	1	0	0	0	2	0	1	0	0	38
1:30	0	21	3	0	0	0	0	0	3	1	0	0	0	28
1:45	0	29	3	0	1	1	0	0	1	0	2	0	0	37
2:00	0	21	2	0	0	0	0	0	0	0	1	0	0	24
2:15	0	10	2	0	4	0	0	0	1	0	1	0	0	18
2:30	0	13	2	0	1	1	0	0	2	0	1	0	0	20
2:45	0	17	0	0	0	1	0	0	0	0	0	0	0	18
3:00	0	17	5	0	1	0	0	0	0	0	0	0	0	23
3:15	0	21	6	0	2	1	0	0	0	0	0	0	0	30
3:30	0	34	8	0	2	0	0	0	2	0	0	0	0	46
3:45	0	33	5	0	1	0	0	0	1	0	0	0	0	40
4:00	0	38	9	0	0	2	0	0	3	0	0	0	0	52
4:15	0	33	9	0	1	1	0	0	3	0	0	0	0	47
4:30	0	58	14	0	2	2	0	0	0	0	0	0	0	76
4:45	0	52	6	0	1	0	0	1	2	0	0	0	0	62
5:00	0	45	15	0	4	3	0	0	3	0	0	0	0	70
5:15	0	51	12	0	4	1	0	0	2	0	3	0	0	73
5:30	1	85	23	0	8	2	0	0	3	0	0	0	0	122
5:45	0	71	23	0	4	4	0	0	1	0	0	0	0	103
6:00	0	53	22	0	6	2	0	0	1	0	0	0	0	84
6:15	0	89	22	1	5	6	0	0	2	0	2	0	0	127
6:30	0	118	34	1	6	4	0	0	1	0	4	0	0	168
6:45	0	121	42	1	8	5	0	0	2	0	2	0	0	181
7:00	0	168	43	0	10	3	0	0	5	0	1	0	0	230
7:15	0	153	26	3	9	6	0	0	4	0	3	0	0	204
7:30	0	139	41	2	5	2	0	0	3	0	1	0	0	193
7:45	0	101	40	0	2	1	0	0	0	0	2	0	0	146
8:00	0	96	28	0	7	4	0	0	5	0	2	0	0	142
8:15	0	109	37	1	7	1	0	0	3	0	1	0	0	159
8:30	0	102	31	0	7	4	0	0	5	0	1	0	0	150
8:45	0	92	35	1	9	1	0	0	6	0	2	0	0	146
9:00	0	96	28	0	16	3	0	0	5	0	3	0	0	151
9:15	0	111	34	0	11	3	0	0	7	0	3	0	0	169
9:30	0	86	25	0	11	4	0	0	5	0	1	0	0	132
9:45	0	107	39	0	18	9	0	1	7	0	0	0	0	181
10:00	1	78	33	0	8	3	0	0	3	0	0	0	0	126
10:15	1	97	34	0	6	3	0	1	6	0	2	0	0	150
10:30	0	80	30	0	10	1	0	0	8	0	2	0	0	131
10:45	0	92	22	0	10	1	0	0	6	0	4	0	0	135
11:00	0	96	32	0	6	9	0	0	9	0	1	0	0	153
11:15	0	101	28	0	7	7	0	0	10	0	0	0	0	153
11:30	0	104	45	0	8	4	0	0	8	0	5	0	0	174
11:45	0	93	30	0	10	2	0	0	5	0	0	0	0	140
TOTAL	3	3,296	948	10	242	111	0	4	152	1	53	0	0	4,820

AM PEAK HOUR	6:45 AM
AM PEAK VOLUME	808

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	106	29	0	4	1	0	0	5	0	3	0	0	148
12:15	0	90	33	0	3	3	0	0	7	0	1	0	0	137
12:30	0	116	36	0	6	6	0	0	5	0	1	0	0	170
12:45	0	86	49	0	10	4	0	0	9	0	6	0	0	164
13:00	0	99	31	1	7	2	0	0	10	0	1	0	0	151
13:15	0	97	34	0	10	5	0	0	16	0	3	0	0	165
13:30	0	157	36	0	14	3	0	0	8	0	0	0	0	218
13:45	0	134	35	0	8	3	0	0	4	0	5	0	0	189
14:00	0	187	39	3	8	4	0	1	4	0	1	0	0	247
14:15	0	133	42	0	11	6	0	0	6	0	0	0	0	198
14:30	0	126	41	0	7	4	0	0	6	0	1	0	0	185
14:45	1	113	45	1	7	3	0	0	9	0	2	0	0	181
15:00	0	151	41	1	9	3	0	2	7	0	0	0	0	214
15:15	0	128	25	0	8	0	0	1	6	0	1	0	0	169
15:30	1	123	41	1	9	4	0	0	6	0	0	0	0	185
15:45	1	108	41	0	5	2	0	1	5	0	0	0	0	163
16:00	1	125	43	0	6	2	0	0	4	0	0	0	0	181
16:15	0	133	45	0	10	3	0	0	7	0	0	0	0	198
16:30	1	138	43	0	10	1	0	0	9	0	0	0	0	202
16:45	0	133	33	0	3	5	0	0	5	0	1	0	0	180
17:00	0	138	40	1	3	1	0	0	6	0	0	0	0	189
17:15	0	132	29	0	8	0	0	0	7	0	0	0	0	176
17:30	0	144	35	0	4	2	0	2	4	0	2	0	0	193
17:45	0	138	36	0	7	1	0	0	2	0	0	0	0	184
18:00	0	128	42	0	6	2	0	1	3	0	0	0	0	182
18:15	0	139	31	0	5	4	0	0	7	0	0	0	0	186
18:30	0	146	33	0	2	0	0	1	3	0	1	0	0	186
18:45	0	118	28	0	3	5	0	0	4	0	1	0	0	159
19:00	0	124	21	0	1	5	0	0	4	0	0	0	0	155
19:15	0	134	21	0	2	1	0	0	2	0	0	0	0	160
19:30	0	105	21	0	2	0	0	0	3	0	0	0	0	131
19:45	1	118	19	0	1	0	0	1	3	0	0	0	0	143
20:00	0	76	14	0	2	1	0	0	4	0	0	0	0	97
20:15	0	101	18	0	1	2	0	0	2	0	0	0	0	124
20:30	0	86	16	0	0	0	0	0	6	0	0	0	0	108
20:45	0	93	13	0	1	0	0	0	2	0	0	0	0	109
21:00	0	69	9	0	1	0	0	0	1	0	0	0	0	80
21:15	0	73	12	0	0	0	0	0	2	0	0	0	0	87
21:30	1	67	9	0	2	0	0	0	0	0	0	0	0	79
21:45	0	67	11	0	1	0	0	0	6	0	0	0	0	85
22:00	0	74	12	0	0	0	0	0	2	0	0	0	0	88
22:15	0	57	9	0	0	1	0	0	3	0	0	0	0	70
22:30	0	59	10	0	0	0	0	1	1	0	0	0	0	71
22:45	0	46	10	0	2	1	0	0	0	0	0	0	0	59
23:00	0	34	3	0	1	3	0	0	0	0	0	0	0	41
23:15	0	35	5	0	0	0	0	0	1	0	1	0	0	42
23:30	0	28	6	0	0	1	0	0	0	0	0	0	0	35
23:45	0	30	6	0	0	0	0	0	0	0	0	0	0	36
TOTAL	7	5,042	1,281	8	210	94	0	11	216	0	31	0	0	6,900

PM PEAK HOUR	1:30 PM
PM PEAK VOLUME	852

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	10	8,338	2,229	18	452	205	0	15	368	1	84	0	0	11,720
% OF TOTAL	0.1%	71.1%	19.0%	0.2%	3.9%	1.7%	0.0%	0.1%	3.1%	0.0%	0.7%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	32	17,425	4,652	32	893	405	1	37	694	2	162	0	0	24,335
% OF TOTAL	0.1%	71.6%	19.1%	0.1%	3.7%	1.7%	0.0%	0.2%	2.9%	0.0%	0.7%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY# Bloomington
CLASS11 Cedar between Santa Ana and Jurupa

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	25	1	0	0	1	0	0	2	0	0	0	0	29
0:15	0	35	3	0	1	0	0	1	0	0	0	0	0	40
0:30	0	22	3	0	0	1	0	0	0	0	2	0	0	28
0:45	0	22	0	0	1	1	0	0	1	0	0	0	0	25
1:00	0	23	0	0	1	1	0	0	3	0	0	0	0	28
1:15	0	16	3	0	0	0	0	1	2	0	1	0	0	23
1:30	0	17	1	0	0	0	0	0	1	1	0	0	0	20
1:45	0	24	2	0	1	0	0	0	1	0	0	0	0	28
2:00	0	17	2	0	0	0	0	1	1	0	0	0	0	21
2:15	0	14	2	0	0	0	0	0	1	0	0	0	0	17
2:30	0	35	5	0	0	0	0	0	1	0	0	0	0	41
2:45	0	25	2	0	0	0	0	0	1	0	0	0	0	28
3:00	0	18	9	0	0	1	1	0	1	0	0	0	0	30
3:15	0	34	7	0	0	0	0	0	0	0	0	0	0	41
3:30	0	39	8	0	0	0	0	0	1	0	0	0	0	48
3:45	0	45	10	0	3	0	0	0	2	0	0	0	0	60
4:00	0	43	9	0	2	1	0	0	3	0	0	0	0	58
4:15	0	79	12	0	0	2	0	0	2	0	0	0	0	95
4:30	1	86	18	0	2	1	0	0	0	0	1	0	0	109
4:45	0	99	22	0	2	1	0	0	5	0	1	0	0	130
5:00	0	54	24	0	2	1	0	0	2	0	0	0	0	83
5:15	0	67	29	0	6	3	0	1	9	0	1	0	0	116
5:30	2	97	17	0	7	1	0	0	5	0	2	0	0	131
5:45	0	108	33	1	9	0	0	0	3	0	0	0	0	154
6:00	0	91	27	0	7	3	0	0	3	0	1	0	0	132
6:15	0	99	31	1	9	5	0	1	6	0	7	0	0	159
6:30	0	139	43	1	10	4	0	0	1	0	0	0	0	198
6:45	1	116	41	1	6	2	0	0	6	0	2	0	0	175
7:00	2	114	33	1	9	1	0	1	4	0	1	0	0	166
7:15	0	181	50	1	5	2	0	0	4	0	1	0	0	244
7:30	0	193	46	0	7	8	0	0	4	0	2	0	0	260
7:45	1	168	38	0	6	4	0	0	7	0	3	0	0	227
8:00	0	120	39	1	5	4	0	0	10	0	3	0	0	182
8:15	0	132	33	0	7	5	0	0	5	0	3	0	0	185
8:30	1	127	18	0	7	1	0	1	5	0	3	0	0	163
8:45	0	100	29	0	9	8	0	0	4	0	2	0	0	152
9:00	0	103	43	0	11	3	0	0	5	0	4	0	0	169
9:15	0	104	40	0	5	0	0	0	4	0	0	0	0	153
9:30	1	122	32	0	4	5	0	0	8	0	0	0	0	172
9:45	1	84	32	0	7	2	0	1	4	0	1	0	0	132
10:00	0	96	44	0	9	3	0	1	7	0	2	0	0	162
10:15	0	98	29	0	12	1	0	1	5	0	4	0	0	150
10:30	0	117	34	0	8	1	0	0	5	0	1	0	0	166
10:45	0	111	26	0	6	4	0	0	6	0	1	0	0	154
11:00	0	102	30	1	4	3	0	1	5	0	0	0	0	146
11:15	0	98	35	0	9	5	0	0	3	0	5	0	0	155
11:30	0	90	28	0	7	3	0	0	10	0	0	0	0	138
11:45	0	111	40	0	5	5	0	1	5	0	1	0	0	168
TOTAL	10	3,860	1,063	8	211	97	1	12	173	1	55	0	0	5,491

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	913

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	84	29	0	11	3	0	0	7	0	1	0	0	135
12:15	0	95	24	0	7	4	0	1	5	0	0	0	0	136
12:30	0	103	44	0	11	5	0	1	7	0	3	0	0	174
12:45	0	96	33	0	9	5	0	0	5	0	1	0	0	149
13:00	0	97	40	0	5	3	0	0	5	0	1	0	0	151
13:15	0	124	30	0	12	3	0	2	5	0	0	0	0	176
13:30	0	128	37	0	8	2	0	0	3	0	2	0	0	180
13:45	0	146	39	0	8	5	0	0	9	0	3	0	0	210
14:00	2	126	43	0	11	4	0	0	4	0	0	0	0	190
14:15	0	149	48	0	9	2	0	0	4	0	2	0	0	214
14:30	0	128	42	2	10	0	0	1	4	0	2	0	0	189
14:45	0	189	42	1	6	3	0	1	6	0	0	0	0	248
15:00	0	119	30	0	12	2	0	0	2	0	2	0	0	167
15:15	0	155	47	1	8	4	0	0	5	0	0	0	0	220
15:30	0	132	36	0	7	5	0	0	5	0	0	0	0	185
15:45	1	165	44	0	7	5	0	0	5	0	0	0	0	227
16:00	0	156	37	1	9	2	0	0	1	0	0	0	0	206
16:15	0	164	54	0	6	5	0	0	5	0	1	0	0	235
16:30	0	131	30	0	9	6	0	0	6	0	1	0	0	183
16:45	1	171	45	0	8	3	0	0	4	0	0	0	0	232
17:00	0	144	43	0	12	4	0	0	4	0	0	0	0	207
17:15	0	160	43	0	7	3	0	0	6	0	1	0	0	220
17:30	0	133	39	0	3	3	0	0	5	0	1	0	0	184
17:45	0	158	37	1	4	2	0	0	3	0	0	0	0	205
18:00	0	106	36	0	5	3	0	0	2	0	0	0	0	152
18:15	1	161	37	0	3	2	0	0	4	0	0	0	0	208
18:30	0	116	37	0	3	0	0	1	3	0	0	0	0	160
18:45	1	118	27	0	2	0	0	0	3	0	0	0	0	151
19:00	1	124	28	0	0	2	0	1	2	0	0	0	0	158
19:15	0	135	17	0	1	2	0	0	2	0	0	0	0	157
19:30	2	133	29	0	2	1	0	1	1	0	0	0	0	169
19:45	0	107	21	0	1	0	0	0	2	0	0	0	0	131
20:00	1	93	18	0	1	2	0	0	2	0	0	0	0	117
20:15	1	97	18	0	2	1	0	0	2	0	0	0	0	121
20:30	0	80	22	0	2	1	0	0	3	0	0	0	0	108
20:45	0	102	20	0	1	0	0	1	0	0	0	0	0	124
21:00	0	65	15	0	2	1	0	0	1	0	0	0	0	84
21:15	0	65	10	0	1	1	0	0	1	0	0	0	0	78
21:30	0	69	13	0	0	1	0	0	3	0	0	0	0	86
21:45	0	74	12	0	1	0	0	0	0	0	0	0	0	87
22:00	0	62	10	0	1	0	0	0	1	0	0	0	0	74
22:15	1	51	9	0	1	1	0	0	0	0	0	0	0	63
22:30	0	45	7	0	1	1	0	0	2	0	0	0	0	56
22:45	0	40	10	0	0	0	0	0	1	0	0	0	0	51
23:00	0	30	5	0	0	1	0	0	1	0	0	0	0	37
23:15	0	41	8	0	0	0	0	0	1	0	0	0	0	50
23:30	0	29	6	0	1	0	0	0	0	0	0	0	0	36
23:45	0	31	9	0	0	0	0	0	1	0	2	0	0	43
TOTAL	12	5,227	1,360	6	230	103	0	10	153	0	23	0	0	7,124

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	857

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	22	9,087	2,423	14	441	200	1	22	326	1	78	0	0	12,615
% OF TOTAL	0.2%	72.0%	19.2%	0.1%	3.5%	1.6%	0.0%	0.2%	2.6%	0.0%	0.6%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A42621

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021 **CITY#** Bloomington

JOB #: SC3110 CLASS12 Cedar between Jurupa and 7th

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	32	1	0	0	1	0	0	0	0	1	0	0	35
0:15	0	27	2	0	1	0	0	0	0	0	0	0	0	30
0:30	0	22	4	0	1	1	0	0	3	0	0	0	0	31
0:45	0	24	3	0	0	0	0	1	0	0	0	0	0	28
1:00	0	22	2	0	1	2	0	0	4	0	0	0	0	31
1:15	0	25	7	0	1	0	0	0	2	0	1	0	0	36
1:30	0	20	3	0	0	0	0	0	3	1	0	0	0	27
1:45	0	26	1	0	0	1	0	0	1	0	1	0	0	30
2:00	0	20	2	0	0	0	0	0	0	0	1	0	0	23
2:15	0	10	2	0	4	0	0	0	1	0	1	0	0	18
2:30	0	9	2	0	1	1	0	0	2	0	1	0	0	16
2:45	0	18	0	0	0	1	0	0	0	0	0	0	0	19
3:00	0	17	3	0	1	0	0	0	0	0	0	0	0	21
3:15	0	23	5	0	1	1	0	0	0	0	0	0	0	30
3:30	0	29	7	0	2	0	0	0	2	0	0	0	0	40
3:45	0	30	5	0	1	0	0	0	1	0	0	0	0	37
4:00	0	35	7	0	0	2	0	0	3	0	0	0	0	47
4:15	0	30	7	0	0	1	0	0	3	0	0	0	0	41
4:30	0	43	14	0	2	1	0	0	0	0	0	0	0	60
4:45	0	46	8	0	1	0	0	1	2	0	0	0	0	58
5:00	0	43	15	0	2	3	0	0	2	0	0	0	0	65
5:15	0	48	14	0	5	1	0	0	2	0	3	0	0	73
5:30	1	73	22	0	7	2	0	0	3	0	0	0	0	108
5:45	0	71	22	0	5	4	0	0	1	0	0	0	0	103
6:00	0	46	20	0	4	1	0	0	1	0	0	0	0	72
6:15	0	85	20	1	4	6	0	0	2	0	2	0	0	120
6:30	0	116	34	1	5	4	0	0	1	0	4	0	0	165
6:45	0	107	38	0	8	5	0	0	1	0	2	0	0	161
7:00	0	147	38	0	11	2	0	0	4	0	1	0	0	203
7:15	0	117	26	3	11	6	0	0	4	0	3	0	0	170
7:30	0	110	36	1	6	2	0	0	2	0	1	0	0	158
7:45	0	89	40	0	2	1	0	0	0	0	2	0	0	134
8:00	0	90	24	0	8	4	0	0	5	0	2	0	0	133
8:15	0	103	37	0	8	2	0	0	4	0	1	0	0	155
8:30	0	87	27	1	5	4	0	0	5	0	1	0	0	130
8:45	0	86	32	0	6	1	0	0	5	0	2	0	0	132
9:00	0	93	32	0	15	3	0	0	4	0	3	0	0	150
9:15	0	114	39	0	7	2	0	0	7	0	3	0	0	172
9:30	0	80	26	0	7	5	0	0	4	0	1	0	0	123
9:45	0	108	43	0	12	8	0	1	7	0	0	0	0	179
10:00	1	90	28	0	7	4	0	0	4	0	1	0	0	135
10:15	1	95	37	0	4	3	0	1	7	0	2	0	0	150
10:30	0	64	35	0	5	1	0	0	8	0	1	0	0	114
10:45	0	85	18	0	9	1	0	0	6	0	4	0	0	123
11:00	0	88	27	0	7	9	0	0	9	0	1	0	0	141
11:15	0	100	22	0	6	7	0	0	9	0	0	0	0	144
11:30	0	94	42	0	5	3	0	0	7	0	5	0	0	156
11:45	0	87	27	0	10	2	0	0	5	0	0	0	0	131
TOTAL	3	3,024	906	7	208	108	0	4	146	1	51	0	0	4,458

AM PEAK HOUR	6:30 AM
AM PEAK VOLUME	699

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	92	31	0	4	1	0	0	4	0	3	0	0	135
12:15	0	83	28	0	3	3	0	0	7	0	1	0	0	125
12:30	0	109	33	0	5	6	0	0	5	0	1	0	0	159
12:45	0	87	48	0	7	4	0	0	10	0	6	0	0	162
13:00	0	105	35	1	7	2	0	0	9	0	1	0	0	160
13:15	0	93	33	0	11	5	0	0	16	0	3	0	0	161
13:30	0	147	40	0	10	2	0	0	9	0	0	0	0	208
13:45	0	127	32	0	8	3	0	0	5	0	5	0	0	180
14:00	0	157	39	3	6	5	0	1	3	0	1	0	0	215
14:15	0	134	41	0	11	7	0	0	6	0	0	0	0	199
14:30	0	115	48	1	5	5	0	0	6	0	1	0	0	181
14:45	1	102	59	1	12	3	0	0	8	0	2	0	0	188
15:00	0	142	45	1	6	4	0	2	7	0	0	0	0	207
15:15	0	127	26	0	7	0	0	0	7	0	1	0	0	168
15:30	1	117	37	2	10	2	0	0	6	0	0	0	0	175
15:45	1	114	42	0	9	2	0	1	6	0	0	0	0	175
16:00	0	137	46	0	7	1	0	0	5	0	0	0	0	196
16:15	0	122	51	0	10	3	0	0	8	0	0	0	0	194
16:30	1	142	44	0	9	1	0	0	9	0	0	0	0	206
16:45	0	129	37	0	4	4	0	0	4	0	1	0	0	179
17:00	0	147	46	1	3	1	0	0	5	0	0	0	0	203
17:15	0	141	34	0	8	0	0	0	8	0	0	0	0	191
17:30	0	145	41	0	4	0	0	2	4	0	2	0	0	198
17:45	0	146	39	0	8	1	0	0	2	0	0	0	0	196
18:00	0	138	42	0	5	2	0	1	2	0	0	0	0	190
18:15	0	140	32	0	6	4	0	0	6	0	0	0	0	188
18:30	1	131	36	0	3	0	0	1	4	0	1	0	0	177
18:45	0	123	27	0	3	4	0	0	2	0	1	0	0	160
19:00	0	115	22	0	1	3	0	0	4	0	0	0	0	145
19:15	0	121	19	0	2	0	0	0	2	0	0	0	0	144
19:30	0	99	19	0	2	0	0	0	2	0	0	0	0	122
19:45	1	108	22	0	1	0	0	1	3	0	0	0	0	136
20:00	0	68	17	0	1	0	0	0	3	0	0	0	0	89
20:15	0	93	15	0	1	2	0	0	2	0	0	0	0	113
20:30	0	77	13	0	0	0	0	0	5	0	0	0	0	95
20:45	0	77	10	0	1	0	0	0	2	0	0	0	0	90
21:00	0	63	5	0	1	0	0	0	1	0	0	0	0	70
21:15	0	65	12	0	0	0	0	0	2	0	0	0	0	79
21:30	1	60	8	0	1	0	0	0	0	0	0	0	0	70
21:45	0	64	12	0	1	0	0	0	6	0	0	0	0	83
22:00	0	71	12	0	0	0	0	0	2	0	0	0	0	85
22:15	0	52	8	0	0	1	0	0	2	0	0	0	0	63
22:30	0	49	8	0	0	0	0	1	2	0	0	0	0	60
22:45	0	47	8	0	2	1	0	0	0	0	0	0	0	58
23:00	0	32	2	0	1	2	0	0	0	0	0	0	0	37
23:15	0	28	4	0	0	0	0	0	1	0	1	0	0	34
23:30	0	27	7	0	0	1	0	0	0	0	0	0	0	35
23:45	0	32	7	0	0	0	0	0	0	0	0	0	0	39
TOTAL	7	4,840	1,322	10	206	85	0	10	212	0	31	0	0	6,723

PM PEAK HOUR	1:30 PM
PM PEAK VOLUME	802

TOTAL: AM+PM	10	7,864	2,228	17	414	193	0	14	358	1	82	0	0	11,181
% OF TOTAL	0.1%	70.3%	19.9%	0.2%	3.7%	1.7%	0.0%	0.1%	3.2%	0.0%	0.7%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	29	16,420	4,561	35	821	381	1	32	672	2	160	0	0	23,114
% OF TOTAL	0.1%	71.0%	19.7%	0.2%	3.6%	1.6%	0.0%	0.1%	2.9%	0.0%	0.7%	0.0%	0.0%	100.0%

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY# Bloomington
CLASS12 Cedar between Jurupa and 7th

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	22	1	0	0	1	0	0	2	0	0	0	0	26
0:15	0	30	3	0	1	0	0	1	0	0	0	0	0	35
0:30	0	20	2	0	0	0	0	0	0	0	2	0	0	24
0:45	0	19	0	0	1	1	0	0	1	0	0	0	0	22
1:00	0	22	0	0	1	1	0	0	3	0	0	0	0	27
1:15	0	12	3	0	0	0	0	1	2	0	1	0	0	19
1:30	0	13	0	0	0	0	0	0	1	1	0	0	0	15
1:45	0	16	1	0	1	0	0	0	1	0	0	0	0	19
2:00	0	14	2	0	0	0	0	1	0	0	0	0	0	17
2:15	0	13	2	0	0	0	0	0	1	0	0	0	0	16
2:30	0	33	5	0	0	0	0	0	1	0	0	0	0	39
2:45	0	22	2	0	0	0	0	0	2	0	0	0	0	26
3:00	0	18	8	0	0	1	1	0	0	0	0	0	0	28
3:15	0	31	5	0	0	0	0	0	0	0	1	0	0	37
3:30	0	39	9	0	0	0	0	0	2	0	0	0	0	50
3:45	0	38	10	0	3	0	0	0	2	0	0	0	0	53
4:00	0	39	9	0	2	1	0	0	3	0	0	0	0	54
4:15	0	73	10	0	0	1	0	0	2	0	0	0	0	86
4:30	1	78	15	0	3	2	0	0	0	0	1	0	0	100
4:45	0	97	23	0	1	1	0	0	5	0	1	0	0	128
5:00	0	52	24	0	3	1	0	0	1	0	0	0	0	81
5:15	0	66	30	0	6	4	0	1	9	0	1	0	0	117
5:30	2	90	20	0	7	3	0	0	6	0	2	0	0	130
5:45	0	102	31	1	9	0	0	0	3	0	0	0	0	146
6:00	0	85	30	0	6	3	0	0	3	0	1	0	0	128
6:15	0	91	31	1	8	4	0	1	5	0	7	0	0	148
6:30	0	128	47	0	10	4	0	0	1	0	0	0	0	190
6:45	1	115	38	1	6	2	0	0	5	0	2	0	0	170
7:00	1	113	28	2	9	1	0	0	4	0	1	0	0	159
7:15	0	172	51	1	7	3	0	0	4	0	1	0	0	239
7:30	0	195	46	0	7	7	0	0	4	0	2	0	0	261
7:45	0	170	36	0	9	4	0	0	6	0	3	0	0	228
8:00	0	108	36	2	5	4	0	0	8	0	3	0	0	166
8:15	0	130	30	0	7	5	0	0	5	0	3	0	0	180
8:30	1	114	23	0	7	2	0	0	4	0	3	0	0	154
8:45	0	93	27	2	9	8	0	0	4	0	2	0	0	145
9:00	0	104	37	0	10	2	0	0	4	0	4	0	0	161
9:15	0	96	44	0	5	1	0	0	4	0	0	0	0	150
9:30	1	114	34	0	5	4	0	0	7	0	0	0	0	165
9:45	1	72	28	0	6	1	0	1	4	0	0	0	0	113
10:00	0	87	37	0	10	3	0	1	7	0	2	0	0	147
10:15	0	85	33	0	12	1	0	1	5	0	4	0	0	141
10:30	0	90	31	0	7	1	0	0	5	0	1	0	0	135
10:45	0	96	21	0	7	3	0	0	6	0	1	0	0	134
11:00	0	90	28	0	4	3	0	1	5	0	0	0	0	131
11:15	0	99	33	0	4	4	0	0	3	0	5	0	0	148
11:30	0	97	29	0	6	3	0	0	10	0	0	0	0	145
11:45	0	111	32	0	7	4	0	1	6	0	1	0	0	162
TOTAL	8	3,614	1,025	10	211	94	1	10	166	1	55	0	0	5,195

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	894

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	83	32	0	8	2	0	0	7	0	1	0	0	133
12:15	0	95	24	0	7	3	0	1	5	0	0	0	0	135
12:30	0	95	40	0	11	5	0	0	6	0	3	0	0	160
12:45	0	97	30	0	7	5	0	0	5	0	1	0	0	145
13:00	0	105	36	0	3	3	0	0	4	0	1	0	0	152
13:15	0	101	26	1	12	3	0	2	5	0	0	0	0	150
13:30	0	123	30	0	5	2	0	0	3	0	2	0	0	165
13:45	0	120	35	0	7	5	0	0	9	0	3	0	0	179
14:00	2	120	38	1	8	3	0	0	4	0	0	0	0	176
14:15	0	149	45	0	9	2	0	0	4	0	2	0	0	211
14:30	0	121	35	1	8	1	0	1	4	0	2	0	0	173
14:45	0	171	39	1	3	3	0	1	6	0	0	0	0	224
15:00	0	116	32	0	11	2	0	0	2	0	2	0	0	165
15:15	0	143	44	1	6	4	0	0	6	0	0	0	0	204
15:30	0	124	35	0	4	6	0	0	6	0	0	0	0	175
15:45	1	157	41	0	6	5	0	0	5	0	0	0	0	215
16:00	0	166	36	1	10	1	0	0	1	0	0	0	0	215
16:15	0	154	52	0	7	5	0	0	5	0	1	0	0	224
16:30	0	130	30	0	8	5	0	0	5	0	1	0	0	179
16:45	1	166	41	1	8	3	0	0	4	0	0	0	0	224
17:00	0	137	38	0	10	4	0	0	4	0	0	0	0	193
17:15	0	151	50	0	6	3	0	0	7	0	1	0	0	218
17:30	0	131	43	0	2	2	0	0	5	0	1	0	0	184
17:45	0	149	39	1	3	2	0	0	2	0	0	0	0	196
18:00	0	99	38	0	5	3	0	0	1	0	0	0	0	146
18:15	1	160	30	0	2	1	0	0	3	0	0	0	0	197
18:30	0	115	36	0	2	0	0	1	3	0	0	0	0	157
18:45	1	110	30	0	2	0	0	0	2	0	0	0	0	145
19:00	1	110	31	0	0	1	0	0	2	0	0	0	0	145
19:15	0	115	19	0	1	2	0	0	2	0	0	0	0	139
19:30	2	128	25	0	2	0	0	1	1	0	0	0	0	159
19:45	0	80	17	0	1	0	0	0	2	0	0	0	0	100
20:00	1	86	19	0	0	2	0	0	1	0	0	0	0	109
20:15	0	97	20	0	2	1	0	0	3	0	0	0	0	123
20:30	0	77	24	0	1	2	0	0	3	0	0	0	0	107
20:45	0	96	17	0	1	0	0	1	0	0	0	0	0	115
21:00	0	65	14	0	2	1	0	0	1	0	0	0	0	83
21:15	0	65	10	0	1	1	0	0	0	0	0	0	0	77
21:30	0	70	14	0	0	0	0	0	2	0	0	0	0	86
21:45	0	66	11	0	1	0	0	0	0	0	0	0	0	78
22:00	0	52	11	0	1	0	0	0	1	0	0	0	0	65
22:15	1	50	9	0	1	0	0	0	0	0	0	0	0	61
22:30	0	43	6	0	1	1	0	0	3	0	0	0	0	54
22:45	0	39	8	0	0	0	0	0	1	0	0	0	0	48
23:00	0	27	5	0	0	0	0	0	1	0	0	0	0	33
23:15	0	33	8	0	0	0	0	0	1	0	0	0	0	42
23:30	0	26	6	0	1	0	0	0	0	0	0	0	0	33
23:45	0	29	9	0	0	0	0	0	1	0	2	0	0	41
TOTAL	11	4,942	1,308	8	196	94	0	8	148	0	23	0	0	6,738

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	842

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	19	8,556	2,333	18	407	188	1	18	314	1	78	0	0	11,933
% OF TOTAL	0.2%	71.7%	19.6%	0.2%	3.4%	1.6%	0.0%	0.2%	2.6%	0.0%	0.7%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A42621

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021 **CITY#** Bloomington

JOB #: SC3110 CLASS13 Cedar between 7th and El Rivino

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	34	1	0	1	1	0	0	0	0	1	0	0	38
0:15	0	27	4	0	0	0	0	0	0	0	0	0	0	31
0:30	0	20	6	0	0	1	0	1	3	0	0	0	0	31
0:45	0	22	3	0	0	0	0	0	0	0	0	0	0	25
1:00	0	33	4	0	1	1	0	1	3	0	1	0	0	44
1:15	0	25	4	0	0	0	0	0	2	0	1	0	0	32
1:30	0	17	2	0	0	0	0	0	4	0	0	0	0	23
1:45	0	22	1	0	0	0	0	0	1	0	2	0	0	26
2:00	0	21	1	0	1	0	0	0	0	0	1	0	0	24
2:15	0	12	1	0	2	0	0	0	2	0	1	0	0	18
2:30	0	15	1	0	0	1	0	0	1	0	1	0	0	19
2:45	0	16	0	0	0	1	0	0	0	0	0	0	0	17
3:00	0	16	1	0	1	0	0	0	0	0	0	0	0	18
3:15	0	22	6	0	0	0	0	0	0	0	0	0	0	28
3:30	0	30	4	0	2	0	0	0	2	0	0	0	0	38
3:45	0	26	6	0	1	0	0	0	1	0	0	0	0	34
4:00	0	25	3	0	0	2	0	0	3	0	0	0	0	33
4:15	0	32	4	0	0	1	0	0	3	0	0	0	0	40
4:30	0	39	11	0	2	1	0	0	0	0	0	0	0	53
4:45	0	44	4	0	0	1	0	2	1	0	0	0	0	52
5:00	0	31	14	0	2	1	0	0	3	0	1	0	0	52
5:15	0	50	6	0	4	0	0	0	1	0	4	0	0	65
5:30	1	71	9	0	5	2	0	0	3	0	1	0	0	92
5:45	0	59	27	0	4	2	0	0	1	0	1	0	0	94
6:00	0	58	18	0	1	4	0	0	1	0	0	0	0	82
6:15	0	73	15	0	7	4	0	0	2	0	2	0	0	103
6:30	0	103	24	0	7	5	0	0	1	0	4	0	0	144
6:45	0	112	36	0	5	5	0	0	1	0	2	0	0	161
7:00	0	123	30	2	9	3	0	0	4	0	1	0	0	172
7:15	0	103	27	2	7	6	0	0	5	0	3	0	0	153
7:30	0	82	28	0	6	1	0	0	2	0	2	0	0	121
7:45	0	77	31	0	1	1	0	0	1	0	1	0	0	112
8:00	0	78	33	0	5	4	0	0	5	0	2	0	0	127
8:15	0	93	38	1	3	4	0	0	4	0	1	0	0	144
8:30	0	80	27	0	4	2	0	0	5	0	1	0	0	119
8:45	0	80	35	1	6	2	0	0	5	0	2	0	0	131
9:00	0	86	38	0	5	2	0	0	5	0	5	0	0	141
9:15	1	102	38	0	6	2	0	1	6	0	2	0	0	158
9:30	0	78	31	0	6	4	0	2	3	0	1	0	0	125
9:45	1	91	45	0	7	8	0	2	6	0	1	0	0	161
10:00	0	80	26	0	8	3	0	0	3	0	0	0	0	120
10:15	1	83	32	0	4	3	0	2	7	0	3	0	0	135
10:30	0	50	31	0	2	1	0	3	4	0	1	0	0	92
10:45	0	74	26	0	9	2	0	1	4	0	4	0	0	120
11:00	0	76	32	0	3	6	0	2	7	0	2	0	0	128
11:15	0	99	27	0	9	6	0	2	8	0	1	0	0	152
11:30	0	80	43	0	4	3	0	0	6	0	5	0	0	141
11:45	0	76	31	0	8	2	0	0	5	0	0	0	0	122
TOTAL	4	2,746	865	6	158	98	0	19	134	0	61	0	0	4,091

AM PEAK HOUR	6:30 AM
AM PEAK VOLUME	630

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	1	66	36	0	3	1	0	2	3	0	3	0	0	115
12:15	0	79	31	0	0	3	0	0	5	0	1	0	0	119
12:30	0	85	40	0	3	5	0	0	5	0	2	0	0	140
12:45	0	77	43	0	5	4	0	0	9	0	5	0	0	143
13:00	0	97	28	0	5	2	0	0	8	0	1	0	0	141
13:15	0	77	30	1	8	6	0	0	17	0	3	0	0	142
13:30	0	151	41	0	5	3	0	0	7	0	0	0	0	207
13:45	0	118	43	0	5	4	0	1	4	0	5	0	0	180
14:00	0	116	40	2	4	6	0	1	4	0	1	0	0	174
14:15	0	113	49	0	6	5	0	1	6	0	0	0	0	180
14:30	0	113	40	1	6	3	0	0	5	0	1	0	0	169
14:45	1	112	62	0	7	6	0	0	8	0	1	0	0	197
15:00	0	130	54	0	7	2	0	2	10	0	0	0	0	205
15:15	0	154	34	0	5	2	0	0	5	0	1	0	0	201
15:30	1	111	52	2	9	2	0	1	5	0	0	0	0	183
15:45	1	112	56	0	4	3	0	1	6	0	0	0	0	183
16:00	0	127	53	0	8	1	0	1	3	0	0	0	0	193
16:15	1	134	48	0	7	4	0	1	9	0	0	0	0	204
16:30	0	139	47	0	9	0	0	0	9	0	0	0	0	204
16:45	0	145	44	0	4	5	0	0	3	0	0	0	0	201
17:00	1	152	47	1	4	1	0	2	6	0	0	0	0	214
17:15	0	149	40	0	1	2	0	0	7	0	0	0	0	199
17:30	0	128	43	0	4	1	0	3	2	0	2	0	0	183
17:45	0	139	43	0	9	1	0	1	1	0	0	0	0	194
18:00	1	133	29	0	2	3	0	0	4	0	0	0	0	172
18:15	1	124	33	0	4	3	0	0	5	0	0	0	0	170
18:30	1	131	31	0	3	0	0	2	2	0	1	0	0	171
18:45	0	118	26	0	3	5	0	1	4	0	1	0	0	158
19:00	0	99	24	0	2	2	0	1	3	0	0	0	0	131
19:15	0	117	23	0	1	0	0	0	2	0	0	0	0	143
19:30	0	109	19	0	2	0	0	0	2	0	0	0	0	132
19:45	0	100	24	0	0	0	0	1	2	0	0	0	0	127
20:00	0	82	16	0	0	0	0	1	3	0	0	0	0	102
20:15	0	75	19	0	2	2	0	0	2	0	0	0	0	100
20:30	1	84	14	0	0	0	0	0	4	0	0	0	0	103
20:45	1	76	9	0	1	0	0	0	2	0	0	0	0	89
21:00	0	71	10	0	0	0	0	0	1	0	0	0	0	82
21:15	0	82	11	0	1	0	0	0	2	0	0	0	0	96
21:30	1	61	9	0	1	0	0	0	0	0	0	0	0	72
21:45	0	60	9	0	1	0	0	0	6	0	0	0	0	76
22:00	0	74	6	0	0	0	0	0	2	0	0	0	0	82
22:15	0	56	6	0	0	1	0	0	1	0	0	0	0	64
22:30	0	51	8	0	1	0	0	0	3	0	0	0	0	63
22:45	0	52	3	0	2	2	0	0	0	0	0	0	0	59
23:00	0	37	2	0	1	3	0	0	0	0	0	0	0	43
23:15	0	23	4	0	0	1	0	0	1	0	0	0	0	29
23:30	0	41	4	0	0	1	0	0	0	0	0	0	0	46
23:45	0	28	4	0	0	0	0	0	0	0	0	0	0	32
TOTAL	12	4,710	1,387	7	155	95	0	23	198	0	28	0	0	6,613

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	823

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	16	7,456	2,252	13	313	193	0	42	332	0	89	0	0	10,704
% OF TOTAL	0.1%	69.7%	21.0%	0.1%	2.9%	1.8%	0.0%	0.4%	3.1%	0.0%	0.8%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	41	16,057	4,978	27	658	408	0	92	624	0	168	1	0	23,054
% OF TOTAL	0.2%	69.6%	21.6%	0.1%	2.9%	1.8%	0.0%	0.4%	2.7%	0.0%	0.7%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY# Bloomington
CLASS13 Cedar between 7th and El Rivino

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	16	3	0	0	1	0	0	1	0	0	0	0	21
0:15	0	21	5	0	1	1	0	1	0	0	0	0	0	29
0:30	0	13	2	0	0	0	0	0	0	0	2	0	0	17
0:45	0	17	0	0	1	2	0	0	1	0	0	0	0	21
1:00	0	23	1	0	0	1	0	0	3	0	0	0	0	28
1:15	0	15	2	0	0	1	0	1	2	0	1	0	0	22
1:30	0	11	1	0	0	0	0	0	2	0	1	0	0	15
1:45	0	10	4	0	0	0	0	0	1	0	0	0	0	15
2:00	0	12	1	0	0	0	0	1	0	0	0	0	0	14
2:15	0	9	4	0	0	0	0	1	0	0	0	0	0	14
2:30	0	34	2	0	0	0	0	0	1	0	0	0	0	37
2:45	0	27	5	0	0	0	0	0	1	0	0	0	0	33
3:00	0	20	7	0	1	1	0	0	1	0	0	0	0	30
3:15	0	22	11	0	0	0	0	0	0	0	1	0	0	34
3:30	0	36	20	0	0	0	0	0	2	0	0	0	0	58
3:45	0	31	11	0	3	0	0	1	1	0	0	0	0	47
4:00	0	36	15	0	0	1	0	0	2	0	0	0	0	54
4:15	0	56	24	0	1	1	0	1	2	0	0	0	0	85
4:30	1	77	32	0	2	2	0	0	0	0	1	0	0	115
4:45	0	113	38	0	2	2	0	0	4	0	0	1	0	160
5:00	0	57	30	0	4	3	0	0	1	0	0	0	0	95
5:15	0	75	38	0	7	5	0	2	7	0	1	0	0	135
5:30	2	99	34	0	5	2	0	0	6	0	3	0	0	151
5:45	0	102	50	1	6	1	0	0	4	0	0	0	0	164
6:00	0	96	48	0	4	3	0	1	2	0	0	0	0	154
6:15	0	94	37	0	9	3	0	0	6	0	8	0	0	157
6:30	0	123	53	0	11	4	0	0	2	0	1	0	0	194
6:45	1	140	44	0	6	2	0	0	5	0	1	0	0	199
7:00	2	124	32	0	9	2	0	1	2	0	0	0	0	172
7:15	0	190	55	0	4	4	0	0	4	0	1	0	0	258
7:30	0	197	56	1	7	4	0	2	2	0	3	0	0	272
7:45	0	178	43	0	6	5	0	3	3	0	3	0	0	241
8:00	0	129	45	0	4	4	0	1	8	0	3	0	0	194
8:15	0	122	30	0	5	4	0	0	5	0	3	0	0	169
8:30	1	121	20	0	7	4	0	0	4	0	3	0	0	160
8:45	0	105	36	1	7	7	0	1	3	0	2	0	0	162
9:00	0	97	41	0	7	2	0	1	1	0	5	0	0	154
9:15	0	91	34	0	5	3	0	1	4	0	0	0	0	138
9:30	1	103	31	0	4	4	0	1	5	0	0	0	0	149
9:45	1	70	32	0	5	3	0	1	5	0	0	0	0	117
10:00	0	65	38	0	9	3	0	0	7	0	3	0	0	125
10:15	0	64	36	0	7	1	0	1	3	0	2	0	0	114
10:30	0	87	30	0	8	2	0	0	7	0	3	0	0	137
10:45	0	64	29	0	5	2	0	0	6	0	1	0	0	107
11:00	0	91	31	1	7	3	0	3	2	0	0	0	0	138
11:15	0	66	34	0	4	4	0	0	3	0	3	0	0	114
11:30	0	77	39	0	2	4	0	1	9	0	2	0	0	134
11:45	0	85	36	0	3	5	0	3	4	0	1	0	0	137
TOTAL	9	3,511	1,250	4	178	106	0	29	144	0	58	1	0	5,290

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	965

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	81	38	0	4	3	0	0	8	0	1	0	0	135
12:15	0	91	30	0	6	3	0	0	6	0	0	0	0	136
12:30	0	99	45	1	8	4	0	1	7	0	3	0	0	168
12:45	0	87	39	0	4	5	0	2	3	0	1	0	0	141
13:00	0	83	37	0	2	3	0	1	2	0	1	0	0	129
13:15	0	101	31	1	5	3	0	2	6	0	0	0	0	149
13:30	0	117	36	0	7	3	0	0	1	0	2	0	0	166
13:45	0	116	33	0	5	4	0	2	9	0	3	0	0	172
14:00	2	120	40	1	6	3	0	0	3	0	0	0	0	175
14:15	0	138	45	0	5	3	0	1	3	0	2	0	0	197
14:30	0	127	43	1	4	1	0	1	5	0	2	0	0	184
14:45	0	175	42	2	5	3	0	1	6	0	0	0	0	234
15:00	0	148	46	0	10	2	0	0	1	0	2	0	0	209
15:15	0	147	55	0	7	5	0	0	8	0	0	0	0	222
15:30	0	167	58	0	1	6	0	0	6	0	0	0	0	238
15:45	1	176	54	0	3	8	0	0	6	0	0	0	0	248
16:00	0	175	49	0	12	3	0	0	1	0	0	0	0	240
16:15	0	163	57	1	8	6	0	0	5	0	0	0	0	240
16:30	0	189	54	0	6	7	0	1	6	0	0	0	0	263
16:45	1	194	54	0	8	4	0	0	5	0	1	0	0	267
17:00	1	162	45	1	4	4	0	0	4	0	0	0	0	221
17:15	1	189	52	0	9	3	0	1	8	0	1	0	0	264
17:30	0	134	52	0	7	1	0	1	5	0	1	0	0	201
17:45	0	166	54	1	5	2	0	0	2	0	0	0	0	230
18:00	1	154	38	0	4	3	0	0	2	0	0	0	0	202
18:15	1	159	32	1	3	3	0	2	1	0	0	0	0	202
18:30	0	107	32	0	1	0	0	1	3	0	0	0	0	144
18:45	0	118	24	0	1	0	0	1	1	0	0	0	0	145
19:00	2	97	19	0	4	1	0	0	2	0	0	0	0	125
19:15	1	100	21	0	1	3	0	0	1	0	0	0	0	127
19:30	2	99	23	0	2	0	0	1	1	0	0	0	0	128
19:45	0	84	22	0	1	0	0	0	3	0	0	0	0	110
20:00	1	76	18	0	0	2	0	0	1	0	0	0	0	98
20:15	0	85	19	0	0	1	0	0	4	0	0	0	0	109
20:30	0	59	24	0	1	2	0	1	2	0	0	0	0	89
20:45	0	77	16	0	0	0	0	1	0	0	0	0	0	94
21:00	0	54	19	0	1	1	0	0	1	0	0	0	0	76
21:15	0	60	9	0	1	0	0	0	0	0	0	0	0	70
21:30	0	66	12	0	1	0	0	0	2	0	0	0	0	81
21:45	0	73	13	0	0	0	0	0	0	0	0	0	0	86
22:00	0	45	10	0	2	0	0	0	1	0	0	0	0	58
22:15	1	41	9	0	1	1	0	0	0	0	0	0	0	53
22:30	1	44	3	0	1	1	0	0	2	0	0	0	0	52
22:45	0	36	6	0	0	1	0	0	2	0	0	0	0	45
23:00	0	28	2	0	0	0	0	0	1	0	0	0	0	31
23:15	0	31	7	0	0	0	0	0	1	0	0	0	0	39
23:30	0	25	5	0	1	0	0	0	0	0	0	0	0	31
23:45	0	27	4	0	0	1	0	0	1	0	1	0	0	34
TOTAL	16	5,090	1,476	10	167	109	0	21	148	0	21	0	0	7,058

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	1,015

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	25	8,601	2,726	14	345	215	0	50	292	0	79	1	0	12,348
% OF TOTAL	0.2%	69.7%	22.1%	0.1%	2.8%	1.7%	0.0%	0.4%	2.4%	0.0%	0.6%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS14 Rubidoux between El Rivino and Market

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	31	0	0	0	2	0	0	4	0	1	0	0	38
0:15	0	23	0	0	1	0	0	0	0	0	0	0	0	24
0:30	0	13	0	0	0	0	0	0	2	0	1	0	0	16
0:45	0	19	2	0	0	1	10	0	0	0	0	0	0	32
1:00	0	13	1	0	1	0	3	0	3	0	1	0	0	22
1:15	0	27	3	0	0	0	1	0	2	0	1	0	0	34
1:30	0	23	0	0	0	0	6	0	2	0	0	0	0	31
1:45	0	44	0	0	0	1	6	0	1	0	2	0	0	54
2:00	0	17	0	0	0	1	3	0	0	0	1	0	0	22
2:15	0	10	1	0	0	1	6	0	4	0	3	0	0	25
2:30	0	12	0	0	0	1	7	0	1	0	1	0	0	22
2:45	0	15	0	0	1	1	7	0	0	0	0	0	0	24
3:00	0	12	0	0	1	0	6	0	2	0	0	0	0	21
3:15	0	26	2	0	1	0	7	0	0	0	0	0	0	36
3:30	0	38	2	0	0	0	6	0	3	0	0	0	0	49
3:45	0	39	1	0	2	0	9	0	1	0	0	0	0	52
4:00	0	30	0	0	0	2	2	0	3	0	0	0	0	37
4:15	0	54	0	0	2	1	3	0	2	0	0	0	0	62
4:30	0	64	2	0	2	2	5	0	1	0	1	0	0	77
4:45	0	69	1	0	1	2	2	0	5	0	0	0	0	80
5:00	0	51	6	0	0	3	2	0	3	0	1	0	0	66
5:15	0	71	5	0	1	1	0	0	1	0	3	0	0	82
5:30	0	79	11	0	5	1	3	0	4	0	1	0	0	104
5:45	0	98	10	0	3	2	2	0	2	0	1	1	0	119
6:00	0	86	7	0	4	2	1	0	2	0	0	0	0	102
6:15	0	97	7	0	5	3	3	0	2	0	3	0	0	120
6:30	0	130	2	0	1	4	1	0	0	0	4	0	0	142
6:45	0	154	8	0	2	3	9	0	3	0	3	0	0	182
7:00	0	120	8	0	8	1	1	0	6	0	1	0	0	145
7:15	0	116	4	0	11	2	8	0	2	0	3	0	0	146
7:30	0	122	6	1	6	1	0	0	4	0	2	0	0	142
7:45	1	127	7	0	4	1	0	0	3	0	1	0	0	144
8:00	0	114	10	0	6	1	0	0	5	0	2	0	0	138
8:15	0	111	8	1	3	3	5	0	7	0	1	0	0	139
8:30	0	110	2	0	10	4	0	0	7	0	1	0	0	134
8:45	0	108	10	0	7	4	0	0	5	0	3	0	0	137
9:00	0	121	10	0	7	1	0	0	6	0	4	0	0	149
9:15	1	115	8	0	5	3	1	0	7	0	2	0	0	142
9:30	0	106	5	0	10	0	1	0	5	0	2	0	0	129
9:45	0	126	7	0	11	8	0	1	7	0	1	0	0	161
10:00	0	100	4	1	3	3	0	0	6	0	0	0	0	117
10:15	1	107	5	0	6	1	1	0	3	0	3	0	0	127
10:30	0	106	8	0	6	2	0	0	5	0	2	0	0	129
10:45	0	94	8	0	10	1	0	0	9	1	5	0	0	128
11:00	0	93	7	0	2	3	2	0	7	0	2	0	0	116
11:15	0	118	5	0	10	3	1	0	8	0	1	0	0	146
11:30	1	87	6	0	6	2	0	0	5	0	4	0	0	111
11:45	0	87	6	0	10	2	0	0	4	0	0	0	0	109
TOTAL	4	3,533	205	3	174	80	130	1	164	1	68	1	0	4,364

AM PEAK HOUR	6:45 AM
AM PEAK VOLUME	615

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	1	98	10	0	4	0	1	0	8	0	2	0	0	124
12:15	0	86	6	0	2	4	1	0	5	0	3	0	0	107
12:30	0	106	13	0	7	1	1	0	9	0	6	0	0	143
12:45	0	93	10	0	4	3	0	0	9	0	3	0	0	122
13:00	0	119	8	0	17	3	1	0	11	0	3	0	0	162
13:15	0	110	10	0	10	6	0	0	20	0	3	0	0	159
13:30	0	125	13	0	5	0	1	0	5	0	0	0	0	149
13:45	0	120	10	0	1	6	0	0	8	0	5	0	0	150
14:00	0	117	6	0	10	4	0	0	4	0	0	0	0	141
14:15	0	103	13	0	6	4	2	0	8	0	0	0	0	136
14:30	0	143	8	1	8	2	0	0	5	0	1	0	0	168
14:45	0	141	7	0	9	4	0	1	7	1	2	0	0	172
15:00	0	130	8	1	5	4	0	1	8	0	2	0	0	159
15:15	0	151	6	0	11	1	0	0	6	0	1	0	0	176
15:30	0	126	7	0	10	2	1	0	5	1	0	0	0	152
15:45	1	134	12	0	11	3	1	0	8	0	0	0	0	170
16:00	1	169	16	0	12	1	1	0	6	0	1	0	0	207
16:15	2	163	14	1	10	4	1	0	9	0	0	0	0	204
16:30	0	164	8	0	14	2	0	0	7	0	0	0	0	195
16:45	0	179	4	1	6	3	0	0	5	0	1	0	0	199
17:00	1	152	3	0	12	3	1	0	8	0	0	0	0	180
17:15	0	182	4	0	11	0	0	0	4	0	1	0	0	202
17:30	0	177	7	0	13	1	0	0	7	0	3	0	0	208
17:45	0	162	2	0	9	1	0	0	7	0	0	0	0	181
18:00	1	133	6	0	4	2	0	2	5	0	0	0	0	153
18:15	1	141	4	0	4	6	0	0	5	0	0	0	0	161
18:30	1	140	3	0	7	3	0	0	3	0	2	0	0	159
18:45	0	122	4	0	3	6	0	0	6	0	0	0	0	141
19:00	0	121	4	0	1	4	0	1	8	0	0	0	0	139
19:15	0	105	3	0	0	1	0	0	5	0	0	0	0	114
19:30	0	104	2	0	4	0	0	0	4	0	0	0	0	114
19:45	0	113	3	0	1	0	0	0	3	0	0	0	0	120
20:00	0	78	3	0	0	1	0	0	2	0	0	0	0	84
20:15	0	81	1	0	0	1	0	0	1	0	0	0	0	84
20:30	0	90	2	0	1	0	0	0	3	0	0	0	0	96
20:45	1	70	2	0	0	2	0	0	1	0	0	0	0	76
21:00	0	71	1	0	1	1	0	0	3	0	0	0	0	77
21:15	0	77	2	0	0	0	0	0	1	0	0	0	0	80
21:30	2	45	0	0	3	1	0	0	1	0	0	0	0	52
21:45	0	71	3	0	0	1	0	0	3	0	0	0	0	78
22:00	0	61	0	0	1	1	0	0	0	0	0	0	0	63
22:15	0	62	1	0	1	2	0	0	5	0	0	0	0	71
22:30	0	52	4	0	0	0	0	0	1	0	0	0	0	57
22:45	0	48	2	0	1	4	0	0	0	0	0	0	0	55
23:00	0	32	1	0	0	3	0	0	2	0	0	0	0	38
23:15	0	27	0	0	0	0	0	0	1	0	1	0	0	29
23:30	0	32	2	0	0	1	0	0	0	0	0	0	0	35
23:45	0	21	0	0	0	0	0	0	1	0	0	0	0	22
TOTAL	12	5,147	258	4	239	102	12	5	243	2	40	0	0	6,064

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	805

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	16	8,680	463	7	413	182	142	6	407	3	108	1	0	10,428
% OF TOTAL	0.2%	83.2%	4.4%	0.1%	4.0%	1.7%	1.4%	0.1%	3.9%	0.0%	1.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	38	18,436	1,329	11	870	517	156	21	911	4	207	2	1	22,503
% OF TOTAL	0.4%	176.8%	12.7%	0.1%	8.3%	5.0%	1.5%	0.2%	8.7%	0.0%	2.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS14 Rubidoux between El Rivino and Market

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	20	3	0	0	0	0	0	0	0	1	0	0	24
0:15	0	23	1	0	0	1	0	0	3	0	0	0	0	28
0:30	0	8	0	0	0	0	0	0	1	0	0	0	0	9
0:45	0	17	0	0	2	4	0	0	2	0	0	0	0	25
1:00	0	36	1	0	1	1	0	0	3	0	0	0	0	42
1:15	0	22	2	0	0	3	1	0	2	0	1	0	0	31
1:30	0	13	2	0	0	7	0	0	4	0	2	0	0	28
1:45	0	20	1	0	0	3	0	0	2	0	1	0	0	27
2:00	0	10	0	0	0	3	0	0	0	0	1	0	0	14
2:15	0	13	1	0	0	6	0	1	1	0	2	0	0	24
2:30	0	23	1	0	2	5	0	0	2	0	0	0	0	33
2:45	0	23	2	0	0	4	0	0	3	0	0	0	0	32
3:00	0	19	0	0	0	4	0	0	2	0	0	0	0	25
3:15	0	22	2	0	2	8	0	0	3	0	1	0	0	38
3:30	0	44	2	0	2	7	0	0	2	0	1	0	0	58
3:45	0	38	7	0	3	3	1	0	6	0	1	0	0	59
4:00	0	31	4	0	3	6	0	0	3	0	0	0	0	47
4:15	0	58	5	0	0	6	1	0	3	0	2	0	0	75
4:30	1	101	4	0	4	8	0	0	4	0	0	0	0	122
4:45	0	119	7	0	5	7	0	0	6	0	2	0	0	146
5:00	0	66	8	0	6	6	1	1	2	0	0	0	0	90
5:15	0	101	10	0	5	5	0	0	7	0	1	0	0	129
5:30	1	95	6	0	9	8	0	1	11	0	3	1	0	135
5:45	0	119	17	0	8	7	0	0	5	0	0	0	0	156
6:00	0	92	16	0	7	9	0	0	3	0	0	0	0	127
6:15	0	126	13	0	6	9	0	0	11	0	5	0	0	170
6:30	0	126	21	0	8	3	0	0	4	0	2	0	0	164
6:45	0	150	24	0	7	8	1	0	7	0	0	0	0	197
7:00	0	124	16	0	13	5	0	0	6	0	4	0	0	168
7:15	0	191	26	0	7	4	0	0	5	0	1	0	0	234
7:30	1	213	21	1	7	7	1	0	7	0	3	0	0	261
7:45	0	215	16	0	3	14	1	1	6	0	3	0	0	259
8:00	0	158	24	0	10	3	2	0	13	0	4	0	0	214
8:15	1	134	11	0	3	4	0	1	11	0	2	0	0	167
8:30	1	123	12	0	6	5	1	0	7	0	3	0	0	158
8:45	0	126	12	0	18	4	0	1	7	0	2	0	0	170
9:00	0	120	13	0	10	5	0	0	6	0	5	0	0	159
9:15	0	93	9	0	6	1	0	0	9	0	2	0	0	120
9:30	1	106	12	0	9	4	0	0	10	0	1	0	0	143
9:45	1	94	14	0	13	5	0	1	5	0	1	0	0	134
10:00	0	69	8	0	9	5	0	1	10	0	4	0	0	106
10:15	1	94	10	0	17	1	0	0	8	0	2	0	0	133
10:30	0	108	16	0	10	3	0	0	9	1	2	0	0	149
10:45	0	66	9	0	5	2	2	0	11	0	2	0	0	97
11:00	0	90	15	0	5	1	0	0	6	0	1	0	0	118
11:15	0	81	12	0	11	1	0	0	8	0	4	0	0	117
11:30	0	119	13	0	4	1	0	0	15	0	2	0	0	154
11:45	0	89	12	0	8	4	0	0	10	0	1	0	0	124
TOTAL	8	3,948	441	1	254	220	12	8	271	1	75	1	0	5,240

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	968

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	101	14	0	9	5	0	2	10	0	2	0	0	143
12:15	0	80	10	0	6	3	0	1	8	0	0	0	0	108
12:30	0	124	9	0	5	3	1	0	10	0	3	0	0	155
12:45	0	94	10	0	9	4	0	0	10	0	0	0	0	127
13:00	0	104	13	0	7	3	0	0	3	0	2	0	0	132
13:15	0	114	15	0	7	3	0	0	10	0	1	0	0	150
13:30	0	136	10	0	10	5	0	0	2	0	2	0	0	165
13:45	0	133	16	0	6	2	0	0	8	0	3	0	0	168
14:00	1	137	13	0	8	6	0	0	3	0	0	0	0	168
14:15	0	148	28	0	6	2	1	0	5	0	0	0	0	190
14:30	0	150	12	0	10	4	0	1	5	0	2	0	0	184
14:45	0	178	19	0	9	3	0	0	6	0	0	0	1	216
15:00	1	205	18	0	12	2	0	1	7	0	1	0	0	247
15:15	1	199	11	1	11	5	0	0	11	0	0	0	0	239
15:30	0	173	18	0	4	3	0	0	5	0	0	0	0	203
15:45	1	234	19	0	5	8	0	1	8	0	0	0	0	276
16:00	0	207	12	0	8	3	0	0	4	0	0	0	0	234
16:15	0	204	13	0	5	2	0	0	6	0	0	0	0	230
16:30	0	218	15	0	11	4	0	0	8	0	1	0	0	257
16:45	0	232	10	0	6	6	0	0	3	0	1	0	0	258
17:00	1	206	16	1	5	4	0	0	3	0	0	0	0	236
17:15	1	202	6	0	8	2	0	0	11	0	1	0	0	231
17:30	0	169	18	0	2	1	0	0	8	0	1	0	0	199
17:45	0	184	12	1	6	1	0	0	4	0	0	0	0	208
18:00	0	156	10	0	1	3	0	0	3	0	0	0	0	173
18:15	0	144	9	0	2	4	0	0	5	0	0	0	0	164
18:30	2	145	15	0	4	1	0	0	2	0	0	0	0	169
18:45	0	115	4	0	3	3	0	0	4	0	0	0	0	129
19:00	2	93	2	0	1	3	0	0	5	0	0	0	0	106
19:15	1	121	4	0	2	2	0	0	2	0	0	0	0	132
19:30	1	135	2	0	4	0	0	1	3	0	0	0	0	146
19:45	0	102	7	0	0	0	0	0	3	0	0	0	0	112
20:00	1	95	5	0	0	3	0	0	5	0	0	0	0	109
20:15	0	76	5	0	1	1	0	0	5	0	0	0	0	88
20:30	0	87	5	0	1	3	0	0	3	0	0	0	0	99
20:45	0	67	3	0	0	1	0	0	2	0	0	0	0	73
21:00	0	65	2	0	1	1	0	0	4	0	0	0	0	73
21:15	0	58	2	0	1	0	0	0	1	0	1	0	0	63
21:30	0	67	1	0	0	1	0	0	2	0	0	0	0	71
21:45	0	64	0	0	1	3	0	0	1	0	1	0	0	70
22:00	0	55	3	0	2	0	0	0	2	0	0	0	0	62
22:15	1	34	3	0	0	0	0	0	1	0	1	0	0	40
22:30	0	43	1	0	2	1	0	0	2	0	0	0	0	49
22:45	0	36	1	0	0	1	0	0	5	0	0	0	0	43
23:00	0	27	0	0	0	0	0	0	2	0	0	0	0	29
23:15	0	30	3	0	1	0	0	0	2	0	0	0	0	36
23:30	0	31	1	0	0	0	0	0	5	0	0	0	0	37
23:45	0	30	0	0	1	0	0	0	6	0	1	0	0	38
TOTAL	14	5,808	425	3	203	115	2	7	233	0	24	0	1	6,835

PM PEAK HOUR	3:45 PM
PM PEAK VOLUME	997

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	22	9,756	866	4	457	335	14	15	504	1	99	1	1	12,075
% OF TOTAL	0.2%	80.8%	7.2%	0.0%	3.8%	2.8%	0.1%	0.1%	4.2%	0.0%	0.8%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS15 Rubidoux between Market and 28th

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	17	0	0	0	4	0	0	9	0	1	0	0	31
0:15	0	13	1	0	1	2	0	0	6	0	0	0	0	23
0:30	0	18	0	0	1	1	0	0	10	0	4	0	0	34
0:45	0	9	1	0	0	1	0	0	3	0	1	0	0	15
1:00	0	3	0	0	1	2	0	0	7	0	1	0	0	14
1:15	0	17	0	0	0	0	0	0	9	0	2	1	0	29
1:30	0	9	1	0	0	1	0	0	3	0	2	0	0	16
1:45	0	19	0	0	0	0	0	0	5	0	1	0	0	25
2:00	0	7	0	0	0	0	0	0	1	0	1	0	0	9
2:15	0	9	0	0	0	0	0	0	8	0	2	0	0	19
2:30	0	10	0	0	0	2	0	0	4	0	2	1	0	19
2:45	0	13	0	0	0	2	0	0	5	0	0	0	0	20
3:00	0	8	1	0	0	1	0	0	2	0	1	0	0	13
3:15	0	20	0	0	0	0	1	0	1	0	1	0	0	23
3:30	0	29	0	0	0	0	0	0	5	0	0	0	0	34
3:45	0	39	1	0	0	0	0	0	4	0	3	0	0	47
4:00	0	16	1	0	1	1	0	0	8	0	0	0	0	27
4:15	0	31	0	0	2	0	0	0	7	0	1	0	0	41
4:30	0	51	1	0	4	3	0	0	4	0	0	0	0	63
4:45	0	61	2	0	1	4	0	0	8	0	1	0	0	77
5:00	0	40	1	0	0	2	0	0	7	1	0	0	0	51
5:15	0	47	2	0	0	3	0	0	5	0	0	0	0	57
5:30	0	62	5	0	6	2	0	0	10	0	0	0	0	85
5:45	0	69	2	0	2	3	1	0	4	0	1	1	0	83
6:00	0	49	2	0	2	2	0	0	7	0	0	0	0	62
6:15	0	53	4	0	4	3	1	0	9	0	2	0	0	76
6:30	0	64	3	0	1	5	0	0	5	0	1	0	0	79
6:45	0	80	5	0	5	2	0	0	9	0	1	1	0	103
7:00	0	59	3	0	4	1	0	0	7	0	0	0	0	74
7:15	0	47	6	0	5	2	0	0	10	0	0	0	0	70
7:30	0	91	7	1	3	3	0	0	14	0	0	0	0	119
7:45	1	76	2	0	3	6	0	0	8	0	0	0	0	96
8:00	0	70	6	0	6	5	0	0	12	0	1	0	0	100
8:15	1	54	5	1	1	7	0	0	15	0	0	0	0	84
8:30	0	64	7	0	7	8	0	0	14	0	1	0	0	101
8:45	0	68	6	0	4	7	0	0	11	0	2	0	0	98
9:00	0	65	7	0	4	7	0	0	18	0	0	0	0	101
9:15	0	38	5	0	4	8	0	0	10	0	2	0	0	67
9:30	0	56	6	0	7	6	0	0	12	0	2	0	0	89
9:45	0	60	6	0	7	15	0	1	12	0	1	0	0	102
10:00	0	34	6	1	2	6	0	0	9	0	2	0	0	60
10:15	1	61	4	0	4	6	1	0	15	0	2	0	0	94
10:30	0	49	5	1	3	10	0	1	15	0	0	0	0	84
10:45	0	43	2	0	9	4	1	0	18	1	1	0	0	79
11:00	0	58	3	0	2	4	0	0	11	0	1	0	0	79
11:15	0	51	3	0	9	6	0	0	17	0	3	0	0	89
11:30	0	39	3	0	7	11	0	0	12	0	0	0	0	72
11:45	0	70	3	0	5	3	1	0	9	0	2	0	0	93
TOTAL	3	2,016	128	4	127	171	6	2	414	2	49	4	0	2,926

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	399

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	50	5	0	3	4	0	0	14	0	2	0	0	78
12:15	1	51	2	1	2	5	0	0	13	0	4	0	0	79
12:30	0	59	7	0	4	5	1	0	19	0	1	0	0	96
12:45	0	51	7	0	8	7	0	0	14	0	2	0	0	89
13:00	0	39	2	0	9	6	0	0	14	0	1	0	0	71
13:15	0	54	4	0	5	4	2	0	20	0	5	0	0	94
13:30	0	57	9	0	2	4	0	0	13	0	2	0	0	87
13:45	0	67	3	0	6	10	0	0	16	0	1	0	0	103
14:00	0	61	7	0	3	7	0	0	10	0	0	0	0	88
14:15	0	60	7	0	4	5	0	0	18	0	0	0	0	94
14:30	0	67	5	1	4	7	0	1	12	0	1	0	0	98
14:45	0	83	3	0	6	3	1	0	18	0	3	0	0	117
15:00	0	87	8	2	9	5	0	0	14	0	0	0	0	125
15:15	0	93	2	0	9	6	0	0	14	0	1	0	0	125
15:30	0	90	6	1	13	10	1	0	10	0	0	0	0	131
15:45	1	92	6	0	6	5	0	0	17	0	1	0	0	128
16:00	1	120	7	0	10	5	0	0	11	0	0	0	0	154
16:15	0	124	11	1	11	6	1	0	13	0	0	0	0	167
16:30	0	113	11	0	14	8	0	0	14	0	0	0	0	160
16:45	0	141	11	1	3	5	0	0	9	0	0	0	0	170
17:00	0	97	12	0	16	3	0	0	11	0	0	0	0	139
17:15	0	130	4	0	8	4	0	0	8	0	0	0	0	154
17:30	0	107	5	0	17	2	0	0	19	0	2	0	0	152
17:45	0	124	4	0	4	3	0	1	12	1	1	0	0	150
18:00	0	94	7	0	6	1	0	0	18	0	1	0	0	127
18:15	1	73	6	0	4	5	0	0	9	0	0	0	0	98
18:30	0	78	6	0	3	5	0	0	8	0	0	0	0	100
18:45	0	76	5	0	4	4	0	0	10	0	1	0	0	100
19:00	0	68	3	0	1	2	0	1	11	0	0	0	0	86
19:15	0	62	1	0	1	1	0	0	11	0	0	0	0	76
19:30	0	64	2	0	3	1	0	0	10	0	0	0	0	80
19:45	0	44	1	0	1	2	0	0	9	0	0	0	0	57
20:00	0	46	1	0	0	2	0	0	6	0	0	0	0	55
20:15	0	38	2	0	0	4	0	0	2	0	0	0	0	46
20:30	0	36	3	0	1	0	0	0	6	0	0	0	0	46
20:45	1	26	2	0	0	0	0	0	10	0	1	1	0	41
21:00	0	26	1	0	1	0	0	0	4	0	0	0	0	32
21:15	0	36	1	0	0	1	0	0	4	0	0	0	0	42
21:30	1	25	1	0	2	2	0	0	3	0	1	0	0	35
21:45	0	32	2	0	0	9	0	0	6	0	0	0	0	49
22:00	0	35	0	0	1	2	0	0	3	0	1	0	0	42
22:15	0	36	0	0	0	2	0	0	8	0	0	0	0	46
22:30	0	23	2	0	0	0	0	0	4	0	2	0	0	31
22:45	0	19	3	0	0	3	0	0	9	0	0	0	0	34
23:00	0	18	0	0	0	1	0	0	8	0	1	2	0	30
23:15	0	11	0	0	0	1	0	0	4	0	0	0	0	16
23:30	0	13	1	0	0	1	0	0	5	0	1	0	0	21
23:45	0	16	0	0	0	1	0	0	6	0	0	0	0	23
TOTAL	6	3,012	198	7	204	179	6	3	507	1	36	3	0	4,162

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	651

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	9	5,028	326	11	331	350	12	5	921	3	85	7	0	7,088
% OF TOTAL	0.1%	70.9%	4.6%	0.2%	4.7%	4.9%	0.2%	0.1%	13.0%	0.0%	1.2%	0.1%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	20	11,120	844	29	728	715	69	30	###	4	192	19	0	15,667
% OF TOTAL	0.3%	156.9%	11.9%	0.4%	10.3%	10.1%	1.0%	0.4%	26.8%	0.1%	2.7%	0.3%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS15 Rubidoux between Market and 28th

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	19	2	0	0	0	0	0	3	0	0	0	0	24
0:15	0	24	1	0	0	0	0	0	6	0	0	0	0	31
0:30	0	26	1	0	0	1	0	0	3	0	6	0	0	37
0:45	0	10	1	0	0	2	0	0	8	0	1	1	0	23
1:00	0	22	1	0	1	1	0	0	1	0	0	1	0	27
1:15	0	15	2	0	0	2	0	0	5	0	0	1	0	25
1:30	0	13	1	0	0	1	0	0	6	0	1	0	0	22
1:45	0	16	0	0	1	1	0	0	6	0	0	0	0	24
2:00	0	9	0	0	0	1	0	0	2	0	0	0	0	12
2:15	0	6	0	0	1	0	0	0	7	0	1	0	0	15
2:30	0	17	0	0	1	2	0	0	8	0	0	0	0	28
2:45	0	13	2	0	1	3	0	0	5	0	0	0	0	24
3:00	0	10	0	0	0	0	0	0	16	0	2	0	0	28
3:15	0	21	0	0	3	2	1	0	8	0	1	0	0	36
3:30	0	27	2	0	1	0	0	0	5	0	1	0	0	36
3:45	0	17	3	0	0	1	0	0	11	0	1	0	0	33
4:00	0	19	1	0	2	1	0	0	8	0	1	0	0	32
4:15	0	31	1	0	1	2	0	0	6	0	1	0	0	42
4:30	0	32	0	0	2	2	0	0	8	0	0	0	0	44
4:45	0	50	6	0	2	2	0	0	6	0	2	0	0	68
5:00	0	42	4	0	3	1	0	1	7	0	3	0	0	61
5:15	0	43	4	0	4	12	0	0	13	0	0	0	0	76
5:30	0	52	5	0	7	6	1	0	12	0	2	0	0	85
5:45	0	63	6	0	4	6	3	0	9	0	1	2	0	94
6:00	0	60	6	1	7	12	2	0	10	0	0	0	0	98
6:15	0	61	7	0	8	5	2	0	13	0	1	0	0	97
6:30	0	59	8	0	6	4	0	0	14	0	0	0	0	91
6:45	0	78	9	0	6	9	4	1	20	0	2	0	0	129
7:00	0	68	6	1	10	5	1	0	11	0	3	0	0	105
7:15	0	104	14	0	7	3	2	0	7	0	5	0	0	142
7:30	0	148	13	1	4	8	1	2	18	0	1	0	0	196
7:45	0	141	5	0	6	4	7	1	11	0	1	0	0	176
8:00	0	105	8	0	4	5	1	0	18	0	2	0	0	143
8:15	1	72	2	1	9	3	1	0	14	0	1	0	0	104
8:30	0	58	6	0	8	5	2	0	18	0	1	0	0	98
8:45	0	64	3	0	11	8	0	3	15	0	4	0	0	108
9:00	0	68	7	0	7	5	3	1	12	0	0	0	0	103
9:15	0	58	8	1	9	6	1	0	21	0	2	0	0	106
9:30	0	51	7	1	9	5	1	0	12	0	2	0	0	88
9:45	1	68	7	0	16	3	0	0	16	0	1	0	0	112
10:00	0	44	6	0	6	7	2	2	23	0	3	0	0	93
10:15	1	44	5	0	20	7	1	2	18	0	2	0	0	100
10:30	0	60	5	1	11	8	3	0	18	1	1	0	0	108
10:45	0	42	1	0	11	6	0	0	21	0	2	0	0	83
11:00	0	51	9	0	8	8	1	0	16	0	0	0	0	93
11:15	0	53	7	0	9	9	1	0	14	0	0	1	0	94
11:30	0	65	8	0	11	4	1	0	17	0	2	0	0	108
11:45	0	50	8	1	9	7	2	2	15	0	2	0	0	96
TOTAL	3	2,269	208	8	246	195	44	15	541	1	62	6	0	3,598

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	657

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	66	7	0	7	7	2	0	13	0	2	0	0	104
12:15	0	55	4	0	4	6	3	1	23	0	3	1	0	100
12:30	0	63	8	0	6	3	0	1	25	0	0	0	0	106
12:45	0	65	3	0	8	9	1	1	11	0	1	0	0	99
13:00	0	71	6	0	7	8	0	0	12	0	1	0	0	105
13:15	0	70	10	1	2	5	0	0	14	0	0	0	0	102
13:30	0	89	9	1	6	6	2	0	10	0	2	0	0	125
13:45	0	84	8	0	10	4	2	0	21	0	1	1	0	131
14:00	1	91	8	0	7	7	0	1	11	0	3	0	0	129
14:15	0	106	11	0	3	6	0	0	12	0	0	0	0	138
14:30	0	106	9	1	9	4	0	1	17	0	4	0	0	151
14:45	1	127	9	0	7	8	0	0	16	0	0	0	0	168
15:00	1	157	8	0	7	6	2	0	14	0	2	0	0	197
15:15	0	142	8	1	7	4	0	1	16	0	3	0	0	182
15:30	0	143	14	0	4	2	1	0	8	0	0	0	0	172
15:45	0	179	15	1	6	12	0	0	12	0	0	0	0	225
16:00	0	142	15	1	3	2	0	0	5	0	2	0	0	170
16:15	0	132	9	0	2	4	0	0	7	0	1	0	0	155
16:30	0	164	16	0	6	3	0	1	11	0	2	0	0	203
16:45	0	160	6	0	9	4	0	0	4	0	0	1	0	184
17:00	0	158	14	0	1	5	0	0	7	0	0	0	0	185
17:15	1	121	12	1	4	3	0	0	16	0	1	0	0	159
17:30	0	133	13	0	2	3	0	1	11	0	2	0	0	165
17:45	0	108	12	0	5	2	0	0	6	0	1	0	0	134
18:00	0	93	10	0	2	5	0	1	7	0	0	0	0	118
18:15	0	84	4	0	3	4	0	0	10	0	0	0	0	105
18:30	2	97	8	1	0	3	0	0	8	0	0	0	0	119
18:45	0	78	3	0	3	1	0	0	7	0	0	0	0	92
19:00	0	65	5	0	0	3	0	0	10	0	0	0	0	83
19:15	1	66	3	0	0	2	0	0	3	0	0	0	0	75
19:30	0	74	7	0	2	1	0	1	6	0	2	0	0	93
19:45	1	66	6	1	1	2	0	0	6	0	0	0	0	83
20:00	0	47	3	0	0	3	0	0	6	0	1	0	0	60
20:15	0	44	1	0	1	3	0	0	7	0	0	1	0	57
20:30	0	39	4	0	2	2	0	0	3	0	0	0	0	50
20:45	0	40	4	0	1	0	0	0	6	0	0	0	0	51
21:00	0	31	5	1	1	2	0	0	8	0	1	0	0	49
21:15	0	28	1	0	0	1	0	0	3	0	0	0	0	33
21:30	0	33	1	0	0	2	0	0	1	0	1	0	0	38
21:45	0	30	1	0	1	4	0	0	5	0	1	0	0	42
22:00	0	33	1	0	2	4	0	0	5	0	0	0	0	45
22:15	0	16	2	0	0	0	0	0	3	0	1	0	0	22
22:30	0	26	1	0	0	2	0	0	5	0	0	0	0	34
22:45	0	20	1	0	0	2	0	0	4	0	1	2	0	30
23:00	0	25	0	0	0	0	0	0	2	0	3	0	0	30
23:15	0	13	1	0	0	1	0	0	3	0	0	0	0	18
23:30	0	22	2	0	0	0	0	0	8	0	3	0	0	35
23:45	0	21	2	0	0	0	0	0	7	0	0	0	0	30
TOTAL	8	3,823	310	10	151	170	13	10	435	0	45	6	0	4,981

PM PEAK HOUR	3:00 PM
PM PEAK VOLUME	776

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	11	6,092	518	18	397	365	57	25	976	1	107	12	0	8,579
% OF TOTAL	0.1%	71.0%	6.0%	0.2%	4.6%	4.3%	0.7%	0.3%	11.4%	0.0%	1.2%	0.1%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS16 Rubidoux between 28th and SR-60 WB Off-Ramp

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	19	1	0	3	1	0	0	10	0	1	0	0	35
0:15	0	17	0	0	0	1	0	3	4	0	0	0	0	25
0:30	0	20	0	0	1	1	0	0	14	0	3	0	0	39
0:45	0	12	0	0	1	0	0	0	4	0	1	0	0	18
1:00	0	7	0	0	0	2	0	1	7	0	1	0	0	18
1:15	0	22	1	0	0	0	0	0	7	0	3	0	0	33
1:30	0	10	0	0	1	1	0	1	5	0	0	0	0	18
1:45	0	16	1	0	0	0	0	0	2	0	0	0	0	19
2:00	0	4	0	0	0	0	0	0	2	0	0	0	0	6
2:15	0	13	0	0	1	1	0	0	11	0	0	2	0	28
2:30	0	12	1	0	0	2	0	0	4	0	0	2	0	21
2:45	0	12	1	0	0	3	0	0	6	0	0	0	0	22
3:00	0	15	1	0	0	1	0	0	4	0	0	0	0	21
3:15	0	20	1	0	0	0	0	0	1	0	0	1	0	23
3:30	0	34	4	0	0	0	0	0	6	0	0	0	0	44
3:45	0	47	1	0	1	1	0	0	6	0	0	1	0	57
4:00	0	24	1	0	1	2	0	3	8	0	0	0	0	39
4:15	0	45	2	0	0	0	0	3	5	0	0	0	0	55
4:30	0	80	8	0	5	4	0	1	8	0	0	0	0	106
4:45	0	80	10	0	3	4	0	5	2	0	0	0	0	104
5:00	1	48	5	0	4	2	0	2	8	1	0	0	0	71
5:15	0	68	12	0	7	0	0	0	13	0	0	0	0	100
5:30	0	68	28	0	10	4	0	0	8	0	0	0	0	118
5:45	1	72	27	1	11	3	0	1	5	0	0	0	0	121
6:00	0	70	19	0	9	3	0	0	10	0	0	0	0	111
6:15	0	59	11	1	3	7	0	0	11	0	0	0	0	92
6:30	0	72	13	0	6	5	0	0	9	0	0	0	0	105
6:45	0	84	29	0	7	6	0	3	10	1	0	0	0	140
7:00	0	59	12	1	8	5	0	0	4	0	0	0	0	89
7:15	0	55	15	2	11	3	0	0	20	0	0	0	0	106
7:30	0	80	28	0	12	3	0	0	11	0	0	0	0	134
7:45	1	81	17	0	10	9	0	1	11	0	0	0	0	130
8:00	0	88	14	0	11	6	0	0	12	0	0	1	0	132
8:15	0	76	20	1	4	6	0	0	17	0	0	0	0	124
8:30	0	62	11	1	8	12	0	2	16	0	0	0	0	112
8:45	0	87	12	0	13	8	0	1	17	0	0	0	0	138
9:00	0	52	19	0	11	10	0	0	21	0	0	0	0	113
9:15	0	51	17	0	11	12	0	0	12	0	0	0	0	103
9:30	0	67	18	0	13	9	0	0	17	0	0	0	0	124
9:45	1	76	20	1	15	16	0	3	15	0	0	0	0	147
10:00	0	48	21	1	8	13	0	0	14	0	0	1	0	106
10:15	1	58	14	1	10	13	0	1	20	0	0	0	0	118
10:30	0	59	13	0	13	10	0	0	19	0	0	0	0	114
10:45	0	63	16	0	8	6	0	1	20	0	0	1	0	115
11:00	0	54	11	1	8	14	0	0	17	0	0	0	0	105
11:15	1	56	17	0	14	7	0	0	22	0	0	0	0	117
11:30	0	65	16	1	12	10	0	1	13	0	0	0	0	118
11:45	0	80	14	1	15	5	0	0	15	0	0	0	0	130
TOTAL	6	2,367	502	13	289	231	0	33	503	2	9	9	0	3,964

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	520

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	54	21	0	8	9	0	0	19	0	0	0	0	111
12:15	1	57	14	1	11	9	0	1	12	0	0	0	0	106
12:30	0	73	27	0	10	8	0	1	22	0	0	0	0	141
12:45	0	74	21	0	16	5	0	0	20	0	0	0	0	136
13:00	0	78	23	0	16	11	0	0	23	0	0	1	0	152
13:15	0	66	20	0	12	8	0	0	21	0	0	0	0	127
13:30	0	70	22	1	9	12	0	1	20	0	0	0	0	135
13:45	1	64	21	0	13	10	0	0	19	0	0	0	0	128
14:00	0	75	13	0	12	10	0	0	17	0	0	0	0	127
14:15	0	67	19	0	6	6	0	0	14	0	0	0	0	112
14:30	0	86	18	0	12	12	0	1	19	0	0	0	0	148
14:45	0	82	17	3	13	6	0	0	18	0	0	0	0	139
15:00	0	90	17	2	25	9	0	3	19	0	0	0	0	165
15:15	0	108	17	0	14	8	0	0	16	0	0	0	0	163
15:30	0	86	20	1	20	10	0	3	12	0	0	0	0	152
15:45	2	97	13	0	14	5	0	3	21	0	0	0	0	155
16:00	1	110	24	0	21	10	0	3	9	0	0	0	0	178
16:15	1	126	19	2	17	9	0	1	13	0	0	0	0	188
16:30	1	93	15	0	18	5	0	0	15	0	0	0	0	147
16:45	0	128	25	1	14	9	0	2	8	0	0	0	0	187
17:00	0	88	22	0	20	5	0	2	9	0	0	0	0	146
17:15	0	102	25	1	14	6	0	1	19	0	0	0	0	168
17:30	0	112	17	1	19	5	0	1	19	0	0	1	0	175
17:45	0	117	14	1	4	8	0	0	17	1	0	0	0	162
18:00	0	102	16	0	11	2	0	2	10	0	0	0	0	143
18:15	0	93	15	0	5	6	0	4	8	0	0	0	0	131
18:30	0	76	11	0	5	5	0	6	11	0	0	0	0	114
18:45	0	93	8	0	3	5	0	1	11	0	0	0	0	121
19:00	0	78	7	1	3	1	0	3	12	0	0	0	0	105
19:15	1	75	6	0	3	1	0	1	11	0	0	0	0	98
19:30	0	66	5	0	4	2	0	0	10	0	0	0	0	87
19:45	0	51	9	0	0	2	0	3	10	0	0	0	0	75
20:00	0	49	4	0	2	3	0	0	5	0	0	0	0	63
20:15	0	52	6	1	2	5	1	0	2	0	0	0	0	69
20:30	0	31	4	0	2	0	0	0	9	0	0	0	0	46
20:45	2	38	0	0	2	0	0	3	11	0	0	0	0	56
21:00	0	34	1	0	1	0	0	0	5	0	0	0	0	41
21:15	0	49	3	0	0	2	0	0	5	0	0	0	0	59
21:30	0	38	1	0	1	4	0	0	4	0	1	0	0	49
21:45	0	41	0	0	0	7	0	1	6	0	0	0	0	55
22:00	0	36	3	0	2	2	0	1	6	0	0	0	0	50
22:15	0	34	4	0	0	0	0	0	8	0	0	0	0	46
22:30	0	28	0	0	1	2	0	0	6	0	1	0	0	38
22:45	0	21	0	0	0	2	0	0	10	0	0	0	0	33
23:00	0	5	0	0	1	0	0	0	5	0	0	0	0	11
23:15	0	17	0	0	0	1	0	0	5	0	2	0	0	25
23:30	0	14	0	0	0	1	0	1	8	0	0	0	0	24
23:45	0	19	0	0	0	0	0	0	6	0	0	0	0	25
TOTAL	10	3,243	567	16	386	248	1	49	585	1	4	2	0	5,112

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	700

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	16	5,610	1,069	29	675	479	1	82	###	3	13	11	0	9,076
% OF TOTAL	0.2%	61.8%	11.8%	0.3%	7.4%	5.3%	0.0%	0.9%	12.0%	0.0%	0.1%	0.1%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	37	11,447	2,503	58	1,348	912	1	177	###	11	46	37	0	18,751
% OF TOTAL	0.4%	126.1%	27.6%	0.6%	14.9%	10.0%	0.0%	2.0%	24.0%	0.1%	0.5%	0.4%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS16 Rubidoux between 28th and SR-60 WB Off-Ramp

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	24	2	0	0	0	0	0	4	0	0	0	0	30
0:15	0	21	2	0	0	0	0	1	5	0	0	0	0	29
0:30	0	25	4	0	0	1	0	1	4	0	2	1	0	38
0:45	0	14	0	0	1	0	0	0	10	0	0	2	0	27
1:00	0	23	1	0	0	2	0	0	1	0	1	0	0	28
1:15	0	16	2	0	2	1	0	0	7	0	1	0	0	29
1:30	0	10	1	0	0	1	0	1	7	0	0	1	0	21
1:45	0	17	1	0	0	1	0	0	7	0	0	0	0	26
2:00	0	11	1	0	0	1	0	0	2	0	0	0	0	15
2:15	0	8	1	0	0	0	0	1	6	0	0	2	0	18
2:30	0	21	0	0	1	1	0	0	8	0	0	1	0	32
2:45	0	16	0	0	3	4	0	0	4	0	0	0	0	27
3:00	0	13	1	0	0	0	0	1	12	0	0	1	0	28
3:15	0	14	4	0	3	1	0	0	10	0	0	1	0	33
3:30	0	28	7	0	1	2	0	0	8	1	0	0	0	47
3:45	0	16	4	1	1	1	0	0	14	0	0	0	0	37
4:00	0	12	4	0	3	3	0	0	11	0	0	1	0	34
4:15	1	26	8	0	3	4	0	1	8	1	1	0	0	53
4:30	0	43	6	0	5	3	0	1	2	1	0	0	0	61
4:45	0	45	15	0	3	2	0	2	11	0	0	2	0	80
5:00	0	38	12	0	4	3	0	1	9	0	0	0	0	67
5:15	0	45	7	0	9	9	0	2	14	0	1	0	0	87
5:30	1	51	15	0	17	7	0	0	14	0	1	0	0	106
5:45	0	41	8	0	10	8	0	0	14	0	0	3	0	84
6:00	0	62	15	1	16	14	0	0	11	0	0	0	0	119
6:15	0	49	10	0	12	10	0	1	17	0	0	0	0	99
6:30	0	52	18	0	14	6	0	1	16	0	0	0	0	107
6:45	0	62	13	0	13	8	0	3	17	0	0	0	0	116
7:00	0	70	9	1	20	11	0	1	16	0	0	0	0	128
7:15	0	62	19	0	23	9	0	2	9	0	0	0	0	124
7:30	1	119	27	1	10	6	0	2	15	0	0	0	0	181
7:45	1	112	26	0	16	6	0	3	14	0	1	0	0	179
8:00	0	85	30	0	10	10	0	0	18	0	0	0	0	153
8:15	1	76	15	1	14	9	0	1	18	0	0	0	0	135
8:30	0	60	21	0	9	3	0	1	12	0	0	0	0	106
8:45	0	52	21	1	18	8	0	1	20	0	0	0	0	121
9:00	0	32	21	0	9	7	0	5	19	0	0	0	0	93
9:15	0	55	23	0	16	6	0	2	19	0	0	0	0	121
9:30	0	41	14	1	11	3	0	1	18	0	1	0	0	90
9:45	1	59	19	2	31	8	0	2	20	0	0	0	0	142
10:00	0	58	15	0	11	6	0	1	24	0	0	0	0	115
10:15	0	50	7	1	24	10	0	3	29	0	0	0	0	124
10:30	0	68	20	0	15	10	0	0	18	1	0	0	0	132
10:45	0	55	17	1	12	3	0	2	18	0	0	0	0	108
11:00	0	67	20	0	7	11	0	0	24	0	0	0	0	129
11:15	0	58	18	0	12	8	0	0	12	0	0	0	0	108
11:30	0	65	27	0	13	8	0	0	24	0	1	0	0	138
11:45	0	68	22	1	10	8	0	1	11	0	0	0	0	121
TOTAL	6	2,115	553	12	412	243	0	45	611	4	10	15	0	4,026

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	648

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	72	20	1	16	16	0	5	21	0	0	0	0	151
12:15	0	63	11	0	9	10	0	4	24	0	0	1	0	122
12:30	1	63	17	1	5	5	0	3	29	0	0	0	0	124
12:45	0	59	13	0	11	9	0	2	16	0	0	0	0	110
13:00	0	73	15	0	11	10	0	0	14	0	1	0	0	124
13:15	0	68	26	1	14	3	0	1	18	0	0	0	0	131
13:30	1	94	24	0	13	6	0	1	13	0	0	0	0	152
13:45	0	90	19	0	16	7	0	1	20	0	0	0	0	153
14:00	0	106	27	0	9	9	0	2	17	0	0	1	0	171
14:15	1	93	33	0	7	4	0	1	13	0	0	0	0	152
14:30	0	107	38	3	9	7	0	3	20	0	3	0	0	190
14:45	1	101	37	1	8	9	0	1	16	0	3	0	0	177
15:00	1	137	29	1	7	6	0	1	12	0	2	0	0	196
15:15	0	115	46	1	13	9	0	3	19	0	2	0	0	208
15:30	1	127	34	1	6	3	0	0	7	0	0	0	0	179
15:45	0	118	41	0	13	6	0	1	12	0	0	0	0	191
16:00	0	129	38	2	9	2	0	0	9	0	2	0	0	191
16:15	0	118	24	0	4	6	0	1	7	0	1	0	0	161
16:30	0	130	35	1	12	1	0	1	8	0	2	0	0	190
16:45	0	123	24	0	9	4	0	2	8	0	0	1	0	171
17:00	0	142	40	0	3	1	0	0	5	0	0	0	0	191
17:15	1	120	30	1	9	4	0	0	15	0	0	0	0	180
17:30	2	127	36	0	3	4	0	1	13	0	3	0	0	189
17:45	0	105	33	0	6	4	0	1	9	0	1	0	0	159
18:00	0	109	17	0	4	5	0	0	5	0	0	0	0	140
18:15	0	84	25	0	3	3	0	3	8	0	0	0	0	126
18:30	1	91	17	1	2	1	0	1	5	1	0	0	0	120
18:45	0	91	14	0	3	3	0	1	6	1	0	0	0	119
19:00	0	85	8	0	5	1	0	1	10	0	0	0	0	110
19:15	1	68	16	0	1	1	0	1	4	0	0	0	0	92
19:30	0	72	12	0	3	1	0	0	6	0	1	0	0	95
19:45	2	82	9	1	2	1	0	2	6	0	0	0	0	105
20:00	0	61	9	0	0	6	0	1	5	0	0	0	0	82
20:15	0	40	8	0	1	2	0	0	5	0	0	0	0	56
20:30	0	59	13	0	1	3	0	0	5	0	0	1	0	82
20:45	0	57	7	0	0	1	0	0	6	1	0	0	0	72
21:00	0	35	8	0	2	2	0	0	13	0	0	0	0	60
21:15	0	40	3	1	0	1	0	0	3	0	0	0	0	48
21:30	0	34	6	0	0	0	0	0	1	0	0	1	0	42
21:45	0	35	2	0	1	6	0	1	6	0	0	0	0	51
22:00	0	30	4	0	4	5	0	0	3	0	0	0	0	46
22:15	0	17	1	0	0	0	0	1	4	0	1	0	0	24
22:30	1	34	3	0	3	1	0	0	4	0	0	0	0	46
22:45	0	24	1	0	1	0	0	0	7	0	1	0	0	34
23:00	0	29	2	0	2	1	0	1	0	0	0	4	0	39
23:15	0	17	4	0	1	1	0	1	2	0	0	0	0	26
23:30	0	24	1	0	0	0	0	1	9	0	0	1	0	36
23:45	1	24	1	0	0	0	0	0	7	1	0	1	0	35
TOTAL	15	3,722	881	17	261	190	0	50	475	4	23	11	0	5,649

PM PEAK HOUR	3:00 PM
PM PEAK VOLUME	774

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	21	5,837	1,434	29	673	433	0	95	###	8	33	26	0	9,675
% OF TOTAL	0.2%	60.3%	14.8%	0.3%	7.0%	4.5%	0.0%	1.0%	11.2%	0.1%	0.3%	0.3%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS17 Market between Agua Mansa and 24th

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	28	0	0	2	0	0	0	1	0	1	0	0	32
0:15	0	21	0	0	0	0	0	0	0	0	1	0	0	22
0:30	0	15	1	0	0	0	0	0	1	0	1	0	0	18
0:45	0	20	0	0	0	1	8	0	0	0	3	0	0	32
1:00	0	11	2	0	0	1	0	0	2	0	0	0	1	17
1:15	0	18	1	0	0	0	0	0	3	0	1	0	0	23
1:30	0	16	0	0	0	0	1	0	1	0	2	0	0	20
1:45	1	32	0	0	1	0	0	0	3	0	1	0	0	38
2:00	0	11	0	0	2	0	0	0	2	0	1	0	0	16
2:15	0	12	1	0	1	2	0	0	2	0	1	0	0	19
2:30	0	16	0	0	0	1	0	0	2	0	0	0	0	19
2:45	0	19	0	0	0	1	0	0	4	0	1	0	0	25
3:00	0	16	0	0	1	0	0	0	3	0	1	0	0	21
3:15	0	25	1	0	0	1	0	0	2	0	0	0	0	29
3:30	0	43	0	0	1	0	0	0	4	0	1	0	0	49
3:45	0	48	0	0	1	0	0	0	5	0	0	0	0	54
4:00	0	34	0	0	0	0	0	0	0	0	0	0	0	34
4:15	0	58	2	0	1	0	0	0	3	0	2	0	0	66
4:30	0	76	2	0	1	0	0	0	6	0	0	0	0	85
4:45	0	123	1	0	0	1	0	0	3	0	4	0	0	132
5:00	0	56	2	0	0	1	0	0	3	0	1	0	0	63
5:15	0	69	2	0	2	1	0	1	6	0	0	0	0	81
5:30	0	69	2	0	3	1	0	0	5	0	1	0	0	81
5:45	1	91	5	0	5	1	0	0	2	0	0	0	0	105
6:00	0	80	6	1	5	3	0	0	7	0	3	0	0	105
6:15	0	86	5	0	2	2	0	0	13	0	2	0	0	110
6:30	0	104	6	0	4	5	0	0	4	0	2	0	0	125
6:45	0	122	5	0	7	1	1	0	8	0	1	0	0	145
7:00	0	114	8	1	6	0	0	0	5	0	1	0	0	135
7:15	0	107	6	0	11	1	0	0	9	0	0	0	0	134
7:30	0	85	4	0	7	2	0	0	8	0	0	0	0	106
7:45	0	110	3	0	4	2	0	0	6	0	0	0	0	125
8:00	0	101	4	1	7	7	1	0	6	0	2	0	0	129
8:15	0	84	11	0	3	5	1	0	19	0	2	0	0	125
8:30	0	80	4	0	4	3	0	0	15	0	2	0	0	108
8:45	0	78	14	0	2	6	0	0	11	0	3	0	0	114
9:00	0	85	17	0	8	10	0	0	11	0	2	0	0	133
9:15	1	100	7	1	9	9	0	0	15	0	5	0	0	147
9:30	0	77	7	0	12	6	4	0	13	0	1	0	0	120
9:45	0	88	8	0	8	13	1	0	8	0	4	0	0	130
10:00	0	80	5	0	5	12	0	0	16	0	4	0	0	122
10:15	0	80	5	0	5	5	1	0	10	0	4	0	0	110
10:30	0	72	5	1	7	8	0	0	13	0	5	0	0	111
10:45	0	71	9	0	4	6	3	0	16	0	2	0	0	111
11:00	0	56	3	0	3	12	1	0	10	0	3	0	0	88
11:15	0	84	4	0	3	6	1	0	11	0	2	0	0	111
11:30	1	72	4	0	5	9	0	0	6	0	4	0	0	101
11:45	0	56	5	1	12	5	0	2	11	0	2	0	0	94
TOTAL	4	2,999	177	6	164	150	23	3	314	0	79	0	1	3,920

AM PEAK HOUR	6:30 AM
AM PEAK VOLUME	539

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	1	70	6	0	3	12	1	0	13	0	1	0	0	107
12:15	0	73	10	0	7	12	1	0	11	0	5	0	0	119
12:30	0	83	12	0	6	5	2	0	17	0	1	0	0	126
12:45	1	69	9	0	6	5	0	0	9	0	0	0	0	99
13:00	0	82	6	0	9	4	0	0	10	0	7	0	0	118
13:15	0	75	11	1	3	6	1	0	19	0	2	0	0	118
13:30	0	84	8	0	5	3	0	0	10	0	4	0	0	114
13:45	0	71	8	0	5	10	1	0	9	0	2	1	0	107
14:00	0	85	10	0	10	6	2	0	10	0	0	0	0	123
14:15	0	71	8	0	7	2	1	0	16	0	2	0	0	107
14:30	0	99	6	1	7	6	0	0	5	0	0	0	0	124
14:45	0	89	6	0	10	11	1	0	10	0	2	0	0	129
15:00	0	96	7	0	10	7	1	0	16	0	4	0	0	141
15:15	0	117	11	0	9	7	1	0	4	0	1	0	0	150
15:30	0	73	11	0	10	7	0	1	9	0	2	0	0	113
15:45	0	115	14	0	7	10	1	0	8	0	1	0	0	156
16:00	1	114	18	1	8	6	1	2	11	0	0	0	0	162
16:15	1	102	9	0	8	10	0	0	17	0	0	0	0	147
16:30	0	92	12	0	4	4	0	0	6	0	0	0	0	118
16:45	0	112	8	0	3	4	0	0	8	0	1	0	0	136
17:00	1	121	6	0	7	4	0	0	8	0	0	0	0	147
17:15	0	128	4	1	3	3	0	0	5	0	0	0	0	144
17:30	0	128	5	0	9	2	0	0	5	0	0	0	0	149
17:45	0	105	6	0	12	4	0	0	5	0	1	0	0	133
18:00	1	88	9	0	0	1	0	0	1	0	1	0	0	101
18:15	0	97	2	0	4	2	0	0	3	0	1	0	0	109
18:30	1	85	6	1	2	2	0	0	5	0	1	0	0	103
18:45	0	90	6	0	1	5	0	1	3	0	0	0	0	106
19:00	0	84	2	0	0	2	0	0	8	0	0	0	0	96
19:15	0	71	5	0	1	1	0	0	2	0	0	0	0	80
19:30	1	59	7	0	0	0	0	0	4	0	0	0	0	71
19:45	1	79	2	1	0	0	0	0	1	0	0	0	0	84
20:00	1	50	1	0	1	1	0	0	6	0	0	0	0	60
20:15	0	57	1	0	0	0	0	0	0	0	0	0	0	58
20:30	0	63	1	0	0	1	0	0	2	0	1	0	0	68
20:45	0	49	2	0	0	3	0	0	1	0	1	0	0	56
21:00	0	53	2	1	1	1	0	0	3	0	2	0	0	63
21:15	0	49	1	0	0	1	0	0	2	0	1	0	0	54
21:30	1	30	1	0	1	0	0	0	2	0	0	0	0	35
21:45	0	43	4	0	1	1	0	0	6	0	0	0	0	55
22:00	0	36	2	0	2	1	0	0	3	0	0	0	0	44
22:15	0	41	0	0	1	1	0	0	5	0	0	0	0	48
22:30	0	36	0	0	0	0	0	0	2	0	0	0	0	38
22:45	0	33	1	0	1	4	0	0	3	0	2	0	0	44
23:00	0	22	1	0	0	3	0	0	1	0	0	0	0	27
23:15	0	21	0	0	0	0	0	0	4	0	0	0	0	25
23:30	0	23	0	0	0	3	0	0	4	0	2	0	0	32
23:45	0	15	0	0	0	1	0	0	2	0	2	0	0	20
TOTAL	11	3,528	267	7	184	184	14	4	314	0	50	1	0	4,564

PM PEAK HOUR	3:45 PM
PM PEAK VOLUME	583

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	15	6,527	444	13	348	334	37	7	628	0	129	1	1	8,484
% OF TOTAL	0.2%	76.9%	5.2%	0.2%	4.1%	3.9%	0.4%	0.1%	7.4%	0.0%	1.5%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	27	12,601	955	14	637	597	120	12	###	1	226	2	3	16,288
% OF TOTAL	0.3%	148.5%	11.3%	0.2%	7.5%	7.0%	1.4%	0.1%	12.9%	0.0%	2.7%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS17 Market between Agua Mansa and 24th

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	15	0	0	0	0	0	0	1	0	2	0	0	18
0:15	0	13	0	0	0	1	0	0	2	0	0	0	0	16
0:30	1	18	0	0	0	0	0	0	0	0	2	0	0	21
0:45	0	18	0	0	3	1	0	0	1	0	0	0	0	23
1:00	0	27	0	0	0	0	0	0	2	1	0	0	0	30
1:15	0	14	0	0	0	0	0	0	1	0	1	0	0	16
1:30	0	11	0	0	0	0	0	0	0	0	0	0	0	11
1:45	0	10	0	0	0	0	0	0	1	0	0	0	0	11
2:00	0	5	0	0	0	0	0	0	2	0	2	0	0	9
2:15	0	10	1	0	0	0	0	0	0	0	1	0	0	12
2:30	0	11	0	0	0	1	0	0	0	0	1	0	0	13
2:45	0	14	0	0	0	0	0	0	1	0	0	0	0	15
3:00	0	12	0	0	0	0	0	0	0	0	0	0	0	12
3:15	0	17	1	0	0	1	0	0	6	0	0	0	0	25
3:30	0	26	1	0	0	2	0	0	6	0	1	0	0	36
3:45	0	32	2	0	1	0	0	0	7	0	1	0	0	43
4:00	0	20	2	0	0	1	0	0	9	0	0	0	0	32
4:15	0	37	2	0	0	1	0	0	7	0	0	0	0	47
4:30	1	52	3	0	2	2	0	0	3	0	2	0	0	65
4:45	0	58	3	0	3	1	0	0	6	0	0	0	0	71
5:00	0	43	6	0	3	1	0	0	2	0	3	0	0	58
5:15	0	68	4	0	4	8	1	0	4	0	2	0	0	91
5:30	1	56	4	0	5	8	0	0	9	0	4	0	0	87
5:45	0	72	7	0	5	10	2	0	7	0	1	0	0	104
6:00	0	62	4	0	3	5	1	0	5	0	0	0	0	80
6:15	0	71	5	0	2	5	2	0	9	0	3	0	0	97
6:30	0	101	11	0	9	4	5	0	8	0	1	0	0	139
6:45	0	97	10	0	6	6	1	0	10	0	0	0	0	130
7:00	0	99	6	0	10	0	6	0	8	0	1	0	0	130
7:15	0	120	10	0	3	0	0	0	6	0	2	0	0	141
7:30	0	98	15	0	5	2	1	0	3	0	2	0	0	126
7:45	0	116	4	0	6	5	2	0	10	0	1	0	0	144
8:00	0	88	8	0	6	2	3	0	6	0	1	0	0	114
8:15	0	76	9	0	0	2	3	0	13	0	2	0	0	105
8:30	1	82	2	0	10	7	4	0	2	0	5	0	1	114
8:45	0	82	6	0	5	5	1	0	5	0	3	0	0	107
9:00	0	77	7	0	7	4	0	0	10	0	2	0	0	107
9:15	0	52	9	0	6	4	2	0	11	0	2	0	0	86
9:30	1	67	6	0	6	13	0	0	11	0	3	0	0	107
9:45	0	62	10	0	3	8	6	1	11	0	0	0	0	101
10:00	0	50	5	0	6	4	6	0	13	0	0	0	0	84
10:15	0	66	9	0	4	6	0	0	5	0	4	0	0	94
10:30	0	67	6	0	4	1	4	0	9	0	4	0	0	95
10:45	0	49	2	0	4	4	5	0	12	0	2	0	0	78
11:00	0	65	10	0	5	4	5	0	9	0	1	0	0	99
11:15	0	55	8	0	4	10	1	0	12	0	1	0	0	91
11:30	0	72	10	0	7	8	1	0	12	0	2	0	0	112
11:45	0	64	3	0	2	8	2	0	9	0	2	0	0	90
TOTAL	5	2,497	211	0	149	155	64	1	286	1	67	0	1	3,437

AM PEAK HOUR	7:00 AM
AM PEAK VOLUME	541

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	55	9	0	8	5	0	0	9	0	1	0	0	87
12:15	0	56	11	0	8	12	1	0	8	0	2	0	0	98
12:30	0	87	8	0	1	4	0	0	8	0	1	0	0	109
12:45	0	61	5	0	6	6	3	1	10	0	2	0	0	94
13:00	0	62	9	0	1	3	2	0	9	0	1	0	0	87
13:15	0	71	8	0	8	9	2	1	8	0	2	0	0	109
13:30	0	98	2	0	8	3	1	0	9	0	4	0	0	125
13:45	0	84	13	0	4	3	0	0	6	0	0	0	0	110
14:00	0	85	13	0	4	2	2	0	4	0	2	0	0	112
14:15	0	94	15	0	7	4	0	0	4	0	1	0	0	125
14:30	0	108	10	0	5	5	4	0	4	0	0	0	0	136
14:45	0	106	8	0	7	3	0	0	6	0	0	0	1	131
15:00	0	117	7	0	10	3	1	0	5	0	0	0	0	143
15:15	1	104	8	0	5	4	1	0	6	0	1	0	0	130
15:30	0	121	11	0	2	5	0	0	5	0	0	0	0	144
15:45	1	119	8	0	2	9	0	0	6	0	0	0	0	145
16:00	0	125	11	0	6	3	1	0	3	0	0	0	0	149
16:15	0	118	14	0	3	0	0	0	4	0	0	0	0	139
16:30	0	130	11	0	5	3	1	0	4	0	0	0	0	154
16:45	0	134	10	0	0	1	0	0	1	0	0	0	0	146
17:00	1	122	12	0	6	1	0	0	1	0	0	0	0	143
17:15	0	130	14	0	5	2	0	0	0	0	1	0	0	152
17:30	0	110	9	0	2	1	0	0	9	0	0	0	0	131
17:45	0	117	9	1	6	1	0	0	5	0	1	0	0	140
18:00	0	125	13	0	3	2	0	0	4	0	1	0	0	148
18:15	0	71	6	0	0	1	0	1	2	0	0	0	0	81
18:30	0	77	8	0	4	0	0	1	3	0	0	0	0	93
18:45	0	67	5	0	2	1	0	0	2	0	2	0	0	79
19:00	1	48	1	0	0	2	0	0	3	0	0	0	0	55
19:15	2	75	7	0	2	1	0	0	1	0	0	0	0	88
19:30	0	81	3	0	2	0	0	0	2	0	0	0	0	88
19:45	0	61	4	0	1	0	0	0	1	0	0	0	0	67
20:00	0	67	4	0	0	3	0	0	0	0	0	0	0	74
20:15	0	43	1	0	0	0	0	0	4	0	0	0	0	48
20:30	0	60	6	0	0	2	0	0	2	0	0	0	0	70
20:45	0	40	2	0	0	0	0	0	2	0	1	0	0	45
21:00	0	45	0	0	0	0	0	0	1	0	1	0	0	47
21:15	0	33	0	0	1	0	0	0	2	0	2	0	0	38
21:30	0	41	1	0	0	1	0	0	1	0	1	0	0	45
21:45	0	38	1	0	1	0	0	0	0	0	0	0	0	40
22:00	0	36	2	0	0	1	0	0	1	0	1	0	0	41
22:15	1	26	0	0	2	0	0	0	1	0	0	0	0	30
22:30	0	27	1	0	1	0	0	0	2	0	0	0	0	31
22:45	0	24	0	0	1	1	0	0	4	0	0	0	0	30
23:00	0	15	0	0	0	0	0	0	3	0	0	0	0	18
23:15	0	24	0	0	0	0	0	0	1	0	0	0	0	25
23:30	0	20	0	0	1	0	0	0	3	0	0	0	0	24
23:45	0	19	0	0	0	1	0	0	0	0	2	1	0	23
TOTAL	7	3,577	300	1	140	108	19	4	179	0	30	1	1	4,367

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	595

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	12	6,074	511	1	289	263	83	5	465	1	97	1	2	7,804
% OF TOTAL	0.2%	77.8%	6.5%	0.0%	3.7%	3.4%	1.1%	0.1%	6.0%	0.0%	1.2%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS18 Market between 24th and SR-60 WB Off-Ramp

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	27	0	0	2	0	0	0	6	0	0	0	0	35
0:15	0	24	1	0	0	0	0	0	5	0	2	0	0	32
0:30	0	16	0	0	0	1	0	0	1	0	1	0	0	19
0:45	0	16	4	0	0	10	0	0	0	0	1	0	0	31
1:00	0	17	0	0	2	0	0	0	5	0	1	0	0	25
1:15	0	17	0	0	1	0	0	0	3	0	1	0	0	22
1:30	0	20	0	0	0	1	0	0	3	0	2	0	0	26
1:45	1	36	5	0	0	2	0	0	3	0	1	0	0	48
2:00	0	10	1	0	2	0	0	1	2	0	1	0	0	17
2:15	0	15	2	0	2	2	0	0	1	0	0	0	0	22
2:30	0	12	2	0	2	1	0	0	3	0	1	0	0	21
2:45	0	23	7	0	0	2	0	0	4	0	0	0	0	36
3:00	0	14	4	0	1	0	0	0	2	0	1	0	0	22
3:15	0	30	4	0	2	2	0	1	4	0	0	0	0	43
3:30	0	64	11	0	2	0	0	0	6	0	1	0	0	84
3:45	0	74	8	0	1	0	0	0	3	0	0	0	0	86
4:00	1	43	8	0	1	0	0	0	3	0	0	0	0	56
4:15	0	65	15	0	2	0	0	0	4	0	2	0	0	88
4:30	0	99	13	0	1	1	0	0	9	0	0	0	0	123
4:45	0	148	29	0	8	1	0	1	7	0	6	0	0	200
5:00	0	52	26	0	6	1	0	0	3	0	0	0	0	88
5:15	1	78	12	0	6	0	1	2	6	0	0	0	0	106
5:30	0	91	29	0	7	1	0	0	10	0	1	0	0	139
5:45	1	118	54	1	12	3	0	0	9	0	0	0	0	198
6:00	0	100	32	0	4	3	0	0	13	0	3	0	0	155
6:15	0	94	27	1	6	1	0	0	14	0	3	0	0	146
6:30	0	98	41	0	6	6	0	0	7	0	1	0	0	159
6:45	0	137	40	0	9	4	0	0	9	0	1	0	0	200
7:00	0	122	35	6	10	0	0	0	10	0	1	0	0	184
7:15	0	88	25	0	15	2	0	0	12	0	0	0	0	142
7:30	1	95	28	0	11	2	0	0	12	0	0	0	0	149
7:45	0	101	29	0	5	2	0	0	4	0	2	0	0	143
8:00	0	115	31	1	13	13	0	0	10	0	0	0	0	183
8:15	0	74	38	0	14	2	0	0	21	0	3	0	0	152
8:30	0	75	31	0	9	5	0	0	15	0	1	0	0	136
8:45	0	81	26	0	8	8	0	0	13	0	4	0	0	140
9:00	0	85	34	0	18	7	0	0	23	0	3	0	0	170
9:15	0	89	27	1	13	9	2	0	15	0	3	0	0	159
9:30	0	60	28	0	16	10	0	0	15	0	1	0	0	130
9:45	0	95	28	0	17	8	0	1	12	0	5	1	0	167
10:00	0	107	35	0	12	15	0	1	23	1	4	0	0	198
10:15	0	69	20	0	12	8	0	0	12	0	4	0	0	125
10:30	0	57	27	1	15	11	0	0	23	0	4	0	0	138
10:45	0	63	20	0	10	12	0	0	16	0	1	0	0	122
11:00	0	68	24	0	13	14	0	1	17	0	5	0	0	142
11:15	0	88	18	0	12	4	1	0	16	0	1	0	0	140
11:30	1	60	20	0	16	6	0	0	12	0	4	0	0	119
11:45	0	48	21	1	12	12	0	1	13	0	2	0	0	110
TOTAL	6	3,178	920	12	336	192	4	9	439	1	78	1	0	5,176

AM PEAK HOUR	6:15 AM
AM PEAK VOLUME	689

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	1	70	31	0	10	11	0	1	14	0	2	0	0	140
12:15	0	69	24	0	15	13	0	0	17	0	5	0	0	143
12:30	1	65	27	0	19	9	0	0	17	0	1	0	0	139
12:45	1	74	22	0	13	7	0	0	10	0	1	0	0	128
13:00	1	100	23	1	12	9	0	3	14	0	7	0	0	170
13:15	0	85	29	0	18	7	0	0	19	0	1	0	0	159
13:30	1	99	27	0	16	8	0	0	12	0	4	0	0	167
13:45	0	78	25	1	14	6	0	0	14	0	3	0	0	141
14:00	0	72	27	0	11	11	0	1	19	0	1	0	0	142
14:15	0	82	27	1	12	5	1	0	16	0	2	0	0	146
14:30	1	82	28	1	12	8	2	0	6	0	0	0	0	140
14:45	0	99	32	0	19	12	0	0	19	0	4	0	0	185
15:00	0	89	31	0	14	5	0	0	13	0	1	0	0	153
15:15	0	89	28	1	14	8	0	0	6	0	1	0	0	147
15:30	1	79	37	0	12	10	0	0	13	0	2	0	0	154
15:45	0	103	33	1	14	6	0	0	13	0	1	0	0	171
16:00	1	89	31	1	25	9	1	1	14	0	0	0	0	172
16:15	1	93	18	0	10	8	0	0	14	0	0	0	0	144
16:30	0	84	25	0	7	5	0	0	8	0	1	0	0	130
16:45	1	95	27	0	10	7	0	0	11	0	0	0	0	151
17:00	0	114	27	0	5	1	0	1	8	0	0	0	0	156
17:15	0	116	19	1	8	3	0	1	7	0	0	0	0	155
17:30	0	100	31	0	5	4	0	1	4	0	0	0	0	145
17:45	0	84	22	0	12	2	0	0	10	0	1	0	0	131
18:00	3	96	14	0	4	2	0	1	3	0	1	0	0	124
18:15	1	91	17	1	7	1	0	1	6	0	0	0	0	125
18:30	0	82	13	1	3	2	0	3	4	0	0	0	0	108
18:45	1	89	17	0	3	3	0	3	7	0	0	0	0	123
19:00	0	58	15	0	1	0	0	2	8	0	0	0	0	84
19:15	0	63	17	0	6	0	0	0	4	0	0	0	0	90
19:30	1	73	6	1	1	1	0	0	6	0	0	0	0	89
19:45	0	66	5	1	3	0	0	0	2	0	0	0	0	77
20:00	1	63	9	0	2	1	0	1	5	0	0	0	0	82
20:15	0	53	13	0	1	0	0	0	3	0	0	0	0	70
20:30	0	63	8	0	3	2	0	0	2	0	1	0	0	79
20:45	0	48	8	0	3	3	0	0	6	0	1	0	0	69
21:00	0	62	5	1	2	1	0	0	5	0	2	0	0	78
21:15	0	38	13	0	1	1	0	0	4	0	1	0	0	58
21:30	1	40	5	0	2	0	0	0	4	0	0	0	0	52
21:45	0	50	10	0	2	1	0	1	3	0	0	0	0	67
22:00	0	44	2	1	4	0	0	0	3	0	0	0	0	54
22:15	0	43	2	0	1	2	0	0	5	0	0	0	0	53
22:30	0	37	3	0	0	0	0	0	5	0	0	0	0	45
22:45	0	33	7	0	2	3	0	0	2	0	2	0	0	49
23:00	0	18	4	0	0	2	0	0	5	0	0	0	0	29
23:15	0	28	1	0	1	2	0	0	4	0	0	0	0	36
23:30	0	21	2	0	2	3	0	0	5	0	2	0	0	35
23:45	0	20	2	0	0	1	0	0	3	0	2	0	0	28
TOTAL	18	3,389	849	14	361	205	4	21	402	0	50	0	0	5,313

PM PEAK HOUR	3:15 PM
PM PEAK VOLUME	644

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	24	6,567	1,769	26	697	397	8	30	841	1	128	1	0	10,489
% OF TOTAL	0.2%	62.6%	16.9%	0.2%	6.6%	3.8%	0.1%	0.3%	8.0%	0.0%	1.2%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	46	13,552	3,542	62	1,242	782	12	55	###	4	221	2	1	21,058
% OF TOTAL	0.4%	129.2%	33.8%	0.6%	11.8%	7.5%	0.1%	0.5%	14.7%	0.0%	2.1%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS18 Market between 24th and SR-60 WB Off-Ramp

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	25	0	0	0	0	0	0	2	0	2	0	0	29
0:15	0	18	1	0	0	0	0	0	3	0	0	0	0	22
0:30	1	22	0	0	0	0	0	0	0	0	2	0	0	25
0:45	0	20	0	0	3	1	0	0	0	0	1	0	0	25
1:00	0	37	1	0	0	1	0	0	3	0	0	0	0	42
1:15	0	26	0	0	0	0	0	0	3	0	1	0	0	30
1:30	0	16	0	0	0	0	0	0	0	0	0	0	0	16
1:45	0	18	0	0	0	0	0	0	3	0	0	0	0	21
2:00	0	8	0	0	0	0	0	0	2	0	2	0	0	12
2:15	0	10	1	0	0	0	0	0	4	0	1	0	0	16
2:30	0	15	0	0	0	0	0	0	2	0	1	0	0	18
2:45	0	17	0	0	0	1	0	0	1	0	0	0	0	19
3:00	0	15	0	0	0	0	0	0	0	0	0	0	0	15
3:15	0	14	1	0	0	0	0	0	4	0	0	0	0	19
3:30	0	30	2	0	0	2	0	2	5	0	1	0	0	42
3:45	0	36	2	1	2	1	0	0	10	0	2	0	0	54
4:00	0	37	2	0	0	1	0	0	11	0	0	0	0	51
4:15	0	41	1	0	0	1	0	0	14	0	0	0	0	57
4:30	0	48	8	0	1	1	0	0	6	0	2	0	0	66
4:45	1	74	0	0	2	2	0	1	7	0	0	0	0	87
5:00	0	48	6	0	1	2	0	0	5	0	3	0	0	65
5:15	0	70	0	0	5	8	0	0	8	0	1	0	0	92
5:30	1	73	4	0	4	8	1	0	11	0	5	0	0	107
5:45	0	81	2	0	6	12	0	0	6	0	1	0	0	108
6:00	0	74	10	1	3	8	0	0	7	0	0	0	0	103
6:15	0	61	14	0	3	6	0	0	10	0	3	0	0	97
6:30	0	94	10	1	13	10	0	0	8	0	1	0	0	137
6:45	1	100	14	0	10	8	0	0	16	0	0	0	0	149
7:00	0	95	19	0	6	6	0	0	11	0	1	0	0	138
7:15	0	106	35	0	3	4	0	0	13	0	0	0	0	161
7:30	0	114	38	1	15	1	0	0	9	0	2	0	0	180
7:45	0	124	30	0	15	6	0	0	8	0	1	0	0	184
8:00	0	96	21	0	13	5	0	0	11	0	1	0	0	147
8:15	0	80	23	0	8	5	0	0	12	0	1	0	0	129
8:30	1	85	20	4	5	14	0	0	11	1	5	0	0	146
8:45	0	80	19	3	11	6	0	0	8	2	3	0	0	132
9:00	0	74	28	2	3	4	0	1	13	0	2	0	0	127
9:15	0	53	17	1	12	6	0	2	10	0	1	0	0	102
9:30	1	56	27	1	11	11	0	2	15	0	4	0	0	128
9:45	0	55	21	1	14	15	0	2	13	0	0	0	0	121
10:00	0	44	30	1	5	13	0	1	16	0	0	0	0	110
10:15	1	60	23	0	7	7	0	1	14	0	1	0	0	114
10:30	0	81	22	0	12	10	1	0	11	0	6	0	0	143
10:45	0	51	21	0	7	7	0	2	15	0	2	0	0	105
11:00	0	63	25	0	10	10	0	1	11	0	0	0	0	120
11:15	0	59	23	1	8	12	0	0	16	0	1	0	0	120
11:30	0	79	25	0	4	9	0	1	18	0	2	0	0	138
11:45	0	72	24	0	6	12	0	0	13	0	0	0	0	127
TOTAL	7	2,655	570	18	228	236	2	16	399	3	62	0	0	4,196

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	672

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	80	27	0	7	6	0	0	13	0	3	0	0	136
12:15	0	57	24	0	12	12	0	0	13	0	2	0	0	120
12:30	0	89	27	1	15	4	1	0	9	0	1	0	0	147
12:45	0	73	16	0	8	13	0	1	13	0	2	0	0	126
13:00	0	67	32	0	8	6	0	0	16	0	1	0	0	130
13:15	1	61	29	0	10	7	0	3	16	0	2	0	0	129
13:30	0	124	25	0	15	7	0	1	15	0	4	0	0	191
13:45	0	106	28	1	12	4	0	0	13	0	0	0	0	164
14:00	0	98	28	0	9	5	0	0	7	0	2	0	0	149
14:15	0	112	32	0	21	7	0	0	8	0	0	0	0	180
14:30	0	140	48	0	9	4	1	0	8	0	0	0	0	210
14:45	0	131	41	0	17	4	0	0	8	0	0	0	0	201
15:00	0	168	41	1	17	6	0	1	13	0	0	0	1	248
15:15	1	151	43	2	15	9	0	0	8	0	3	0	0	232
15:30	0	149	54	0	14	2	0	0	6	0	0	0	0	225
15:45	1	150	57	2	7	10	0	0	11	0	0	0	0	238
16:00	1	200	57	0	9	5	0	0	6	0	0	0	0	278
16:15	1	145	68	2	3	3	0	0	6	0	0	0	0	228
16:30	1	151	52	4	12	5	0	0	5	0	0	0	0	230
16:45	0	189	47	0	9	2	0	0	3	0	0	0	0	250
17:00	1	149	39	2	8	1	0	0	4	0	0	0	0	204
17:15	0	154	40	0	9	2	0	0	5	0	1	0	0	211
17:30	0	133	39	0	8	1	0	1	6	0	0	0	0	188
17:45	0	145	39	1	10	1	0	0	5	0	1	0	0	202
18:00	1	150	40	0	10	1	0	1	7	0	1	0	0	211
18:15	0	88	32	0	3	1	0	0	4	0	0	0	0	128
18:30	0	83	20	0	5	0	0	0	3	0	0	0	0	111
18:45	0	69	19	0	6	1	0	0	4	0	2	0	0	101
19:00	1	58	17	1	1	1	0	0	4	0	0	0	0	83
19:15	3	83	12	0	3	1	0	0	3	0	0	0	0	105
19:30	1	75	19	0	2	0	0	1	2	0	0	0	0	100
19:45	0	63	22	0	2	1	0	0	1	0	0	0	0	89
20:00	0	68	9	0	1	5	0	0	4	0	0	0	0	87
20:15	0	44	9	1	2	0	0	0	6	0	0	0	0	62
20:30	1	72	6	0	6	1	0	0	3	0	0	0	0	89
20:45	0	44	8	0	2	2	0	0	3	0	1	0	0	60
21:00	0	50	10	0	0	0	0	0	4	0	1	0	0	65
21:15	0	39	3	0	1	1	0	0	2	0	1	0	0	47
21:30	0	42	5	0	1	1	0	0	3	0	1	0	0	53
21:45	0	49	6	0	1	0	0	0	2	0	0	0	0	58
22:00	0	38	7	0	0	2	0	0	2	0	1	0	0	50
22:15	1	24	4	0	2	0	0	0	5	0	0	0	0	36
22:30	0	45	4	0	2	0	0	0	3	0	0	0	0	54
22:45	0	26	6	0	1	1	0	0	2	0	0	0	0	36
23:00	0	32	2	0	1	0	0	0	3	0	0	0	0	38
23:15	0	23	3	0	0	0	0	0	4	0	0	0	0	30
23:30	0	22	3	0	1	0	0	0	4	0	0	0	0	30
23:45	0	21	4	0	0	4	0	0	2	0	1	1	0	33
TOTAL	15	4,330	1,203	18	317	149	2	9	297	0	31	1	1	6,373

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	986

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	22	6,985	1,773	36	545	385	4	25	696	3	93	1	1	10,569
% OF TOTAL	0.2%	66.1%	16.8%	0.3%	5.2%	3.6%	0.0%	0.2%	6.6%	0.0%	0.9%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS19 Mission between SR-60 EB Ramps and Valley

AM	EASTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	43	10	0	0	0	0	0	0	0	0	0	0	53
0:15	0	26	4	0	0	0	0	0	0	0	0	0	0	30
0:30	0	27	4	0	0	0	0	0	0	0	0	0	0	31
0:45	0	24	4	0	0	0	0	0	0	0	0	0	0	28
1:00	0	32	3	0	0	0	0	0	0	0	0	0	0	35
1:15	0	18	3	0	0	0	0	0	0	0	0	0	0	21
1:30	0	18	9	0	0	0	0	0	0	0	0	0	0	27
1:45	0	23	6	0	0	0	0	0	0	0	0	0	0	29
2:00	0	10	1	0	0	0	0	0	0	0	0	0	0	11
2:15	0	14	5	0	1	1	0	0	0	0	0	0	0	21
2:30	0	17	3	0	0	1	0	0	0	0	0	0	0	21
2:45	0	20	0	0	0	0	0	0	0	0	0	0	0	20
3:00	0	18	1	0	0	2	0	0	0	0	0	0	0	21
3:15	0	9	3	0	1	0	0	0	0	0	0	0	0	13
3:30	0	14	1	0	0	0	0	0	0	0	0	0	0	15
3:45	0	11	3	0	1	0	0	0	0	0	0	0	0	15
4:00	0	11	3	0	0	0	0	0	1	0	0	0	0	15
4:15	0	25	1	0	0	1	0	0	0	0	0	0	0	27
4:30	1	27	9	0	0	0	0	0	0	0	0	0	0	37
4:45	0	24	13	0	1	0	0	0	1	0	0	0	0	39
5:00	1	36	4	0	2	0	0	0	0	0	0	0	0	43
5:15	0	20	9	0	2	0	0	0	0	0	0	0	0	31
5:30	0	30	14	0	5	1	0	0	0	0	0	0	0	50
5:45	0	37	12	0	2	0	0	0	1	0	0	0	0	52
6:00	0	48	22	1	4	0	0	0	1	0	0	0	0	76
6:15	0	51	11	1	9	0	0	0	1	0	0	0	0	73
6:30	0	58	23	0	2	2	0	0	2	0	1	0	0	88
6:45	0	70	26	0	6	0	0	0	2	0	0	0	0	104
7:00	1	82	25	2	5	1	0	0	1	0	0	0	0	117
7:15	0	86	29	1	1	0	0	0	0	0	0	0	0	117
7:30	0	102	10	0	4	1	0	0	2	0	0	0	0	119
7:45	0	112	27	0	5	0	1	0	4	0	0	0	0	149
8:00	1	108	24	0	8	0	0	0	0	0	0	0	0	141
8:15	0	121	27	3	3	0	0	0	1	0	0	0	0	155
8:30	0	113	38	0	3	1	0	0	2	0	0	0	0	157
8:45	0	174	31	0	2	1	0	1	1	0	0	0	0	210
9:00	0	125	35	0	3	0	0	0	0	0	1	0	0	164
9:15	1	85	34	1	7	1	0	0	2	0	1	0	0	132
9:30	0	99	22	0	7	2	0	0	2	0	0	0	0	132
9:45	0	80	30	0	7	0	0	0	1	0	0	0	0	118
10:00	0	77	21	2	8	3	0	0	1	0	0	0	0	112
10:15	0	98	23	2	6	0	0	0	1	0	0	0	0	130
10:30	0	83	28	0	7	3	0	0	1	0	0	0	0	122
10:45	0	105	37	0	6	2	0	0	3	0	0	0	0	153
11:00	0	95	23	0	4	1	0	0	2	0	0	0	0	125
11:15	0	94	30	2	3	1	0	0	1	0	0	0	0	131
11:30	0	111	36	0	6	2	0	0	2	0	0	0	0	157
11:45	1	86	36	2	5	0	0	0	1	0	0	0	0	131
TOTAL	6	2,797	773	17	136	27	1	1	37	0	3	0	0	3,798

AM PEAK HOUR	8:15 AM
AM PEAK VOLUME	686

PM	EASTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	105	28	1	4	1	0	0	5	0	0	0	0	144
12:15	1	137	49	1	11	2	0	0	1	0	0	0	0	202
12:30	0	122	35	0	6	1	0	0	1	0	0	0	0	165
12:45	0	106	47	0	4	1	0	0	1	0	0	0	0	159
13:00	0	128	34	1	9	8	0	0	0	0	0	0	0	180
13:15	1	117	40	1	8	4	0	0	1	0	2	0	0	174
13:30	1	124	53	0	9	2	0	0	1	0	0	0	0	190
13:45	0	162	44	0	7	3	0	0	2	0	2	0	0	220
14:00	0	147	50	0	12	1	0	0	2	0	1	0	0	213
14:15	0	226	61	4	9	4	0	0	2	0	1	0	0	307
14:30	1	183	56	1	11	2	0	0	1	0	0	0	0	255
14:45	0	247	58	0	7	3	0	0	3	0	0	0	0	318
15:00	1	262	58	2	18	5	0	0	1	0	0	0	0	347
15:15	0	329	107	1	15	2	0	0	2	0	0	0	0	456
15:30	1	287	105	0	20	3	0	0	1	0	0	0	0	417
15:45	0	311	85	0	12	8	0	0	4	0	0	0	0	420
16:00	3	300	94	0	13	3	0	0	2	0	0	0	0	415
16:15	0	290	82	1	15	3	0	0	2	0	0	0	0	393
16:30	0	291	69	0	13	4	0	0	2	0	1	0	0	380
16:45	0	323	90	0	11	2	0	1	2	0	1	0	0	430
17:00	1	290	79	0	12	3	0	0	3	0	0	0	0	388
17:15	1	260	68	1	10	4	0	0	1	0	1	0	0	346
17:30	1	232	58	0	10	1	0	0	0	0	0	0	0	302
17:45	1	280	75	0	13	0	0	1	2	0	0	0	0	372
18:00	2	213	59	1	2	0	0	0	3	0	0	0	0	280
18:15	1	197	60	1	4	1	0	0	2	0	0	0	0	266
18:30	0	199	32	0	10	1	0	0	1	0	0	0	0	243
18:45	1	181	44	0	7	0	0	0	0	0	0	0	0	233
19:00	1	162	34	2	3	1	0	0	1	0	0	0	0	204
19:15	0	130	29	1	6	0	0	0	0	0	0	0	0	166
19:30	1	150	23	0	5	0	0	0	1	0	0	0	0	180
19:45	0	125	19	0	1	0	0	0	3	0	0	0	0	148
20:00	1	128	17	0	2	0	0	0	3	0	0	0	0	151
20:15	0	101	25	0	4	0	0	0	2	0	0	0	0	132
20:30	0	100	33	0	2	0	0	0	1	0	0	0	0	136
20:45	1	80	13	0	0	0	0	0	2	0	0	0	0	96
21:00	1	81	15	0	2	0	0	0	0	0	0	0	0	99
21:15	0	76	14	0	0	0	0	0	0	0	0	0	0	90
21:30	0	70	17	0	1	0	0	0	0	0	0	0	0	88
21:45	0	81	14	0	4	0	0	0	0	0	0	0	0	99
22:00	0	60	8	0	3	1	0	0	0	0	0	0	0	72
22:15	0	65	11	0	1	0	0	0	0	0	0	0	0	77
22:30	1	53	11	0	0	0	0	0	0	0	0	0	0	65
22:45	0	52	11	0	0	0	0	0	0	0	0	0	0	63
23:00	0	47	8	0	1	0	0	0	0	0	0	0	0	56
23:15	0	52	5	0	1	0	0	0	0	0	0	0	0	58
23:30	1	38	3	0	0	0	0	0	0	0	0	0	0	42
23:45	0	33	3	0	1	0	0	0	0	0	0	0	0	37
TOTAL	24	7,733	2,033	19	319	74	0	2	61	0	9	0	0	10,274

PM PEAK HOUR	3:15 PM
PM PEAK VOLUME	1,708

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	30	10,530	2,806	36	455	101	1	3	98	0	12	0	0	14,072
% OF TOTAL	0.2%	74.8%	19.9%	0.3%	3.2%	0.7%	0.0%	0.0%	0.7%	0.0%	0.1%	0.0%	0.0%	100.0%
Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	51	16,235	4,131	60	712	142	1	5	153	0	14	1	0	21,505
% OF TOTAL	0.4%	115.4%	29.4%	0.4%	5.1%	1.0%	0.0%	0.0%	1.1%	0.0%	0.1%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, October 07, 2021
JOB #: SC3110

CITY: Jurupa Valley
LOCATION: CLASS19 Mission between SR-60 EB Ramps and Valley

AM	WESTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	14	2	0	1	1	0	0	0	0	0	0	0	18
0:15	0	14	1	0	0	0	0	0	0	0	0	0	0	15
0:30	0	6	1	0	0	0	0	0	1	0	0	0	0	8
0:45	0	10	1	0	0	0	0	0	0	0	0	0	0	11
1:00	0	15	1	0	0	0	0	0	1	0	0	0	0	17
1:15	0	9	1	0	1	0	0	0	3	0	0	0	0	14
1:30	0	9	0	0	1	0	0	0	0	0	0	0	0	10
1:45	0	7	3	0	0	0	0	0	1	0	0	0	0	11
2:00	0	10	2	0	0	0	0	0	1	0	0	0	0	13
2:15	0	11	0	0	0	0	0	0	0	0	0	0	0	11
2:30	0	4	1	0	0	2	0	0	0	0	0	0	0	7
2:45	0	2	2	0	0	1	0	0	0	0	0	0	0	5
3:00	0	12	1	0	0	0	0	0	1	0	0	0	0	14
3:15	0	9	5	0	0	0	0	0	0	0	0	0	0	14
3:30	0	18	6	0	0	0	0	0	1	0	0	0	0	25
3:45	0	16	4	0	0	1	0	0	1	0	0	0	0	22
4:00	0	11	6	0	1	0	0	0	0	0	0	0	0	18
4:15	0	30	5	0	2	0	0	0	0	0	0	0	0	37
4:30	0	53	18	0	1	1	0	0	0	0	1	0	0	74
4:45	0	41	16	0	2	0	0	0	0	0	0	0	0	59
5:00	0	35	12	0	6	1	0	0	0	0	0	0	0	54
5:15	0	64	19	0	3	0	0	0	0	0	0	0	0	86
5:30	0	74	21	0	2	0	0	0	0	0	0	0	0	97
5:45	1	70	18	0	2	0	0	0	0	0	1	0	0	92
6:00	0	73	21	0	1	2	0	0	1	0	0	0	0	98
6:15	0	88	11	0	1	1	0	0	1	0	0	0	0	102
6:30	0	91	19	0	5	0	0	0	1	0	0	0	0	116
6:45	0	89	19	0	5	0	0	0	2	0	0	0	0	115
7:00	0	101	28	0	4	1	0	0	0	0	0	0	0	134
7:15	0	92	14	0	1	1	0	0	0	0	0	0	0	108
7:30	1	104	25	1	9	0	0	1	1	0	0	0	0	142
7:45	0	101	21	0	9	0	0	0	2	0	0	0	0	133
8:00	0	84	19	0	3	0	0	0	1	0	0	0	0	107
8:15	0	87	22	1	7	0	0	0	1	0	0	0	0	118
8:30	0	127	31	0	6	0	0	0	0	0	0	0	0	164
8:45	1	130	26	0	8	3	0	0	0	0	0	0	0	168
9:00	0	95	22	1	2	0	0	0	0	0	0	0	0	120
9:15	0	78	20	0	8	0	0	1	1	0	0	0	0	108
9:30	0	78	22	1	7	0	0	0	0	0	0	1	0	109
9:45	0	63	16	0	4	1	0	0	1	0	0	0	0	85
10:00	0	65	15	0	3	1	0	0	3	0	0	0	0	87
10:15	0	76	11	0	6	0	0	0	1	0	0	0	0	94
10:30	0	84	21	1	2	1	0	0	0	0	0	0	0	109
10:45	0	95	22	0	9	0	0	0	0	0	0	0	0	126
11:00	0	68	17	0	5	0	0	0	1	0	0	0	0	91
11:15	0	63	21	0	3	0	0	0	0	0	0	0	0	87
11:30	0	59	24	1	5	0	0	0	1	0	0	0	0	90
11:45	0	88	17	0	5	3	0	0	0	0	0	0	0	113
TOTAL	3	2,623	630	6	140	21	0	2	28	0	2	1	0	3,456

AM PEAK HOUR	8:15 AM
AM PEAK VOLUME	570

PM	WESTBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	78	18	1	2	0	0	0	2	0	0	0	0	101
12:15	1	67	24	1	5	1	0	0	0	0	0	0	0	99
12:30	1	73	24	0	9	0	0	0	2	0	0	0	0	109
12:45	0	87	21	0	1	0	0	0	0	0	0	0	0	109
13:00	0	82	19	0	6	1	0	0	1	0	0	0	0	109
13:15	1	83	32	0	3	1	0	0	2	0	0	0	0	122
13:30	2	84	25	2	12	1	0	0	1	0	0	0	0	127
13:45	0	106	22	0	5	1	0	0	0	0	0	0	0	134
14:00	0	101	22	0	8	2	0	0	0	0	0	0	0	133
14:15	0	110	27	2	1	2	0	0	3	0	0	0	0	145
14:30	0	83	25	0	5	0	0	0	0	0	0	0	0	113
14:45	0	80	23	1	3	0	0	0	0	0	0	0	0	107
15:00	1	72	20	0	4	2	0	0	0	0	0	0	0	99
15:15	0	65	16	1	3	0	0	0	0	0	0	0	0	85
15:30	0	80	20	0	7	0	0	0	0	0	0	0	0	107
15:45	0	73	9	0	2	0	0	0	1	0	0	0	0	85
16:00	0	83	21	1	8	1	0	0	0	0	0	0	0	114
16:15	1	74	22	1	2	0	0	0	1	0	0	0	0	101
16:30	0	71	24	1	2	1	0	0	0	0	0	0	0	99
16:45	0	64	12	3	1	0	0	0	0	0	0	0	0	80
17:00	0	91	20	0	2	0	0	0	0	0	0	0	0	113
17:15	2	69	21	0	2	0	0	0	2	0	0	0	0	96
17:30	0	59	15	1	1	0	0	0	0	0	0	0	0	76
17:45	0	64	25	0	1	1	0	0	0	0	0	0	0	91
18:00	0	72	11	0	0	0	0	0	0	0	0	0	0	83
18:15	2	75	21	1	4	0	0	0	2	0	0	0	0	105
18:30	0	59	10	0	0	1	0	0	0	0	0	0	0	70
18:45	2	73	9	0	2	0	0	0	0	0	0	0	0	86
19:00	1	74	12	0	2	1	0	0	0	0	0	0	0	90
19:15	2	62	11	1	0	0	0	0	1	0	0	0	0	77
19:30	0	61	10	0	0	0	0	0	0	0	0	0	0	71
19:45	0	76	10	0	0	0	0	0	0	0	0	0	0	86
20:00	0	86	8	0	0	0	0	0	0	0	0	0	0	94
20:15	0	60	9	1	2	1	0	0	0	0	0	0	0	73
20:30	0	51	12	0	1	0	0	0	0	0	0	0	0	64
20:45	0	54	12	0	2	0	0	0	1	0	0	0	0	69
21:00	0	51	7	0	1	0	0	0	0	0	0	0	0	59
21:15	1	56	8	0	0	0	0	0	1	0	0	0	0	66
21:30	0	41	3	0	0	0	0	0	0	0	0	0	0	44
21:45	0	44	5	0	1	0	0	0	2	0	0	0	0	52
22:00	0	34	9	0	2	0	0	0	1	0	0	0	0	46
22:15	1	24	5	0	0	1	0	0	0	0	0	0	0	31
22:30	0	24	5	0	0	1	0	0	0	0	0	0	0	30
22:45	0	26	1	0	1	0	0	0	0	0	0	0	0	28
23:00	0	21	2	0	2	0	0	0	0	0	0	0	0	25
23:15	0	17	4	0	1	0	0	0	3	0	0	0	0	25
23:30	0	18	2	0	0	0	0	0	1	0	0	0	0	21
23:45	0	24	2	0	1	1	0	0	0	0	0	0	0	28
TOTAL	18	3,082	695	18	117	20	0	0	27	0	0	0	0	3,977

PM PEAK HOUR	1:30 PM
PM PEAK VOLUME	539

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	21	5,705	1,325	24	257	41	0	2	55	0	2	1	0	7,433
% OF TOTAL	0.3%	76.8%	17.8%	0.3%	3.5%	0.6%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

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Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Existing AM.pdf

Scenario 1 Existing AM
2/15/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Ave/I-10 Ramps	Signalized	HCM 7th Edition	SB Left	0.567	21.9	C
2	Sierra Ave/Slover Ave	Signalized	HCM 7th Edition	NB Left	0.505	30.5	C
3	Sierra Ave/Santa Ana Ave	Signalized	HCM 7th Edition	WB Left	0.359	19.6	B
4	Sierra Ave/Jurupa Ave	Signalized	HCM 7th Edition	WB Left	0.377	28.6	C
5	Armstrong Rd/Sierra Ave	Signalized	HCM 7th Edition	EB Left	0.509	39.8	D
6	Armstrong/30th St	Signalized	HCM 7th Edition	WB Left	0.398	5.1	A
7	Valley Way/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	EB Right	0.852	68.9	E
8	Valley Way/SR-60 WB On Ramp	Signalized	HCM 7th Edition	NB Left	0.545	9.7	A
9	SR-60 EB Ramps/Mission Blvd	Signalized	HCM 7th Edition	WB Left	0.430	24.6	C
10	Valley Way/Mission Blvd	Signalized	HCM 7th Edition	NB Left	0.569	35.9	D
11	Jurupa Rd/Mission Blvd	Two-way stop	HCM 7th Edition	NB Left	0.248	48.3	E
12	Pacific Ave/Mission Blvd	Signalized	HCM 7th Edition	EB Left	0.430	20.4	C
13	Cedar Ave/I-10 WB Ramp	Signalized	HCM 7th Edition	SB Right	0.834	28.5	C
14	Cedar Ave/I-10 EB Ramps	Signalized	HCM 7th Edition	NB Right	0.721	21.7	C
15	Cedar Ave/Orange St	Signalized	HCM 7th Edition	EB Left	0.567	18.8	B
16	Cedar Ave/Slover Ave	Signalized	HCM 7th Edition	EB Left	0.610	29.7	C
17	Cedar Ave/Santa Ana Ave	Signalized	HCM 7th Edition	NB Left	0.486	13.7	B

18	Cedar Ave/Jurupa Ave	Signalized	HCM 7th Edition	SB Left	0.386	12.2	B
19	Cedar Ave/7th St	Signalized	HCM 7th Edition	SB Left	0.362	8.8	A
20	Rubidoux Blvd/Market St	Signalized	HCM 7th Edition	NB Right	0.820	62.0	E
21	Agua Mansa Rd/Market St	Signalized	HCM 7th Edition	EB Left	0.487	35.4	D
22	Rubidoux Blvd/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	EB Left	0.633	20.5	C
23	Rubidoux Blvd/SrR-60 WB On Ramp	Two-way stop	HCM 7th Edition	NB Left	0.630	25.5	D
24	Rubidoux Blvd/SR-60 EB Ramps	Signalized	HCM 7th Edition	WB Left	0.628	30.8	C
25	Market St/Rivera St	Signalized	HCM 7th Edition	EB Right	0.339	13.0	B
26	Market St/SR-60 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.439	8.6	A
27	Market St/SR-60 EB Ramp	Signalized	HCM 7th Edition	EBR2	0.704	23.1	C
28	Sierra Ave/20th St	All-way stop	HCM 7th Edition	SB Left	0.057	7.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Ave/I-10 Ramps

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	565.00	100.00	100.00	325.00	100.00	305.00	440.00	100.00	1500.00	1205.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	390.00	0.00	0.00	665.00	0.00	0.00	1215.00	0.00	0.00	1150.00
Speed [mph]	40.00			35.00			65.00			65.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	415	804	418	538	840	747	861	0	448	432	0	558
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	42	0	0	75	0	0	45	0	0	56
Total Hourly Volume [veh/h]	415	804	376	538	840	672	861	0	403	432	0	502
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	1.0000	0.9760	0.9760	1.0000	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	106	206	96	138	215	172	221	0	103	111	0	129
Total Analysis Volume [veh/h]	425	824	385	551	861	689	882	0	413	443	0	514
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna
Signal Group	1	6	0	5	2	0	3	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	0	0	5	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	20	32	0	20	32	0	48	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	5	0	0
Pedestrian Clearance [s]	0	23	0	0	23	0	39	0	0	35	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No		No	No		No			No		
Maximum Recall	No	No		No	No		No			No		
Pedestrian Recall	No	No		No	No		No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	L
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	43	16	45	29	29
g / C, Green / Cycle	0.14	0.43	0.16	0.45	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.12	0.16	0.16	0.17	0.25	0.13
s, saturation flow rate [veh/h]	3514	5176	3514	5176	3514	3514
c, Capacity [veh/h]	498	2247	562	2342	1005	1005
d1, Uniform Delay [s]	41.91	19.05	41.84	17.98	34.04	29.17
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.29	0.46	13.53	0.45	2.65	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.37	0.98	0.37	0.88	0.44
d, Delay for Lane Group [s/veh]	46.19	19.51	55.37	18.43	36.69	29.48
Lane Group LOS	D	B	E	B	D	C
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.25	4.14	7.66	4.26	9.42	3.94
50th-Percentile Queue Length [ft/ln]	131.36	103.43	191.60	106.41	235.50	98.45
95th-Percentile Queue Length [veh/ln]	9.01	7.45	12.20	7.64	14.45	7.09
95th-Percentile Queue Length [ft/ln]	225.34	186.18	305.11	190.99	361.34	177.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.19	19.51	0.00	55.37	18.43	0.00	36.69	0.00	0.00	29.48	0.00	0.00
Movement LOS	D	B		E	B		D			C		
d_A, Approach Delay [s/veh]	21.97			22.25			25.18			13.82		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	21.88											
Intersection LOS	C											
Intersection V/C	0.567											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	3.386	3.328	2.920	2.809
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	560	560	880	880
d_b, Bicycle Delay [s]	25.92	25.92	15.68	15.68
l_b,int, Bicycle LOS Score for Intersection	2.247	2.336	1.560	1.560
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.505

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	265.00	100.00	675.00	675.00	100.00	100.00	345.00	100.00	320.00	275.00	100.00	465.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	600.00	0.00	0.00	0.00
Speed [mph]	50.00			40.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	1026	108	577	851	284	181	267	56	65	267	444
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	11	0	0	28	0	0	6	0	0	44
Total Hourly Volume [veh/h]	104	1026	97	577	851	256	181	267	50	65	267	400
Peak Hour Factor	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690	0.9690
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	265	25	149	220	66	47	69	13	17	69	103
Total Analysis Volume [veh/h]	107	1059	100	595	878	264	187	276	52	67	276	413
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	137.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	31	40	0	27	36	0	13	44	0	9	40	40
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	31	0	0	27	0	0	31	0	0	31	31
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	6	61	61	22	77	77	8	16	16	4	13	39
g / C, Green / Cycle	0.05	0.51	0.51	0.19	0.65	0.65	0.07	0.14	0.14	0.04	0.10	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.17	0.17	0.17	0.22	0.22	0.05	0.08	0.03	0.02	0.08	0.14
s, saturation flow rate [veh/h]	3514	5176	1794	3514	3618	1684	3514	3618	1615	3514	3618	2859
c, Capacity [veh/h]	168	2622	909	655	2334	1087	243	494	221	131	378	927
d1, Uniform Delay [s]	56.12	17.51	17.54	47.82	9.62	9.63	54.91	48.43	46.22	56.70	52.08	32.03
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.01	0.33	0.97	5.25	0.39	0.83	5.09	0.99	0.54	3.08	2.71	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.33	0.33	0.91	0.33	0.33	0.77	0.56	0.24	0.51	0.73	0.45
d, Delay for Lane Group [s/veh]	60.13	17.85	18.51	53.07	10.01	10.46	60.00	49.42	46.77	59.78	54.79	32.36
Lane Group LOS	E	B	B	D	B	B	E	D	D	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.64	4.42	4.80	9.00	4.32	4.18	2.88	3.84	1.39	1.02	4.04	4.57
50th-Percentile Queue Length [ft/ln]	40.90	110.59	119.98	224.89	108.11	104.55	72.10	95.91	34.71	25.56	100.90	114.16
95th-Percentile Queue Length [veh/ln]	2.94	7.87	8.39	13.91	7.73	7.53	5.19	6.91	2.50	1.84	7.26	8.07
95th-Percentile Queue Length [ft/ln]	73.62	196.82	209.79	347.85	193.37	188.18	129.78	172.64	62.49	46.01	181.62	201.78

Movement, Approach, & Intersection Results

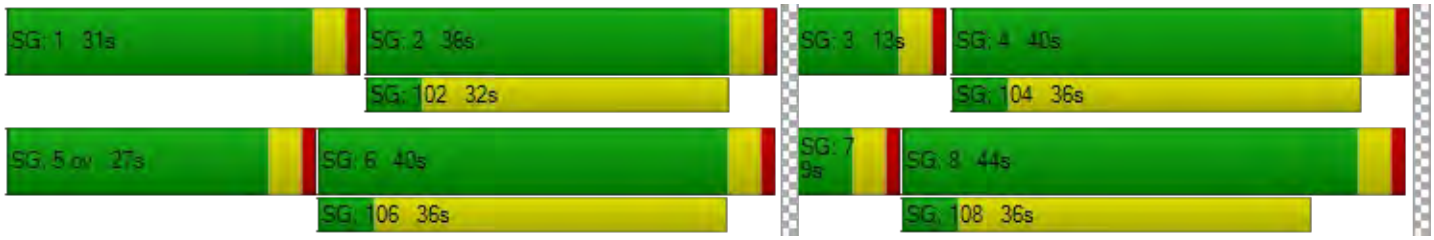
d_M, Delay for Movement [s/veh]	60.13	17.97	18.51	53.07	10.06	10.46	60.00	49.42	46.77	59.78	54.79	32.36
Movement LOS	E	B	B	D	B	B	E	D	D	E	D	C
d_A, Approach Delay [s/veh]	21.58			24.85			52.99			42.98		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	30.48											
Intersection LOS	C											
Intersection V/C	0.505											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.292	3.405	2.968	3.249
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	533	667	600
d_b, Bicycle Delay [s]	29.40	32.27	26.67	29.40
l_b,int, Bicycle LOS Score for Intersection	2.086	2.530	1.989	2.220
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.359

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	285.00	100.00	210.00	375.00	100.00	100.00	240.00	100.00	100.00	300.00	100.00	350.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	535.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	170	1000	52	95	675	101	111	70	71	51	104	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	10	0	0	7	0	0	10
Total Hourly Volume [veh/h]	170	1000	47	95	675	91	111	70	64	51	104	86
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	268	13	25	181	24	30	19	17	14	28	23
Total Analysis Volume [veh/h]	182	1071	50	102	723	97	119	75	69	55	111	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	31	0	9	30	0	14	40	0	10	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	55	55	5	53	53	7	11	11	4	7	7
g / C, Green / Cycle	0.07	0.61	0.61	0.05	0.59	0.59	0.08	0.12	0.12	0.04	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.05	0.21	0.03	0.03	0.15	0.15	0.07	0.02	0.04	0.03	0.03	0.06
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1788	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	234	3130	977	180	2132	1054	150	450	201	75	301	134
d1, Uniform Delay [s]	41.34	8.86	7.25	41.72	8.94	8.95	40.51	35.23	36.03	42.62	39.02	40.11
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.48	0.30	0.10	2.78	0.29	0.60	9.04	0.17	1.01	12.56	0.75	6.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.34	0.05	0.57	0.26	0.26	0.79	0.17	0.34	0.73	0.37	0.68
d, Delay for Lane Group [s/veh]	46.82	9.16	7.35	44.50	9.23	9.55	49.55	35.40	37.04	55.18	39.77	46.12
Lane Group LOS	D	A	A	D	A	A	D	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.05	2.82	0.34	1.12	2.17	2.25	2.87	0.72	1.39	1.43	1.15	2.14
50th-Percentile Queue Length [ft/ln]	51.34	70.44	8.50	27.90	54.17	56.26	71.81	18.05	34.87	35.82	28.84	53.42
95th-Percentile Queue Length [veh/ln]	3.70	5.07	0.61	2.01	3.90	4.05	5.17	1.30	2.51	2.58	2.08	3.85
95th-Percentile Queue Length [ft/ln]	92.41	126.79	15.30	50.23	97.51	101.26	129.26	32.48	62.76	64.48	51.92	96.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.82	9.16	7.35	44.50	9.31	9.55	49.55	35.40	37.04	55.18	39.77	46.12
Movement LOS	D	A	A	D	A	A	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	14.35			13.23			42.23			45.32		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	19.55											
Intersection LOS	B											
Intersection V/C	0.359											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.248	3.193	2.609	2.577
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	578	800	711
d_b, Bicycle Delay [s]	22.05	22.76	16.20	18.69
l_b,int, Bicycle LOS Score for Intersection	2.279	2.072	1.782	1.781
Bicycle LOS	B	B	A	A

Sequence

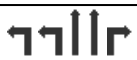
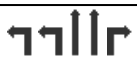
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	28.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.377

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	0	2	0	1
Entry Pocket Length [ft]	685.00	100.00	675.00	385.00	100.00	260.00	375.00	100.00	100.00	280.00	100.00	270.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	284	740	49	33	395	208	248	187	205	128	241	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	21	0	0	21	0	0	10
Total Hourly Volume [veh/h]	284	740	44	33	395	187	248	187	184	128	241	90
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	73	192	11	9	102	48	64	48	48	33	62	23
Total Analysis Volume [veh/h]	294	766	46	34	409	194	257	194	190	133	249	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	41	0	9	36	36	14	36	0	14	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	27	27	0	27	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	61	61	3	54	67	9	14	14	6	11	11
g / C, Green / Cycle	0.10	0.61	0.61	0.03	0.54	0.67	0.09	0.14	0.14	0.06	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.08	0.21	0.03	0.01	0.11	0.12	0.07	0.05	0.12	0.04	0.07	0.06
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	351	2203	984	108	1953	1086	327	518	231	200	388	173
d1, Uniform Delay [s]	44.20	9.69	7.86	47.44	11.94	6.09	44.38	38.79	41.60	46.21	42.80	42.29
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.29	0.43	0.09	1.65	0.24	0.36	4.21	0.45	7.12	3.74	1.78	2.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.35	0.05	0.32	0.21	0.18	0.79	0.37	0.82	0.66	0.64	0.54
d, Delay for Lane Group [s/veh]	49.49	10.13	7.95	49.08	12.18	6.45	48.60	39.24	48.72	49.95	44.57	44.86
Lane Group LOS	D	B	A	D	B	A	D	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.62	3.45	0.35	0.42	2.14	1.27	3.19	2.11	4.82	1.68	2.97	2.24
50th-Percentile Queue Length [ft/ln]	90.59	86.21	8.69	10.55	53.41	31.85	79.75	52.68	120.41	42.10	74.16	56.07
95th-Percentile Queue Length [veh/ln]	6.52	6.21	0.63	0.76	3.85	2.29	5.74	3.79	8.42	3.03	5.34	4.04
95th-Percentile Queue Length [ft/ln]	163.06	155.18	15.64	18.98	96.14	57.34	143.55	94.82	210.38	75.79	133.50	100.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.49	10.13	7.95	49.08	12.18	6.45	48.60	39.24	48.72	49.95	44.57	44.86
Movement LOS	D	B	A	D	B	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	20.50			12.40			45.80			46.13		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	28.63											
Intersection LOS	C											
Intersection V/C	0.377											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	3.156	3.124	3.022	2.757
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	740	640	640	640
d_b, Bicycle Delay [s]	19.85	23.12	23.12	23.12
l_b,int, Bicycle LOS Score for Intersection	2.476	2.102	2.106	1.960
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Armstrong Rd/Sierra Ave

Control Type:	Signalized	Delay (sec / veh):	39.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	490.00	100.00	200.00	310.00	100.00	270.00	135.00	100.00	75.00	195.00	100.00	380.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	400.00
Speed [mph]	45.00			45.00			55.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	933	209	85	15	344	50	40	18	649	84	44	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	9	0	0	5	0	0	65	0	0	2
Total Hourly Volume [veh/h]	933	209	76	15	344	45	40	18	584	84	44	21
Peak Hour Factor	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780	0.9780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	238	53	19	4	88	12	10	5	149	21	11	5
Total Analysis Volume [veh/h]	954	214	78	15	352	46	41	18	597	86	45	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	0	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	0.0	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	38	43	0	11	16	0	29	38	0	28	37	0
Vehicle Extension [s]	3.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	3.3	0.0	3.3	3.3	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	5.30	5.30	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.30	3.30	3.30	3.30	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	33	86	86	2	55	55	4	2	7	6	6
g / C, Green / Cycle	0.27	0.72	0.72	0.02	0.46	0.46	0.03	0.02	0.06	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.27	0.11	0.05	0.00	0.19	0.03	0.02	0.00	0.05	0.02	0.02
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1705
c, Capacity [veh/h]	958	1358	1154	58	872	741	57	72	110	93	83
d1, Uniform Delay [s]	43.59	5.50	5.13	58.28	21.58	18.09	57.56	57.94	55.58	55.27	55.34
k, delay calibration	0.11	0.50	0.50	0.04	0.50	0.50	0.04	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.68	0.25	0.11	0.87	1.39	0.16	6.05	1.82	4.55	2.36	2.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.00	0.16	0.07	0.26	0.40	0.06	0.72	0.25	0.78	0.36	0.39
d, Delay for Lane Group [s/veh]	56.26	5.75	5.24	59.15	22.97	18.25	63.61	59.76	60.13	57.63	58.31
Lane Group LOS	E	A	A	E	C	B	E	E	E	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	15.23	1.52	0.52	0.23	6.58	0.72	1.28	0.28	2.66	1.03	1.01
50th-Percentile Queue Length [ft/ln]	380.73	38.03	13.04	5.68	164.56	17.94	32.05	6.93	66.62	25.74	25.19
95th-Percentile Queue Length [veh/ln]	21.63	2.74	0.94	0.41	10.79	1.29	2.31	0.50	4.80	1.85	1.81
95th-Percentile Queue Length [ft/ln]	540.74	68.46	23.47	10.22	269.75	32.29	57.70	12.48	119.92	46.33	45.35

Movement, Approach, & Intersection Results

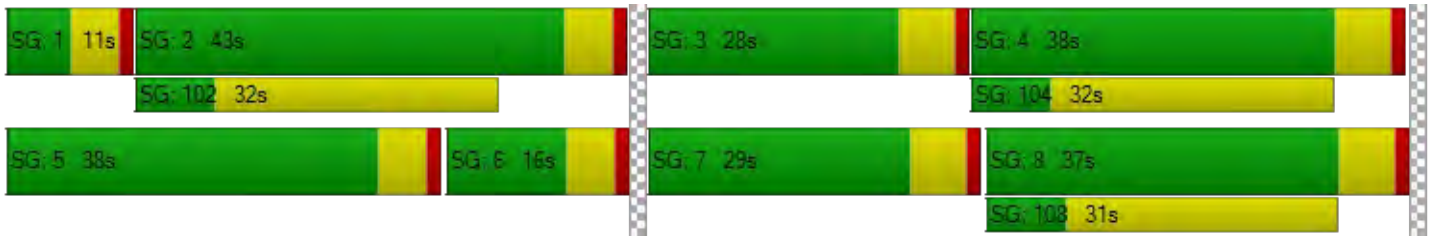
d_M, Delay for Movement [s/veh]	56.26	5.75	5.24	59.15	22.97	18.25	63.61	59.76	0.00	60.13	57.80	58.31
Movement LOS	E	A	A	E	C	B	E	E		E	E	E
d_A, Approach Delay [s/veh]	44.40			23.76			5.73			59.19		
Approach LOS	D			C			A			E		
d_I, Intersection Delay [s/veh]	39.82											
Intersection LOS	D											
Intersection V/C	0.509											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	0.00	49.50
l_p,int, Pedestrian LOS Score for Intersectio	2.892	2.524	0.000	2.388
Crosswalk LOS	C	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	628	178	533	517
d_b, Bicycle Delay [s]	28.22	49.78	32.27	33.00
l_b,int, Bicycle LOS Score for Intersection	3.630	2.249	1.608	1.687
Bicycle LOS	D	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Armstrong/30th St

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	135.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1191	37	13	1061	65	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	4	0	0	0	3
Total Hourly Volume [veh/h]	1191	33	13	1061	65	28
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	310	9	3	276	17	7
Total Analysis Volume [veh/h]	1239	34	14	1104	68	29
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	5	5	0
Maximum Green [s]	45	0	30	5	30	0
Amber [s]	4.3	0.0	4.3	4.3	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	34	0	11	23	41	0
Vehicle Extension [s]	3.0	0.0	2.0	3.0	2.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	19	0	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.3	3.3	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C
C, Cycle Length [s]	75	75	75	75	75
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	0.00	3.30	2.00
g_i, Effective Green Time [s]	60	60	60	53	5
g / C, Green / Cycle	0.80	0.80	0.80	0.71	0.07
(v / s)_i Volume / Saturation Flow Rate	0.34	0.02	0.03	0.31	0.06
s, saturation flow rate [veh/h]	3618	1615	442	3618	1747
c, Capacity [veh/h]	2906	1297	465	2557	127
d1, Uniform Delay [s]	2.21	1.48	3.19	4.64	34.14
k, delay calibration	0.50	0.50	0.04	0.50	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	0.04	0.01	0.53	3.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.03	0.03	0.43	0.76
d, Delay for Lane Group [s/veh]	2.67	1.52	3.20	5.17	37.72
Lane Group LOS	A	A	A	A	D
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.68	0.03	0.04	2.19	1.84
50th-Percentile Queue Length [ft/ln]	16.88	0.79	0.91	54.72	45.96
95th-Percentile Queue Length [veh/ln]	1.22	0.06	0.07	3.94	3.31
95th-Percentile Queue Length [ft/ln]	30.39	1.42	1.64	98.49	82.72

Movement, Approach, & Intersection Results

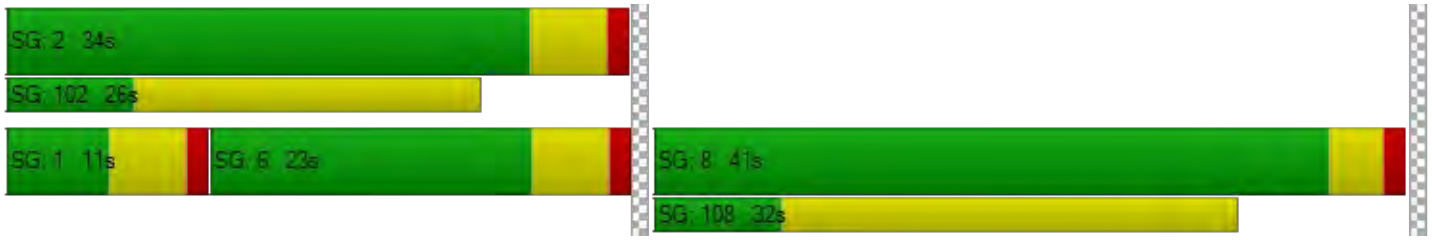
d_M, Delay for Movement [s/veh]	2.67	1.52	3.20	5.17	37.72	37.72
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	2.63		5.15		37.72	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	5.13					
Intersection LOS	A					
Intersection V/C	0.398					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	27.31	0.00	27.31
l_p,int, Pedestrian LOS Score for Intersectio	3.012	0.000	1.791
Crosswalk LOS	C	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	765	472	987
d_b, Bicycle Delay [s]	14.29	21.89	9.63
l_b,int, Bicycle LOS Score for Intersection	2.613	2.482	1.725
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Valley Way/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	68.9
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.852

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	280.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	91	695	0	0	1082	10	52	0	170	193	100	546
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	1	0	0	17	0	0	55
Total Hourly Volume [veh/h]	91	695	0	0	1082	9	52	0	153	193	100	491
Peak Hour Factor	0.9600	0.9600	1.0000	1.0000	0.9600	0.9600	0.9600	1.0000	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	181	0	0	282	2	14	0	40	50	26	128
Total Analysis Volume [veh/h]	95	724	0	0	1127	9	54	0	159	201	104	511
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	12	56	0	0	44	0	22	0	0	0	52	0
Vehicle Extension [s]	3.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	0.0	0.0	3.3	0.0	3.4	0.0	0.0	0.0	3.3	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	L	C
C, Cycle Length [s]	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	5.40	5.30	5.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	3.40	3.30	3.30
g_i, Effective Green Time [s]	7	51	39	39	17	47	47
g / C, Green / Cycle	0.06	0.39	0.30	0.30	0.13	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.05	0.20	0.30	0.30	0.13	0.11	0.37
s, saturation flow rate [veh/h]	1810	3618	1900	1895	1660	1810	1657
c, Capacity [veh/h]	103	1411	566	564	212	650	595
d1, Uniform Delay [s]	61.01	30.24	45.65	45.65	56.70	30.02	41.65
k, delay calibration	0.11	0.50	0.50	0.50	0.12	0.11	0.47
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.79	1.34	38.88	39.64	31.48	0.27	44.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.51	1.00	1.01	1.00	0.31	1.03
d, Delay for Lane Group [s/veh]	86.81	31.57	84.53	85.29	88.18	30.29	86.32
Lane Group LOS	F	C	F	F	F	C	F
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	3.80	8.62	23.66	23.72	8.70	4.58	25.99
50th-Percentile Queue Length [ft/ln]	94.88	215.44	591.57	592.89	217.46	114.43	649.79
95th-Percentile Queue Length [veh/ln]	6.83	13.43	31.73	31.85	13.56	8.09	35.16
95th-Percentile Queue Length [ft/ln]	170.78	335.80	793.26	796.31	339.07	202.14	878.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	86.81	31.57	0.00	0.00	84.91	85.29	88.18	0.00	88.18	30.29	86.32	86.32
Movement LOS	F	C			F	F	F		F	C	F	F
d_A, Approach Delay [s/veh]	37.98			84.91			88.18			72.52		
Approach LOS	D			F			F			E		
d_I, Intersection Delay [s/veh]	68.88											
Intersection LOS	E											
Intersection V/C	0.852											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	54.47	54.47	54.47
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.057	2.172	2.366
Crosswalk LOS	F	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	780	595	255	718
d_b, Bicycle Delay [s]	24.19	32.06	49.46	26.69
l_b,int, Bicycle LOS Score for Intersection	2.235	2.498	1.939	2.997
Bicycle LOS	B	B	A	C

Sequence

Ring 1	8	7	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Valley Way/SR-60 WB On Ramp

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.545

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No			
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	218	786	1039	406	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	41	0	0
Total Hourly Volume [veh/h]	218	786	1039	365	0	0
Peak Hour Factor	0.9620	0.9620	0.9620	0.9620	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	204	270	95	0	0
Total Analysis Volume [veh/h]	227	817	1080	379	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	57.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	5	0	0	0
Maximum Green [s]	30	40	40	0	0	0
Amber [s]	4.1	4.8	4.8	0.0	0.0	0.0
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0
Split [s]	33	130	97	0	0	0
Vehicle Extension [s]	3.0	2.0	2.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	3.3	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	130	130	130	130	
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	
g_i, Effective Green Time [s]	18	125	102	102	
g / C, Green / Cycle	0.14	0.96	0.78	0.78	
(v / s)_i Volume / Saturation Flow Rate	0.13	0.23	0.38	0.42	
s, saturation flow rate [veh/h]	1810	3618	1900	1740	
c, Capacity [veh/h]	258	3470	1485	1360	
d1, Uniform Delay [s]	54.66	0.14	5.04	5.34	
k, delay calibration	0.11	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	9.51	0.16	1.17	1.52	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.88	0.24	0.49	0.54	
d, Delay for Lane Group [s/veh]	64.17	0.30	6.20	6.86	
Lane Group LOS	E	A	A	A	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.80	0.08	5.58	5.98	
50th-Percentile Queue Length [ft/ln]	194.99	1.92	139.42	149.48	
95th-Percentile Queue Length [veh/ln]	12.38	0.14	9.45	9.99	
95th-Percentile Queue Length [ft/ln]	309.49	3.46	236.24	249.74	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.17	0.30	6.42	6.86	0.00	0.00
Movement LOS	E	A	A	A		
d_A, Approach Delay [s/veh]	14.19		6.53		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	9.73					
Intersection LOS	A					
Intersection V/C	0.545					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	54.47
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.072
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1918	1411	0
d_b, Bicycle Delay [s]	0.11	5.64	65.00
l_b,int, Bicycle LOS Score for Intersection	2.421	2.797	4.132
Bicycle LOS	B	C	D

Sequence

Ring 1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: SR-60 EB Ramps/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	1120.00	100.00	100.00	200.00	100.00	100.00	260.00	100.00	340.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	490.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	12	2	4	364	4	45	103	338	6	5	354	234
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	5	0	0	1	0	0	23
Total Hourly Volume [veh/h]	12	2	4	364	4	40	103	338	5	5	354	211
Peak Hour Factor	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	1	1	111	1	12	31	103	2	2	108	64
Total Analysis Volume [veh/h]	15	2	5	442	5	49	125	411	6	6	430	256
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	0	3	0	0	4	0	5	2	0	1	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	5
Maximum Green [s]	0	15	0	0	35	0	25	35	0	15	35	35
Amber [s]	0.0	4.1	0.0	0.0	4.8	0.0	4.1	5.2	0.0	4.1	5.2	5.2
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.5	0.0	1.0	0.5	0.5
Split [s]	0	11	0	0	38	0	11	30	0	26	45	45
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	3.0	2.0	2.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	25	0	0	17	0	0	32	32
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	3.8	0.0	3.1	3.7	0.0	3.1	3.7	3.7
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		No			No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	5.10	5.80	5.80	5.10	5.70	5.70	5.10	5.70	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.80	3.80	3.10	3.70	3.70	3.10	3.70	0.00
g_i, Effective Green Time [s]	2	18	18	9	62	62	1	54	85
g / C, Green / Cycle	0.02	0.17	0.17	0.09	0.59	0.59	0.01	0.51	0.81
(v / s)_i Volume / Saturation Flow Rate	0.09	0.14	0.14	0.07	0.11	0.11	0.00	0.12	0.16
s, saturation flow rate [veh/h]	233	1810	1769	1810	1900	1890	1810	3618	1615
c, Capacity [veh/h]	63	308	301	156	1125	1119	15	1860	1308
d1, Uniform Delay [s]	52.45	41.96	41.96	47.10	9.82	9.82	51.79	14.06	2.25
k, delay calibration	0.08	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.53	5.20	5.32	9.18	0.36	0.37	15.81	0.29	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.81	0.81	0.80	0.19	0.19	0.40	0.23	0.20
d, Delay for Lane Group [s/veh]	54.98	47.17	47.28	56.29	10.18	10.19	67.60	14.35	2.32
Lane Group LOS	D	D	D	E	B	B	E	B	A
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.64	6.59	6.45	3.50	2.07	2.06	0.22	2.66	0.63
50th-Percentile Queue Length [ft/ln]	15.88	164.68	161.20	87.43	51.68	51.49	5.48	66.55	15.70
95th-Percentile Queue Length [veh/ln]	1.14	10.80	10.61	6.30	3.72	3.71	0.39	4.79	1.13
95th-Percentile Queue Length [ft/ln]	28.58	269.91	265.32	157.38	93.02	92.67	9.87	119.79	28.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.98	54.98	54.98	47.21	47.28	47.28	56.29	10.19	10.19	67.60	14.35	2.32
Movement LOS	D	D	D	D	D	D	E	B	B	E	B	A
d_A, Approach Delay [s/veh]	54.98			47.22			20.82			10.36		
Approach LOS	D			D			C			B		
d_I, Intersection Delay [s/veh]	24.59											
Intersection LOS	C											
Intersection V/C	0.430											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	42.08	42.08	42.08	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.738	2.403	2.635	0.000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	112	613	463	749
d_b, Bicycle Delay [s]	46.77	25.24	31.01	20.55
l_b,int, Bicycle LOS Score for Intersection	1.596	2.386	2.008	2.149
Bicycle LOS	A	B	B	B

Sequence

Ring 1	3	4	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Valley Way/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.569

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	3	1	0	1	1	0	1
Entry Pocket Length [ft]	145.00	100.00	510.00	170.00	100.00	150.00	410.00	100.00	180.00	260.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	364	45	403	329	351	300	296	17	56	167	588
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	35	0	0	2	0	0	59
Total Hourly Volume [veh/h]	16	364	40	403	329	316	300	296	15	56	167	529
Peak Hour Factor	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	94	10	104	85	82	78	77	4	15	43	137
Total Analysis Volume [veh/h]	17	377	41	418	341	327	311	307	16	58	173	548
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	81.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	4	6	0	4	6	6	4	6	0	4	6	6
Maximum Green [s]	25	30	0	35	30	30	35	45	0	25	45	45
Amber [s]	3.6	4.8	0.0	3.6	4.8	4.8	3.6	4.8	0.0	3.6	4.8	4.8
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	25	32	0	43	50	50	20	45	0	10	35	35
Vehicle Extension [s]	2.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	2.0	3.0	3.0
Walk [s]	0	5	0	5	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	23	39	39	0	34	0	0	24	24
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	3.5	0.0	2.0	3.5	3.5
I2, Clearance Lost Time [s]	2.6	3.8	0.0	2.6	3.8	3.8	2.6	3.8	0.0	2.6	3.8	3.8
Minimum Recall	No	No		No	No	No	No	Yes		No	Yes	Yes
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.60	5.80	5.80	4.60	5.80	4.60	4.60	7.30	7.30	4.60	7.30	6.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.80	3.80	2.60	3.80	0.00	2.60	3.80	3.80	2.60	3.80	0.00
g_i, Effective Green Time [s]	2	16	16	28	42	62	14	59	59	5	50	84
g / C, Green / Cycle	0.01	0.12	0.12	0.21	0.32	0.47	0.11	0.45	0.45	0.04	0.39	0.64
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.03	0.12	0.09	0.11	0.09	0.08	0.01	0.03	0.05	0.34
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	2859	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	27	448	200	752	1169	1354	372	1626	726	75	1392	1058
d1, Uniform Delay [s]	63.70	55.70	51.19	45.59	32.89	20.34	57.00	21.53	19.90	61.72	25.84	11.72
k, delay calibration	0.04	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.16	4.34	0.50	0.65	0.14	0.09	4.97	0.26	0.06	6.28	0.18	1.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.84	0.20	0.56	0.29	0.24	0.84	0.19	0.02	0.78	0.12	0.52
d, Delay for Lane Group [s/veh]	72.87	60.04	51.69	46.24	33.02	20.43	61.97	21.79	19.96	68.00	26.02	13.54
Lane Group LOS	E	E	D	D	C	C	E	C	B	E	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.62	6.18	1.21	5.96	3.96	2.87	5.16	2.79	0.27	2.00	1.75	8.10
50th-Percentile Queue Length [ft/ln]	15.43	154.45	30.22	149.02	98.88	71.77	128.92	69.78	6.86	50.12	43.71	202.55
95th-Percentile Queue Length [veh/ln]	1.11	10.25	2.18	9.96	7.12	5.17	8.88	5.02	0.49	3.61	3.15	12.77
95th-Percentile Queue Length [ft/ln]	27.77	256.35	54.40	249.12	177.98	129.19	222.02	125.61	12.36	90.22	78.67	319.26

Movement, Approach, & Intersection Results

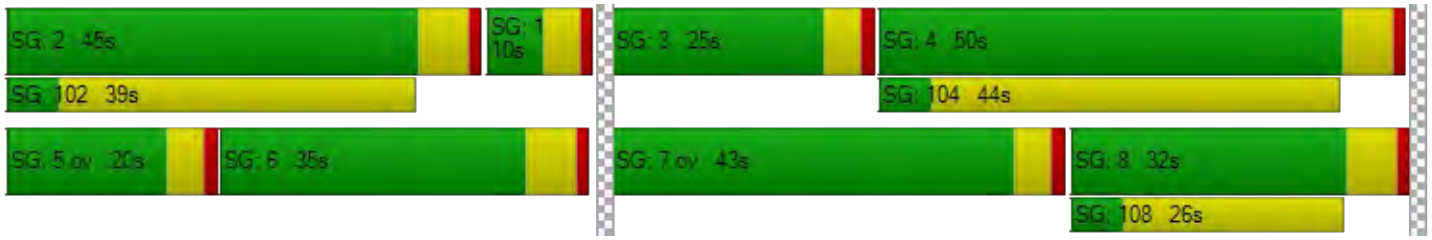
d_M, Delay for Movement [s/veh]	72.87	60.04	51.69	46.24	33.02	20.43	61.97	21.79	19.96	68.00	26.02	13.54
Movement LOS	E	E	D	D	C	C	E	C	B	E	C	B
d_A, Approach Delay [s/veh]	59.75			34.32			41.45			20.37		
Approach LOS	E			C			D			C		
d_I, Intersection Delay [s/veh]	35.93											
Intersection LOS	D											
Intersection V/C	0.569											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.31	0.00	56.31	56.31
l_p,int, Pedestrian LOS Score for Intersectio	2.688	0.000	2.864	2.996
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	403	680	603	449
d_b, Bicycle Delay [s]	41.44	28.31	31.71	39.08
l_b,int, Bicycle LOS Score for Intersection	1.923	2.484	2.084	2.251
Bicycle LOS	A	B	B	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Jurupa Rd/Mission Blvd

Control Type:	Two-way stop	Delay (sec / veh):	48.3
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.248

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	280.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	25	170	687	22	127	748
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	170	687	22	127	748
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	46	185	6	34	202
Total Analysis Volume [veh/h]	27	184	742	24	137	808
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.25	0.29	0.01	0.00	0.16	0.01
d_M, Delay for Movement [s/veh]	48.26	20.93	0.00	0.00	10.00	0.00
Movement LOS	E	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	3.08	3.08	0.00	0.00	0.57	0.00
95th-Percentile Queue Length [ft/ln]	77.09	77.09	0.00	0.00	14.19	0.00
d_A, Approach Delay [s/veh]	24.43		0.00		1.45	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	3.39					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 12: Pacific Ave/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	130.00	100.00	130.00	130.00	100.00	115.00	275.00	100.00	50.00	265.00	100.00	230.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	111	39	102	14	68	85	93	606	65	153	600	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	10	0	0	9	0	0	7	0	0	2
Total Hourly Volume [veh/h]	111	39	92	14	68	76	93	606	58	153	600	20
Peak Hour Factor	0.7980	0.7980	0.7980	0.7980	0.7980	0.7980	0.7980	0.7980	0.7980	0.7980	0.7980	0.7980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	12	29	4	21	24	29	190	18	48	188	6
Total Analysis Volume [veh/h]	139	49	115	18	85	95	117	759	73	192	752	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	4	6	0	4	5	0
Maximum Green [s]	0	30	0	0	30	0	25	45	0	25	45	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.5	0.0	4.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	36	0	0	36	0	17	27	0	17	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	2.5	3.5	0.0	2.5	3.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	17	17	17	17	7	38	38	10	41	41
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.21	0.21	0.08	0.47	0.47	0.13	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.11	0.03	0.07	0.01	0.04	0.06	0.06	0.21	0.05	0.11	0.21	0.02
s, saturation flow rate [veh/h]	1223	1900	1615	1241	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	265	401	341	288	401	341	150	1712	764	231	1875	837
d1, Uniform Delay [s]	33.14	25.54	26.79	28.69	26.05	26.44	35.96	14.04	11.62	34.04	11.72	9.43
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.61	0.13	0.58	0.09	0.26	0.44	8.44	0.83	0.25	7.47	0.64	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.12	0.34	0.06	0.21	0.28	0.78	0.44	0.10	0.83	0.40	0.03
d, Delay for Lane Group [s/veh]	34.75	25.67	27.37	28.78	26.31	26.88	44.40	14.87	11.87	41.51	12.36	9.50
Lane Group LOS	C	C	C	C	C	C	D	B	B	D	B	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.65	0.75	1.87	0.30	1.33	1.52	2.48	4.22	0.69	3.93	3.66	0.20
50th-Percentile Queue Length [ft/ln]	66.31	18.79	46.69	7.39	33.29	37.99	62.09	105.42	17.31	98.16	91.62	5.06
95th-Percentile Queue Length [veh/ln]	4.77	1.35	3.36	0.53	2.40	2.74	4.47	7.58	1.25	7.07	6.60	0.36
95th-Percentile Queue Length [ft/ln]	119.35	33.81	84.04	13.31	59.93	68.38	111.76	189.61	31.16	176.68	164.91	9.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.75	25.67	27.37	28.78	26.31	26.88	44.40	14.87	11.87	41.51	12.36	9.50
Movement LOS	C	C	C	C	C	C	D	B	B	D	B	A
d_A, Approach Delay [s/veh]	30.48			26.80			18.28			18.06		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.42											
Intersection LOS	C											
Intersection V/C	0.430											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.76	29.76	29.76	29.76
l_p,int, Pedestrian LOS Score for Intersectio	2.302	2.235	3.077	2.881
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	775	775	538	538
d_b, Bicycle Delay [s]	15.01	15.01	21.39	21.39
l_b,int, Bicycle LOS Score for Intersection	2.076	1.901	2.348	2.361
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Cedar Ave/I-10 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	28.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.834

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	230.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	485.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	273	1231	0	0	1321	718	0	0	0	441	3	410
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	72	0	0	0	0	0	41
Total Hourly Volume [veh/h]	273	1231	0	0	1321	646	0	0	0	441	3	369
Peak Hour Factor	0.9540	0.9540	1.0000	1.0000	0.9540	0.9540	1.0000	1.0000	1.0000	0.9540	0.9540	0.9540
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	323	0	0	346	169	0	0	0	116	1	97
Total Analysis Volume [veh/h]	286	1290	0	0	1385	677	0	0	0	462	3	387
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	15	48	0	0	33	0	0	0	0	0	22	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	70	70	70	70		70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	11	44	29	29		18	18
g / C, Green / Cycle	0.16	0.63	0.41	0.41		0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.16	0.36	0.27	0.42		0.26	0.24
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1615
c, Capacity [veh/h]	284	2274	2144	669		465	415
d1, Uniform Delay [s]	29.50	7.50	16.39	20.50		25.99	25.40
k, delay calibration	0.11	0.50	0.50	0.50		0.16	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	26.22	1.03	1.52	37.77		23.12	11.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.01	0.57	0.65	1.01		1.00	0.93
d, Delay for Lane Group [s/veh]	55.72	8.54	17.91	58.27		49.11	36.47
Lane Group LOS	F	A	B	F		D	D
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	6.47	4.22	5.38	16.22		10.08	7.04
50th-Percentile Queue Length [ft/ln]	161.85	105.50	134.41	405.40		252.03	176.12
95th-Percentile Queue Length [veh/ln]	10.67	7.59	9.18	23.01		15.29	11.40
95th-Percentile Queue Length [ft/ln]	266.85	189.73	229.47	575.31		382.21	284.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.72	8.54	0.00	0.00	17.91	58.27	0.00	0.00	0.00	49.11	49.11	36.47
Movement LOS	F	A			B	F				D	D	D
d_A, Approach Delay [s/veh]	17.10			31.16			0.00			43.37		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	28.54											
Intersection LOS	C											
Intersection V/C	0.834											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.210	2.326
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1257	829	0	514
d_b, Bicycle Delay [s]	4.83	12.01	35.00	19.31
l_b,int, Bicycle LOS Score for Intersection	2.860	2.733	4.132	3.033
Bicycle LOS	C	B	D	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Cedar Ave/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	600.00	100.00	600.00	100.00	100.00	100.00	380.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1090.00
Speed [mph]	40.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1029	404	420	1339	0	476	3	373	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	40	0	0	0	0	0	37	0	0	0
Total Hourly Volume [veh/h]	0	1029	364	420	1339	0	476	3	336	0	0	0
Peak Hour Factor	1.0000	0.9700	0.9700	0.9700	0.9700	1.0000	0.9700	0.9700	0.9700	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	265	94	108	345	0	123	1	87	0	0	0
Total Analysis Volume [veh/h]	0	1061	375	433	1380	0	491	3	346	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	19	40	0	0	20	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	17	17	15	36	16	16	
g / C, Green / Cycle	0.28	0.28	0.25	0.60	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.23	0.24	0.38	0.24	0.25	
s, saturation flow rate [veh/h]	5176	1615	1810	3618	1810	1643	
c, Capacity [veh/h]	1466	458	452	2171	483	438	
d1, Uniform Delay [s]	19.38	20.07	22.18	7.76	21.16	21.50	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.13	15.07	11.88	1.44	5.89	9.67	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.72	0.82	0.96	0.64	0.89	0.94	
d, Delay for Lane Group [s/veh]	22.52	35.14	34.07	9.20	27.06	31.17	
Lane Group LOS	C	D	C	A	C	C	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.25	6.12	6.71	4.15	5.93	6.15	
50th-Percentile Queue Length [ft/ln]	106.36	152.97	167.71	103.66	148.25	153.85	
95th-Percentile Queue Length [veh/ln]	7.64	10.18	10.96	7.46	9.92	10.22	
95th-Percentile Queue Length [ft/ln]	190.92	254.39	273.90	186.58	248.09	255.57	

Movement, Approach, & Intersection Results

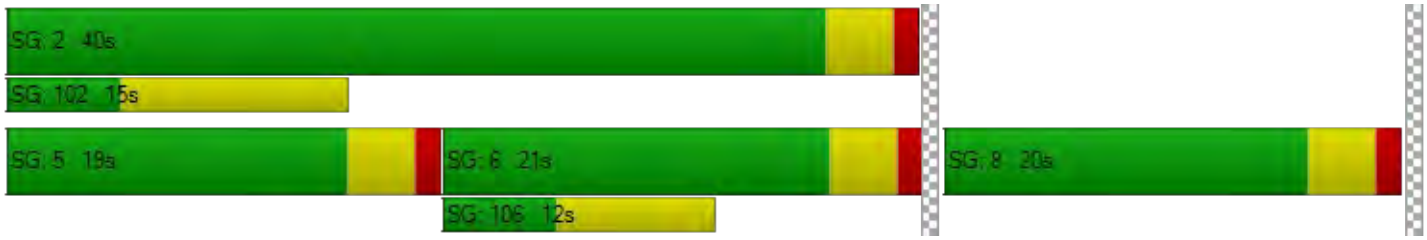
d_M, Delay for Movement [s/veh]	0.00	22.52	35.14	34.07	9.20	0.00	27.63	31.17	31.17	0.00	0.00	0.00
Movement LOS		C	D	C	A		C	C	C			
d_A, Approach Delay [s/veh]	25.81			15.14			29.06			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	21.75											
Intersection LOS	C											
Intersection V/C	0.721											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.306	2.110
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	1200	533	0
d_b, Bicycle Delay [s]	15.41	4.80	16.13	30.00
l_b,int, Bicycle LOS Score for Intersection	2.371	3.055	3.007	4.132
Bicycle LOS	B	C	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Cedar Ave/Orange St

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	160.00	100.00	100.00	140.00	100.00	170.00	400.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1026	3	107	1143	456	272	5	13	0	1	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	46	0	0	1	0	0	14
Total Hourly Volume [veh/h]	4	1026	3	107	1143	410	272	5	12	0	1	122
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	275	1	29	306	110	73	1	3	0	0	33
Total Analysis Volume [veh/h]	4	1099	3	115	1224	439	291	5	13	0	1	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	19	0	9	19	0	0	42	0	0	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	38	30	30	38	34	34	24	24	24	24
g / C, Green / Cycle	0.54	0.42	0.42	0.54	0.48	0.48	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.01	0.29	0.29	0.16	0.34	0.27	0.23	0.01	0.00	0.08
s, saturation flow rate [veh/h]	398	1900	1898	739	3618	1615	1278	1685	1417	1617
c, Capacity [veh/h]	288	803	802	431	1740	777	433	577	541	553
d1, Uniform Delay [s]	9.91	16.44	16.44	10.40	14.25	12.95	24.93	15.31	0.00	16.49
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	4.75	4.76	1.51	2.41	2.97	1.82	0.02	0.00	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.69	0.69	0.27	0.70	0.57	0.67	0.03	0.00	0.24
d, Delay for Lane Group [s/veh]	9.93	21.20	21.20	11.91	16.66	15.92	26.75	15.33	0.00	16.71
Lane Group LOS	A	C	C	B	B	B	C	B	A	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.02	7.18	7.17	0.86	6.82	4.70	4.57	0.18	0.00	1.46
50th-Percentile Queue Length [ft/ln]	0.59	179.41	179.26	21.49	170.41	117.58	114.30	4.60	0.00	36.49
95th-Percentile Queue Length [veh/ln]	0.04	11.57	11.56	1.55	11.10	8.26	8.08	0.33	0.00	2.63
95th-Percentile Queue Length [ft/ln]	1.06	289.24	289.05	38.68	277.45	206.50	201.97	8.28	0.00	65.69

Movement, Approach, & Intersection Results

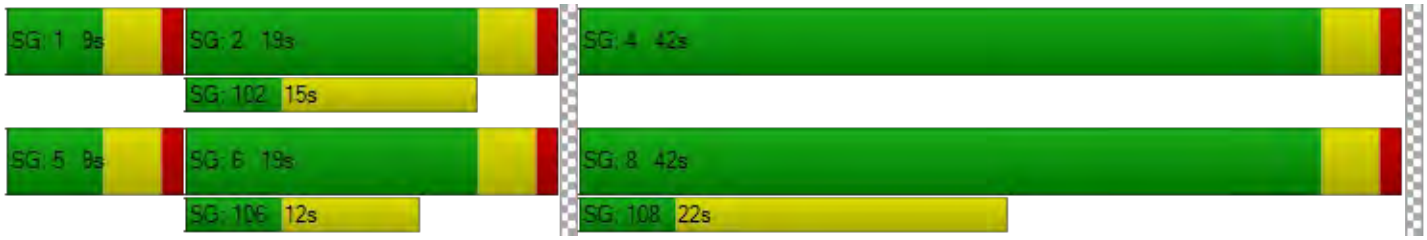
d_M, Delay for Movement [s/veh]	9.93	21.20	21.20	11.91	16.66	15.92	26.75	15.33	15.33	0.00	16.71	16.71
Movement LOS	A	C	C	B	B	B	C	B	B	A	B	B
d_A, Approach Delay [s/veh]	21.16			16.17			26.09			16.71		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	18.77											
Intersection LOS	B											
Intersection V/C	0.567											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.898	0.000	2.193	2.110
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	429	429	1086	1086
d_b, Bicycle Delay [s]	21.61	21.61	7.31	7.31
l_b,int, Bicycle LOS Score for Intersection	2.472	3.064	2.071	1.801
Bicycle LOS	B	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Cedar Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	29.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.610

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	115.00	100.00	100.00	250.00	100.00	80.00	190.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	163	734	14	103	851	163	211	154	73	19	204	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	16	0	0	7	0	0	10
Total Hourly Volume [veh/h]	163	734	13	103	851	147	211	154	66	19	204	91
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	200	4	28	232	40	57	42	18	5	56	25
Total Analysis Volume [veh/h]	178	800	14	112	927	160	230	168	72	21	222	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	30	0	18	33	0	17	26	0	21	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	47	47	7	44	44	13	22	22	2	11	11
g / C, Green / Cycle	0.12	0.50	0.50	0.08	0.46	0.46	0.14	0.23	0.23	0.02	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.10	0.21	0.21	0.06	0.29	0.29	0.13	0.05	0.04	0.01	0.09	0.09
s, saturation flow rate [veh/h]	1810	1900	1889	1810	1900	1804	1810	3618	1615	1810	1900	1708
c, Capacity [veh/h]	210	948	943	143	878	834	248	832	371	43	222	199
d1, Uniform Delay [s]	41.19	15.18	15.18	42.96	19.43	19.45	40.54	29.54	29.48	45.81	40.60	40.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.22	1.43	1.44	9.08	3.48	3.69	14.20	0.12	0.25	8.48	4.96	6.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.43	0.43	0.78	0.63	0.64	0.93	0.20	0.19	0.49	0.75	0.78
d, Delay for Lane Group [s/veh]	50.41	16.60	16.61	52.04	22.91	23.14	54.75	29.66	29.73	54.29	45.55	47.26
Lane Group LOS	D	B	B	D	C	C	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.48	5.51	5.47	2.86	9.39	9.00	5.98	1.47	1.27	0.57	3.85	3.70
50th-Percentile Queue Length [ft/ln]	112.11	137.63	136.86	71.60	234.77	224.88	149.48	36.73	31.77	14.20	96.16	92.45
95th-Percentile Queue Length [veh/ln]	7.96	9.35	9.31	5.16	14.42	13.91	9.99	2.64	2.29	1.02	6.92	6.66
95th-Percentile Queue Length [ft/ln]	198.93	233.83	232.79	128.89	360.41	347.85	249.74	66.11	57.19	25.55	173.09	166.41

Movement, Approach, & Intersection Results

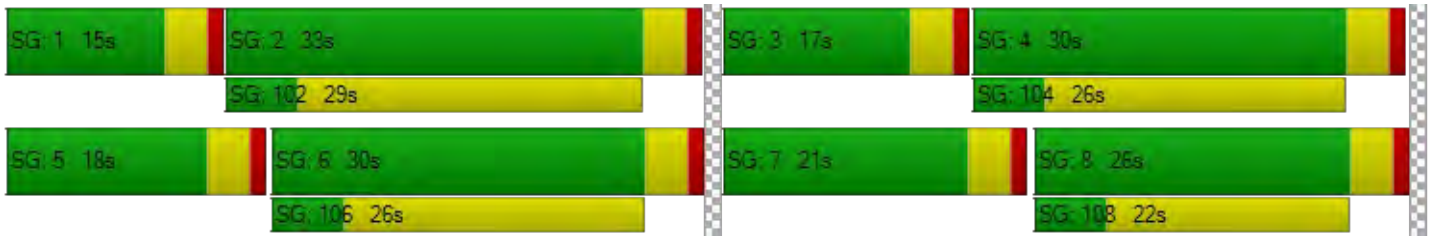
d_M, Delay for Movement [s/veh]	50.41	16.61	16.61	52.04	23.00	23.14	54.75	29.66	29.73	54.29	45.99	47.26
Movement LOS	D	B	B	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	22.67			25.73			41.95			46.86		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	29.67											
Intersection LOS	C											
Intersection V/C	0.610											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	38.93	38.93	38.93	38.93
l_p,int, Pedestrian LOS Score for Intersectio	2.831	2.990	2.852	2.646
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	547	611	463	547
d_b, Bicycle Delay [s]	25.06	22.93	28.05	25.06
l_b,int, Bicycle LOS Score for Intersection	2.379	2.562	1.953	1.850
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Cedar Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	13.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.486

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	290.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	84	759	20	46	874	55	66	82	80	47	88	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	6	0	0	8	0	0	4
Total Hourly Volume [veh/h]	84	759	18	46	874	49	66	82	72	47	88	40
Peak Hour Factor	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	219	5	13	252	14	19	24	21	14	25	12
Total Analysis Volume [veh/h]	97	874	21	53	1007	56	76	94	83	54	101	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	15	25	0	9	19	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	34	34	3	33	33	11	11
g / C, Green / Cycle	0.07	0.57	0.57	0.05	0.55	0.55	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.24	0.24	0.03	0.28	0.28	0.15	0.12
s, saturation flow rate [veh/h]	1810	1900	1884	1810	1900	1865	1682	1687
c, Capacity [veh/h]	132	1084	1075	90	1040	1021	380	379
d1, Uniform Delay [s]	27.25	7.25	7.25	27.89	8.56	8.56	23.61	22.77
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.76	1.17	1.18	5.91	1.83	1.86	2.01	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.41	0.41	0.59	0.52	0.52	0.67	0.53
d, Delay for Lane Group [s/veh]	35.01	8.43	8.44	33.80	10.38	10.42	25.61	23.92
Lane Group LOS	D	A	A	C	B	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.50	2.46	2.45	0.82	3.48	3.43	3.27	2.47
50th-Percentile Queue Length [ft/ln]	37.62	61.60	61.17	20.47	87.02	85.71	81.77	61.68
95th-Percentile Queue Length [veh/ln]	2.71	4.44	4.40	1.47	6.27	6.17	5.89	4.44
95th-Percentile Queue Length [ft/ln]	67.72	110.89	110.10	36.84	156.63	154.27	147.19	111.03

Movement, Approach, & Intersection Results

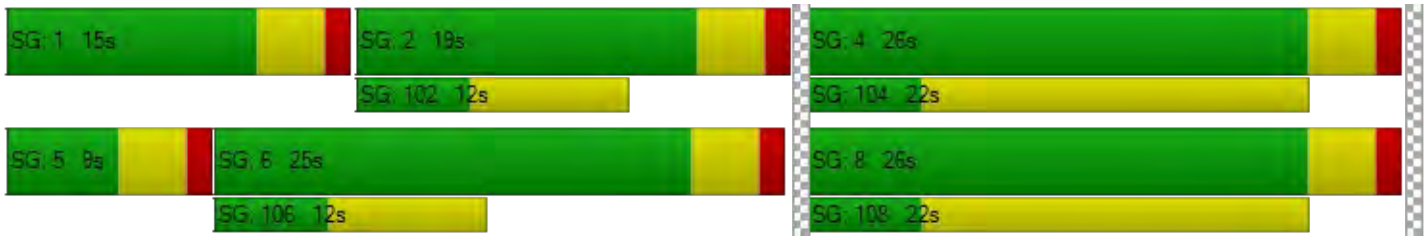
d_M, Delay for Movement [s/veh]	35.01	8.43	8.44	33.80	10.40	10.42	25.61	25.61	25.61	23.92	23.92	23.92
Movement LOS	D	A	A	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.03			11.51			25.61			23.92		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.69											
Intersection LOS	B											
Intersection V/C	0.486											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.988	3.018	2.046	1.945
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	500	733	733
d_b, Bicycle Delay [s]	12.68	16.88	12.03	12.03
l_b,int, Bicycle LOS Score for Intersection	2.380	2.485	1.990	1.898
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Cedar Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.386

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	190.00	100.00	100.00	345.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	180.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	36	678	43	87	901	21	50	73	53	42	72	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	4	0	0	2	0	0	5	0	0	14
Total Hourly Volume [veh/h]	36	678	39	87	901	19	50	73	48	42	72	122
Peak Hour Factor	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220	0.9220
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	184	11	24	244	5	14	20	13	11	20	33
Total Analysis Volume [veh/h]	39	735	42	94	977	21	54	79	52	46	78	132
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	19	0	10	20	0	0	31	0	0	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	36	36	4	37	37	8	8	8	8
g / C, Green / Cycle	0.04	0.60	0.60	0.07	0.62	0.62	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.02	0.21	0.21	0.05	0.26	0.26	0.10	0.03	0.09	0.08
s, saturation flow rate [veh/h]	1810	1900	1864	1810	1900	1886	1323	1615	1362	1615
c, Capacity [veh/h]	77	1134	1113	124	1184	1175	262	217	265	217
d1, Uniform Delay [s]	28.11	6.14	6.14	27.44	5.79	5.79	25.17	23.23	24.85	24.48
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.07	0.84	0.85	8.94	1.11	1.12	1.52	0.56	1.28	2.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.35	0.35	0.76	0.42	0.42	0.51	0.24	0.47	0.61
d, Delay for Lane Group [s/veh]	33.18	6.98	7.00	36.38	6.90	6.91	26.69	23.79	26.13	27.22
Lane Group LOS	C	A	A	D	A	A	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.60	1.82	1.79	1.50	2.20	2.19	1.77	0.63	1.63	1.76
50th-Percentile Queue Length [ft/ln]	15.08	45.45	44.74	37.40	55.06	54.73	44.22	15.74	40.74	43.96
95th-Percentile Queue Length [veh/ln]	1.09	3.27	3.22	2.69	3.96	3.94	3.18	1.13	2.93	3.16
95th-Percentile Queue Length [ft/ln]	27.15	81.80	80.53	67.31	99.12	98.52	79.59	28.32	73.33	79.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.18	6.99	7.00	36.38	6.90	6.91	26.69	26.69	23.79	26.13	26.13	27.22
Movement LOS	C	A	A	D	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.24			9.44			25.88			26.70		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.20											
Intersection LOS	B											
Intersection V/C	0.386											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.907	2.954	2.071	2.153
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	533	900	900
d_b, Bicycle Delay [s]	16.88	16.13	9.08	9.08
l_b,int, Bicycle LOS Score for Intersection	2.236	2.462	1.873	2.005
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Cedar Ave/7th St

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.362

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	295.00	100.00	100.00	190.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	40	663	6	19	861	21	25	9	110	42	14	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	2	0	0	11	0	0	1
Total Hourly Volume [veh/h]	40	663	5	19	861	19	25	9	99	42	14	11
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	180	1	5	234	5	7	2	27	11	4	3
Total Analysis Volume [veh/h]	44	721	5	21	937	21	27	10	108	46	15	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	16	0	18	25	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	40	40	2	39	39	6	6
g / C, Green / Cycle	0.04	0.67	0.67	0.03	0.65	0.65	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.02	0.19	0.19	0.01	0.25	0.25	0.08	0.05
s, saturation flow rate [veh/h]	1810	1900	1895	1810	1900	1885	1716	1573
c, Capacity [veh/h]	79	1264	1261	46	1230	1220	259	270
d1, Uniform Delay [s]	28.13	4.15	4.15	28.83	5.00	5.00	25.96	24.84
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.09	0.57	0.57	6.90	0.94	0.94	1.90	0.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.29	0.29	0.46	0.39	0.39	0.56	0.27
d, Delay for Lane Group [s/veh]	34.22	4.73	4.73	35.73	5.93	5.94	27.86	25.37
Lane Group LOS	C	A	A	D	A	A	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.68	0.99	0.99	0.35	1.65	1.64	2.06	0.97
50th-Percentile Queue Length [ft/ln]	17.03	24.80	24.76	8.82	41.24	40.99	51.58	24.27
95th-Percentile Queue Length [veh/ln]	1.23	1.79	1.78	0.64	2.97	2.95	3.71	1.75
95th-Percentile Queue Length [ft/ln]	30.65	44.64	44.56	15.88	74.24	73.78	92.84	43.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.22	4.73	4.73	35.73	5.94	5.94	27.86	27.86	27.86	25.37	25.37	25.37
Movement LOS	C	A	A	D	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	6.41			6.57			27.86			25.37		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	8.78											
Intersection LOS	A											
Intersection V/C	0.362											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.956	2.888	1.808	1.742
Crosswalk LOS	C	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	700	733	733
d_b, Bicycle Delay [s]	19.20	12.68	12.03	12.03
l_b,int, Bicycle LOS Score for Intersection	2.196	2.369	1.817	1.682
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Rubidoux Blvd/Market St

Control Type:	Signalized	Delay (sec / veh):	62.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.820

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	245.00	100.00	330.00	270.00	100.00	370.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	8	228	277	520	544	88	64	72	62	261	41	397
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	28	0	0	0	0	0	0	0	0	40
Total Hourly Volume [veh/h]	8	228	249	520	544	88	64	72	62	261	41	357
Peak Hour Factor	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010	0.9010
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	63	69	144	151	24	18	20	17	72	11	99
Total Analysis Volume [veh/h]	9	253	276	577	604	98	71	80	69	290	46	396
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	25	45	0	30	45	0	0	25	0	0	25	0
Amber [s]	4.0	5.0	0.0	4.0	5.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	2.0	0.0	1.0	1.0	0.0	0.0	2.0	0.0	0.0	1.0	0.0
Split [s]	15	28	0	42	55	0	0	16	0	0	34	0
Vehicle Extension [s]	1.5	2.5	0.0	1.5	2.5	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Walk [s]	0	0	0	0	7	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	5.0	0.0	3.0	4.0	0.0	0.0	4.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	7.00	7.00	5.00	6.00	6.00	6.00	6.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	5.00	5.00	3.00	4.00	4.00	4.00	4.00	3.00	3.00
g_i, Effective Green Time [s]	3	21	21	37	56	56	10	10	29	29
g / C, Green / Cycle	0.02	0.18	0.18	0.31	0.47	0.47	0.08	0.08	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.00	0.07	0.17	0.32	0.17	0.06	0.04	0.08	0.18	0.25
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1756	1821	1615
c, Capacity [veh/h]	41	633	283	558	1697	758	151	146	440	390
d1, Uniform Delay [s]	57.61	43.91	49.26	41.50	20.30	18.00	52.48	55.00	42.31	45.50
k, delay calibration	0.04	0.50	0.50	0.46	0.50	0.50	0.04	0.04	0.22	0.43
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	1.88	47.89	45.64	0.58	0.35	0.85	25.65	5.43	45.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.40	0.98	1.03	0.36	0.13	0.47	1.02	0.76	1.01
d, Delay for Lane Group [s/veh]	58.60	45.79	97.15	87.14	20.89	18.36	53.32	80.65	47.74	91.27
Lane Group LOS	E	D	F	F	C	B	D	F	D	F
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.27	3.39	11.65	22.61	5.17	1.52	2.05	5.39	9.61	16.14
50th-Percentile Queue Length [ft/ln]	6.80	84.74	291.29	565.31	129.31	38.08	51.17	134.72	240.25	403.43
95th-Percentile Queue Length [veh/ln]	0.49	6.10	17.25	31.10	8.90	2.74	3.68	9.25	14.69	22.92
95th-Percentile Queue Length [ft/ln]	12.23	152.54	431.25	777.38	222.56	68.54	92.11	231.32	367.35	573.05

Movement, Approach, & Intersection Results

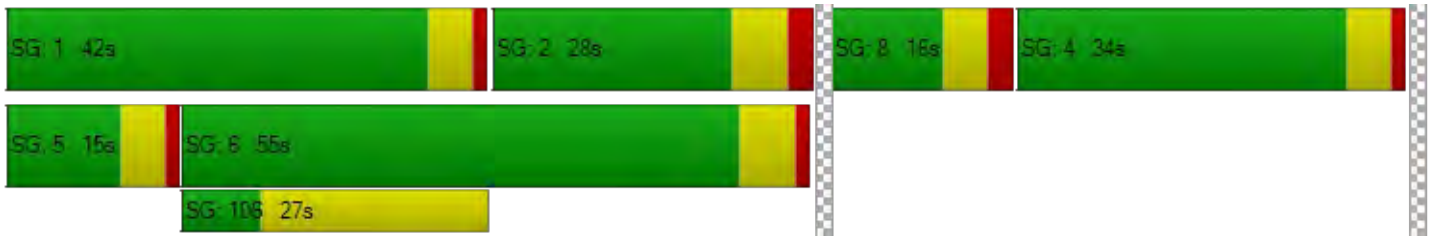
d_M, Delay for Movement [s/veh]	58.60	45.79	97.15	87.14	20.89	18.36	53.32	80.65	80.65	47.74	47.74	91.27
Movement LOS	E	D	F	F	C	B	D	F	F	D	D	F
d_A, Approach Delay [s/veh]	72.35			50.58			71.83			71.29		
Approach LOS	E			D			E			E		
d_I, Intersection Delay [s/veh]	61.97											
Intersection LOS	E											
Intersection V/C	0.820											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.266	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	350	817	167	483
d_b, Bicycle Delay [s]	40.84	21.00	50.42	34.50
l_b,int, Bicycle LOS Score for Intersection	2.027	2.615	1.923	2.833
Bicycle LOS	B	B	A	C

Sequence

Ring 1	1	2	8	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Agua Mansa Rd/Market St

Control Type:	Signalized	Delay (sec / veh):	35.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	2	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	200.00	85.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	315.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	0	3	0	123	0	312	283	547	3	0	455	196
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	31	0	0	0	0	0	20
Total Hourly Volume [veh/h]	0	3	0	123	0	281	283	547	3	0	455	176
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	33	0	75	75	146	1	0	121	47
Total Analysis Volume [veh/h]	0	3	0	131	0	300	302	583	3	0	485	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	29	50	0	9	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	1.5	3.0	0.0	1.5	3.0	0.0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.2	0.0	0.0	3.9	0.0	2.2	4.5	0.0	2.2	4.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	5.20	5.90	5.90	4.20	6.50	6.50	4.20	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.90	3.90	2.20	4.50	4.50	2.20	4.50	4.50
g_i, Effective Green Time [s]	53	52	52	19	36	36	0	17	17
g / C, Green / Cycle	0.50	0.50	0.50	0.18	0.35	0.35	0.00	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.00	0.09	0.19	0.17	0.16	0.00	0.00	0.13	0.12
s, saturation flow rate [veh/h]	1900	1457	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	952	790	800	333	1249	558	3	589	263
d1, Uniform Delay [s]	13.05	14.45	16.43	41.96	26.82	22.54	0.00	42.50	41.65
k, delay calibration	0.50	0.50	0.50	0.18	0.11	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.45	1.35	13.99	0.27	0.00	0.00	2.98	3.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.17	0.38	0.91	0.47	0.01	0.00	0.82	0.72
d, Delay for Lane Group [s/veh]	13.06	14.91	17.78	55.95	27.10	22.55	0.00	45.48	45.27
Lane Group LOS	B	B	B	E	C	C	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.04	1.74	4.57	8.63	5.44	0.05	0.00	6.09	4.70
50th-Percentile Queue Length [ft/ln]	0.93	43.51	114.24	215.81	136.10	1.18	0.00	152.18	117.60
95th-Percentile Queue Length [veh/ln]	0.07	3.13	8.08	13.45	9.27	0.09	0.00	10.13	8.26
95th-Percentile Queue Length [ft/ln]	1.67	78.33	201.89	336.27	231.77	2.13	0.00	253.34	206.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.06	13.06	13.06	14.91	14.91	17.78	55.95	27.10	22.55	0.00	45.48	45.27
Movement LOS	B	B	B	B	B	B	E	C	C	A	D	D
d_A, Approach Delay [s/veh]	13.06			16.91			36.89			45.42		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	35.42											
Intersection LOS	D											
Intersection V/C	0.487											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	13.0	15.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	40.30	40.30	38.57	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.723	2.360	2.876	0.000
Crosswalk LOS	A	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	777	764	829	448
d_b, Bicycle Delay [s]	19.63	20.06	18.01	31.63
l_b,int, Bicycle LOS Score for Intersection	1.565	2.322	2.292	2.131
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	3	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Rubidoux Blvd/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.633

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	85.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	37	587	0	0	872	18	16	0	158	386	67	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	2	0	0	16	0	0	8
Total Hourly Volume [veh/h]	37	587	0	0	872	16	16	0	142	386	67	71
Peak Hour Factor	0.9490	0.9490	1.0000	1.0000	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490	0.9490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	155	0	0	230	4	4	0	37	102	18	19
Total Analysis Volume [veh/h]	39	619	0	0	919	17	17	0	150	407	71	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	4	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	35	0	0	35	0	20	0	0	0	30	0
Maximum Green [s]	0	25	0	0	25	0	35	0	0	0	20	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	4.8	0.0	0.0	0.0	4.8	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	38	0	0	0	38	0
Vehicle Extension [s]	0.0	3.5	0.0	0.0	3.5	0.0	2.0	0.0	0.0	0.0	3.5	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	3.8	0.0	0.0	0.0	3.8	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.80	5.80	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.40	3.40	3.80	3.80	3.80	3.80
g_i, Effective Green Time [s]	37	37	37	37	32	32	32	32
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.06	0.17	0.25	0.25	0.01	0.09	0.38	0.05
s, saturation flow rate [veh/h]	608	3618	1900	1888	1262	1615	1242	1615
c, Capacity [veh/h]	245	1656	870	864	130	649	583	649
d1, Uniform Delay [s]	23.74	14.18	15.60	15.63	37.99	15.76	24.28	14.99
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.39	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.39	0.65	2.38	2.43	0.17	0.07	9.88	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.16	0.37	0.54	0.54	0.13	0.23	0.82	0.12
d, Delay for Lane Group [s/veh]	25.13	14.83	17.98	18.06	38.16	15.83	34.16	15.09
Lane Group LOS	C	B	B	B	D	B	C	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.65	3.40	5.98	6.00	0.33	1.73	9.63	0.82
50th-Percentile Queue Length [ft/ln]	16.14	85.02	149.59	150.07	8.17	43.30	240.68	20.43
95th-Percentile Queue Length [veh/ln]	1.16	6.12	10.00	10.02	0.59	3.12	14.72	1.47
95th-Percentile Queue Length [ft/ln]	29.05	153.04	249.88	250.52	14.71	77.95	367.89	36.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.13	14.83	0.00	0.00	18.02	18.06	38.16	0.00	15.83	34.16	34.16	15.09
Movement LOS	C	B			B	B	D		B	C	C	B
d_A, Approach Delay [s/veh]	15.44			18.02			18.10			31.58		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	20.53											
Intersection LOS	C											
Intersection V/C	0.633											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	36.6
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	29.76	0.00	11.77
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.690	0.000	2.120
Crosswalk LOS	F	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	915	915	805	805
d_b, Bicycle Delay [s]	11.77	11.77	14.28	14.28
l_b,int, Bicycle LOS Score for Intersection	2.102	2.333	1.560	2.485
Bicycle LOS	B	B	A	B

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Rubidoux Blvd/SrR-60 WB On Ramp

Control Type:	Two-way stop	Delay (sec / veh):	25.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	145.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	271	624	776	642	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	271	624	776	642	0	0
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	165	205	169	0	0
Total Analysis Volume [veh/h]	286	659	819	678	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance						
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.63	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	25.48	0.00	0.00	0.00	0.00	0.00
Movement LOS	D	A	A	A		
95th-Percentile Queue Length [veh/ln]	4.25	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	106.20	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	7.71		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.98					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 24: Rubidoux Blvd/SR-60 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	145.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	505	483	149	612	0	382	10	182	8	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	48	0	0	0	0	0	18	0	0	0
Total Hourly Volume [veh/h]	0	505	435	149	612	0	382	10	164	8	0	3
Peak Hour Factor	1.0000	0.9410	0.9410	0.9410	0.9410	1.0000	0.9410	0.9410	0.9410	0.9410	1.0000	0.9410
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	134	116	40	163	0	101	3	44	2	0	1
Total Analysis Volume [veh/h]	0	537	462	158	650	0	406	11	174	9	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Permiss	Split
Signal Group	0	2	0	1	6	0	0	4	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	5	0	0
Maximum Green [s]	0	35	0	30	35	0	0	35	0	20	0	0
Amber [s]	0.0	4.4	0.0	4.1	4.4	0.0	0.0	4.8	0.0	4.4	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	43	0	12	55	0	0	42	0	13	0	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	3.0	0.0	2.0	0.0	0.0
Walk [s]	0	4	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	33	0	0	18	0	0	28	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	3.1	3.4	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	5.40	5.40	5.10	5.40	5.80	5.80	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.10	3.40	3.80	3.80	3.40	3.40
g_i, Effective Green Time [s]	48	48	11	64	28	28	2	2
g / C, Green / Cycle	0.43	0.43	0.10	0.58	0.25	0.25	0.01	0.01
(v / s)_i Volume / Saturation Flow Rate	0.26	0.31	0.09	0.18	0.23	0.11	0.00	0.00
s, saturation flow rate [veh/h]	1900	1633	1810	3618	1812	1615	1810	1615
c, Capacity [veh/h]	823	708	186	2106	457	408	26	23
d1, Uniform Delay [s]	23.97	25.45	48.52	11.70	39.93	34.45	53.70	53.53
k, delay calibration	0.50	0.50	0.04	0.50	0.21	0.11	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.31	5.85	4.17	0.38	13.00	0.71	2.90	0.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.71	0.85	0.31	0.91	0.43	0.35	0.13
d, Delay for Lane Group [s/veh]	27.28	31.29	52.69	12.08	52.92	35.16	56.60	54.45
Lane Group LOS	C	C	D	B	D	D	E	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	10.24	11.22	4.38	3.84	12.34	3.93	0.27	0.09
50th-Percentile Queue Length [ft/ln]	256.01	280.45	109.50	96.08	308.50	98.21	6.63	2.18
95th-Percentile Queue Length [veh/ln]	15.49	16.71	7.81	6.92	18.10	7.07	0.48	0.16
95th-Percentile Queue Length [ft/ln]	387.21	417.78	195.31	172.94	452.52	176.77	11.94	3.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	27.56	31.29	52.69	12.08	0.00	52.92	52.92	35.16	56.60	0.00	54.45
Movement LOS		C	C	D	B		D	D	D	E		D
d_A, Approach Delay [s/veh]	29.29			20.02			47.69			56.06		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	30.83											
Intersection LOS	C											
Intersection V/C	0.628											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	44.55	0.00	44.55	47.29
l_p,int, Pedestrian LOS Score for Intersectio	2.826	0.000	2.206	2.214
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	684	902	658	138
d_b, Bicycle Delay [s]	23.83	16.58	24.76	47.66
l_b,int, Bicycle LOS Score for Intersection	2.423	2.226	2.564	1.560
Bicycle LOS	B	B	B	A

Sequence

Ring 1	4	3	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Market St/Rivera St

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.339

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	165.00	100.00	100.00	155.00	100.00	365.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	17	709	259	35	797	3	0	0	29	259	3	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	26	0	0	0	0	0	3	0	0	5
Total Hourly Volume [veh/h]	17	709	233	35	797	3	0	0	26	259	3	47
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	195	64	10	219	1	0	0	7	71	1	13
Total Analysis Volume [veh/h]	19	779	256	38	876	3	0	0	29	285	3	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	6	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	5	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	30	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	23	23	9	23	0	0	12	0	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	14	0	10	0	0	10	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	41	41	3	42	42	2	2	8	8	8
g / C, Green / Cycle	0.02	0.59	0.59	0.04	0.60	0.60	0.03	0.03	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.01	0.22	0.16	0.02	0.23	0.23	0.00	0.02	0.08	0.08	0.03
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1898	1900	1615	1810	1811	1615
c, Capacity [veh/h]	41	2123	948	68	1144	1142	60	51	209	209	187
d1, Uniform Delay [s]	33.80	7.61	7.10	33.11	7.22	7.22	0.00	33.43	29.74	29.74	28.29
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.14	0.49	0.70	7.00	0.98	0.98	0.00	9.71	3.99	3.98	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.37	0.27	0.56	0.38	0.38	0.00	0.57	0.69	0.69	0.28
d, Delay for Lane Group [s/veh]	41.94	8.11	7.80	40.11	8.20	8.20	0.00	43.15	33.73	33.73	29.09
Lane Group LOS	D	A	A	D	A	A	A	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.39	2.35	1.54	0.72	2.69	2.69	0.00	0.61	2.47	2.47	0.81
50th-Percentile Queue Length [ft/ln]	9.71	58.86	38.47	18.01	67.23	67.16	0.00	15.37	61.78	61.83	20.28
95th-Percentile Queue Length [veh/ln]	0.70	4.24	2.77	1.30	4.84	4.84	0.00	1.11	4.45	4.45	1.46
95th-Percentile Queue Length [ft/ln]	17.48	105.94	69.25	32.41	121.02	120.89	0.00	27.67	111.21	111.29	36.50

Movement, Approach, & Intersection Results

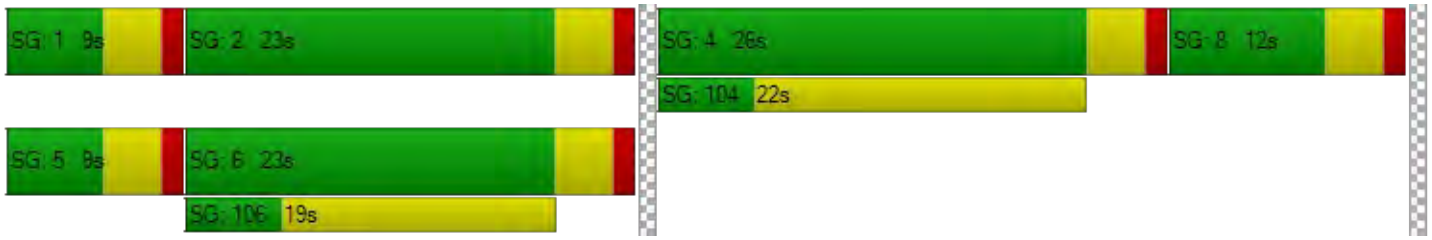
d_M, Delay for Movement [s/veh]	41.94	8.11	7.80	40.11	8.20	8.20	0.00	0.00	43.15	33.73	33.73	29.09
Movement LOS	D	A	A	D	A	A	A	A	D	C	C	C
d_A, Approach Delay [s/veh]	8.64			9.52			43.15			33.02		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	12.96											
Intersection LOS	B											
Intersection V/C	0.339											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	26.58	0.00	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.801	0.000	2.289
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	543	229	629
d_b, Bicycle Delay [s]	18.58	18.58	27.46	16.46
l_b,int, Bicycle LOS Score for Intersection	2.451	2.316	1.612	2.129
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Market St/SR-60 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.439

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	185.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	188	330	0	0	944	141	0	0	0	70	0	655
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	14	0	0	0	0	0	66
Total Hourly Volume [veh/h]	188	330	0	0	944	127	0	0	0	70	0	589
Peak Hour Factor	0.9190	0.9190	1.0000	1.0000	0.9190	0.9190	1.0000	1.0000	1.0000	0.9190	1.0000	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	90	0	0	257	35	0	0	0	19	0	160
Total Analysis Volume [veh/h]	205	359	0	0	1027	138	0	0	0	76	0	641
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	12	27	0	0	15	0	0	0	0	33	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C		L
C, Cycle Length [s]	60	60	60		60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00
g_i, Effective Green Time [s]	8	48	36		4
g / C, Green / Cycle	0.13	0.81	0.61		0.06
(v / s)_i Volume / Saturation Flow Rate	0.11	0.10	0.28		0.04
s, saturation flow rate [veh/h]	1810	3618	3618		1810
c, Capacity [veh/h]	241	2907	2183		114
d1, Uniform Delay [s]	25.41	1.29	6.59		27.48
k, delay calibration	0.11	0.50	0.50		0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00
d2, Incremental Delay [s]	8.13	0.09	0.73		6.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00
PF, progression factor	1.00	1.00	1.00		1.00

Lane Group Results

X, volume / capacity	0.85	0.12	0.47		0.66
d, Delay for Lane Group [s/veh]	33.55	1.37	7.32		33.96
Lane Group LOS	C	A	A		C
Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	3.06	0.04	2.38		1.20
50th-Percentile Queue Length [ft/ln]	76.51	0.88	59.59		29.99
95th-Percentile Queue Length [veh/ln]	5.51	0.06	4.29		2.16
95th-Percentile Queue Length [ft/ln]	137.71	1.58	107.27		53.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.55	1.37	0.00	0.00	7.32	0.00	0.00	0.00	0.00	33.96	0.00	0.00
Movement LOS	C	A			A					C		
d_A, Approach Delay [s/veh]	13.07			6.51			0.00			3.88		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	8.61											
Intersection LOS	A											
Intersection V/C	0.439											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	1.950
Crosswalk LOS	F	F	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	767	367	0	967
d_b, Bicycle Delay [s]	11.41	20.01	30.00	8.01
l_b,int, Bicycle LOS Score for Intersection	2.025	2.407	4.132	1.560
Bicycle LOS	B	B	D	A

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Market St/SR-60 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.704

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	60.00	155.00	100.00	100.00	180.00	100.00	410.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	408	141	601	412	0	113	0	511	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	14	0	0	0	0	0	51	0	0	0
Total Hourly Volume [veh/h]	0	408	127	601	412	0	113	0	460	0	0	0
Peak Hour Factor	1.0000	0.8600	0.8600	0.8600	0.8600	1.0000	0.8600	1.0000	0.8600	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	119	37	175	120	0	33	0	134	0	0	0
Total Analysis Volume [veh/h]	0	474	148	699	479	0	131	0	535	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	14	0	30	44	0	16	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R	
C, Cycle Length [s]	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	11	25	40	12	12	
g / C, Green / Cycle	0.19	0.41	0.67	0.20	0.20	
(v / s)_i Volume / Saturation Flow Rate	0.13	0.39	0.13	0.07	0.19	
s, saturation flow rate [veh/h]	3618	1810	3618	1810	2859	
c, Capacity [veh/h]	677	747	2412	362	572	
d1, Uniform Delay [s]	22.81	16.85	3.84	20.70	23.62	
k, delay calibration	0.50	0.28	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	5.95	13.54	0.18	0.61	7.81	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.70	0.94	0.20	0.36	0.94	
d, Delay for Lane Group [s/veh]	28.76	30.39	4.03	21.31	31.43	
Lane Group LOS	C	C	A	C	C	
Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.28	9.91	0.61	1.50	3.98	
50th-Percentile Queue Length [ft/ln]	81.93	247.86	15.28	37.62	99.60	
95th-Percentile Queue Length [veh/ln]	5.90	15.08	1.10	2.71	7.17	
95th-Percentile Queue Length [ft/ln]	147.48	376.96	27.51	67.72	179.28	

Movement, Approach, & Intersection Results

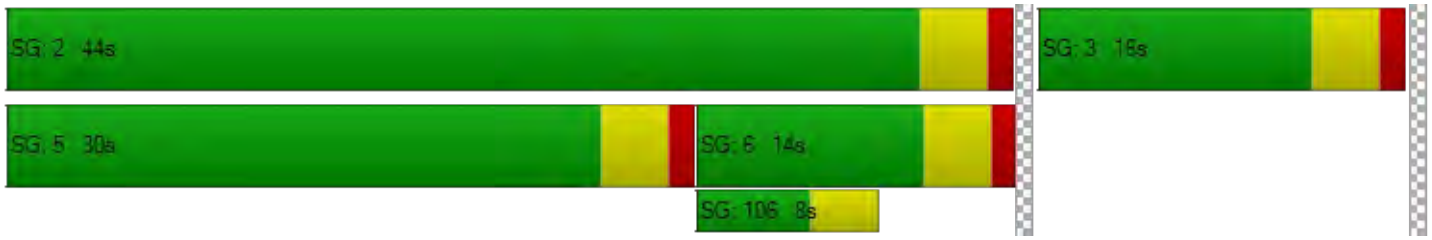
d_M, Delay for Movement [s/veh]	0.00	28.76	0.00	30.39	4.03	0.00	21.31	0.00	31.43	0.00	0.00	0.00
Movement LOS		C		C	A		C		C			
d_A, Approach Delay [s/veh]	22.68			19.67			29.44			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	23.09											
Intersection LOS	C											
Intersection V/C	0.704											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.086
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	1333	400	0
d_b, Bicycle Delay [s]	20.83	3.33	19.20	30.00
l_b,int, Bicycle LOS Score for Intersection	1.951	2.531	1.560	4.132
Bicycle LOS	A	B	A	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Sierra Ave/20th St

Control Type:	All-way stop	Delay (sec / veh):	7.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.057

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	0	0	3	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	17	0	0	50
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	0	17	3	0	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	4	1	0	13
Total Analysis Volume [veh/h]	19	0	18	3	0	53
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	811	702	778	783	924
Degree of Utilization, x	0.02	0.03	0.00	0.00	0.06

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.07	0.08	0.01	0.00	0.18
95th-Percentile Queue Length [ft]	1.80	1.97	0.29	0.00	4.56
Approach Delay [s/veh]	7.54	7.87		6.84	
Approach LOS	A	A		A	
Intersection Delay [s/veh]	7.21				
Intersection LOS	A				

Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Existing AM.pdf

Scenario 1 Existing AM
2/15/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound		Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Right	Left	Right	
1	Sierra Ave/I-10 Ramps	415	804	418	538	840	747	861	448	432	558	6061

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Sierra Ave/Slover Ave	104	1026	108	577	851	284	181	267	56	65	267	444	4230

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Sierra Ave/Santa Ana Ave	170	1000	52	95	675	101	111	70	71	51	104	96	2596

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Sierra Ave/Jurupa Ave	284	740	49	33	395	208	248	187	205	128	241	100	2818

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Armstrong Rd/Sierra Ave	933	209	85	15	344	50	40	18	649	84	44	23	2494

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
6	Armstrong/30th St	1191	37	13	1061	65	31	2398

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
7	Valley Way/SR-60 WB Off Ramp	91	695	1082	10	52	170	193	100	546	2939

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
8	Valley Way/SR-60 WB On Ramp	218	786	1039	406	2449

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR-60 EB Ramps/Mission Blvd	12	2	4	364	4	45	103	338	6	5	354	234	1471

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
10	Valley Way/Mission Blvd	16	364	45	403	329	351	300	296	17	56	167	588	2932

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
11	Jurupa Rd/Mission Blvd	25	170	687	22	127	748	1779

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	Pacific Ave/Mission Blvd	111	39	102	14	68	85	93	606	65	153	600	22	1958

ID	Intersection Name	Northbound		Southbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Thru	Right	
13	Cedar Ave/I-10 WB Ramp	273	1231	1321	718	441	3	410	4397

ID	Intersection Name	Northbound		Southbound		Eastbound			Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	
14	Cedar Ave/I-10 EB Ramps	1029	404	420	1339	476	3	373	4044

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
15	Cedar Ave/Orange St	4	1026	3	107	1143	456	272	5	13	0	1	136	3166

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	Cedar Ave/Slover Ave	163	734	14	103	851	163	211	154	73	19	204	101	2790

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Cedar Ave/Santa Ana Ave	84	759	20	46	874	55	66	82	80	47	88	44	2245

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	Cedar Ave/Jurupa Ave	36	678	43	87	901	21	50	73	53	42	72	136	2192

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Cedar Ave/7th St	40	663	6	19	861	21	25	9	110	42	14	12	1822

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	Rubidoux Blvd/Market St	8	228	277	520	544	88	64	72	62	261	41	397	2562

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	Agua Mansa Rd/Market St	0	3	0	123	0	312	283	547	3	0	455	196	1922

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
22	Rubidoux Blvd/SR-60 WB Off Ramp	37	587	872	18	16	158	386	67	79	2220

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
23	Rubidoux Blvd/SrR-60 WB On Ramp	271	624	776	642	2313

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	Left	Right	
24	Rubidoux Blvd/SR-60 EB Ramps	505	483	149	612	382	10	182	8	3	2334

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Market St/Rivera St	17	709	259	35	797	3	0	0	29	259	3	52	2163

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
26	Market St/SR-60 WB Ramp	188	330	944	141	70	655	2328

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Thru	Right	Left	Thru	Left	2	
27	Market St/SR-60 EB Ramp	408	141	601	412	113	511	2186

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
28	Sierra Ave/20th St	18	0	17	3	0	50	88

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Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Existing PM.pdf

Scenario 2 Existing PM
2/15/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Ave/I-10 Ramps	Signalized	HCM 7th Edition	SB Left	0.650	22.5	C
2	Sierra Ave/Slover Ave	Signalized	HCM 7th Edition	SB Left	0.744	47.8	D
3	Sierra Ave/Santa Ana Ave	Signalized	HCM 7th Edition	EB Left	0.467	22.2	C
4	Sierra Ave/Jurupa Ave	Signalized	HCM 7th Edition	NB Left	0.525	32.6	C
5	Armstrong Rd/Sierra Ave	Signalized	HCM 7th Edition	WB Right	0.569	38.3	D
6	Armstrong/30th St	Signalized	HCM 7th Edition	WB Right	0.597	4.8	A
7	Valley Way/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	EB Left	0.898	73.0	E
8	Valley Way/SR-60 WB On Ramp	Signalized	HCM 7th Edition	NB Left	0.447	7.0	A
9	SR-60 EB Ramps/Mission Blvd	Signalized	HCM 7th Edition	WB Left	0.556	42.3	D
10	Valley Way/Mission Blvd	Signalized	HCM 7th Edition	NB Left	0.626	41.2	D
11	Jurupa Rd/Mission Blvd	Two-way stop	HCM 7th Edition	NB Left	0.482	275.0	F
12	Pacific Ave/Mission Blvd	Signalized	HCM 7th Edition	EB Left	0.548	18.7	B
13	Cedar Ave/I-10 WB Ramp	Signalized	HCM 7th Edition	SB Right	0.694	18.3	B
14	Cedar Ave/I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.637	18.9	B
15	Cedar Ave/Orange St	Signalized	HCM 7th Edition	NB Right	0.550	21.0	C
16	Cedar Ave/Slover Ave	Signalized	HCM 7th Edition	NB Left	0.503	27.5	C
17	Cedar Ave/Santa Ana Ave	Signalized	HCM 7th Edition	SB Left	0.512	16.4	B
			HCM 7th				

18	Cedar Ave/Jurupa Ave	Signalized	HCM 7th Edition	NB Left	0.444	16.5	B
19	Cedar Ave/7th St	Signalized	HCM 7th Edition	NB Left	0.500	15.4	B
20	Rubidoux Blvd/Market St	Signalized	HCM 7th Edition	WB Right	0.904	82.1	F
21	Agua Mansa Rd/Market St	Signalized	HCM 7th Edition	EB Left	0.666	42.3	D
22	Rubidoux Blvd/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	WB Left	0.673	23.1	C
23	Rubidoux Blvd/SrR-60 WB On Ramp	Two-way stop	HCM 7th Edition	NB Left	0.462	19.5	C
24	Rubidoux Blvd/SR-60 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.598	33.2	C
25	Market St/Rivera St	Signalized	HCM 7th Edition	NB Left	0.386	13.8	B
26	Market St/SR-60 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.510	10.2	B
27	Market St/SR-60 EB Ramp	Signalized	HCM 7th Edition	SB Left	0.658	19.5	B
28	Sierra Ave/20th St	All-way stop	HCM 7th Edition	SB Left	0.083	7.7	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Ave/I-10 Ramps

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	565.00	100.00	100.00	325.00	100.00	305.00	440.00	100.00	1500.00	1205.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	390.00	0.00	0.00	665.00	0.00	0.00	1215.00	0.00	0.00	1150.00
Speed [mph]	40.00			35.00			65.00			65.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	591	1241	718	519	918	749	902	0	437	427	0	589
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	72	0	0	75	0	0	44	0	0	59
Total Hourly Volume [veh/h]	591	1241	646	519	918	674	902	0	393	427	0	530
Peak Hour Factor	0.9910	0.9910	0.9910	0.9910	0.9910	0.9910	0.9910	1.0000	0.9910	0.9910	1.0000	0.9910
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	149	313	163	131	232	170	228	0	99	108	0	134
Total Analysis Volume [veh/h]	596	1252	652	524	926	680	910	0	397	431	0	535
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna
Signal Group	1	6	0	5	2	0	3	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	0	0	5	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	25	32	0	25	32	0	48	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	5	0	0
Pedestrian Clearance [s]	0	23	0	0	23	0	39	0	0	35	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No		No	No		No			No		
Maximum Recall	No	No		No	No		No			No		
Pedestrian Recall	No	No		No	No		No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	L
C, Cycle Length [s]	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	44	18	43	31	31
g / C, Green / Cycle	0.19	0.42	0.17	0.41	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.17	0.24	0.15	0.18	0.26	0.12
s, saturation flow rate [veh/h]	3514	5176	3514	5176	3514	3514
c, Capacity [veh/h]	662	2188	601	2097	1026	1026
d1, Uniform Delay [s]	41.63	23.07	42.40	22.62	35.52	30.00
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.76	1.09	4.12	0.68	2.82	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.57	0.87	0.44	0.89	0.42
d, Delay for Lane Group [s/veh]	46.39	24.17	46.52	23.29	38.34	30.27
Lane Group LOS	D	C	D	C	D	C
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.73	7.64	6.83	5.48	10.34	4.01
50th-Percentile Queue Length [ft/ln]	193.37	191.08	170.83	136.96	258.47	100.36
95th-Percentile Queue Length [veh/ln]	12.30	12.18	11.12	9.32	15.61	7.23
95th-Percentile Queue Length [ft/ln]	307.40	304.43	278.00	232.93	390.30	180.64

Movement, Approach, & Intersection Results

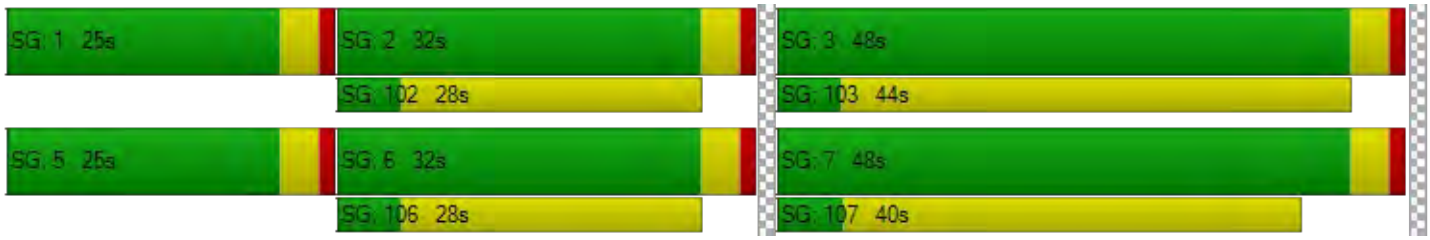
d_M, Delay for Movement [s/veh]	46.39	24.17	0.00	46.52	23.29	0.00	38.34	0.00	0.00	30.27	0.00	0.00
Movement LOS	D	C		D	C		D			C		
d_A, Approach Delay [s/veh]	23.22			21.63			26.77			13.58		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	22.52											
Intersection LOS	C											
Intersection V/C	0.650											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.466	3.386	2.992	2.798
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	533	838	838
d_b, Bicycle Delay [s]	28.23	28.23	17.72	17.72
l_b,int, Bicycle LOS Score for Intersection	2.576	2.357	1.560	1.560
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	47.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.744

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	265.00	100.00	675.00	675.00	100.00	100.00	345.00	100.00	320.00	275.00	100.00	465.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	600.00	0.00	0.00	0.00
Speed [mph]	50.00			40.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	164	1274	177	687	973	148	346	687	89	219	385	894
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	18	0	0	15	0	0	9	0	0	89
Total Hourly Volume [veh/h]	164	1274	159	687	973	133	346	687	80	219	385	805
Peak Hour Factor	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	325	41	175	248	34	88	175	20	56	98	206
Total Analysis Volume [veh/h]	168	1301	162	702	994	136	353	702	82	224	393	822
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	40	0	25	53	0	15	41	0	14	40	40
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	31	0	0	27	0	0	31	0	0	31	31
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	8	47	47	21	61	61	11	26	26	10	25	50
g / C, Green / Cycle	0.06	0.39	0.39	0.18	0.50	0.50	0.09	0.22	0.22	0.08	0.21	0.42
(v / s)_i Volume / Saturation Flow Rate	0.05	0.21	0.21	0.20	0.21	0.21	0.10	0.19	0.05	0.06	0.11	0.29
s, saturation flow rate [veh/h]	3514	5176	1765	3514	3618	1786	3514	3618	1615	3514	3618	2859
c, Capacity [veh/h]	224	2031	692	615	1822	899	322	795	355	280	751	1189
d1, Uniform Delay [s]	55.25	28.06	28.08	49.50	18.68	18.70	54.50	45.34	38.49	54.28	42.27	28.73
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.02	1.02	2.98	68.43	0.70	1.42	54.13	3.48	0.33	5.27	0.57	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.54	0.54	1.14	0.41	0.42	1.10	0.88	0.23	0.80	0.52	0.69
d, Delay for Lane Group [s/veh]	60.27	29.09	31.06	117.93	19.37	20.12	108.63	48.82	38.82	59.55	42.83	29.46
Lane Group LOS	E	C	C	F	B	C	F	D	D	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.57	7.77	8.34	14.85	6.47	6.60	7.16	10.17	1.97	3.42	5.05	9.17
50th-Percentile Queue Length [ft/ln]	64.37	194.14	208.46	371.26	161.84	165.04	178.96	254.17	49.32	85.53	126.24	229.33
95th-Percentile Queue Length [veh/ln]	4.63	12.34	13.07	22.56	10.65	10.82	11.93	15.40	3.55	6.16	8.73	14.14
95th-Percentile Queue Length [ft/ln]	115.87	308.39	326.85	564.05	266.15	270.38	298.24	384.90	88.78	153.95	218.37	353.51

Movement, Approach, & Intersection Results

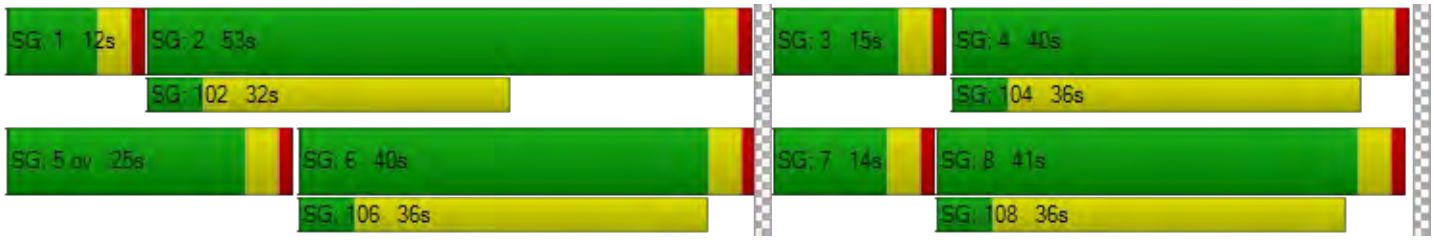
d_M, Delay for Movement [s/veh]	60.27	29.41	31.06	117.93	19.55	20.12	108.63	48.82	38.82	59.55	42.83	29.46
Movement LOS	E	C	C	F	B	C	F	D	D	E	D	C
d_A, Approach Delay [s/veh]	32.75			57.29			66.67			37.79		
Approach LOS	C			E			E			D		
d_I, Intersection Delay [s/veh]	47.78											
Intersection LOS	D											
Intersection V/C	0.744											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.424	3.523	3.093	3.553
Crosswalk LOS	C	D	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	817	617	600
d_b, Bicycle Delay [s]	29.40	21.00	28.70	29.40
l_b,int, Bicycle LOS Score for Intersection	2.240	2.575	2.505	2.820
Bicycle LOS	B	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.467

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	285.00	100.00	210.00	375.00	100.00	100.00	240.00	100.00	100.00	300.00	100.00	350.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	535.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	190	1384	84	114	988	114	197	181	123	80	130	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	11	0	0	12	0	0	10
Total Hourly Volume [veh/h]	190	1384	76	114	988	103	197	181	111	80	130	85
Peak Hour Factor	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	350	19	29	250	26	50	46	28	20	33	22
Total Analysis Volume [veh/h]	192	1401	77	115	1000	104	199	183	112	81	132	86
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	31	0	9	30	0	14	40	0	10	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	52	52	5	51	51	10	12	12	5	7	7
g / C, Green / Cycle	0.07	0.58	0.58	0.05	0.57	0.57	0.11	0.13	0.13	0.06	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.05	0.27	0.05	0.03	0.20	0.20	0.11	0.05	0.07	0.04	0.04	0.05
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1810	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	234	2995	934	184	2042	1021	201	483	216	104	290	129
d1, Uniform Delay [s]	41.47	10.96	8.39	41.77	10.72	10.72	39.95	35.59	36.31	41.83	39.53	40.22
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.95	0.53	0.17	3.43	0.50	0.99	27.14	0.49	1.93	11.59	1.12	5.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.47	0.08	0.62	0.36	0.36	0.99	0.38	0.52	0.78	0.46	0.67
d, Delay for Lane Group [s/veh]	48.41	11.48	8.56	45.20	11.21	11.71	67.09	36.08	38.24	53.42	40.64	45.98
Lane Group LOS	D	B	A	D	B	B	E	D	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.21	4.45	0.59	1.27	3.41	3.56	5.74	1.80	2.32	2.05	1.39	1.99
50th-Percentile Queue Length [ft/ln]	55.26	111.27	14.71	31.77	85.21	88.90	143.45	45.02	58.08	51.26	34.83	49.86
95th-Percentile Queue Length [veh/ln]	3.98	7.91	1.06	2.29	6.13	6.40	9.67	3.24	4.18	3.69	2.51	3.59
95th-Percentile Queue Length [ft/ln]	99.46	197.77	26.48	57.18	153.37	160.02	241.66	81.03	104.55	92.27	62.69	89.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.41	11.48	8.56	45.20	11.35	11.71	67.09	36.08	38.24	53.42	40.64	45.98
Movement LOS	D	B	A	D	B	B	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.59			14.57			49.06			45.64		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.19											
Intersection LOS	C											
Intersection V/C	0.467											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.383	3.337	2.676	2.619
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	578	800	711
d_b, Bicycle Delay [s]	22.05	22.76	16.20	18.69
l_b,int, Bicycle LOS Score for Intersection	2.483	2.236	1.977	1.815
Bicycle LOS	B	B	A	A

Sequence

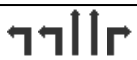
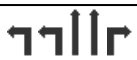
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	32.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.525

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	0	2	0	1
Entry Pocket Length [ft]	685.00	100.00	675.00	385.00	100.00	260.00	375.00	100.00	100.00	280.00	100.00	270.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	265	924	103	90	528	234	489	243	333	134	238	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	10	0	0	23	0	0	33	0	0	8
Total Hourly Volume [veh/h]	265	924	93	90	528	211	489	243	300	134	238	75
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	69	240	24	23	137	55	127	63	78	35	62	20
Total Analysis Volume [veh/h]	276	961	97	94	549	220	509	253	312	139	248	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	9	36	36	20	46	0	10	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	27	27	0	27	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	55	55	5	51	71	16	23	23	6	13	13
g / C, Green / Cycle	0.09	0.53	0.53	0.04	0.49	0.68	0.15	0.22	0.22	0.06	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.08	0.27	0.06	0.03	0.15	0.14	0.14	0.07	0.19	0.04	0.07	0.05
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	301	1905	851	157	1756	1092	535	794	354	200	449	200
d1, Uniform Delay [s]	47.63	16.02	12.51	49.24	16.38	6.38	44.11	34.39	39.64	48.62	43.25	42.33
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.95	0.96	0.27	3.65	0.47	0.42	9.72	0.23	7.12	4.30	1.07	1.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.50	0.11	0.60	0.31	0.20	0.95	0.32	0.88	0.70	0.55	0.39
d, Delay for Lane Group [s/veh]	58.58	16.98	12.79	52.88	16.85	6.80	53.82	34.62	46.76	52.92	44.32	43.57
Lane Group LOS	E	B	B	D	B	A	D	C	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.85	6.65	1.07	1.24	3.74	1.56	7.22	2.73	8.39	1.87	3.02	1.89
50th-Percentile Queue Length [ft/ln]	96.24	166.22	26.83	31.05	93.47	39.11	180.55	68.27	209.83	46.71	75.62	47.25
95th-Percentile Queue Length [veh/ln]	6.93	10.88	1.93	2.24	6.73	2.82	11.63	4.92	13.14	3.36	5.44	3.40
95th-Percentile Queue Length [ft/ln]	173.24	271.94	48.29	55.89	168.24	70.39	290.73	122.88	328.61	84.08	136.12	85.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.58	16.98	12.79	52.88	16.85	6.80	53.82	34.62	46.76	52.92	44.32	43.57
Movement LOS	E	B	B	D	B	A	D	C	D	D	D	D
d_A, Approach Delay [s/veh]	25.28			18.21			47.25			46.77		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	32.64											
Intersection LOS	C											
Intersection V/C	0.525											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.280	3.263	3.010	2.786
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	686	610	800	610
d_b, Bicycle Delay [s]	22.67	25.38	18.90	25.38
l_b,int, Bicycle LOS Score for Intersection	2.668	2.291	2.473	1.950
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Armstrong Rd/Sierra Ave

Control Type:	Signalized	Delay (sec / veh):	38.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.569

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	490.00	100.00	200.00	310.00	100.00	270.00	135.00	100.00	75.00	195.00	100.00	380.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	400.00
Speed [mph]	45.00			45.00			55.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1181	737	38	8	185	40	171	59	700	54	45	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	4	0	0	4	0	0	70	0	0	4
Total Hourly Volume [veh/h]	1181	737	34	8	185	36	171	59	630	54	45	40
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	303	189	9	2	48	9	44	15	162	14	12	10
Total Analysis Volume [veh/h]	1214	757	35	8	190	37	176	61	647	55	46	41
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	0	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	0.0	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	46	51	0	11	16	0	19	38	0	20	39	0
Vehicle Extension [s]	3.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	3.3	0.0	3.3	3.3	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	5.30	5.30	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.30	3.30	3.30	3.30	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	41	78	78	1	39	39	13	13	5	5	5
g / C, Green / Cycle	0.34	0.65	0.65	0.01	0.32	0.32	0.11	0.11	0.04	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.35	0.40	0.02	0.00	0.10	0.02	0.10	0.02	0.03	0.02	0.03
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1624
c, Capacity [veh/h]	1192	1237	1052	35	612	520	196	401	72	80	68
d1, Uniform Delay [s]	39.65	12.13	7.46	58.95	30.65	28.23	52.84	48.25	57.07	56.36	56.53
k, delay calibration	0.11	0.50	0.50	0.04	0.50	0.50	0.04	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.10	2.26	0.06	1.24	1.32	0.26	5.75	0.17	6.22	5.88	8.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.02	0.61	0.03	0.23	0.31	0.07	0.90	0.15	0.77	0.55	0.62
d, Delay for Lane Group [s/veh]	56.75	14.39	7.52	60.19	31.97	28.49	58.60	48.42	63.29	62.24	65.37
Lane Group LOS	F	B	A	E	C	C	E	D	E	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	19.48	10.90	0.30	0.12	4.24	0.76	5.32	0.80	1.75	1.43	1.42
50th-Percentile Queue Length [ft/ln]	487.01	272.51	7.62	3.10	106.00	18.97	133.10	20.12	43.77	35.84	35.43
95th-Percentile Queue Length [veh/ln]	27.05	16.32	0.55	0.22	7.62	1.37	9.11	1.45	3.15	2.58	2.55
95th-Percentile Queue Length [ft/ln]	676.37	407.88	13.72	5.58	190.43	34.14	227.71	36.21	78.79	64.51	63.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.75	14.39	7.52	60.19	31.97	28.49	58.60	48.42	0.00	63.29	62.35	65.37
Movement LOS	F	B	A	E	C	C	E	D		E	E	E
d_A, Approach Delay [s/veh]	39.91			32.38			15.30			63.58		
Approach LOS	D			C			B			E		
d_I, Intersection Delay [s/veh]	38.29											
Intersection LOS	D											
Intersection V/C	0.569											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	0.00	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.022	2.675	0.000	2.385
Crosswalk LOS	C	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	762	178	533	550
d_b, Bicycle Delay [s]	23.00	49.78	32.27	31.54
l_b,int, Bicycle LOS Score for Intersection	4.876	1.954	1.755	1.680
Bicycle LOS	E	A	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Armstrong/30th St

Control Type:	Signalized	Delay (sec / veh):	4.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.597

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	135.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1904	56	32	917	22	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	6	0	0	0	3
Total Hourly Volume [veh/h]	1904	50	32	917	22	24
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	513	13	9	247	6	6
Total Analysis Volume [veh/h]	2054	54	35	989	24	26
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	5	5	0
Maximum Green [s]	45	0	30	5	30	0
Amber [s]	4.3	0.0	4.3	4.3	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	32	0	13	19	48	0
Vehicle Extension [s]	3.0	0.0	2.0	3.0	2.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	19	0	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.3	3.3	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	0.00	3.30	2.00
g_i, Effective Green Time [s]	67	67	67	56	3
g / C, Green / Cycle	0.84	0.84	0.84	0.70	0.04
(v / s)_i Volume / Saturation Flow Rate	0.57	0.03	0.18	0.27	0.03
s, saturation flow rate [veh/h]	3618	1615	197	3618	1703
c, Capacity [veh/h]	3042	1358	277	2512	73
d1, Uniform Delay [s]	2.34	1.05	5.59	5.14	37.75
k, delay calibration	0.50	0.50	0.04	0.50	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.22	0.05	0.08	0.46	4.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.04	0.13	0.39	0.68
d, Delay for Lane Group [s/veh]	3.56	1.10	5.66	5.61	41.91
Lane Group LOS	A	A	A	A	D
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.52	0.02	0.22	2.34	1.04
50th-Percentile Queue Length [ft/ln]	12.89	0.52	5.44	58.57	26.09
95th-Percentile Queue Length [veh/ln]	0.93	0.04	0.39	4.22	1.88
95th-Percentile Queue Length [ft/ln]	23.20	0.93	9.79	105.42	46.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.56	1.10	5.66	5.61	41.91	41.91
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	3.50		5.61		41.91	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	4.78					
Intersection LOS	A					
Intersection V/C	0.597					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.76	0.00	29.76
l_p,int, Pedestrian LOS Score for Intersectio	3.216	0.000	1.822
Crosswalk LOS	C	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	668	343	1100
d_b, Bicycle Delay [s]	17.76	27.47	8.10
l_b,int, Bicycle LOS Score for Intersection	3.304	2.404	1.647
Bicycle LOS	C	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Valley Way/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	73.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.898

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	280.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	30	1155	0	0	809	4	230	0	85	294	60	572
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	9	0	0	57
Total Hourly Volume [veh/h]	30	1155	0	0	809	4	230	0	76	294	60	515
Peak Hour Factor	0.9400	0.9400	1.0000	1.0000	0.9400	0.9400	0.9400	1.0000	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	307	0	0	215	1	61	0	20	78	16	137
Total Analysis Volume [veh/h]	32	1229	0	0	861	4	245	0	81	313	64	548
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	10	52	0	0	42	0	31	0	0	0	57	0
Vehicle Extension [s]	3.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	0.0	0.0	3.3	0.0	3.4	0.0	0.0	0.0	3.3	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	5.40	5.30	5.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	3.40	3.30	3.30
g_i, Effective Green Time [s]	4	47	38	38	26	52	52
g / C, Green / Cycle	0.03	0.33	0.27	0.27	0.18	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.02	0.34	0.23	0.23	0.19	0.17	0.37
s, saturation flow rate [veh/h]	1810	3618	1900	1897	1757	1810	1641
c, Capacity [veh/h]	47	1207	521	521	321	668	606
d1, Uniform Delay [s]	67.57	46.65	47.71	47.73	57.20	33.67	44.15
k, delay calibration	0.11	0.50	0.50	0.50	0.40	0.11	0.46
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.31	30.63	14.16	14.29	48.91	0.51	37.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	1.02	0.83	0.83	1.01	0.47	1.01
d, Delay for Lane Group [s/veh]	82.88	77.28	61.87	62.02	106.11	34.18	81.75
Lane Group LOS	F	F	E	E	F	C	F
Critical Lane Group	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.32	25.37	15.85	15.87	15.55	8.20	26.90
50th-Percentile Queue Length [ft/ln]	33.00	634.24	396.15	396.67	388.65	205.01	672.56
95th-Percentile Queue Length [veh/ln]	2.38	34.06	22.37	22.40	22.19	12.90	35.67
95th-Percentile Queue Length [ft/ln]	59.40	851.56	559.36	559.99	554.66	322.42	891.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	82.88	77.28	0.00	0.00	61.94	62.02	106.11	0.00	106.11	34.18	81.75	81.75
Movement LOS	F	F			E	E	F		F	C	F	F
d_A, Approach Delay [s/veh]	77.42			61.94			106.11			65.65		
Approach LOS	E			E			F			E		
d_I, Intersection Delay [s/veh]	73.00											
Intersection LOS	E											
Intersection V/C	0.898											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	59.43	59.43	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.229	2.163	2.415
Crosswalk LOS	F	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	524	366	739
d_b, Bicycle Delay [s]	31.09	38.11	46.74	27.85
l_b,int, Bicycle LOS Score for Intersection	2.600	2.273	2.112	3.180
Bicycle LOS	B	B	B	C

Sequence

Ring 1	8	7	5	6	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 8: Valley Way/SR-60 WB On Ramp

Control Type:	Signalized	Delay (sec / veh):	7.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.447

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No			
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	168	1202	981	198	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	20	0	0
Total Hourly Volume [veh/h]	168	1202	981	178	0	0
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	325	265	48	0	0
Total Analysis Volume [veh/h]	181	1298	1059	192	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	53.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	5	0	0	0
Maximum Green [s]	30	40	40	0	0	0
Amber [s]	4.1	4.8	4.8	0.0	0.0	0.0
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0
Split [s]	34	140	106	0	0	0
Vehicle Extension [s]	3.0	2.0	2.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	3.3	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	140	140	140	140	
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	
g_i, Effective Green Time [s]	16	135	114	114	
g / C, Green / Cycle	0.12	0.96	0.81	0.81	
(v / s)_i Volume / Saturation Flow Rate	0.10	0.36	0.33	0.35	
s, saturation flow rate [veh/h]	1810	3618	1900	1802	
c, Capacity [veh/h]	209	3481	1546	1467	
d1, Uniform Delay [s]	60.85	0.16	3.62	3.72	
k, delay calibration	0.11	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	10.29	0.31	0.79	0.91	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.87	0.37	0.40	0.43	
d, Delay for Lane Group [s/veh]	71.14	0.46	4.41	4.63	
Lane Group LOS	E	A	A	A	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	6.80	0.15	3.75	3.88	
50th-Percentile Queue Length [ft/ln]	170.04	3.71	93.78	96.91	
95th-Percentile Queue Length [veh/ln]	11.08	0.27	6.75	6.98	
95th-Percentile Queue Length [ft/ln]	276.96	6.68	168.81	174.44	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.14	0.46	4.50	4.63	0.00	0.00
Movement LOS	E	A	A	A		
d_A, Approach Delay [s/veh]	9.11		4.52		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.01					
Intersection LOS	A					
Intersection V/C	0.447					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	1.828
Crosswalk LOS	F	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1924	1439	0
d_b, Bicycle Delay [s]	0.10	5.52	70.00
l_b,int, Bicycle LOS Score for Intersection	2.780	2.608	4.132
Bicycle LOS	C	B	D

Sequence

Ring 1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: SR-60 EB Ramps/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.556

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	1120.00	100.00	100.00	200.00	100.00	100.00	260.00	100.00	340.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	490.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	20	1	15	1274	4	108	83	472	20	12	312	115
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	11	0	0	2	0	0	12
Total Hourly Volume [veh/h]	20	1	13	1274	4	97	83	472	18	12	312	103
Peak Hour Factor	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750	0.9750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	3	327	1	25	21	121	5	3	80	26
Total Analysis Volume [veh/h]	21	1	13	1307	4	99	85	484	18	12	320	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	0	3	0	0	4	0	5	2	0	1	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	5
Maximum Green [s]	0	15	0	0	35	0	25	35	0	15	35	35
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	0	9	0	0	56	0	14	26	0	29	41	41
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	3.0	2.0	2.0
Walk [s]	0	0	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	0	0	0	25	0	0	17	0	0	32	32
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		No			No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	3	50	50	7	49	49	2	43	97
g / C, Green / Cycle	0.03	0.42	0.42	0.06	0.41	0.41	0.01	0.36	0.81
(v / s)_i Volume / Saturation Flow Rate	0.02	0.39	0.40	0.05	0.13	0.13	0.01	0.09	0.07
s, saturation flow rate [veh/h]	1734	1810	1780	1810	1900	1876	1810	3618	1615
c, Capacity [veh/h]	50	753	741	108	772	763	28	1309	1310
d1, Uniform Delay [s]	57.76	33.51	33.87	55.64	24.37	24.38	58.57	26.81	2.29
k, delay calibration	0.04	0.39	0.41	0.11	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.47	17.29	20.18	11.64	1.13	1.14	10.41	0.44	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.94	0.95	0.78	0.33	0.33	0.43	0.24	0.08
d, Delay for Lane Group [s/veh]	64.23	50.79	54.05	67.28	25.50	25.53	68.98	27.25	2.31
Lane Group LOS	E	D	D	E	C	C	E	C	A
Critical Lane Group	Yes	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.15	22.50	23.24	2.83	4.95	4.91	0.43	3.19	0.32
50th-Percentile Queue Length [ft/ln]	28.78	562.52	581.02	70.69	123.84	122.64	10.84	79.71	7.95
95th-Percentile Queue Length [veh/ln]	2.07	30.28	31.15	5.09	8.60	8.54	0.78	5.74	0.57
95th-Percentile Queue Length [ft/ln]	51.81	757.01	778.67	127.25	215.09	213.45	19.51	143.47	14.32

Movement, Approach, & Intersection Results

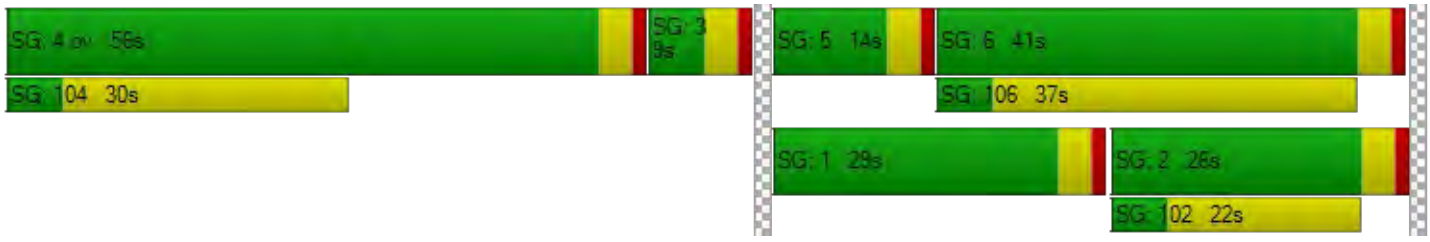
d_M, Delay for Movement [s/veh]	64.23	64.23	64.23	52.29	54.05	54.05	67.28	25.51	25.53	68.98	27.25	2.31
Movement LOS	E	E	E	D	D	D	E	C	C	E	C	A
d_A, Approach Delay [s/veh]	64.23			52.42			31.56			22.36		
Approach LOS	E			D			C			C		
d_I, Intersection Delay [s/veh]	42.30											
Intersection LOS	D											
Intersection V/C	0.556											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.763	2.624	2.622	0.000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	83	867	367	617
d_b, Bicycle Delay [s]	55.10	19.27	40.02	28.70
l_b,int, Bicycle LOS Score for Intersection	1.621	3.904	2.046	1.931
Bicycle LOS	A	D	B	A

Sequence

Ring 1	4	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Valley Way/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	41.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.626

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	3	1	0	1	1	0	1
Entry Pocket Length [ft]	145.00	100.00	510.00	170.00	100.00	150.00	410.00	100.00	180.00	260.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	385	82	424	335	208	597	1013	31	52	192	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	21	0	0	3	0	0	42
Total Hourly Volume [veh/h]	24	385	74	424	335	187	597	1013	28	52	192	380
Peak Hour Factor	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340	0.9340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	103	20	113	90	50	160	271	7	14	51	102
Total Analysis Volume [veh/h]	26	412	79	454	359	200	639	1085	30	56	206	407
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	78.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	4	6	0	4	6	6	4	6	0	4	6	6
Maximum Green [s]	25	30	0	35	30	30	35	45	0	25	45	45
Amber [s]	3.6	4.8	0.0	3.6	4.8	4.8	3.6	4.8	0.0	3.6	4.8	4.8
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	18	34	0	34	50	50	37	62	0	10	35	35
Vehicle Extension [s]	2.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	2.0	3.0	3.0
Walk [s]	0	5	0	5	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	23	39	39	0	34	0	0	24	24
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	3.5	0.0	2.0	3.5	3.5
I2, Clearance Lost Time [s]	2.6	3.8	0.0	2.6	3.8	3.8	2.6	3.8	0.0	2.6	3.8	3.8
Minimum Recall	No	No		No	No	No	No	Yes		No	Yes	Yes
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.80	5.80	4.60	5.80	4.60	4.60	7.30	7.30	4.60	7.30	6.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.80	3.80	2.60	3.80	0.00	2.60	3.80	3.80	2.60	3.80	0.00
g_i, Effective Green Time [s]	3	19	19	25	41	75	28	69	69	5	46	77
g / C, Green / Cycle	0.02	0.13	0.13	0.18	0.29	0.53	0.20	0.49	0.49	0.04	0.33	0.55
(v / s)_i Volume / Saturation Flow Rate	0.01	0.11	0.05	0.13	0.10	0.07	0.18	0.30	0.02	0.03	0.06	0.25
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	2859	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	34	480	214	618	1049	1524	709	1785	797	70	1195	902
d1, Uniform Delay [s]	68.37	59.41	55.35	54.60	39.19	16.41	54.51	25.66	18.30	66.77	33.30	18.26
k, delay calibration	0.04	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.32	4.55	1.05	1.72	0.19	0.04	4.53	1.55	0.09	7.73	0.31	1.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.86	0.37	0.73	0.34	0.13	0.90	0.61	0.04	0.80	0.17	0.45
d, Delay for Lane Group [s/veh]	80.69	63.96	56.40	56.31	39.38	16.45	59.04	27.20	18.39	74.50	33.61	19.90
Lane Group LOS	F	E	E	E	D	B	E	C	B	E	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.03	7.32	2.57	7.58	4.82	1.58	11.18	12.87	0.51	2.12	2.53	7.94
50th-Percentile Queue Length [ft/ln]	25.73	182.89	64.20	189.46	120.59	39.47	279.41	321.65	12.80	52.94	63.23	198.45
95th-Percentile Queue Length [veh/ln]	1.85	11.75	4.62	12.09	8.43	2.84	16.66	18.75	0.92	3.81	4.55	12.56
95th-Percentile Queue Length [ft/ln]	46.32	293.78	115.57	302.33	210.64	71.05	416.48	468.71	23.04	95.29	113.82	313.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	80.69	63.96	56.40	56.31	39.38	16.45	59.04	27.20	18.39	74.50	33.61	19.90
Movement LOS	F	E	E	E	D	B	E	C	B	E	C	B
d_A, Approach Delay [s/veh]	63.64			42.44			38.65			28.69		
Approach LOS	E			D			D			C		
d_I, Intersection Delay [s/veh]	41.21											
Intersection LOS	D											
Intersection V/C	0.626											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	0.00	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersectio	2.724	0.000	3.082	3.110
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	403	631	803	417
d_b, Bicycle Delay [s]	44.64	32.78	25.08	43.85
l_b,int, Bicycle LOS Score for Intersection	1.993	2.413	3.009	2.146
Bicycle LOS	A	B	C	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Jurupa Rd/Mission Blvd

Control Type:	Two-way stop	Delay (sec / veh):	275.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	280.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	14	245	1479	47	120	635
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	245	1479	47	120	635
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	64	385	12	31	165
Total Analysis Volume [veh/h]	15	255	1539	49	125	661
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.48	0.73	0.02	0.00	0.30	0.01
d_M, Delay for Movement [s/veh]	274.99	169.61	0.00	0.00	17.20	0.00
Movement LOS	F	F	A	A	C	A
95th-Percentile Queue Length [veh/ln]	13.48	13.48	0.00	0.00	1.23	0.00
95th-Percentile Queue Length [ft/ln]	337.11	337.11	0.00	0.00	30.85	0.00
d_A, Approach Delay [s/veh]	175.46		0.00		2.74	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	18.73					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 12: Pacific Ave/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	130.00	100.00	130.00	130.00	100.00	115.00	275.00	100.00	50.00	265.00	100.00	230.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	91	36	66	29	27	77	136	1234	161	170	583	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	7	0	0	8	0	0	16	0	0	3
Total Hourly Volume [veh/h]	91	36	59	29	27	69	136	1234	145	170	583	24
Peak Hour Factor	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210	0.9210
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	10	16	8	7	19	37	335	39	46	158	7
Total Analysis Volume [veh/h]	99	39	64	31	29	75	148	1340	157	185	633	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	4	6	0	4	5	0
Maximum Green [s]	0	30	0	0	30	0	25	45	0	25	45	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.5	0.0	4.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	36	0	0	36	0	17	29	0	15	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	2.5	3.5	0.0	2.5	3.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	11	11	11	11	11	11	8	44	44	10	45	45
g / C, Green / Cycle	0.14	0.14	0.14	0.14	0.14	0.14	0.10	0.55	0.55	0.12	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.08	0.02	0.04	0.02	0.02	0.05	0.08	0.37	0.10	0.10	0.17	0.02
s, saturation flow rate [veh/h]	1311	1900	1615	1312	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	223	272	232	217	272	232	185	1975	882	223	2050	915
d1, Uniform Delay [s]	34.92	29.97	30.56	33.41	29.81	30.78	35.11	13.09	9.13	34.26	9.10	7.63
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.38	0.24	0.64	0.30	0.17	0.80	7.71	1.90	0.44	7.77	0.39	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.14	0.28	0.14	0.11	0.32	0.80	0.68	0.18	0.83	0.31	0.03
d, Delay for Lane Group [s/veh]	36.30	30.20	31.20	33.71	29.98	31.58	42.82	14.99	9.57	42.03	9.49	7.69
Lane Group LOS	D	C	C	C	C	C	D	B	A	D	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.91	0.66	1.12	0.56	0.49	1.32	3.07	7.71	1.28	3.81	2.53	0.18
50th-Percentile Queue Length [ft/ln]	47.85	16.52	27.93	14.08	12.21	33.04	76.85	192.78	32.08	95.22	63.16	4.52
95th-Percentile Queue Length [veh/ln]	3.45	1.19	2.01	1.01	0.88	2.38	5.53	12.27	2.31	6.86	4.55	0.33
95th-Percentile Queue Length [ft/ln]	86.13	29.74	50.27	25.35	21.97	59.47	138.34	306.63	57.75	171.39	113.69	8.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.30	30.20	31.20	33.71	29.98	31.58	42.82	14.99	9.57	42.03	9.49	7.69
Movement LOS	D	C	C	C	C	C	D	B	A	D	A	A
d_A, Approach Delay [s/veh]	33.51			31.73			16.98			16.57		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.74											
Intersection LOS	B											
Intersection V/C	0.548											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.76	29.76	29.76	29.76
l_p,int, Pedestrian LOS Score for Intersectio	2.280	2.223	3.146	2.991
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	775	775	588	538
d_b, Bicycle Delay [s]	15.01	15.01	19.95	21.39
l_b,int, Bicycle LOS Score for Intersection	1.904	1.796	2.930	2.258
Bicycle LOS	A	A	C	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Cedar Ave/I-10 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	230.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	485.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	221	1349	0	0	1185	594	0	0	0	285	0	448
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	59	0	0	0	0	0	45
Total Hourly Volume [veh/h]	221	1349	0	0	1185	535	0	0	0	285	0	403
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	355	0	0	312	141	0	0	0	75	0	106
Total Analysis Volume [veh/h]	233	1420	0	0	1247	563	0	0	0	300	0	424
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	14	41	0	0	27	0	0	0	0	0	19	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	R
C, Cycle Length [s]	60	60	60	60		60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	9	37	24	24		15	15
g / C, Green / Cycle	0.16	0.62	0.40	0.40		0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.13	0.39	0.24	0.35		0.21	0.22
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1767	1615
c, Capacity [veh/h]	283	2250	2065	644		432	395
d1, Uniform Delay [s]	24.51	7.06	14.27	16.63		21.72	21.84
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	5.98	1.36	1.32	15.23		5.37	6.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.63	0.60	0.87		0.87	0.88
d, Delay for Lane Group [s/veh]	30.49	8.41	15.59	31.86		27.10	28.49
Lane Group LOS	C	A	B	C		C	C
Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	3.34	3.88	3.90	8.49		5.15	4.96
50th-Percentile Queue Length [ft/ln]	83.50	97.04	97.56	212.19		128.87	123.89
95th-Percentile Queue Length [veh/ln]	6.01	6.99	7.02	13.27		8.88	8.61
95th-Percentile Queue Length [ft/ln]	150.29	174.68	175.61	331.63		221.96	215.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.49	8.41	0.00	0.00	15.59	31.86	0.00	0.00	0.00	27.10	27.10	28.27
Movement LOS	C	A			B	C				C	C	C
d_A, Approach Delay [s/veh]	11.52			20.65			0.00			27.77		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	18.28											
Intersection LOS	B											
Intersection V/C	0.694											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.112	2.276
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1233	767	0	500
d_b, Bicycle Delay [s]	4.41	11.41	30.00	16.88
l_b,int, Bicycle LOS Score for Intersection	2.923	2.588	4.132	2.828
Bicycle LOS	C	B	D	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Cedar Ave/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	600.00	100.00	600.00	100.00	100.00	100.00	380.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1090.00
Speed [mph]	40.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1015	350	367	1102	0	556	6	187	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	35	0	0	0	0	0	19	0	0	0
Total Hourly Volume [veh/h]	0	1015	315	367	1102	0	556	6	168	0	0	0
Peak Hour Factor	1.0000	0.9540	0.9540	0.9540	0.9540	1.0000	0.9540	0.9540	0.9540	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	266	83	96	289	0	146	2	44	0	0	0
Total Analysis Volume [veh/h]	0	1064	330	385	1155	0	583	6	176	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	16	0	23	39	0	0	21	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	
C, Cycle Length [s]	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	18	18	15	37	15	15	
g / C, Green / Cycle	0.30	0.30	0.25	0.61	0.25	0.25	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.20	0.21	0.32	0.22	0.22	
s, saturation flow rate [veh/h]	5176	1615	1810	3618	1810	1714	
c, Capacity [veh/h]	1552	484	445	2216	460	436	
d1, Uniform Delay [s]	18.51	18.48	21.66	6.61	21.27	21.37	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.48	7.55	5.15	0.88	4.42	5.15	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.69	0.68	0.86	0.52	0.85	0.86	
d, Delay for Lane Group [s/veh]	20.99	26.03	26.81	7.50	25.69	26.52	
Lane Group LOS	C	C	C	A	C	C	
Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.07	4.46	5.16	2.91	5.20	5.11	
50th-Percentile Queue Length [ft/ln]	101.67	111.55	128.93	72.78	129.90	127.65	
95th-Percentile Queue Length [veh/ln]	7.32	7.93	8.88	5.24	8.93	8.81	
95th-Percentile Queue Length [ft/ln]	183.00	198.16	222.04	131.01	223.36	220.29	

Movement, Approach, & Intersection Results

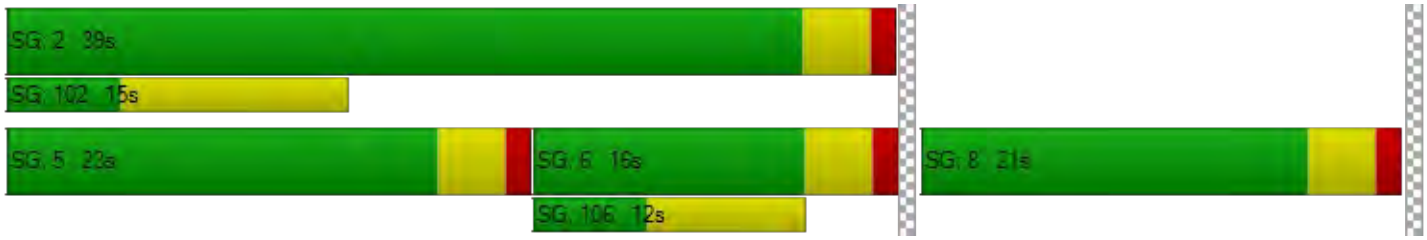
d_M, Delay for Movement [s/veh]	0.00	20.99	26.03	26.81	7.50	0.00	25.97	26.52	26.52	0.00	0.00	0.00
Movement LOS		C	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	22.19			12.32			26.10			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	18.89											
Intersection LOS	B											
Intersection V/C	0.637											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.245	2.064
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	1167	567	0
d_b, Bicycle Delay [s]	19.20	5.21	15.41	30.00
l_b,int, Bicycle LOS Score for Intersection	2.346	2.830	2.853	4.132
Bicycle LOS	B	C	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Cedar Ave/Orange St

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.550

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	160.00	100.00	100.00	140.00	100.00	170.00	400.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	814	2	85	955	246	280	22	15	11	7	272
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	25	0	0	2	0	0	27
Total Hourly Volume [veh/h]	10	814	2	85	955	221	280	22	13	11	7	245
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	217	1	23	255	59	75	6	3	3	2	65
Total Analysis Volume [veh/h]	11	868	2	91	1018	236	299	23	14	12	7	261
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	22	0	9	22	0	0	29	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	19	19	27	22	22	25	25	25	25
g / C, Green / Cycle	0.45	0.32	0.32	0.45	0.37	0.37	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.02	0.23	0.23	0.10	0.28	0.15	0.26	0.02	0.01	0.17
s, saturation flow rate [veh/h]	599	1900	1898	902	3618	1615	1129	1781	1393	1621
c, Capacity [veh/h]	334	604	603	454	1328	593	423	742	637	676
d1, Uniform Delay [s]	11.16	18.11	18.11	11.02	16.72	14.07	21.86	10.42	11.97	12.23
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	7.28	7.29	0.99	4.27	1.99	2.19	0.03	0.01	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.72	0.72	0.20	0.77	0.40	0.71	0.05	0.02	0.40
d, Delay for Lane Group [s/veh]	11.20	25.39	25.40	12.01	20.99	16.06	24.04	10.45	11.98	12.61
Lane Group LOS	B	C	C	B	C	B	C	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.07	5.75	5.75	0.68	5.88	2.32	4.04	0.26	0.09	2.27
50th-Percentile Queue Length [ft/ln]	1.70	143.82	143.73	17.09	147.03	57.89	101.11	6.60	2.35	56.66
95th-Percentile Queue Length [veh/ln]	0.12	9.69	9.68	1.23	9.86	4.17	7.28	0.48	0.17	4.08
95th-Percentile Queue Length [ft/ln]	3.07	242.15	242.03	30.76	246.46	104.20	182.01	11.88	4.23	101.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.20	25.40	25.40	12.01	20.99	16.06	24.04	10.45	10.45	11.98	12.61	12.61
Movement LOS	B	C	C	B	C	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	25.22			19.52			22.55			12.58		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	20.96											
Intersection LOS	C											
Intersection V/C	0.550											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.799	0.000	2.131	2.142
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	600	833	833
d_b, Bicycle Delay [s]	14.70	14.70	10.21	10.21
l_b,int, Bicycle LOS Score for Intersection	2.286	2.690	2.117	2.066
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Cedar Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	27.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	115.00	100.00	100.00	250.00	100.00	80.00	190.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	96	541	25	116	773	89	189	355	135	19	261	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	9	0	0	14	0	0	13
Total Hourly Volume [veh/h]	96	541	22	116	773	80	189	355	121	19	261	112
Peak Hour Factor	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	139	6	30	198	20	48	91	31	5	67	29
Total Analysis Volume [veh/h]	98	554	23	119	792	82	194	364	124	19	267	115
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	30	0	15	33	0	15	28	0	17	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	43	43	7	45	45	11	21	21	2	12	12
g / C, Green / Cycle	0.07	0.48	0.48	0.08	0.50	0.50	0.12	0.24	0.24	0.02	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.15	0.07	0.23	0.23	0.11	0.10	0.08	0.01	0.10	0.11
s, saturation flow rate [veh/h]	1810	1900	1873	1810	1900	1838	1810	3618	1615	1810	1900	1712
c, Capacity [veh/h]	126	913	900	151	940	909	221	852	380	42	259	233
d1, Uniform Delay [s]	41.20	14.33	14.34	40.47	15.01	15.01	38.84	29.25	28.50	43.42	37.48	37.64
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.99	0.92	0.93	8.81	1.71	1.76	10.55	0.34	0.49	7.67	4.67	5.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.32	0.32	0.79	0.47	0.47	0.88	0.43	0.33	0.46	0.76	0.79
d, Delay for Lane Group [s/veh]	51.19	15.25	15.27	49.28	16.71	16.77	49.38	29.59	28.99	51.09	42.15	43.59
Lane Group LOS	D	B	B	D	B	B	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.41	3.53	3.49	2.86	5.83	5.65	4.59	3.14	2.11	0.49	4.27	4.07
50th-Percentile Queue Length [ft/ln]	60.34	88.30	87.29	71.59	145.66	141.28	114.80	78.48	52.73	12.13	106.66	101.68
95th-Percentile Queue Length [veh/ln]	4.34	6.36	6.28	5.15	9.79	9.55	8.11	5.65	3.80	0.87	7.65	7.32
95th-Percentile Queue Length [ft/ln]	108.61	158.94	157.12	128.86	244.63	238.75	202.67	141.27	94.91	21.83	191.35	183.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.19	15.26	15.27	49.28	16.74	16.77	49.38	29.59	28.99	51.09	42.53	43.59
Movement LOS	D	B	B	D	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	20.48			20.64			35.11			43.24		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.48											
Intersection LOS	C											
Intersection V/C	0.503											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.729	2.874	2.883	2.723
Crosswalk LOS	B	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	644	533	578
d_b, Bicycle Delay [s]	22.76	20.67	24.20	22.76
l_b,int, Bicycle LOS Score for Intersection	2.119	2.386	2.134	1.901
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Cedar Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	290.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	148	631	53	70	765	48	62	135	122	22	132	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	5	0	0	12	0	0	4
Total Hourly Volume [veh/h]	148	631	48	70	765	43	62	135	110	22	132	39
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	170	13	19	207	12	17	36	30	6	36	11
Total Analysis Volume [veh/h]	160	681	52	76	826	46	67	146	119	24	143	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	18	0	16	16	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	31	31	4	28	28	13	13
g / C, Green / Cycle	0.11	0.52	0.52	0.06	0.46	0.46	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.09	0.20	0.20	0.04	0.23	0.23	0.19	0.12
s, saturation flow rate [veh/h]	1810	1900	1853	1810	1900	1865	1729	1801
c, Capacity [veh/h]	208	978	953	112	878	861	458	469
d1, Uniform Delay [s]	25.79	8.79	8.79	27.55	11.31	11.31	22.20	20.42
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.96	1.12	1.15	6.93	2.04	2.08	2.19	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.38	0.38	0.68	0.50	0.50	0.72	0.45
d, Delay for Lane Group [s/veh]	31.75	9.91	9.94	34.48	13.35	13.39	24.39	21.08
Lane Group LOS	C	A	A	C	B	B	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.31	2.38	2.33	1.17	3.58	3.53	4.19	2.35
50th-Percentile Queue Length [ft/ln]	57.73	59.49	58.22	29.37	89.58	88.15	104.66	58.85
95th-Percentile Queue Length [veh/ln]	4.16	4.28	4.19	2.11	6.45	6.35	7.54	4.24
95th-Percentile Queue Length [ft/ln]	103.91	107.08	104.79	52.87	161.24	158.68	188.39	105.93

Movement, Approach, & Intersection Results

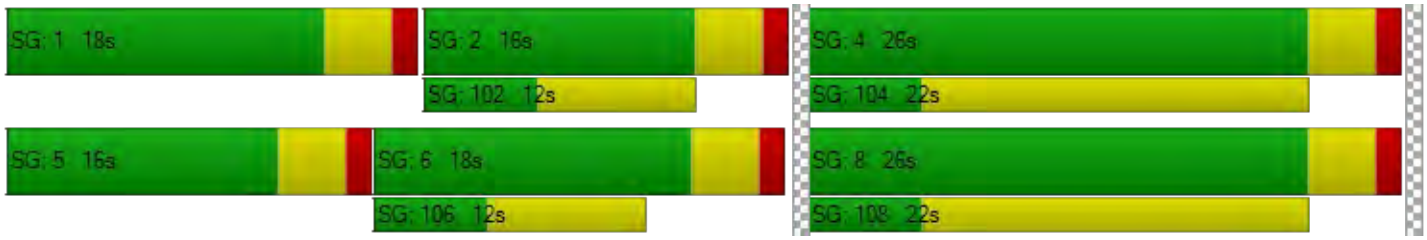
d_M, Delay for Movement [s/veh]	31.75	9.92	9.94	34.48	13.37	13.39	24.39	24.39	24.39	21.08	21.08	21.08
Movement LOS	C	A	A	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.83			15.06			24.39			21.08		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.43											
Intersection LOS	B											
Intersection V/C	0.512											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.871	2.894	2.166	2.021
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	467	400	733	733
d_b, Bicycle Delay [s]	17.63	19.20	12.03	12.03
l_b,int, Bicycle LOS Score for Intersection	2.300	2.346	2.127	1.911
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Cedar Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.444

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	190.00	100.00	100.00	345.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	180.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	78	736	76	105	800	45	51	198	72	45	64	69
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	5	0	0	7	0	0	7
Total Hourly Volume [veh/h]	78	736	68	105	800	40	51	198	65	45	64	62
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	194	18	28	211	11	13	52	17	12	17	16
Total Analysis Volume [veh/h]	82	775	72	111	842	42	54	208	68	47	67	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	19	0	10	19	0	0	46	0	0	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	43	43	6	45	45	14	14	14	14
g / C, Green / Cycle	0.06	0.57	0.57	0.08	0.59	0.59	0.19	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.05	0.23	0.23	0.06	0.23	0.23	0.16	0.04	0.11	0.04
s, saturation flow rate [veh/h]	1810	1900	1844	1810	1900	1868	1676	1615	1015	1615
c, Capacity [veh/h]	108	1091	1059	142	1127	1108	372	303	258	303
d1, Uniform Delay [s]	34.73	8.78	8.78	33.93	8.12	8.12	29.39	25.85	27.88	25.80
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.39	1.07	1.10	9.04	1.04	1.06	2.45	0.37	1.19	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.39	0.39	0.78	0.40	0.40	0.70	0.22	0.44	0.21
d, Delay for Lane Group [s/veh]	45.12	9.85	9.88	42.97	9.16	9.17	31.84	26.23	29.07	26.16
Lane Group LOS	D	A	A	D	A	A	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.69	3.27	3.18	2.21	3.18	3.13	4.49	1.00	1.91	0.95
50th-Percentile Queue Length [ft/ln]	42.23	81.79	79.62	55.13	79.55	78.37	112.15	24.90	47.87	23.75
95th-Percentile Queue Length [veh/ln]	3.04	5.89	5.73	3.97	5.73	5.64	7.96	1.79	3.45	1.71
95th-Percentile Queue Length [ft/ln]	76.01	147.22	143.31	99.23	143.19	141.06	198.99	44.82	86.16	42.74

Movement, Approach, & Intersection Results

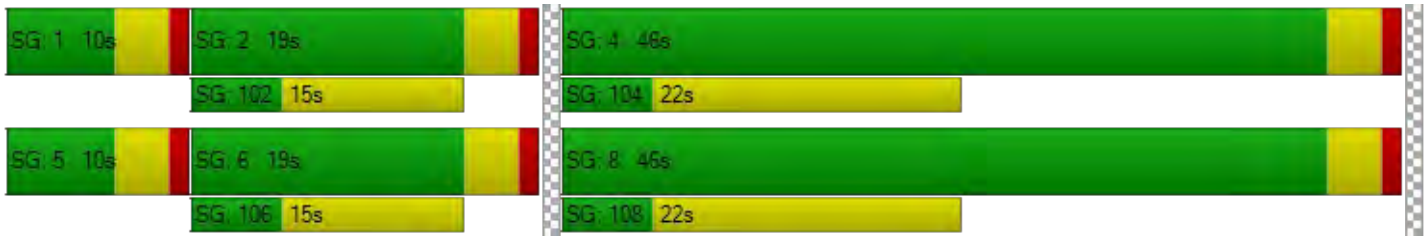
d_M, Delay for Movement [s/veh]	45.12	9.87	9.88	42.97	9.17	9.17	31.84	31.84	26.23	29.07	29.07	26.16
Movement LOS	D	A	A	D	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.98			12.94			30.68			28.01		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.47											
Intersection LOS	B											
Intersection V/C	0.444											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.927	2.932	2.174	2.196
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1120	1120
d_b, Bicycle Delay [s]	24.00	24.00	7.26	7.26
l_b,int, Bicycle LOS Score for Intersection	2.333	2.385	2.116	1.867
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Cedar Ave/7th St

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.500

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	295.00	100.00	100.00	190.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	125	776	12	45	796	33	30	29	293	40	12	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	3	0	0	29	0	0	3
Total Hourly Volume [veh/h]	125	776	11	45	796	30	30	29	264	40	12	23
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	200	3	12	205	8	8	7	68	10	3	6
Total Analysis Volume [veh/h]	129	798	11	46	819	31	31	30	272	41	12	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	17	0	17	16	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	31	31	3	28	28	14	14
g / C, Green / Cycle	0.09	0.52	0.52	0.05	0.47	0.47	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.07	0.21	0.21	0.03	0.23	0.23	0.20	0.07
s, saturation flow rate [veh/h]	1810	1900	1891	1810	1900	1876	1633	1077
c, Capacity [veh/h]	171	979	974	86	890	878	453	348
d1, Uniform Delay [s]	26.49	8.96	8.96	27.94	10.95	10.95	21.86	18.24
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.62	1.29	1.30	5.15	1.86	1.88	2.33	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.41	0.41	0.54	0.48	0.48	0.73	0.22
d, Delay for Lane Group [s/veh]	33.11	10.25	10.26	33.09	12.81	12.83	24.19	18.56
Lane Group LOS	C	B	B	C	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.89	2.55	2.54	0.69	3.25	3.21	4.49	0.84
50th-Percentile Queue Length [ft/ln]	47.14	63.70	63.43	17.35	81.24	80.36	112.29	20.99
95th-Percentile Queue Length [veh/ln]	3.39	4.59	4.57	1.25	5.85	5.79	7.97	1.51
95th-Percentile Queue Length [ft/ln]	84.85	114.65	114.18	31.23	146.23	144.64	199.18	37.78

Movement, Approach, & Intersection Results

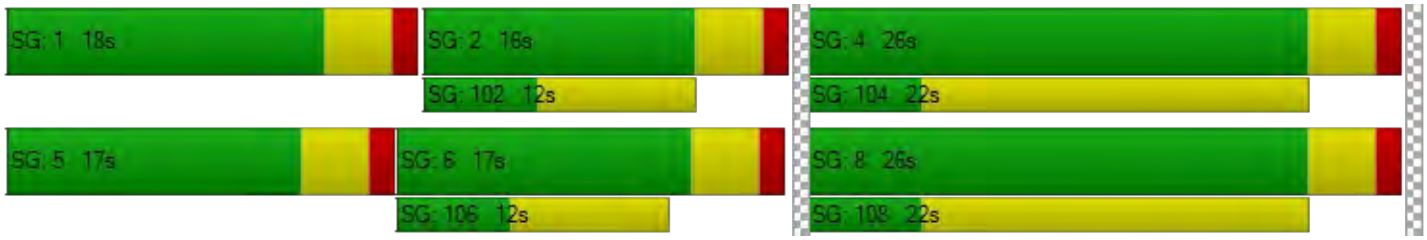
d_M, Delay for Movement [s/veh]	33.11	10.26	10.26	33.09	12.82	12.83	24.19	24.19	24.19	18.56	18.56	18.56
Movement LOS	C	B	B	C	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	13.40			13.86			24.19			18.56		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	15.36											
Intersection LOS	B											
Intersection V/C	0.500											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	3.023	2.899	1.955	1.768
Crosswalk LOS	C	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	433	400	733	733
d_b, Bicycle Delay [s]	18.41	19.20	12.03	12.03
l_b,int, Bicycle LOS Score for Intersection	2.334	2.301	2.157	1.692
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Rubidoux Blvd/Market St

Control Type:	Signalized	Delay (sec / veh):	82.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.904

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	245.00	100.00	330.00	270.00	100.00	370.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	25	354	433	469	604	52	47	111	29	276	60	535
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	43	0	0	0	0	0	0	0	0	54
Total Hourly Volume [veh/h]	25	354	390	469	604	52	47	111	29	276	60	481
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	92	101	121	156	13	12	29	7	71	16	124
Total Analysis Volume [veh/h]	26	366	403	485	625	54	49	115	30	285	62	497
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	25	45	0	30	45	0	0	25	0	0	25	0
Amber [s]	4.0	5.0	0.0	4.0	5.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	1.0	2.0	0.0	1.0	1.0	0.0	0.0	2.0	0.0	0.0	1.0	0.0
Split [s]	15	34	0	33	52	0	0	16	0	0	37	0
Vehicle Extension [s]	1.5	2.5	0.0	1.5	2.5	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Walk [s]	0	0	0	0	7	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	5.0	0.0	3.0	4.0	0.0	0.0	4.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	7.00	7.00	5.00	6.00	6.00	6.00	6.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	5.00	5.00	3.00	4.00	4.00	4.00	4.00	3.00	3.00
g_i, Effective Green Time [s]	6	27	27	28	50	50	10	10	32	32
g / C, Green / Cycle	0.05	0.23	0.23	0.23	0.42	0.42	0.08	0.08	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.25	0.27	0.17	0.03	0.03	0.08	0.19	0.31
s, saturation flow rate [veh/h]	1810	3618	1615	1810	3618	1615	1810	1833	1825	1615
c, Capacity [veh/h]	89	814	363	422	1510	674	151	153	487	431
d1, Uniform Delay [s]	55.01	40.09	46.50	46.00	24.63	21.08	51.82	54.75	39.84	44.00
k, delay calibration	0.04	0.50	0.50	0.48	0.50	0.50	0.04	0.04	0.18	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.66	1.79	79.98	90.20	0.84	0.23	0.46	11.67	3.22	92.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.45	1.11	1.15	0.41	0.08	0.32	0.95	0.71	1.15
d, Delay for Lane Group [s/veh]	55.67	41.89	126.48	136.20	25.47	21.31	52.28	66.41	43.06	136.72
Lane Group LOS	E	D	F	F	C	C	D	E	D	F
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.75	4.69	18.41	22.56	6.07	0.92	1.39	4.78	9.38	23.35
50th-Percentile Queue Length [ft/ln]	18.82	117.26	460.18	564.10	151.86	22.90	34.75	119.52	234.54	583.85
95th-Percentile Queue Length [veh/ln]	1.35	8.24	26.93	32.78	10.12	1.65	2.50	8.37	14.40	33.98
95th-Percentile Queue Length [ft/ln]	33.87	206.05	673.33	819.51	252.91	41.21	62.55	209.16	360.12	849.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.67	41.89	126.48	136.20	25.47	21.31	52.28	66.41	66.41	43.06	43.06	136.72
Movement LOS	E	D	F	F	C	C	D	E	E	D	D	F
d_A, Approach Delay [s/veh]	85.22			71.41			62.84			98.21		
Approach LOS	F			E			E			F		
d_I, Intersection Delay [s/veh]	82.07											
Intersection LOS	F											
Intersection V/C	0.904											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.254	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	767	167	533
d_b, Bicycle Delay [s]	36.04	22.82	50.42	32.27
l_b,int, Bicycle LOS Score for Intersection	2.251	2.520	1.880	3.041
Bicycle LOS	B	B	A	C

Sequence

Ring 1	1	2	8	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Agua Mansa Rd/Market St

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.666

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	2	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	200.00	85.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	315.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	120	0	316	491	532	0	0	534	174
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	32	0	0	0	0	0	17
Total Hourly Volume [veh/h]	0	0	0	120	0	284	491	532	0	0	534	157
Peak Hour Factor	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	34	0	80	137	149	0	0	149	44
Total Analysis Volume [veh/h]	0	0	0	134	0	318	550	596	0	0	598	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	44	44	0	30	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	1.5	3.0	0.0	1.5	3.0	0.0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.2	0.0	0.0	3.9	0.0	2.2	4.5	0.0	2.2	4.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.20	5.90	5.90	4.20	6.50	6.50	4.20	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.90	3.90	2.20	4.50	4.50	2.20	4.50	4.50
g_i, Effective Green Time [s]	44	43	43	38	60	60	0	22	22
g / C, Green / Cycle	0.37	0.36	0.36	0.32	0.50	0.50	0.00	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.00	0.09	0.20	0.30	0.16	0.00	0.00	0.17	0.11
s, saturation flow rate [veh/h]	1900	1457	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	693	585	581	572	1812	809	2	671	300
d1, Uniform Delay [s]	0.00	26.79	30.60	40.31	17.90	0.00	0.00	47.69	44.68
k, delay calibration	0.50	0.50	0.50	0.38	0.11	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.91	3.67	24.58	0.11	0.00	0.00	4.36	1.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.23	0.55	0.96	0.33	0.00	0.00	0.89	0.59
d, Delay for Lane Group [s/veh]	0.00	27.70	34.27	64.89	18.01	0.00	0.00	52.05	46.51
Lane Group LOS	A	C	C	E	B	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	2.82	7.81	19.10	4.69	0.00	0.00	8.86	4.81
50th-Percentile Queue Length [ft/ln]	0.00	70.48	195.20	477.51	117.16	0.00	0.00	221.38	120.28
95th-Percentile Queue Length [veh/ln]	0.00	5.07	12.39	26.27	8.24	0.00	0.00	13.74	8.41
95th-Percentile Queue Length [ft/ln]	0.00	126.87	309.77	656.70	205.91	0.00	0.00	343.38	210.21

Movement, Approach, & Intersection Results

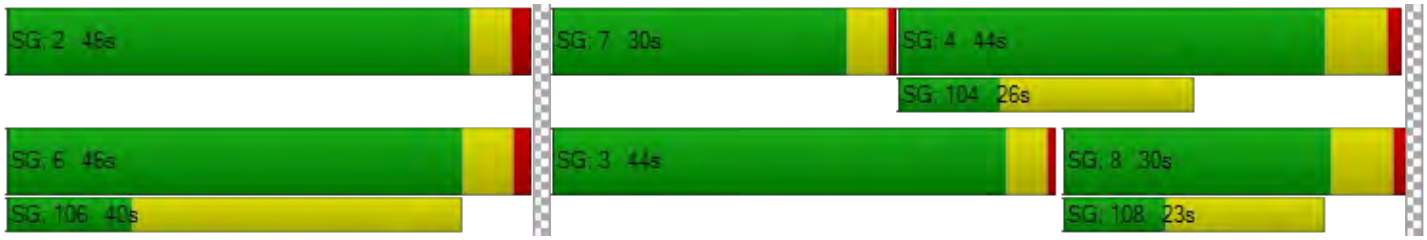
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	27.70	27.70	34.27	64.89	18.01	0.00	0.00	52.05	46.51
Movement LOS	A	A	A	C	C	C	E	B	A	A	D	D
d_A, Approach Delay [s/veh]	0.00			32.32			40.51			50.79		
Approach LOS	A			C			D			D		
d_I, Intersection Delay [s/veh]	42.30											
Intersection LOS	D											
Intersection V/C	0.666											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	13.0	15.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	47.70	45.94	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.727	2.463	2.974	0.000
Crosswalk LOS	A	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	668	625	392
d_b, Bicycle Delay [s]	26.14	26.60	28.36	38.80
l_b,int, Bicycle LOS Score for Intersection	1.560	2.358	2.505	2.212
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	3	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Rubidoux Blvd/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	85.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	61	783	0	0	863	12	13	0	135	448	72	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	1	0	0	14	0	0	9
Total Hourly Volume [veh/h]	61	783	0	0	863	11	13	0	121	448	72	83
Peak Hour Factor	0.9550	0.9550	1.0000	1.0000	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	205	0	0	226	3	3	0	32	117	19	22
Total Analysis Volume [veh/h]	64	820	0	0	904	12	14	0	127	469	75	87
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	4	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	35	0	0	35	0	20	0	0	0	30	0
Maximum Green [s]	0	25	0	0	25	0	35	0	0	0	20	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	4.8	0.0	0.0	0.0	4.8	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	41	0	0	41	0	39	0	0	0	39	0
Vehicle Extension [s]	0.0	3.5	0.0	0.0	3.5	0.0	2.0	0.0	0.0	0.0	3.5	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	3.8	0.0	0.0	0.0	3.8	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.80	5.80	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.40	3.40	3.80	3.80	3.80	3.80
g_i, Effective Green Time [s]	36	36	36	36	33	33	33	33
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.10	0.23	0.24	0.24	0.01	0.08	0.43	0.05
s, saturation flow rate [veh/h]	619	3618	1900	1891	1243	1615	1263	1615
c, Capacity [veh/h]	241	1610	846	842	121	670	608	670
d1, Uniform Delay [s]	25.55	15.93	16.23	16.26	38.48	14.86	24.97	14.47
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.45	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.69	1.15	2.49	2.52	0.16	0.05	16.75	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.51	0.54	0.54	0.12	0.19	0.89	0.13
d, Delay for Lane Group [s/veh]	28.24	17.09	18.72	18.78	38.63	14.91	41.72	14.57
Lane Group LOS	C	B	B	B	D	B	D	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.14	5.03	6.01	6.03	0.27	1.40	12.37	0.93
50th-Percentile Queue Length [ft/ln]	28.55	125.69	150.31	150.66	6.78	35.09	309.36	23.22
95th-Percentile Queue Length [veh/ln]	2.06	8.70	10.03	10.05	0.49	2.53	18.14	1.67
95th-Percentile Queue Length [ft/ln]	51.39	217.62	250.85	251.30	12.21	63.17	453.59	41.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.24	17.09	0.00	0.00	18.75	18.78	38.63	0.00	14.91	41.72	41.72	14.57
Movement LOS	C	B			B	B	D		B	D	D	B
d_A, Approach Delay [s/veh]	17.89			18.75			17.26			37.98		
Approach LOS	B			B			B			D		
d_I, Intersection Delay [s/veh]	23.09											
Intersection LOS	C											
Intersection V/C	0.673											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	35.6
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	29.76	0.00	12.32
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.746	0.000	2.154
Crosswalk LOS	F	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	890	890	830	830
d_b, Bicycle Delay [s]	12.32	12.32	13.69	13.69
l_b,int, Bicycle LOS Score for Intersection	2.289	2.316	1.560	2.616
Bicycle LOS	B	B	A	B

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Rubidoux Blvd/SrR-60 WB On Ramp

Control Type:	Two-way stop	Delay (sec / veh):	19.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.462

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	145.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	203	843	953	494	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	203	843	953	494	0	0
Peak Hour Factor	0.9680	0.9680	0.9680	0.9680	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	218	246	128	0	0
Total Analysis Volume [veh/h]	210	871	985	510	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance						
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.46	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	19.53	0.00	0.00	0.00	0.00	0.00
Movement LOS	C	A	A	A		
95th-Percentile Queue Length [veh/ln]	2.39	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	59.68	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	3.79		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.59					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 24: Rubidoux Blvd/SR-60 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	33.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	145.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	484	235	61	918	0	531	46	379	19	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	24	0	0	0	0	0	38	0	0	0
Total Hourly Volume [veh/h]	0	484	211	61	918	0	531	46	341	19	0	1
Peak Hour Factor	1.0000	0.9730	0.9730	0.9730	0.9730	1.0000	0.9730	0.9730	0.9730	0.9730	1.0000	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	124	54	16	236	0	136	12	88	5	0	0
Total Analysis Volume [veh/h]	0	497	217	63	943	0	546	47	350	20	0	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Permiss	Split
Signal Group	0	2	0	1	6	0	0	4	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	5	0	0
Maximum Green [s]	0	35	0	30	35	0	0	35	0	20	0	0
Amber [s]	0.0	4.4	0.0	4.1	4.4	0.0	0.0	4.8	0.0	4.4	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	43	0	11	54	0	0	45	0	11	0	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	3.0	0.0	2.0	0.0	0.0
Walk [s]	0	4	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	33	0	0	18	0	0	28	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	3.1	3.4	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	5.40	5.40	5.10	5.40	5.80	5.80	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.10	3.40	3.80	3.80	3.40	3.40
g_i, Effective Green Time [s]	43	43	5	53	38	38	2	2
g / C, Green / Cycle	0.39	0.39	0.05	0.48	0.34	0.34	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.03	0.26	0.33	0.22	0.01	0.00
s, saturation flow rate [veh/h]	1900	1716	1810	3618	1816	1615	1810	1615
c, Capacity [veh/h]	744	672	82	1748	624	555	41	36
d1, Uniform Delay [s]	25.07	25.71	51.94	19.87	35.20	30.27	53.15	52.59
k, delay calibration	0.50	0.50	0.04	0.50	0.37	0.15	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.21	2.99	5.57	1.20	21.11	1.66	3.40	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.53	0.77	0.54	0.95	0.63	0.49	0.03
d, Delay for Lane Group [s/veh]	27.28	28.71	57.51	21.07	56.31	31.92	56.55	52.70
Lane Group LOS	C	C	E	C	E	C	E	D
Critical Lane Group	No	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.15	7.43	1.81	8.22	18.58	7.83	0.58	0.03
50th-Percentile Queue Length [ft/ln]	178.86	185.67	45.33	205.59	464.57	195.74	14.49	0.70
95th-Percentile Queue Length [veh/ln]	11.54	11.90	3.26	12.93	25.65	12.42	1.04	0.05
95th-Percentile Queue Length [ft/ln]	288.53	297.40	81.59	323.17	641.31	310.46	26.09	1.26

Movement, Approach, & Intersection Results

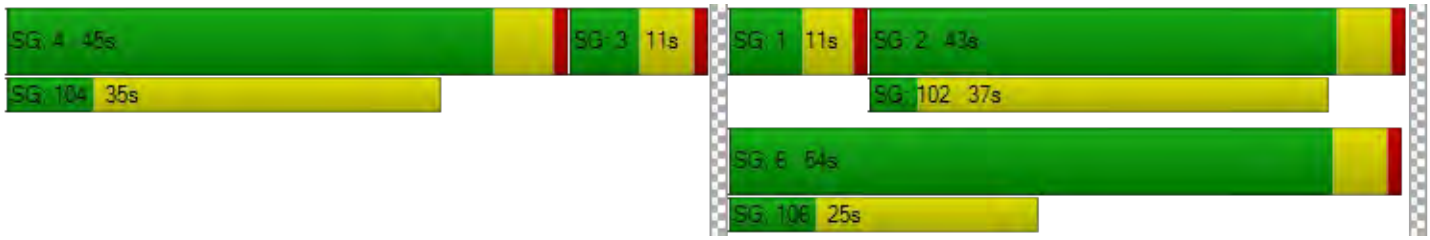
d_M, Delay for Movement [s/veh]	0.00	27.68	28.71	57.51	21.07	0.00	56.31	56.31	31.92	56.55	0.00	52.70
Movement LOS		C	C	E	C		E	E	C	E		D
d_A, Approach Delay [s/veh]	27.99			23.35			47.26			56.36		
Approach LOS	C			C			D			E		
d_I, Intersection Delay [s/veh]	33.24											
Intersection LOS	C											
Intersection V/C	0.598											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	44.55	0.00	44.55	47.29
l_p,int, Pedestrian LOS Score for Intersectio	2.854	0.000	2.376	2.093
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	684	884	713	102
d_b, Bicycle Delay [s]	23.83	17.14	22.78	49.54
l_b,int, Bicycle LOS Score for Intersection	2.168	2.390	3.178	1.560
Bicycle LOS	B	B	C	A

Sequence

Ring 1	4	3	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Market St/Rivera St

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.386

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	165.00	100.00	100.00	155.00	100.00	365.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	729	226	89	1006	1	1	13	53	201	0	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	23	0	0	0	0	0	5	0	0	5
Total Hourly Volume [veh/h]	9	729	203	89	1006	1	1	13	48	201	0	45
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	198	55	24	273	0	0	4	13	55	0	12
Total Analysis Volume [veh/h]	10	792	221	97	1093	1	1	14	52	218	0	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	6	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	5	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	30	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	23	23	12	17	0	0	9	0	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	14	0	10	0	0	10	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	39	39	5	43	43	4	4	7	7	7
g / C, Green / Cycle	0.01	0.56	0.56	0.07	0.61	0.61	0.05	0.05	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.22	0.14	0.05	0.29	0.29	0.01	0.03	0.06	0.06	0.03
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1899	1894	1615	1810	1810	1615
c, Capacity [veh/h]	25	2007	896	126	1160	1159	99	84	172	172	153
d1, Uniform Delay [s]	34.21	8.88	8.04	32.01	7.46	7.46	31.69	32.49	30.51	30.51	29.57
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.52	0.58	0.66	9.48	1.38	1.38	0.70	7.15	3.85	3.85	1.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.39	0.25	0.77	0.47	0.47	0.15	0.62	0.63	0.63	0.32
d, Delay for Lane Group [s/veh]	43.73	9.47	8.69	41.50	8.84	8.84	32.40	39.64	34.36	34.36	30.76
Lane Group LOS	D	A	A	D	A	A	C	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.22	2.74	1.46	1.82	3.51	3.51	0.26	1.01	1.89	1.89	0.79
50th-Percentile Queue Length [ft/ln]	5.61	68.41	36.58	45.52	87.65	87.63	6.44	25.37	47.29	47.29	19.87
95th-Percentile Queue Length [veh/ln]	0.40	4.93	2.63	3.28	6.31	6.31	0.46	1.83	3.41	3.41	1.43
95th-Percentile Queue Length [ft/ln]	10.10	123.13	65.84	81.94	157.77	157.73	11.60	45.66	85.13	85.13	35.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.73	9.47	8.69	41.50	8.84	8.84	32.40	32.40	39.64	34.36	34.36	30.76
Movement LOS	D	A	A	D	A	A	C	C	D	C	C	C
d_A, Approach Delay [s/veh]	9.63			11.50			38.02			33.70		
Approach LOS	A			B			D			C		
d_I, Intersection Delay [s/veh]	13.78											
Intersection LOS	B											
Intersection V/C	0.386											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	26.58	0.00	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.885	0.000	2.280
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	371	143	629
d_b, Bicycle Delay [s]	18.58	23.21	30.18	16.46
l_b,int, Bicycle LOS Score for Intersection	2.423	2.542	1.678	2.008
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Market St/SR-60 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	185.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	249	341	0	0	1071	187	0	0	0	89	0	626
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	19	0	0	0	0	0	63
Total Hourly Volume [veh/h]	249	341	0	0	1071	168	0	0	0	89	0	563
Peak Hour Factor	0.9450	0.9450	1.0000	1.0000	0.9450	0.9450	1.0000	1.0000	1.0000	0.9450	1.0000	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	90	0	0	283	44	0	0	0	24	0	149
Total Analysis Volume [veh/h]	263	361	0	0	1133	178	0	0	0	94	0	596
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	14	23	0	0	9	0	0	0	0	37	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C		L
C, Cycle Length [s]	60	60	60		60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00
g_i, Effective Green Time [s]	10	48	34		4
g / C, Green / Cycle	0.17	0.80	0.56		0.07
(v / s)_i Volume / Saturation Flow Rate	0.15	0.10	0.31		0.05
s, saturation flow rate [veh/h]	1810	3618	3618		1810
c, Capacity [veh/h]	302	2874	2030		130
d1, Uniform Delay [s]	24.38	1.41	8.41		27.25
k, delay calibration	0.11	0.50	0.50		0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00
d2, Incremental Delay [s]	7.75	0.09	1.11		7.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00
PF, progression factor	1.00	1.00	1.00		1.00

Lane Group Results

X, volume / capacity	0.87	0.13	0.56		0.72
d, Delay for Lane Group [s/veh]	32.12	1.50	9.52		34.51
Lane Group LOS	C	A	A		C
Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	3.83	0.04	3.38		1.49
50th-Percentile Queue Length [ft/ln]	95.65	0.90	84.59		37.27
95th-Percentile Queue Length [veh/ln]	6.89	0.06	6.09		2.68
95th-Percentile Queue Length [ft/ln]	172.16	1.62	152.26		67.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.12	1.50	0.00	0.00	9.52	0.00	0.00	0.00	0.00	34.51	0.00	0.00
Movement LOS	C	A			A					C		
d_A, Approach Delay [s/veh]	14.40			8.29			0.00			4.94		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	10.18											
Intersection LOS	B											
Intersection V/C	0.510											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	1.957
Crosswalk LOS	F	F	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	633	167	0	1100
d_b, Bicycle Delay [s]	14.01	25.21	30.00	6.08
l_b,int, Bicycle LOS Score for Intersection	2.074	2.494	4.132	1.560
Bicycle LOS	B	B	D	A

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Market St/SR-60 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	60.00	155.00	100.00	100.00	180.00	100.00	410.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	514	59	393	592	0	134	0	856	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	0	0	0	86	0	0	0
Total Hourly Volume [veh/h]	0	514	53	393	592	0	134	0	770	0	0	0
Peak Hour Factor	1.0000	0.9550	0.9550	0.9550	0.9550	1.0000	0.9550	1.0000	0.9550	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	135	14	103	155	0	35	0	202	0	0	0
Total Analysis Volume [veh/h]	0	538	55	412	620	0	140	0	806	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	12	0	25	37	0	23	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R	
C, Cycle Length [s]	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	14	16	33	19	19	
g / C, Green / Cycle	0.23	0.26	0.56	0.31	0.31	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.23	0.17	0.08	0.28	
s, saturation flow rate [veh/h]	3618	1810	3618	1810	2859	
c, Capacity [veh/h]	825	474	2015	561	886	
d1, Uniform Delay [s]	21.00	21.15	7.11	15.49	19.90	
k, delay calibration	0.50	0.11	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.98	5.00	0.40	0.23	4.05	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.65	0.87	0.31	0.25	0.91	
d, Delay for Lane Group [s/veh]	24.98	26.16	7.51	15.72	23.95	
Lane Group LOS	C	C	A	B	C	
Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.39	5.33	1.54	1.31	5.21	
50th-Percentile Queue Length [ft/ln]	84.74	133.17	38.49	32.74	130.22	
95th-Percentile Queue Length [veh/ln]	6.10	9.11	2.77	2.36	8.95	
95th-Percentile Queue Length [ft/ln]	152.53	227.80	69.28	58.94	223.80	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.98	0.00	26.16	7.51	0.00	15.72	0.00	23.95	0.00	0.00	0.00
Movement LOS		C		C	A		B		C			
d_A, Approach Delay [s/veh]	22.74			14.95			22.73			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	19.54											
Intersection LOS	B											
Intersection V/C	0.658											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	1.806
Crosswalk LOS	F	F	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	267	1100	633	0
d_b, Bicycle Delay [s]	22.53	6.08	14.01	30.00
l_b,int, Bicycle LOS Score for Intersection	2.003	2.411	1.560	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Sierra Ave/20th St

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.083

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	9	0	0	17	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	56	0	0	33
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	0	56	17	0	33
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	15	4	0	9
Total Analysis Volume [veh/h]	9	0	59	18	0	35
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	807	709	786	764	897
Degree of Utilization, x	0.01	0.08	0.02	0.00	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.03	0.27	0.07	0.00	0.12
95th-Percentile Queue Length [ft]	0.85	6.79	1.76	0.00	3.04
Approach Delay [s/veh]	7.51	8.04		6.88	
Approach LOS	A	A		A	
Intersection Delay [s/veh]	7.67				
Intersection LOS	A				

Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Existing PM.pdf

Scenario 2 Existing PM
2/15/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound		Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Right	Left	Right	
1	Sierra Ave/I-10 Ramps	591	1241	718	519	918	749	902	437	427	589	7091

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Sierra Ave/Slover Ave	164	1274	177	687	973	148	346	687	89	219	385	894	6043

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Sierra Ave/Santa Ana Ave	190	1384	84	114	988	114	197	181	123	80	130	95	3680

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Sierra Ave/Jurupa Ave	265	924	103	90	528	234	489	243	333	134	238	83	3664

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Armstrong Rd/Sierra Ave	1181	737	38	8	185	40	171	59	700	54	45	44	3262

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
6	Armstrong/30th St	1904	56	32	917	22	27	2958

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
7	Valley Way/SR-60 WB Off Ramp	30	1155	809	4	230	85	294	60	572	3239

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
8	Valley Way/SR-60 WB On Ramp	168	1202	981	198	2549

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR-60 EB Ramps/Mission Blvd	20	1	15	1274	4	108	83	472	20	12	312	115	2436

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
10	Valley Way/Mission Blvd	24	385	82	424	335	208	597	1013	31	52	192	422	3765

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
11	Jurupa Rd/Mission Blvd	14	245	1479	47	120	635	2540

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	Pacific Ave/Mission Blvd	91	36	66	29	27	77	136	1234	161	170	583	27	2637

ID	Intersection Name	Northbound		Southbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Thru	Right	
13	Cedar Ave/I-10 WB Ramp	221	1349	1185	594	285	0	448	4082

ID	Intersection Name	Northbound		Southbound		Eastbound			Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	
14	Cedar Ave/I-10 EB Ramps	1015	350	367	1102	556	6	187	3583

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
15	Cedar Ave/Orange St	10	814	2	85	955	246	280	22	15	11	7	272	2719

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	Cedar Ave/Slover Ave	96	541	25	116	773	89	189	355	135	19	261	125	2724

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Cedar Ave/Santa Ana Ave	148	631	53	70	765	48	62	135	122	22	132	43	2231

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	Cedar Ave/Jurupa Ave	78	736	76	105	800	45	51	198	72	45	64	69	2339

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Cedar Ave/7th St	125	776	12	45	796	33	30	29	293	40	12	26	2217

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	Rubidoux Blvd/Market St	25	354	433	469	604	52	47	111	29	276	60	535	2995

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	Agua Mansa Rd/Market St	0	0	0	120	0	316	491	532	0	0	534	174	2167

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
22	Rubidoux Blvd/SR-60 WB Off Ramp	61	783	863	12	13	135	448	72	92	2479

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
23	Rubidoux Blvd/SrR-60 WB On Ramp	203	843	953	494	2493

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	Left	Right	
24	Rubidoux Blvd/SR-60 EB Ramps	484	235	61	918	531	46	379	19	1	2674

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Market St/Rivera St	9	729	226	89	1006	1	1	13	53	201	0	50	2378

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
26	Market St/SR-60 WB Ramp	249	341	1071	187	89	626	2563

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Thru	Right	Left	Thru	Left	2	
27	Market St/SR-60 EB Ramp	514	59	393	592	134	856	2548

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
28	Sierra Ave/20th St	9	0	56	17	0	33	115

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Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Interim Year AM.pdf

Scenario 13 OY AM
2/15/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Ave/I-10 Ramps	Signalized	HCM 7th Edition	SB Left	0.694	24.1	C
2	Sierra Ave/Slover Ave	Signalized	HCM 7th Edition	WB Left	0.650	35.1	D
3	Sierra Ave/Santa Ana Ave	Signalized	HCM 7th Edition	WB Left	0.481	23.0	C
4	Sierra Ave/Jurupa Ave	Signalized	HCM 7th Edition	NB Left	0.533	34.3	C
5	Armstrong Rd/Sierra Ave	Signalized	HCM 7th Edition	WB Left	0.768	55.7	E
6	Armstrong/30th St	Signalized	HCM 7th Edition	WB Left	0.565	6.7	A
7	Valley Way/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	NB Left	1.088	125.3	F
8	Valley Way/SR-60 WB On Ramp	Signalized	HCM 7th Edition	NB Left	0.721	12.6	B
9	SR-60 EB Ramps/Mission Blvd	Signalized	HCM 7th Edition	WB Left	0.438	30.2	C
10	Valley Way/Mission Blvd	Signalized	HCM 7th Edition	NB Left	0.747	41.0	D
11	Jurupa Rd/Mission Blvd	Two-way stop	HCM 7th Edition	NB Left	0.476	101.3	F
12	Pacific Ave/Mission Blvd	Signalized	HCM 7th Edition	EB Left	0.473	22.0	C
13	Cedar Ave/I-10 WB Ramp	Signalized	HCM 7th Edition	NB Left	0.628	16.6	B
14	Cedar Ave/I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.881	40.5	D
15	Cedar Ave/Orange St	Signalized	HCM 7th Edition	EB Left	0.846	25.0	C
16	Cedar Ave/Slover Ave	Signalized	HCM 7th Edition	EB Left	0.921	64.9	E
17	Cedar Ave/Santa Ana Ave	Signalized	HCM 7th Edition	NB Left	0.774	29.9	C
			HCM 7th				

18	Cedar Ave/Jurupa Ave	Signalized	HCM 7th Edition	EB Left	5.324	304.2	F
19	Cedar Ave/7th St	Signalized	HCM 7th Edition	SB Left	0.587	16.7	B
20	Rubidoux Blvd/Market St	Signalized	HCM 7th Edition	WB Right	0.949	98.3	F
21	Agua Mansa Rd/Market St	Signalized	HCM 7th Edition	EB Left	0.733	41.9	D
22	Rubidoux Blvd/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	WB Left	0.866	33.4	C
23	Rubidoux Blvd/SrR-60 WB On Ramp	Two-way stop	HCM 7th Edition	NB Left	1.248	177.0	F
24	Rubidoux Blvd/SR-60 EB Ramps	Signalized	HCM 7th Edition	EB Left	0.963	95.0	F
25	Market St/Rivera St	Signalized	HCM 7th Edition	EB Right	0.543	16.0	B
26	Market St/SR-60 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.552	9.1	A
27	Market St/SR-60 EB Ramp	Signalized	HCM 7th Edition	EBR2	0.855	45.2	D
28	Sierra Ave/20th St	Signalized	HCM 7th Edition	WB Right	0.147	15.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Ave/I-10 Ramps

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	565.00	100.00	100.00	325.00	100.00	305.00	440.00	100.00	1500.00	1205.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	390.00	0.00	0.00	665.00	0.00	0.00	1215.00	0.00	0.00	1150.00
Speed [mph]	40.00			35.00			65.00			65.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	415	804	418	538	840	747	861	0	448	432	0	558
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	62	32	25	0	89	0	0	0	161	48	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	52	0	0	88	0	0	69	0	0	66
Total Hourly Volume [veh/h]	552	981	466	635	1080	793	1016	0	621	558	0	592
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	258	123	167	284	209	267	0	163	147	0	156
Total Analysis Volume [veh/h]	581	1033	491	668	1137	835	1069	0	654	587	0	623
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna
Signal Group	1	6	0	5	2	0	3	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	0	0	5	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	25	32	0	25	32	0	48	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	5	0	0
Pedestrian Clearance [s]	0	23	0	0	23	0	39	0	0	35	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No		No	No		No			No		
Maximum Recall	No	No		No	No		No			No		
Pedestrian Recall	No	No		No	No		No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	L
C, Cycle Length [s]	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	37	21	38	35	35
g / C, Green / Cycle	0.18	0.35	0.20	0.36	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.17	0.20	0.19	0.22	0.30	0.17
s, saturation flow rate [veh/h]	3514	5176	3514	5176	3514	3514
c, Capacity [veh/h]	651	1805	703	1881	1184	1184
d1, Uniform Delay [s]	41.75	27.82	41.49	27.26	33.17	27.71
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.53	1.33	7.85	1.45	2.86	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.57	0.95	0.60	0.90	0.50
d, Delay for Lane Group [s/veh]	46.28	29.15	49.34	28.71	36.03	28.03
Lane Group LOS	D	C	D	C	D	C
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.52	6.95	9.11	7.75	11.90	5.29
50th-Percentile Queue Length [ft/ln]	188.03	173.78	227.65	193.71	297.43	132.36
95th-Percentile Queue Length [veh/ln]	12.02	11.28	14.05	12.31	17.55	9.07
95th-Percentile Queue Length [ft/ln]	300.47	281.88	351.37	307.84	438.85	226.69

Movement, Approach, & Intersection Results

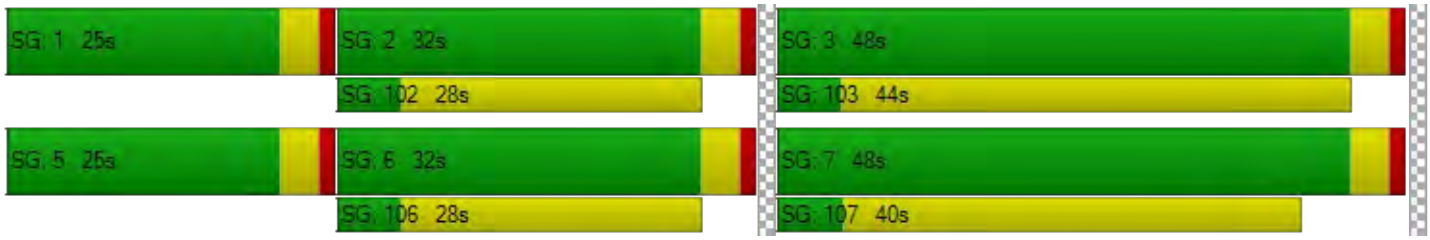
d_M, Delay for Movement [s/veh]	46.28	29.15	0.00	49.34	28.71	0.00	36.03	0.00	0.00	28.03	0.00	0.00
Movement LOS	D	C		D	C		D			C		
d_A, Approach Delay [s/veh]	27.40			25.25			22.79			13.96		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	24.11											
Intersection LOS	C											
Intersection V/C	0.694											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.482	3.420	3.043	2.904
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	533	838	838
d_b, Bicycle Delay [s]	28.23	28.23	17.72	17.72
l_b,int, Bicycle LOS Score for Intersection	2.447	2.552	1.560	1.560
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	35.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	265.00	100.00	675.00	675.00	100.00	100.00	345.00	100.00	320.00	275.00	100.00	465.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	600.00	0.00	0.00	0.00
Speed [mph]	50.00			40.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	1026	108	577	851	284	181	267	56	65	267	444
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	78	6	97	199	3	3	19	2	3	12	38
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	13	0	0	34	0	0	7	0	0	56
Total Hourly Volume [veh/h]	123	1289	120	778	1203	304	217	334	61	80	327	506
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	339	32	205	317	80	57	88	16	21	86	133
Total Analysis Volume [veh/h]	129	1357	126	819	1266	320	228	352	64	84	344	533
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	137.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	40	0	35	63	0	14	40	0	15	41	41
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	31	0	0	27	0	0	31	0	0	31	31
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	7	57	57	31	81	81	10	21	21	5	16	51
g / C, Green / Cycle	0.05	0.44	0.44	0.24	0.62	0.62	0.08	0.16	0.16	0.04	0.12	0.39
(v / s)_i Volume / Saturation Flow Rate	0.04	0.21	0.21	0.23	0.29	0.31	0.06	0.10	0.04	0.02	0.10	0.19
s, saturation flow rate [veh/h]	3514	5176	1796	3514	3618	1715	3514	3618	1615	3514	3618	2859
c, Capacity [veh/h]	181	2260	784	838	2257	1070	270	593	265	133	452	1126
d1, Uniform Delay [s]	60.72	26.20	26.21	49.15	13.02	13.25	59.23	50.34	47.32	61.64	55.01	29.33
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.18	0.75	2.17	10.07	0.71	1.61	7.05	0.95	0.47	4.84	2.68	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.49	0.49	0.98	0.47	0.49	0.84	0.59	0.24	0.63	0.76	0.47
d, Delay for Lane Group [s/veh]	65.90	26.95	28.37	59.22	13.73	14.86	66.27	51.29	47.79	66.48	57.70	29.64
Lane Group LOS	E	C	C	E	B	B	E	D	D	E	E	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.17	7.86	8.51	14.07	7.91	8.21	3.89	5.27	1.81	1.42	5.46	5.98
50th-Percentile Queue Length [ft/ln]	54.24	196.57	212.70	351.84	197.70	205.35	97.34	131.79	45.23	35.54	136.41	149.44
95th-Percentile Queue Length [veh/ln]	3.91	12.46	13.29	20.23	12.52	12.91	7.01	9.04	3.26	2.56	9.29	9.99
95th-Percentile Queue Length [ft/ln]	97.64	311.54	332.29	505.65	313.00	322.86	175.21	225.92	81.42	63.97	232.19	249.68

Movement, Approach, & Intersection Results

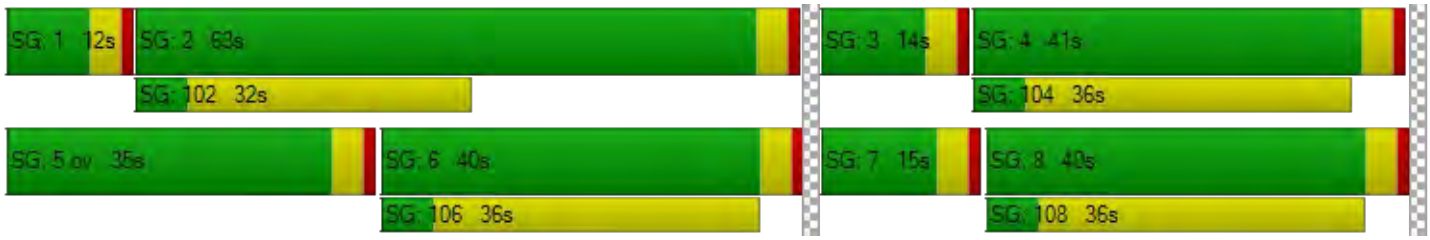
d_M, Delay for Movement [s/veh]	65.90	27.22	28.37	59.22	13.91	14.86	66.27	51.29	47.79	66.48	57.70	29.64
Movement LOS	E	C	C	E	B	B	E	D	D	E	E	C
d_A, Approach Delay [s/veh]	30.40			29.47			56.25			42.91		
Approach LOS	C			C			E			D		
d_I, Intersection Delay [s/veh]	35.10											
Intersection LOS	D											
Intersection V/C	0.650											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.31	56.31	56.31	56.31
l_p,int, Pedestrian LOS Score for Intersectio	3.437	3.583	3.025	3.368
Crosswalk LOS	C	D	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	554	908	554	569
d_b, Bicycle Delay [s]	33.98	19.39	33.98	33.27
l_b,int, Bicycle LOS Score for Intersection	2.230	2.901	2.097	2.399
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	23.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	285.00	100.00	210.00	375.00	100.00	100.00	240.00	100.00	100.00	300.00	100.00	350.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	535.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	170	1000	52	95	675	101	111	70	71	51	104	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	50	0	115	69	19	6	10	0	1	17	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	14	0	0	8	0	0	14
Total Hourly Volume [veh/h]	201	1230	55	227	866	124	137	93	76	61	140	127
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	324	14	60	228	33	36	24	20	16	37	33
Total Analysis Volume [veh/h]	212	1295	58	239	912	131	144	98	80	64	147	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	11	30	0	13	40	0	9	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	48	48	7	48	48	9	15	15	4	10	10
g / C, Green / Cycle	0.08	0.54	0.54	0.08	0.54	0.54	0.10	0.16	0.16	0.05	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.06	0.25	0.04	0.07	0.19	0.19	0.08	0.03	0.05	0.04	0.04	0.08
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1780	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	273	2777	866	273	1941	955	176	587	262	83	400	178
d1, Uniform Delay [s]	40.73	12.89	10.03	41.07	11.98	11.99	39.82	32.46	33.23	42.48	37.12	38.83
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.70	0.57	0.15	8.60	0.52	1.06	8.83	0.13	0.65	14.10	0.57	6.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.47	0.07	0.87	0.36	0.36	0.82	0.17	0.31	0.77	0.37	0.75
d, Delay for Lane Group [s/veh]	45.43	13.46	10.18	49.67	12.50	13.04	48.65	32.60	33.88	56.58	37.68	45.07
Lane Group LOS	D	B	B	D	B	B	D	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.35	4.63	0.50	2.80	3.51	3.60	3.44	0.90	1.53	1.72	1.52	3.14
50th-Percentile Queue Length [ft/ln]	58.78	115.63	12.60	69.91	87.75	90.03	86.01	22.46	38.26	42.89	37.88	78.48
95th-Percentile Queue Length [veh/ln]	4.23	8.15	0.91	5.03	6.32	6.48	6.19	1.62	2.75	3.09	2.73	5.65
95th-Percentile Queue Length [ft/ln]	105.81	203.81	22.68	125.84	157.95	162.06	154.83	40.42	68.87	77.20	68.19	141.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.43	13.46	10.18	49.67	12.63	13.04	48.65	32.60	33.88	56.58	37.68	45.07
Movement LOS	D	B	B	D	B	B	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	17.67			19.58			40.10			44.06		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	23.01											
Intersection LOS	C											
Intersection V/C	0.481											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.335	3.332	2.646	2.598
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	800	711
d_b, Bicycle Delay [s]	22.76	22.76	16.20	18.69
l_b,int, Bicycle LOS Score for Intersection	2.424	2.272	1.832	1.856
Bicycle LOS	B	B	A	A

Sequence

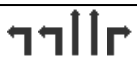
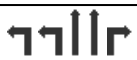
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.533

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	0	2	0	1
Entry Pocket Length [ft]	685.00	100.00	675.00	385.00	100.00	260.00	375.00	100.00	100.00	280.00	100.00	270.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	284	740	49	33	395	208	248	187	205	128	241	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	185	37	0	0	28	42	13	2	72	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	29	0	0	31	0	0	12
Total Hourly Volume [veh/h]	520	910	52	39	494	258	306	223	283	151	290	106
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	137	239	14	10	130	68	81	59	74	40	76	28
Total Analysis Volume [veh/h]	547	958	55	41	520	272	322	235	298	159	305	112
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	22	49	0	9	36	36	16	36	0	16	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	27	27	0	27	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	61	61	4	46	62	12	23	23	7	18	18
g / C, Green / Cycle	0.16	0.55	0.55	0.03	0.42	0.56	0.11	0.21	0.21	0.06	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.16	0.26	0.03	0.01	0.14	0.17	0.09	0.06	0.18	0.05	0.08	0.07
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	575	1988	888	115	1514	910	381	753	336	225	593	265
d1, Uniform Delay [s]	45.57	15.18	11.55	52.07	21.71	12.60	48.13	36.88	42.29	50.46	42.00	41.32
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.13	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.28	0.84	0.13	1.87	0.62	0.84	5.18	0.23	8.91	4.02	0.69	1.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.48	0.06	0.36	0.34	0.30	0.84	0.31	0.89	0.71	0.51	0.42
d, Delay for Lane Group [s/veh]	54.84	16.01	11.68	53.94	22.33	13.45	53.30	37.11	51.20	54.48	42.69	42.40
Lane Group LOS	D	B	B	D	C	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.72	6.57	0.59	0.56	4.37	3.33	4.47	2.62	8.37	2.23	3.76	2.75
50th-Percentile Queue Length [ft/ln]	192.91	164.19	14.67	14.11	109.21	83.28	111.77	65.44	209.31	55.75	93.96	68.84
95th-Percentile Queue Length [veh/ln]	12.27	10.77	1.06	1.02	7.80	6.00	7.94	4.71	13.12	4.01	6.77	4.96
95th-Percentile Queue Length [ft/ln]	306.80	269.26	26.40	25.39	194.91	149.90	198.46	117.79	327.94	100.35	169.13	123.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.84	16.01	11.68	53.94	22.33	13.45	53.30	37.11	51.20	54.48	42.69	42.40
Movement LOS	D	B	B	D	C	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	29.48			20.98			48.12			45.89		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.27											
Intersection LOS	C											
Intersection V/C	0.533											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	3.320	3.238	3.153	2.794
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	818	582	582	582
d_b, Bicycle Delay [s]	19.20	27.65	27.65	27.65
l_b,int, Bicycle LOS Score for Intersection	2.852	2.271	2.291	2.045
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Armstrong Rd/Sierra Ave

Control Type:	Signalized	Delay (sec / veh):	55.7
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	490.00	100.00	200.00	310.00	100.00	270.00	135.00	100.00	75.00	195.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			45.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	933	209	85	15	344	50	40	18	649	84	44	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	191	81	35	8	37	0	15	11	58	118	32	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	14	0	0	6	0	0	82	0	0	3
Total Hourly Volume [veh/h]	1292	328	121	26	443	53	62	32	742	217	84	26
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	340	86	32	7	117	14	16	8	195	57	22	7
Total Analysis Volume [veh/h]	1360	345	127	27	466	56	65	34	781	228	88	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	145
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	0	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	0.0	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	59	64	0	11	16	0	18	38	0	32	52	0
Vehicle Extension [s]	3.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	3.3	0.0	3.3	3.3	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	C
C, Cycle Length [s]	145	145	145	145	145	145	145	145	145	145	145
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	5.30	5.30	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.30	3.30	3.30	3.30	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	54	95	95	3	45	45	7	4	20	17	17
g / C, Green / Cycle	0.37	0.66	0.66	0.02	0.31	0.31	0.05	0.03	0.14	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.39	0.18	0.08	0.01	0.25	0.03	0.04	0.01	0.13	0.03	0.03
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1751
c, Capacity [veh/h]	1301	1246	1059	81	586	498	83	96	251	227	209
d1, Uniform Delay [s]	45.65	10.49	9.32	69.75	45.93	35.91	68.45	69.36	61.52	58.03	58.09
k, delay calibration	0.11	0.50	0.50	0.04	0.50	0.50	0.04	0.11	0.14	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.72	0.55	0.23	0.90	10.67	0.46	5.87	2.22	14.63	0.60	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.05	0.28	0.12	0.34	0.80	0.11	0.78	0.35	0.91	0.26	0.27
d, Delay for Lane Group [s/veh]	71.37	11.04	9.55	70.65	56.61	36.37	74.32	71.58	76.15	58.63	58.77
Lane Group LOS	F	B	A	E	E	D	E	E	E	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	27.88	4.81	1.58	0.50	16.72	1.47	2.53	0.65	9.20	1.99	1.90
50th-Percentile Queue Length [ft/ln]	696.93	120.24	39.46	12.42	418.08	36.78	63.30	16.33	229.98	49.78	47.58
95th-Percentile Queue Length [veh/ln]	37.70	8.41	2.84	0.89	23.43	2.65	4.56	1.18	14.17	3.58	3.43
95th-Percentile Queue Length [ft/ln]	942.61	210.16	71.03	22.36	585.75	66.20	113.94	29.39	354.33	89.61	85.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.37	11.04	9.55	70.65	56.61	36.37	74.32	71.58	0.00	76.15	58.68	58.77
Movement LOS	F	B	A	E	E	D	E	E		E	E	E
d_A, Approach Delay [s/veh]	55.72			55.23			8.64			70.30		
Approach LOS	E			E			A			E		
d_I, Intersection Delay [s/veh]	55.75											
Intersection LOS	E											
Intersection V/C	0.768											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.92	61.92	0.00	61.92
l_p,int, Pedestrian LOS Score for Intersectio	2.908	2.622	0.000	2.469
Crosswalk LOS	C	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	810	148	441	634
d_b, Bicycle Delay [s]	25.68	62.19	44.03	33.80
l_b,int, Bicycle LOS Score for Intersection	4.606	2.475	1.641	1.845
Bicycle LOS	E	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Armstrong/30th St

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.565

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	135.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1191	37	13	1061	65	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	307	0	0	226	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	4	0	0	0	4
Total Hourly Volume [veh/h]	1712	40	15	1478	77	33
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	451	11	4	389	20	9
Total Analysis Volume [veh/h]	1802	42	16	1556	81	35
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	5	5	0
Maximum Green [s]	45	0	30	5	30	0
Amber [s]	4.3	0.0	4.3	4.3	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	46	0	11	35	44	0
Vehicle Extension [s]	3.0	0.0	2.0	3.0	2.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	19	0	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.3	3.3	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	0.00	3.30	2.00
g_i, Effective Green Time [s]	73	73	73	65	8
g / C, Green / Cycle	0.81	0.81	0.81	0.72	0.08
(v / s)_i Volume / Saturation Flow Rate	0.50	0.03	0.06	0.43	0.07
s, saturation flow rate [veh/h]	3618	1615	255	3618	1746
c, Capacity [veh/h]	2938	1311	298	2613	148
d1, Uniform Delay [s]	3.17	1.63	4.89	6.09	40.39
k, delay calibration	0.50	0.50	0.04	0.50	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.97	0.05	0.03	1.01	3.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.03	0.05	0.60	0.79
d, Delay for Lane Group [s/veh]	4.13	1.68	4.91	7.10	43.84
Lane Group LOS	A	A	A	A	D
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.41	0.06	0.09	5.87	2.66
50th-Percentile Queue Length [ft/ln]	60.26	1.62	2.21	146.79	66.40
95th-Percentile Queue Length [veh/ln]	4.34	0.12	0.16	9.85	4.78
95th-Percentile Queue Length [ft/ln]	108.46	2.92	3.97	246.14	119.53

Movement, Approach, & Intersection Results

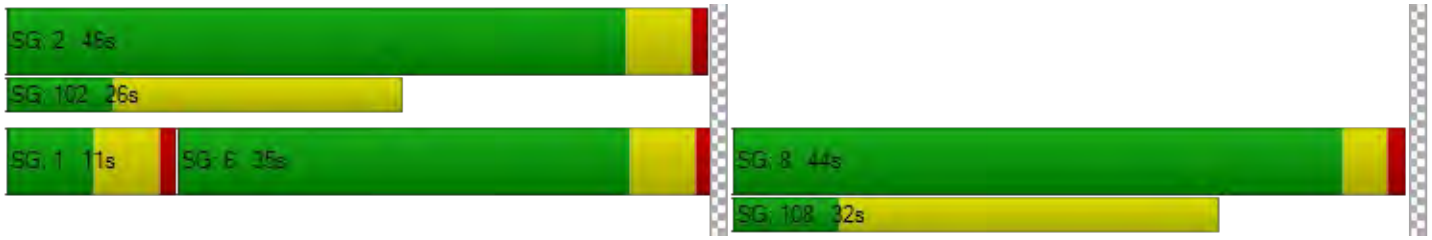
d_M, Delay for Movement [s/veh]	4.13	1.68	4.91	7.10	43.84	43.84
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	4.08		7.08		43.84	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	6.72					
Intersection LOS	A					
Intersection V/C	0.565					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
l_p,int, Pedestrian LOS Score for Intersectio	3.324	0.000	1.817
Crosswalk LOS	C	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	904	660	889
d_b, Bicycle Delay [s]	13.50	20.20	13.89
l_b,int, Bicycle LOS Score for Intersection	3.084	2.857	1.758
Bicycle LOS	C	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Valley Way/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	125.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.088

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	280.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	91	695	0	0	1082	10	52	0	170	193	100	546
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	292	0	0	226	0	0	0	0	0	0	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	1	0	0	20	0	0	66
Total Hourly Volume [veh/h]	107	1112	0	0	1503	11	61	0	181	228	118	593
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	293	0	0	396	3	16	0	48	60	31	156
Total Analysis Volume [veh/h]	113	1171	0	0	1582	12	64	0	191	240	124	624
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	11	67	0	0	56	0	22	0	0	0	51	0
Vehicle Extension [s]	3.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	0.0	0.0	3.3	0.0	3.4	0.0	0.0	0.0	3.3	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	5.40	5.30	5.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	3.40	3.30	3.30
g_i, Effective Green Time [s]	6	62	51	51	17	46	46
g / C, Green / Cycle	0.05	0.44	0.36	0.36	0.12	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.06	0.32	0.42	0.42	0.15	0.13	0.45
s, saturation flow rate [veh/h]	1810	3618	1900	1895	1660	1810	1656
c, Capacity [veh/h]	83	1594	688	686	197	591	541
d1, Uniform Delay [s]	66.80	32.38	44.65	44.65	61.70	36.62	47.15
k, delay calibration	0.11	0.50	0.50	0.50	0.28	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	180.71	3.05	86.93	88.17	152.44	0.45	183.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.37	0.73	1.16	1.16	1.30	0.41	1.38
d, Delay for Lane Group [s/veh]	247.51	35.42	131.58	132.82	214.14	37.07	231.04
Lane Group LOS	F	D	F	F	F	D	F
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	7.06	16.42	39.53	39.66	15.24	6.46	46.14
50th-Percentile Queue Length [ft/ln]	176.51	410.44	988.17	991.49	381.04	161.53	1153.56
95th-Percentile Queue Length [veh/ln]	12.31	23.06	55.02	55.27	23.92	10.63	68.82
95th-Percentile Queue Length [ft/ln]	307.81	576.57	1375.53	1381.86	597.98	265.74	1720.60

Movement, Approach, & Intersection Results

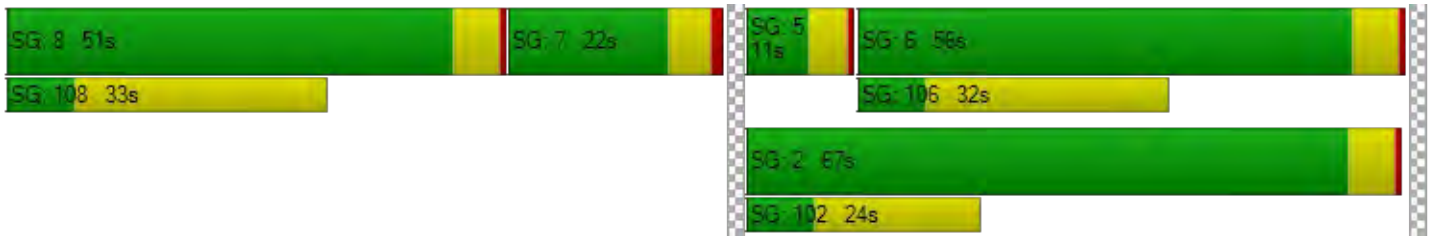
d_M, Delay for Movement [s/veh]	247.51	35.42	0.00	0.00	132.19	132.82	214.14	0.00	214.14	37.07	231.04	231.04
Movement LOS	F	D			F	F	F		F	D	F	F
d_A, Approach Delay [s/veh]	54.09			132.20			214.14			183.92		
Approach LOS	D			F			F			F		
d_I, Intersection Delay [s/veh]	125.33											
Intersection LOS	F											
Intersection V/C	1.088											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	59.43	59.43	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.441	2.217	2.455
Crosswalk LOS	F	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	881	724	237	653
d_b, Bicycle Delay [s]	21.90	28.48	54.38	31.76
l_b,int, Bicycle LOS Score for Intersection	2.619	2.875	2.013	3.299
Bicycle LOS	B	C	B	C

Sequence

Ring 1	8	7	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Valley Way/SR-60 WB On Ramp

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No			
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	218	786	1039	406	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	292	103	123	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	60	0	0
Total Hourly Volume [veh/h]	257	1219	1329	542	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	321	350	143	0	0
Total Analysis Volume [veh/h]	271	1283	1399	571	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	68.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	5	0	0	0
Maximum Green [s]	30	40	40	0	0	0
Amber [s]	4.1	4.8	4.8	0.0	0.0	0.0
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0
Split [s]	29	140	111	0	0	0
Vehicle Extension [s]	3.0	2.0	2.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	3.3	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	140	140	140	140	
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	
g_i, Effective Green Time [s]	23	135	107	107	
g / C, Green / Cycle	0.16	0.96	0.77	0.77	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.35	0.52	0.57	
s, saturation flow rate [veh/h]	1810	3618	1900	1724	
c, Capacity [veh/h]	296	3481	1455	1320	
d1, Uniform Delay [s]	57.61	0.16	7.97	8.96	
k, delay calibration	0.22	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	19.34	0.30	2.55	3.88	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.92	0.37	0.68	0.75	
d, Delay for Lane Group [s/veh]	76.96	0.46	10.52	12.84	
Lane Group LOS	E	A	B	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.83	0.15	12.33	14.12	
50th-Percentile Queue Length [ft/ln]	270.71	3.64	308.18	352.94	
95th-Percentile Queue Length [veh/ln]	16.22	0.26	18.09	20.28	
95th-Percentile Queue Length [ft/ln]	405.62	6.56	452.14	506.99	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	76.96	0.46	11.21	12.84	0.00	0.00
Movement LOS	E	A	B	B		
d_A, Approach Delay [s/veh]	13.80		11.68		0.00	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	12.61					
Intersection LOS	B					
Intersection V/C	0.721					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.324
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1924	1510	0
d_b, Bicycle Delay [s]	0.10	4.20	70.00
l_b,int, Bicycle LOS Score for Intersection	2.842	3.234	4.132
Bicycle LOS	C	C	D

Sequence

Ring 1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: SR-60 EB Ramps/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	30.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	1120.00	100.00	100.00	200.00	100.00	100.00	260.00	100.00	340.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	490.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	12	2	4	364	4	45	103	338	6	5	354	234
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	231	0	0	0	6	0	0	18	59
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	5	0	0	1	0	0	34
Total Hourly Volume [veh/h]	14	2	4	661	5	48	122	405	6	6	436	301
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	1	1	174	1	13	32	107	2	2	115	79
Total Analysis Volume [veh/h]	15	2	4	696	5	51	128	426	6	6	459	317
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	0	3	0	0	4	0	5	2	0	1	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	5
Maximum Green [s]	0	15	0	0	35	0	25	35	0	15	35	35
Amber [s]	0.0	4.1	0.0	0.0	4.8	0.0	4.1	5.2	0.0	4.1	5.2	5.2
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.5	0.0	1.0	0.5	0.5
Split [s]	0	11	0	0	51	0	13	30	0	28	45	45
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	3.0	2.0	2.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	25	0	0	17	0	0	32	32
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	3.8	0.0	3.1	3.7	0.0	3.1	3.7	3.7
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		No			No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.10	5.80	5.80	5.10	5.70	5.70	5.10	5.70	5.80
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.80	3.80	3.10	3.70	3.70	3.10	3.70	0.00
g_i, Effective Green Time [s]	3	29	29	10	66	66	1	56	91
g / C, Green / Cycle	0.02	0.24	0.24	0.09	0.55	0.55	0.01	0.47	0.76
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.21	0.07	0.11	0.11	0.00	0.13	0.20
s, saturation flow rate [veh/h]	1777	1810	1781	1810	1900	1891	1810	3618	1615
c, Capacity [veh/h]	37	436	430	157	1042	1037	15	1701	1226
d1, Uniform Delay [s]	58.18	43.67	43.72	53.87	13.80	13.80	59.21	19.28	4.34
k, delay calibration	0.04	0.12	0.12	0.11	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.80	5.72	6.05	9.88	0.45	0.45	16.40	0.39	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.87	0.87	0.82	0.21	0.21	0.40	0.27	0.26
d, Delay for Lane Group [s/veh]	62.98	49.39	49.78	63.74	14.25	14.25	75.61	19.67	4.45
Lane Group LOS	E	D	D	E	B	B	E	B	A
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.69	11.30	11.22	4.13	2.93	2.92	0.25	3.80	1.80
50th-Percentile Queue Length [ft/ln]	17.17	282.41	280.51	103.31	73.29	73.02	6.14	94.91	45.02
95th-Percentile Queue Length [veh/ln]	1.24	16.81	16.71	7.44	5.28	5.26	0.44	6.83	3.24
95th-Percentile Queue Length [ft/ln]	30.91	420.21	417.84	185.95	131.93	131.44	11.06	170.84	81.03

Movement, Approach, & Intersection Results

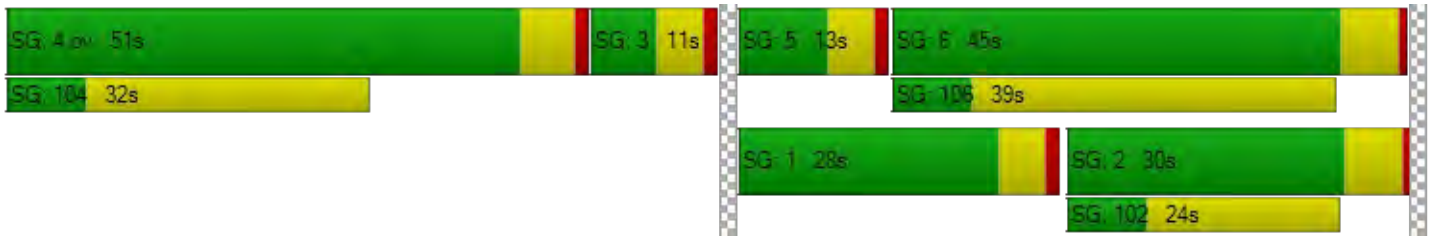
d_M, Delay for Movement [s/veh]	62.98	62.98	62.98	49.57	49.78	49.78	63.74	14.25	14.25	75.61	19.67	4.45
Movement LOS	E	E	E	D	D	D	E	B	B	E	B	A
d_A, Approach Delay [s/veh]	62.98			49.58			25.56			13.93		
Approach LOS	E			D			C			B		
d_I, Intersection Delay [s/veh]	30.17											
Intersection LOS	C											
Intersection V/C	0.438											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.746	2.504	2.634	0.000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	98	753	405	655
d_b, Bicycle Delay [s]	54.25	23.31	38.16	27.14
l_b,int, Bicycle LOS Score for Intersection	1.596	2.809	2.022	2.233
Bicycle LOS	A	C	B	B

Sequence

Ring 1	4	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Valley Way/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	41.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.747

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	3	1	0	1	1	0	1
Entry Pocket Length [ft]	145.00	100.00	510.00	170.00	100.00	150.00	410.00	100.00	180.00	260.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	364	45	403	329	351	300	296	17	56	167	588
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	0	13	31	59	231	6	0	0	18	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	47	0	0	2	0	0	74
Total Hourly Volume [veh/h]	19	442	48	489	419	426	585	355	18	66	215	669
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	116	13	129	110	112	154	93	5	17	57	176
Total Analysis Volume [veh/h]	20	465	51	515	441	448	616	374	19	69	226	704
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	76.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	4	6	0	4	6	6	4	6	0	4	6	6
Maximum Green [s]	25	30	0	35	30	30	35	45	0	25	45	45
Amber [s]	3.6	4.8	0.0	3.6	4.8	4.8	3.6	4.8	0.0	3.6	4.8	4.8
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	13	32	0	41	60	60	32	51	0	16	35	35
Vehicle Extension [s]	2.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	2.0	3.0	3.0
Walk [s]	0	5	0	5	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	23	39	39	0	34	0	0	24	24
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	3.5	0.0	2.0	3.5	3.5
I2, Clearance Lost Time [s]	2.6	3.8	0.0	2.6	3.8	3.8	2.6	3.8	0.0	2.6	3.8	3.8
Minimum Recall	No	No		No	No	No	No	Yes		No	Yes	Yes
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.80	5.80	4.60	5.80	4.60	4.60	7.30	7.30	4.60	7.30	6.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.80	3.80	2.60	3.80	0.00	2.60	3.80	3.80	2.60	3.80	0.00
g_i, Effective Green Time [s]	2	20	20	36	55	87	27	54	54	7	34	76
g / C, Green / Cycle	0.02	0.15	0.15	0.26	0.39	0.62	0.19	0.39	0.39	0.05	0.24	0.55
(v / s)_i Volume / Saturation Flow Rate	0.01	0.13	0.03	0.15	0.12	0.16	0.18	0.10	0.01	0.04	0.06	0.44
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	2859	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	30	529	236	913	1408	1775	669	1394	622	89	884	898
d1, Uniform Delay [s]	68.42	58.56	52.70	44.94	29.75	11.92	55.62	29.49	26.76	65.76	42.64	24.44
k, delay calibration	0.04	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.58	4.91	0.45	0.55	0.13	0.07	5.78	0.47	0.09	5.20	0.70	6.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.88	0.22	0.56	0.31	0.25	0.92	0.27	0.03	0.77	0.26	0.78
d, Delay for Lane Group [s/veh]	77.00	63.47	53.15	45.49	29.88	12.00	61.40	29.96	26.85	70.97	43.34	31.23
Lane Group LOS	E	E	D	D	C	B	E	C	C	E	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.77	8.27	1.59	7.68	5.09	2.98	10.96	4.33	0.41	2.54	3.22	19.05
50th-Percentile Queue Length [ft/ln]	19.36	206.81	39.78	191.96	127.27	74.55	274.09	108.18	10.16	63.57	80.60	476.19
95th-Percentile Queue Length [veh/ln]	1.39	12.99	2.86	12.22	8.79	5.37	16.39	7.74	0.73	4.58	5.80	26.21
95th-Percentile Queue Length [ft/ln]	34.84	324.73	71.61	305.57	219.78	134.20	409.84	193.47	18.28	114.43	145.09	655.13

Movement, Approach, & Intersection Results

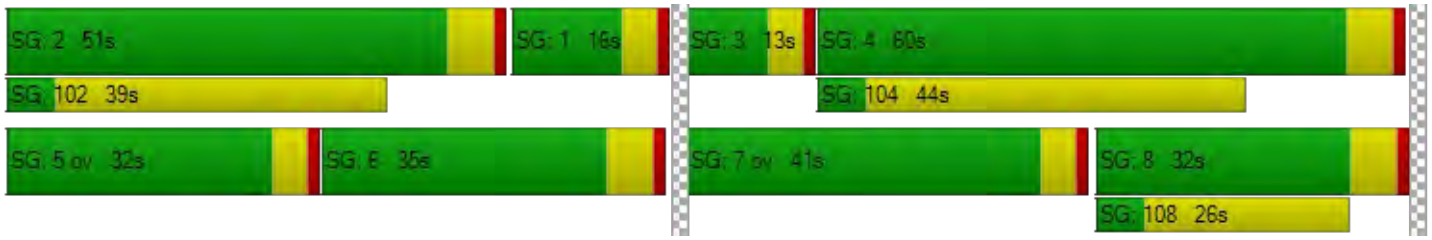
d_M, Delay for Movement [s/veh]	77.00	63.47	53.15	45.49	29.88	12.00	61.40	29.96	26.85	70.97	43.34	31.23
Movement LOS	E	E	D	D	C	B	E	C	C	E	D	C
d_A, Approach Delay [s/veh]	63.00			29.90			49.10			36.71		
Approach LOS	E			C			D			D		
d_I, Intersection Delay [s/veh]	41.02											
Intersection LOS	D											
Intersection V/C	0.747											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	0.00	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersectio	2.744	0.000	2.985	3.096
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	374	774	646	417
d_b, Bicycle Delay [s]	46.25	26.29	32.10	43.85
l_b,int, Bicycle LOS Score for Intersection	2.006	2.757	2.394	2.445
Bicycle LOS	B	C	B	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Jurupa Rd/Mission Blvd

Control Type:	Two-way stop	Delay (sec / veh):	101.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	280.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	25	170	687	22	127	748
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	19	0	3	68
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	202	830	26	153	951
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	53	218	7	40	250
Total Analysis Volume [veh/h]	32	213	874	27	161	1001
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.48	0.37	0.01	0.00	0.21	0.01
d_M, Delay for Movement [s/veh]	101.27	54.00	0.00	0.00	10.98	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	7.22	7.22	0.00	0.00	0.79	0.00
95th-Percentile Queue Length [ft/ln]	180.54	180.54	0.00	0.00	19.86	0.00
d_A, Approach Delay [s/veh]	60.18		0.00		1.52	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	7.15					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 12: Pacific Ave/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.473

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	130.00	100.00	130.00	130.00	100.00	115.00	275.00	100.00	50.00	265.00	100.00	230.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	111	39	102	14	68	85	93	606	65	153	600	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	49	20	0	18	11	21	7	0	13	0	0	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	12	0	0	12	0	0	9	0	0	3
Total Hourly Volume [veh/h]	180	66	108	35	91	109	117	715	81	181	708	29
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	17	28	9	24	29	31	188	21	48	186	8
Total Analysis Volume [veh/h]	189	69	114	37	96	115	123	753	85	191	745	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	4	6	0	4	5	0
Maximum Green [s]	0	30	0	0	30	0	25	45	0	25	45	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.5	0.0	4.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	36	0	0	36	0	17	27	0	17	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	2.5	3.5	0.0	2.5	3.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	21	21	21	21	21	21	7	34	34	10	37	37
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.26	0.26	0.09	0.43	0.43	0.13	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.16	0.04	0.07	0.03	0.05	0.07	0.07	0.21	0.05	0.11	0.21	0.02
s, saturation flow rate [veh/h]	1189	1900	1615	1220	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	316	493	419	336	493	419	157	1541	688	230	1687	753
d1, Uniform Delay [s]	31.22	22.77	23.61	26.31	23.11	23.63	35.79	16.65	13.92	34.06	14.34	11.61
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.82	0.13	0.35	0.14	0.19	0.35	8.23	1.11	0.37	7.47	0.84	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.14	0.27	0.11	0.19	0.27	0.78	0.49	0.12	0.83	0.44	0.04
d, Delay for Lane Group [s/veh]	33.04	22.90	23.96	26.45	23.30	23.98	44.02	17.76	14.29	41.53	15.19	11.72
Lane Group LOS	C	C	C	C	C	C	D	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.56	0.99	1.71	0.58	1.40	1.72	2.60	4.71	0.91	3.91	4.18	0.29
50th-Percentile Queue Length [ft/ln]	89.04	24.77	42.70	14.53	35.02	43.10	64.93	117.69	22.85	97.67	104.62	7.25
95th-Percentile Queue Length [veh/ln]	6.41	1.78	3.07	1.05	2.52	3.10	4.67	8.27	1.65	7.03	7.53	0.52
95th-Percentile Queue Length [ft/ln]	160.27	44.59	76.85	26.15	63.03	77.58	116.87	206.65	41.13	175.80	188.32	13.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.04	22.90	23.96	26.45	23.30	23.98	44.02	17.76	14.29	41.53	15.19	11.72
Movement LOS	C	C	C	C	C	C	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	28.38			24.09			20.81			20.28		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	22.03											
Intersection LOS	C											
Intersection V/C	0.473											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.76	29.76	29.76	29.76
l_p,int, Pedestrian LOS Score for Intersectio	2.328	2.260	3.168	2.912
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	775	775	538	538
d_b, Bicycle Delay [s]	15.01	15.01	21.39	21.39
l_b,int, Bicycle LOS Score for Intersection	2.193	1.989	2.360	2.360
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Cedar Ave/I-10 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	230.00	100.00	230.00	100.00	100.00	100.00	485.00	100.00	485.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	273	1231	0	0	1321	718	0	0	0	441	3	410
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	89	54	0	0	113	0	0	0	20	247	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	85	0	0	2	0	0	48
Total Hourly Volume [veh/h]	411	1507	0	0	1672	762	0	0	20	767	4	436
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	108	397	0	0	440	201	0	0	5	202	1	115
Total Analysis Volume [veh/h]	433	1586	0	0	1760	802	0	0	21	807	4	459
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	14	36	0	0	22	0	0	0	0	0	24	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	9	35	22	22		17	17	17
g / C, Green / Cycle	0.15	0.59	0.37	0.37		0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.12	0.31	0.20	0.28		0.22	0.22	0.16
s, saturation flow rate [veh/h]	3514	5176	8626	2859		1810	1810	2859
c, Capacity [veh/h]	544	3053	3177	1053		501	501	791
d1, Uniform Delay [s]	24.44	7.28	15.04	16.64		20.22	20.22	18.69
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	2.70	0.64	0.70	5.22		3.18	3.17	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.52	0.55	0.76		0.81	0.81	0.58
d, Delay for Lane Group [s/veh]	27.14	7.91	15.74	21.86		23.40	23.39	19.36
Lane Group LOS	C	A	B	C		C	C	B
Critical Lane Group	Yes	No	No	Yes		Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.86	2.84	3.30	4.76		5.12	5.12	2.52
50th-Percentile Queue Length [ft/ln]	71.48	70.91	82.41	119.03		128.06	128.02	63.07
95th-Percentile Queue Length [veh/ln]	5.15	5.11	5.93	8.34		8.83	8.83	4.54
95th-Percentile Queue Length [ft/ln]	128.66	127.64	148.33	208.49		220.85	220.80	113.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.14	7.91	0.00	0.00	15.74	21.86	0.00	0.00	0.00	23.39	23.39	19.36
Movement LOS	C	A			B	C				C	C	B
d_A, Approach Delay [s/veh]	12.04			17.66			0.00			21.94		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	16.65											
Intersection LOS	B											
Intersection V/C	0.628											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.341	2.649
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1067	600	0	667
d_b, Bicycle Delay [s]	6.53	14.70	30.00	13.33
l_b,int, Bicycle LOS Score for Intersection	2.670	2.433	4.132	3.734
Bicycle LOS	B	B	D	D

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Cedar Ave/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	40.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.881

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	2	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	600.00	100.00	600.00	100.00	100.00	100.00	380.00	100.00	380.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1090.00
Speed [mph]	40.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1029	404	420	1339	0	476	3	373	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	143	84	0	379	0	0	0	247	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	56	0	0	0	0	0	69	0	0	0
Total Hourly Volume [veh/h]	0	1357	505	496	1959	0	562	4	618	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	357	133	131	516	0	148	1	163	0	0	0
Total Analysis Volume [veh/h]	0	1428	532	522	2062	0	592	4	651	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	34	0	16	50	0	0	45	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	95	95	95	95	95	95	95	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	31	31	12	47	40	40	40	
g / C, Green / Cycle	0.33	0.33	0.13	0.49	0.42	0.42	0.42	
(v / s)_i Volume / Saturation Flow Rate	0.17	0.33	0.15	0.40	0.16	0.16	0.40	
s, saturation flow rate [veh/h]	8626	1615	3514	5176	1810	1811	1615	
c, Capacity [veh/h]	2805	525	444	2555	764	764	682	
d1, Uniform Delay [s]	25.92	32.05	41.50	20.25	18.99	18.98	26.57	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.41	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.66	42.54	84.67	2.85	0.33	0.32	22.13	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.51	1.01	1.18	0.81	0.39	0.39	0.95	
d, Delay for Lane Group [s/veh]	26.58	74.60	126.17	23.10	19.31	19.31	48.70	
Lane Group LOS	C	F	F	C	B	B	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.05	17.46	10.23	12.11	4.41	4.40	17.45	
50th-Percentile Queue Length [ft/ln]	126.25	436.38	255.72	302.74	110.13	110.11	436.20	
95th-Percentile Queue Length [veh/ln]	8.74	24.52	16.51	17.82	7.85	7.85	24.30	
95th-Percentile Queue Length [ft/ln]	218.38	612.88	412.74	445.41	196.18	196.16	607.46	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	26.58	74.60	126.17	23.10	0.00	19.31	19.31	48.70	0.00	0.00	0.00
Movement LOS		C	F	F	C		B	B	D			
d_A, Approach Delay [s/veh]	39.62			43.92			34.65			0.00		
Approach LOS	D			D			C			A		
d_I, Intersection Delay [s/veh]	40.47											
Intersection LOS	D											
Intersection V/C	0.881											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	38.93	38.93
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.608	2.262
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	632	968	863	0
d_b, Bicycle Delay [s]	22.24	12.64	15.35	47.50
l_b,int, Bicycle LOS Score for Intersection	2.225	2.981	3.731	4.132
Bicycle LOS	B	C	D	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Cedar Ave/Orange St

Control Type:	Signalized	Delay (sec / veh):	25.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.846

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	160.00	100.00	100.00	140.00	100.00	100.00	400.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1026	3	107	1143	456	272	5	13	0	1	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	227	0	0	626	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	54	0	0	2	0	0	16
Total Hourly Volume [veh/h]	10	1438	4	126	1975	484	321	6	13	0	1	144
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	378	1	33	520	127	84	2	3	0	0	38
Total Analysis Volume [veh/h]	11	1514	4	133	2079	509	338	6	14	0	1	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	74	0	11	76	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	81	72	72	81	75	75	26	26	26	26
g / C, Green / Cycle	0.70	0.63	0.63	0.70	0.66	0.66	0.23	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.06	0.40	0.40	0.28	0.57	0.32	0.27	0.01	0.00	0.09
s, saturation flow rate [veh/h]	197	1900	1898	475	3618	1615	1254	1691	1900	1615
c, Capacity [veh/h]	175	1190	1189	341	2372	1059	324	382	461	365
d1, Uniform Delay [s]	19.21	13.39	13.39	11.33	16.02	9.95	47.84	34.85	34.46	38.02
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.48	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	2.63	2.63	3.34	4.94	1.56	60.75	0.06	0.00	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.64	0.64	0.39	0.88	0.48	1.04	0.05	0.00	0.42
d, Delay for Lane Group [s/veh]	19.36	16.01	16.02	14.67	20.97	11.51	108.59	34.91	34.46	38.77
Lane Group LOS	B	B	B	B	C	B	F	C	C	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.07	11.74	11.73	1.19	20.31	6.14	14.87	0.45	0.02	3.74
50th-Percentile Queue Length [ft/ln]	1.87	293.45	293.35	29.82	507.81	153.54	371.76	11.20	0.55	93.53
95th-Percentile Queue Length [veh/ln]	0.13	17.36	17.35	2.15	27.70	10.21	21.71	0.81	0.04	6.73
95th-Percentile Queue Length [ft/ln]	3.37	433.91	433.79	53.67	692.60	255.14	542.85	20.16	0.99	168.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.36	16.02	16.02	14.67	20.97	11.51	108.59	34.91	34.91	34.46	34.46	38.77
Movement LOS	B	B	B	B	C	B	F	C	C	C	C	D
d_A, Approach Delay [s/veh]	16.04			18.89			104.47			38.75		
Approach LOS	B			B			F			D		
d_I, Intersection Delay [s/veh]	25.05											
Intersection LOS	C											
Intersection V/C	0.846											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.85	0.00	48.85	48.85
l_p,int, Pedestrian LOS Score for Intersectio	3.255	0.000	2.271	2.199
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1217	1252	452	452
d_b, Bicycle Delay [s]	8.80	8.04	34.44	34.44
l_b,int, Bicycle LOS Score for Intersection	2.821	3.849	2.154	1.838
Bicycle LOS	C	D	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Cedar Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	64.9
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.921

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	115.00	100.00	100.00	250.00	100.00	80.00	190.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	163	734	14	103	851	163	211	154	73	19	204	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	170	3	20	506	100	57	7	41	6	3	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	29	0	0	13	0	0	13
Total Hourly Volume [veh/h]	207	1036	18	142	1510	263	306	189	114	28	244	112
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	273	5	37	397	69	81	50	30	7	64	29
Total Analysis Volume [veh/h]	218	1091	19	149	1589	277	322	199	120	29	257	118
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	54	0	15	54	0	20	26	0	25	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	62	62	11	62	62	16	28	28	3	15	15
g / C, Green / Cycle	0.09	0.52	0.52	0.09	0.52	0.52	0.13	0.23	0.23	0.03	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.12	0.29	0.29	0.08	0.49	0.52	0.18	0.06	0.07	0.02	0.10	0.11
s, saturation flow rate [veh/h]	1810	1900	1889	1810	1900	1805	1810	3618	1615	1810	1900	1704
c, Capacity [veh/h]	166	979	973	166	979	930	241	842	376	49	240	215
d1, Uniform Delay [s]	54.50	19.94	19.95	53.95	27.71	29.09	52.00	37.37	38.15	57.73	51.00	51.21
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.24	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	150.62	2.39	2.41	15.47	19.46	30.26	163.67	0.14	0.48	10.99	6.37	8.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.31	0.57	0.57	0.90	0.95	1.00	1.33	0.24	0.32	0.59	0.81	0.84
d, Delay for Lane Group [s/veh]	205.12	22.34	22.36	69.42	47.17	59.35	215.67	37.51	38.63	68.72	57.37	59.60
Lane Group LOS	F	C	C	E	D	F	F	D	D	E	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	11.94	11.09	11.04	5.09	28.79	32.41	18.21	2.40	2.99	0.99	5.91	5.62
50th-Percentile Queue Length [ft/ln]	298.56	277.34	276.09	127.18	719.68	810.20	455.21	60.10	74.75	24.84	147.73	140.52
95th-Percentile Queue Length [veh/ln]	19.32	16.56	16.49	8.79	37.59	41.85	28.29	4.33	5.38	1.79	9.90	9.51
95th-Percentile Queue Length [ft/ln]	483.03	413.89	412.34	219.66	939.66	1046.33	707.34	108.19	134.55	44.72	247.39	237.73

Movement, Approach, & Intersection Results

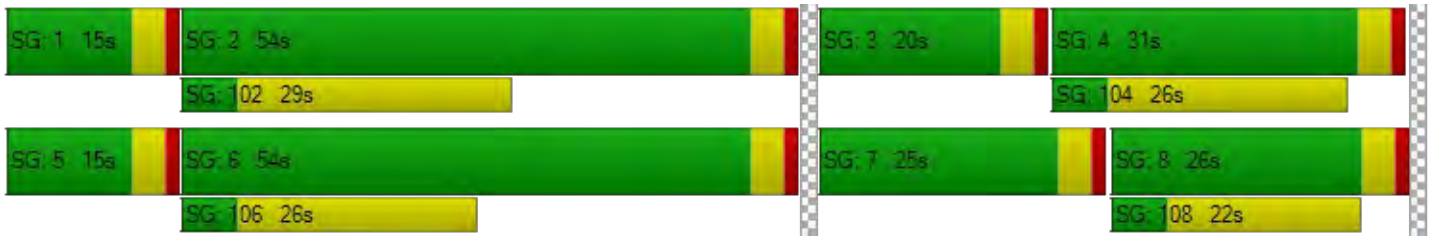
d_M, Delay for Movement [s/veh]	205.12	22.35	22.36	69.42	52.20	59.35	215.67	37.51	38.63	68.72	57.91	59.60
Movement LOS	F	C	C	E	D	E	F	D	D	E	E	E
d_A, Approach Delay [s/veh]	52.35			54.46			127.22			59.18		
Approach LOS	D			D			F			E		
d_I, Intersection Delay [s/veh]	64.88											
Intersection LOS	E											
Intersection V/C	0.921											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	2.919	3.287	2.828	2.699
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	367	450
d_b, Bicycle Delay [s]	20.42	20.42	40.02	36.04
l_b,int, Bicycle LOS Score for Intersection	2.657	3.246	2.099	1.904
Bicycle LOS	B	C	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Cedar Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.774

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	290.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	84	759	20	46	874	55	66	82	80	47	88	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	180	0	0	532	0	12	1	63	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	7	0	0	16	0	0	5
Total Hourly Volume [veh/h]	139	1076	22	54	1563	58	90	98	141	55	107	47
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	283	6	14	411	15	24	26	37	14	28	12
Total Analysis Volume [veh/h]	146	1133	23	57	1645	61	95	103	148	58	113	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	80	0	9	75	0	0	31	0	0	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	76	76	5	71	71	27	27
g / C, Green / Cycle	0.08	0.63	0.63	0.04	0.59	0.59	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.08	0.31	0.31	0.03	0.45	0.45	0.24	0.16
s, saturation flow rate [veh/h]	1810	1900	1887	1810	1900	1876	1442	1385
c, Capacity [veh/h]	151	1205	1196	74	1124	1110	363	349
d1, Uniform Delay [s]	54.84	11.56	11.57	56.98	18.19	18.31	47.51	41.92
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.42	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	27.12	1.38	1.39	15.28	4.86	5.08	33.26	3.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.97	0.48	0.48	0.77	0.76	0.77	0.95	0.63
d, Delay for Lane Group [s/veh]	81.96	12.94	12.96	72.26	23.05	23.39	80.77	45.06
Lane Group LOS	F	B	B	E	C	C	F	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.53	8.23	8.18	2.03	18.19	18.28	13.81	6.13
50th-Percentile Queue Length [ft/ln]	138.27	205.74	204.62	50.66	454.70	456.98	345.15	153.29
95th-Percentile Queue Length [veh/ln]	9.39	12.93	12.88	3.65	25.18	25.29	19.90	10.19
95th-Percentile Queue Length [ft/ln]	234.69	323.35	321.91	91.19	629.56	632.27	497.49	254.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	81.96	12.95	12.96	72.26	23.21	23.39	80.77	80.77	80.77	45.06	45.06	45.06
Movement LOS	F	B	B	E	C	C	F	F	F	D	D	D
d_A, Approach Delay [s/veh]	20.69			24.81			80.77			45.06		
Approach LOS	C			C			F			D		
d_I, Intersection Delay [s/veh]	29.89											
Intersection LOS	C											
Intersection V/C	0.774											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.019	3.055	2.089	2.004
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1267	1183	450	450
d_b, Bicycle Delay [s]	8.07	10.00	36.04	36.04
l_b,int, Bicycle LOS Score for Intersection	2.635	3.020	2.157	1.931
Bicycle LOS	B	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Cedar Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	304.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	5.324

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	190.00	100.00	100.00	345.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	180.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	36	678	43	87	901	21	50	73	53	42	72	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	183	151	0	0	310	288	70	9	49	0	33	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	31	0	0	11	0	0	16
Total Hourly Volume [veh/h]	225	951	46	103	1373	282	129	95	101	50	118	144
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	250	12	27	361	74	34	25	27	13	31	38
Total Analysis Volume [veh/h]	237	1001	48	108	1445	297	136	100	106	53	124	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	32	0	12	31	0	0	61	0	0	61	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	28	28	8	27	27	57	57	57	57
g / C, Green / Cycle	0.09	0.27	0.27	0.07	0.26	0.26	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.13	0.28	0.28	0.06	0.46	0.48	4.71	0.07	1.12	0.09
s, saturation flow rate [veh/h]	1810	1900	1870	1810	1900	1792	50	1615	158	1615
c, Capacity [veh/h]	155	513	505	135	492	464	81	874	130	874
d1, Uniform Delay [s]	48.00	38.32	38.32	47.83	38.91	38.91	34.11	11.83	32.59	12.20
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	244.66	47.56	48.37	10.44	359.85	398.85	891.05	0.06	205.03	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.53	1.03	1.03	0.80	1.78	1.87	2.91	0.12	1.36	0.17
d, Delay for Lane Group [s/veh]	292.66	85.89	86.69	58.27	398.77	437.77	925.16	11.89	237.63	12.29
Lane Group LOS	F	F	F	E	F	F	F	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	14.46	19.25	19.06	3.16	61.59	63.10	22.19	1.15	9.41	1.70
50th-Percentile Queue Length [ft/ln]	361.50	481.32	476.44	79.00	1539.71	1577.42	554.63	28.79	235.32	42.60
95th-Percentile Queue Length [veh/ln]	23.53	26.94	26.73	5.69	95.49	98.58	39.93	2.07	16.94	3.07
95th-Percentile Queue Length [ft/ln]	588.21	673.40	668.15	142.20	2387.33	2464.55	998.34	51.82	423.58	76.68

Movement, Approach, & Intersection Results

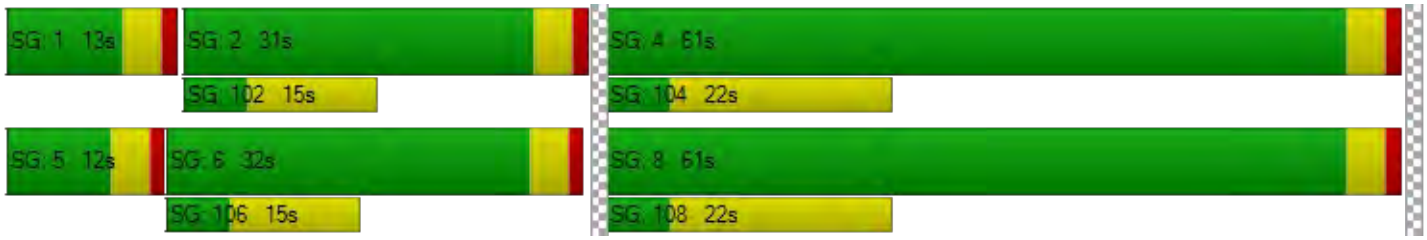
d_M, Delay for Movement [s/veh]	292.66	86.27	86.69	58.27	414.13	437.77	925.16	925.16	11.89	237.63	237.63	12.29
Movement LOS	F	F	F	E	F	F	F	F	B	F	F	B
d_A, Approach Delay [s/veh]	124.32			397.15			642.10			133.52		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	304.21											
Intersection LOS	F											
Intersection V/C	5.324											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.241	3.168	2.416	2.235
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	514	1086	1086
d_b, Bicycle Delay [s]	28.23	28.97	10.97	10.97
l_b,int, Bicycle LOS Score for Intersection	2.625	3.111	2.142	2.129
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Cedar Ave/7th St

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.587

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	295.00	100.00	100.00	190.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	40	663	6	19	861	21	25	9	110	42	14	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	53	311	2	1	331	27	21	0	47	2	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	5	0	0	18	0	0	2
Total Hourly Volume [veh/h]	100	1093	8	23	1347	47	51	11	159	52	17	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	288	2	6	354	12	13	3	42	14	4	4
Total Analysis Volume [veh/h]	105	1151	8	24	1418	49	54	12	167	55	18	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	34	0	55	76	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	82	82	3	77	77	18	18
g / C, Green / Cycle	0.07	0.72	0.72	0.02	0.67	0.67	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.06	0.31	0.31	0.01	0.39	0.39	0.14	0.10
s, saturation flow rate [veh/h]	1810	1900	1895	1810	1900	1878	1664	917
c, Capacity [veh/h]	130	1359	1356	45	1269	1255	297	193
d1, Uniform Delay [s]	52.57	6.71	6.71	55.40	10.34	10.36	47.51	44.62
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.99	0.98	0.99	9.39	1.94	1.98	4.62	1.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.43	0.43	0.53	0.58	0.58	0.78	0.46
d, Delay for Lane Group [s/veh]	63.55	7.70	7.70	64.80	12.28	12.34	52.13	46.29
Lane Group LOS	E	A	A	E	B	B	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.28	4.78	4.77	0.78	8.87	8.83	6.89	2.44
50th-Percentile Queue Length [ft/ln]	81.98	119.44	119.21	19.59	221.83	220.67	172.30	61.02
95th-Percentile Queue Length [veh/ln]	5.90	8.36	8.35	1.41	13.76	13.70	11.20	4.39
95th-Percentile Queue Length [ft/ln]	147.57	209.06	208.75	35.26	343.96	342.48	279.94	109.84

Movement, Approach, & Intersection Results

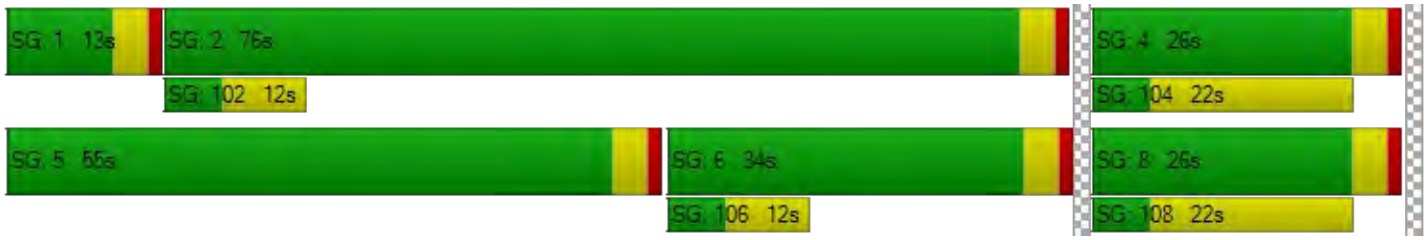
d_M, Delay for Movement [s/veh]	63.55	7.70	7.70	64.80	12.31	12.34	52.13	52.13	52.13	46.29	46.29	46.29
Movement LOS	E	A	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.34			13.16			52.13			46.29		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	16.72											
Intersection LOS	B											
Intersection V/C	0.587											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.85	48.85	48.85	48.85
l_p,int, Pedestrian LOS Score for Intersectio	3.343	3.280	1.962	1.786
Crosswalk LOS	C	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	522	1252	383	383
d_b, Bicycle Delay [s]	31.41	8.04	37.60	37.60
l_b,int, Bicycle LOS Score for Intersection	2.603	2.794	1.974	1.708
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Rubidoux Blvd/Market St

Control Type:	Signalized	Delay (sec / veh):	98.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.949

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	2	0	0
Entry Pocket Length [ft]	245.00	100.00	330.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	8	228	277	520	544	88	64	72	62	261	41	397
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.1800	1.1800	1.1800	1.1800	1.0000	1.0000	1.0000	1.0000	1.1800	1.0000	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	50	183	142	103	89	54	13	10	12	31	42	239
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	47	0	0	0	0	0	0	0	0	71
Total Hourly Volume [veh/h]	58	452	422	717	731	142	77	82	74	339	83	636
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	119	111	189	192	37	20	22	19	89	22	167
Total Analysis Volume [veh/h]	61	476	444	755	769	149	81	86	78	357	87	669
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	0	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	0.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	15	34	0	26	45	0	15	17	0	43	45	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	5.0	0.0	3.0	4.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	7.00	7.00	5.00	6.00	6.00	5.00	7.00	5.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	5.00	5.00	3.00	4.00	4.00	3.00	5.00	3.00	4.00	4.00
g_i, Effective Green Time [s]	9	27	27	21	40	40	9	33	15	40	40
g / C, Green / Cycle	0.07	0.23	0.23	0.18	0.34	0.34	0.08	0.28	0.12	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.03	0.13	0.27	0.21	0.21	0.09	0.04	0.09	0.10	0.05	0.41
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1753	3514	1900	1615
c, Capacity [veh/h]	131	815	364	615	1216	543	141	482	438	627	533
d1, Uniform Delay [s]	53.41	41.46	46.48	49.50	33.58	29.13	53.42	34.80	51.16	28.21	40.18
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.55	3.05	121.46	105.77	2.51	1.25	3.68	0.42	3.73	0.10	129.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.58	1.22	1.23	0.63	0.27	0.58	0.34	0.81	0.14	1.25
d, Delay for Lane Group [s/veh]	55.96	44.52	167.94	155.27	36.09	30.38	57.10	35.21	54.89	28.31	169.38
Lane Group LOS	E	D	F	F	D	C	E	D	D	C	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.81	6.38	22.63	17.87	9.38	3.20	2.51	3.90	5.45	1.79	34.62
50th-Percentile Queue Length [ft/ln]	45.13	159.60	565.66	446.75	234.47	79.97	62.65	97.59	136.32	44.74	865.45
95th-Percentile Queue Length [veh/ln]	3.25	10.53	33.76	27.29	14.40	5.76	4.51	7.03	9.28	3.22	50.74
95th-Percentile Queue Length [ft/ln]	81.24	263.20	843.92	682.19	360.03	143.94	112.77	175.66	232.06	80.52	1268.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.96	44.52	167.94	155.27	36.09	30.38	57.10	35.21	35.21	54.89	28.31	169.38
Movement LOS	E	D	F	F	D	C	E	D	D	D	C	F
d_A, Approach Delay [s/veh]	101.09			89.37			42.45			121.63		
Approach LOS	F			F			D			F		
d_I, Intersection Delay [s/veh]	98.32											
Intersection LOS	F											
Intersection V/C	0.949											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.277	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	650	167	650
d_b, Bicycle Delay [s]	36.04	27.34	50.42	27.34
l_b,int, Bicycle LOS Score for Intersection	2.408	2.940	1.964	3.513
Bicycle LOS	B	C	A	D

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Agua Mansa Rd/Market St

Control Type:	Signalized	Delay (sec / veh):	41.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.733

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	2	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	200.00	85.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			30.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	0	3	0	123	0	312	283	547	3	0	455	196
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	61	0	30	109	108	40	0	279	181
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	40	0	0	4	0	0	41
Total Hourly Volume [veh/h]	0	4	3	206	0	358	443	753	40	0	816	371
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	54	0	94	117	198	11	0	215	98
Total Analysis Volume [veh/h]	0	4	3	217	0	377	466	793	42	0	859	391
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	44	52	0	22	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	1.5	3.0	0.0	1.5	3.0	0.0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.2	0.0	0.0	3.9	0.0	2.2	4.5	0.0	2.2	4.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.20	5.90	5.90	4.20	6.50	6.50	4.20	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.90	3.90	2.20	4.50	4.50	2.20	4.50	4.50
g_i, Effective Green Time [s]	41	40	40	33	63	63	0	31	31
g / C, Green / Cycle	0.34	0.34	0.34	0.27	0.53	0.53	0.00	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.00	0.15	0.23	0.26	0.22	0.03	0.00	0.24	0.24
s, saturation flow rate [veh/h]	1766	1431	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	603	515	542	491	1903	849	1	923	412
d1, Uniform Delay [s]	26.14	31.31	34.56	42.93	17.27	13.85	0.00	43.66	43.93
k, delay calibration	0.50	0.50	0.50	0.26	0.11	0.11	0.04	0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	2.52	7.22	19.26	0.15	0.02	0.00	4.91	16.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.42	0.70	0.95	0.42	0.05	0.00	0.93	0.95
d, Delay for Lane Group [s/veh]	26.17	33.83	41.79	62.19	17.42	13.87	0.00	48.57	60.58
Lane Group LOS	C	C	D	E	B	B	A	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.14	5.30	10.57	16.06	6.59	0.56	0.00	12.60	12.87
50th-Percentile Queue Length [ft/ln]	3.54	132.45	264.15	401.57	164.81	14.05	0.00	315.06	321.80
95th-Percentile Queue Length [veh/ln]	0.25	9.07	15.90	22.64	10.80	1.01	0.00	18.42	18.76
95th-Percentile Queue Length [ft/ln]	6.37	226.82	397.42	565.89	270.08	25.30	0.00	460.61	468.90

Movement, Approach, & Intersection Results

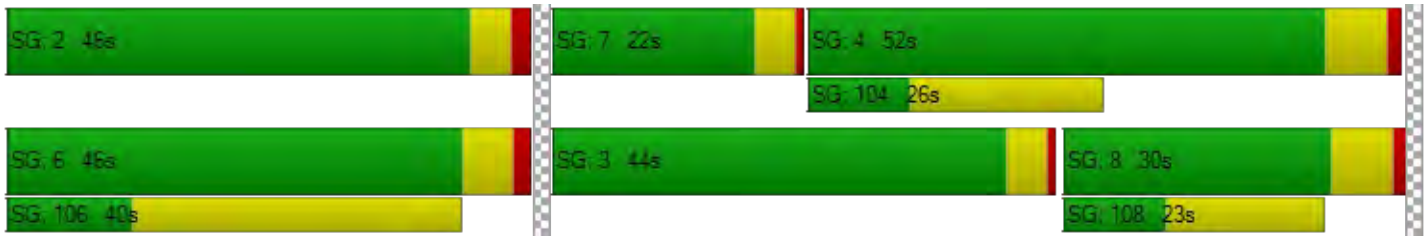
d_M, Delay for Movement [s/veh]	26.17	26.17	26.17	33.83	41.79	41.79	62.19	17.42	13.87	0.00	48.57	60.58
Movement LOS	C	C	C	C	D	D	E	B	B	A	D	E
d_A, Approach Delay [s/veh]	26.17			38.88			33.34			52.33		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	41.90											
Intersection LOS	D											
Intersection V/C	0.733											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	13.0	15.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	47.70	45.94	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.749	2.509	2.898	0.000
Crosswalk LOS	A	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	668	758	392
d_b, Bicycle Delay [s]	26.14	26.60	23.13	38.80
l_b,int, Bicycle LOS Score for Intersection	1.571	2.606	2.636	2.625
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	3	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Rubidoux Blvd/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	33.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.866

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	85.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	37	587	0	0	872	18	16	0	158	386	67	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	301	0	0	161	5	16	0	142	0	19	42
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	3	0	0	33	0	0	14
Total Hourly Volume [veh/h]	71	994	0	0	1190	23	35	0	295	455	98	121
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	262	0	0	313	6	9	0	78	120	26	32
Total Analysis Volume [veh/h]	75	1046	0	0	1253	24	37	0	311	479	103	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	4	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	35	0	0	35	0	20	0	0	0	30	0
Maximum Green [s]	0	25	0	0	25	0	35	0	0	0	20	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	4.8	0.0	0.0	0.0	4.8	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	41	0	0	41	0	39	0	0	0	39	0
Vehicle Extension [s]	0.0	3.5	0.0	0.0	3.5	0.0	2.0	0.0	0.0	0.0	3.5	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	3.8	0.0	0.0	0.0	3.8	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.80	5.80	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.40	3.40	3.80	3.80	3.80	3.80
g_i, Effective Green Time [s]	36	36	36	36	33	33	33	33
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.17	0.29	0.34	0.34	0.03	0.19	0.53	0.08
s, saturation flow rate [veh/h]	440	3618	1900	1887	1169	1615	1104	1615
c, Capacity [veh/h]	151	1610	846	840	118	670	540	670
d1, Uniform Delay [s]	35.56	17.33	18.56	18.62	39.27	16.95	26.77	14.86
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.50	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.30	2.05	6.22	6.41	0.56	0.19	61.29	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.65	0.76	0.76	0.31	0.46	1.08	0.19
d, Delay for Lane Group [s/veh]	46.86	19.38	24.77	25.03	39.82	17.14	88.06	15.02
Lane Group LOS	D	B	C	C	D	B	F	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.89	7.08	10.11	10.18	0.73	3.93	19.52	1.39
50th-Percentile Queue Length [ft/ln]	47.22	176.90	252.77	254.40	18.34	98.28	487.91	34.84
95th-Percentile Queue Length [veh/ln]	3.40	11.44	15.33	15.41	1.32	7.08	28.18	2.51
95th-Percentile Queue Length [ft/ln]	85.00	285.97	383.14	385.19	33.02	176.90	704.49	62.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.86	19.38	0.00	0.00	24.90	25.03	39.82	0.00	17.14	88.06	88.06	15.02
Movement LOS	D	B			C	C	D		B	F	F	B
d_A, Approach Delay [s/veh]	21.22			24.90			19.55			74.97		
Approach LOS	C			C			B			E		
d_I, Intersection Delay [s/veh]	33.44											
Intersection LOS	C											
Intersection V/C	0.866											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	35.6
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	29.76	0.00	12.32
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.995	0.000	2.192
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	890	890	830	830
d_b, Bicycle Delay [s]	12.32	12.32	13.69	13.69
l_b,int, Bicycle LOS Score for Intersection	2.484	2.616	1.560	2.753
Bicycle LOS	B	B	A	C

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Rubidoux Blvd/SrR-60 WB On Ramp

Control Type:	Two-way stop	Delay (sec / veh):	177.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.248

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	145.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	271	624	776	642	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	328	150	154	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	320	1064	1066	912	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	280	281	240	0	0
Total Analysis Volume [veh/h]	337	1120	1122	960	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.25	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	177.03	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	16.18	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	404.45	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	40.95		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	16.86					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 24: Rubidoux Blvd/SR-60 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	95.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.963

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	145.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	505	483	149	612	0	382	10	182	8	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	56	0	97	53	0	271	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	57	0	0	0	0	0	22	0	0	0
Total Hourly Volume [veh/h]	0	652	513	273	775	0	722	12	193	9	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	172	135	72	204	0	190	3	51	2	0	1
Total Analysis Volume [veh/h]	0	686	540	287	816	0	760	13	203	9	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Permiss	Split
Signal Group	0	2	0	1	6	0	0	4	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	5	0	0
Maximum Green [s]	0	35	0	30	35	0	0	35	0	20	0	0
Amber [s]	0.0	4.4	0.0	4.1	4.4	0.0	0.0	4.8	0.0	4.4	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	43	0	18	61	0	0	48	0	11	0	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	3.0	0.0	2.0	0.0	0.0
Walk [s]	0	4	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	33	0	0	18	0	0	28	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	3.1	3.4	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.10	5.40	5.80	5.80	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.10	3.40	3.80	3.80	3.40	3.40
g_i, Effective Green Time [s]	38	38	17	59	42	42	2	2
g / C, Green / Cycle	0.31	0.31	0.14	0.50	0.35	0.35	0.01	0.01
(v / s)_i Volume / Saturation Flow Rate	0.32	0.37	0.16	0.23	0.43	0.13	0.00	0.00
s, saturation flow rate [veh/h]	1900	1644	1810	3618	1811	1615	1810	1615
c, Capacity [veh/h]	597	517	250	1792	637	568	27	24
d1, Uniform Delay [s]	41.14	41.14	51.70	19.74	38.90	28.85	58.53	58.38
k, delay calibration	0.50	0.50	0.11	0.50	0.50	0.11	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	43.72	101.92	76.34	0.84	110.20	0.38	2.72	1.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.03	1.19	1.15	0.46	1.21	0.36	0.34	0.17
d, Delay for Lane Group [s/veh]	84.86	143.06	128.03	20.58	149.10	29.23	61.25	59.60
Lane Group LOS	F	F	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	24.27	29.36	12.68	7.31	37.67	4.36	0.29	0.13
50th-Percentile Queue Length [ft/ln]	606.66	733.93	317.06	182.83	941.72	108.89	7.23	3.18
95th-Percentile Queue Length [veh/ln]	32.92	42.45	19.65	11.75	54.01	7.78	0.52	0.23
95th-Percentile Queue Length [ft/ln]	823.01	1061.15	491.36	293.71	1350.14	194.45	13.01	5.73

Movement, Approach, & Intersection Results

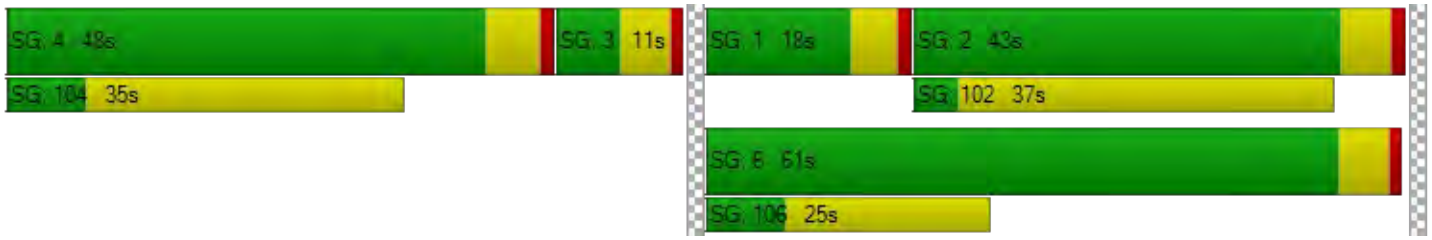
d_M, Delay for Movement [s/veh]	0.00	91.05	143.06	128.03	20.58	0.00	149.10	149.10	29.23	61.25	0.00	59.60
Movement LOS		F	F	F	C		F	F	C	E		E
d_A, Approach Delay [s/veh]	113.96			48.54			124.17			60.74		
Approach LOS	F			D			F			E		
d_I, Intersection Delay [s/veh]	95.01											
Intersection LOS	F											
Intersection V/C	0.963											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	52.27
l_p,int, Pedestrian LOS Score for Intersectio	2.984	0.000	2.364	2.301
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	627	927	703	93
d_b, Bicycle Delay [s]	28.29	17.28	25.22	54.53
l_b,int, Bicycle LOS Score for Intersection	2.618	2.470	3.206	1.560
Bicycle LOS	B	B	C	A

Sequence

Ring 1	4	3	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Market St/Rivera St

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	165.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	17	709	259	35	797	3	0	0	29	259	3	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	561	0	4	225	0	0	0	0	0	0	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	31	0	0	0	0	0	3	0	0	7
Total Hourly Volume [veh/h]	20	1398	275	45	1165	4	0	0	31	306	4	65
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	368	72	12	307	1	0	0	8	81	1	17
Total Analysis Volume [veh/h]	21	1472	289	47	1226	4	0	0	33	322	4	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	6	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	5	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	30	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	22	24	24	16	18	0	0	39	0	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	14	0	10	0	0	10	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	70	70	4	72	72	3	3	12	12	12
g / C, Green / Cycle	0.02	0.67	0.67	0.04	0.68	0.68	0.03	0.03	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.01	0.41	0.18	0.03	0.32	0.32	0.00	0.02	0.09	0.09	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1898	1900	1615	1810	1812	1615
c, Capacity [veh/h]	40	2417	1079	65	1295	1294	57	48	206	206	184
d1, Uniform Delay [s]	50.79	9.75	7.04	50.12	7.87	7.87	0.00	50.43	45.31	45.31	43.04
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.26	1.15	0.61	14.42	1.25	1.25	0.00	15.43	6.68	6.67	1.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.61	0.27	0.73	0.48	0.48	0.00	0.68	0.79	0.79	0.37
d, Delay for Lane Group [s/veh]	61.05	10.90	7.65	64.54	9.12	9.12	0.00	65.85	51.99	51.98	44.28
Lane Group LOS	E	B	A	E	A	A	A	E	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.64	7.96	2.33	1.44	5.64	5.64	0.00	1.07	4.49	4.50	1.69
50th-Percentile Queue Length [ft/ln]	16.11	199.00	58.27	36.10	141.04	140.91	0.00	26.79	112.33	112.45	42.34
95th-Percentile Queue Length [veh/ln]	1.16	12.59	4.20	2.60	9.54	9.53	0.00	1.93	7.97	7.98	3.05
95th-Percentile Queue Length [ft/ln]	28.99	314.68	104.88	64.97	238.42	238.25	0.00	48.22	199.24	199.40	76.20

Movement, Approach, & Intersection Results

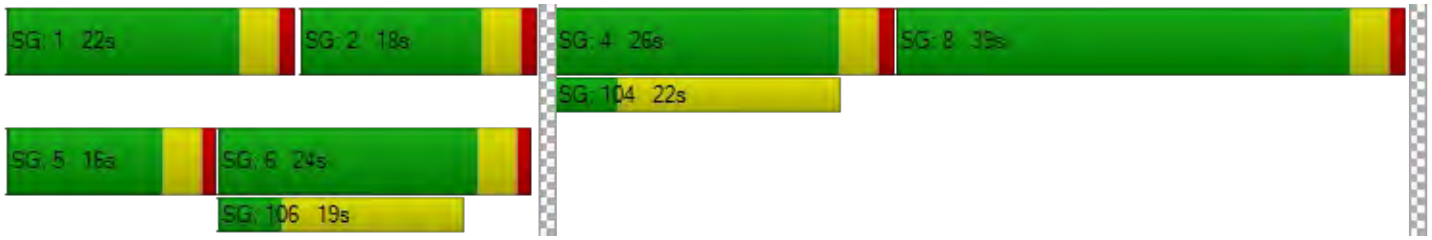
d_M, Delay for Movement [s/veh]	61.05	10.90	7.65	64.54	9.12	9.12	0.00	0.00	65.85	51.99	51.98	44.28
Movement LOS	E	B	A	E	A	A	A	A	E	D	D	D
d_A, Approach Delay [s/veh]	10.97			11.16			65.85			50.66		
Approach LOS	B			B			E			D		
d_I, Intersection Delay [s/veh]	16.04											
Intersection LOS	B											
Intersection V/C	0.543											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	43.89	0.00	43.89
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.150	0.000	2.337
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	381	267	667	419
d_b, Bicycle Delay [s]	34.40	39.43	23.33	32.80
l_b,int, Bicycle LOS Score for Intersection	3.055	2.613	1.619	2.221
Bicycle LOS	C	B	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Market St/SR-60 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	9.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.552

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	185.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	188	330	0	0	944	141	0	0	0	70	0	655
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	140	0	0	172	53	0	0	0	0	0	421
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	22	0	0	0	0	0	119
Total Hourly Volume [veh/h]	222	529	0	0	1286	197	0	0	0	83	0	1075
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	139	0	0	338	52	0	0	0	22	0	283
Total Analysis Volume [veh/h]	234	557	0	0	1354	207	0	0	0	87	0	1132
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	13	22	0	0	9	0	0	0	0	38	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C		L
C, Cycle Length [s]	60	60	60		60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00
g_i, Effective Green Time [s]	9	48	35		4
g / C, Green / Cycle	0.15	0.80	0.59		0.06
(v / s)_i Volume / Saturation Flow Rate	0.13	0.15	0.37		0.05
s, saturation flow rate [veh/h]	1810	3618	3618		1810
c, Capacity [veh/h]	271	2897	2114		119
d1, Uniform Delay [s]	24.89	1.41	8.29		27.51
k, delay calibration	0.11	0.50	0.50		0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00
d2, Incremental Delay [s]	7.94	0.15	1.50		8.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00
PF, progression factor	1.00	1.00	1.00		1.00

Lane Group Results

X, volume / capacity	0.86	0.19	0.64		0.73
d, Delay for Lane Group [s/veh]	32.84	1.55	9.79		35.83
Lane Group LOS	C	A	A		D
Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	3.45	0.06	4.06		1.42
50th-Percentile Queue Length [ft/ln]	86.20	1.49	101.59		35.38
95th-Percentile Queue Length [veh/ln]	6.21	0.11	7.31		2.55
95th-Percentile Queue Length [ft/ln]	155.16	2.68	182.86		63.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.84	1.55	0.00	0.00	9.79	0.00	0.00	0.00	0.00	35.83	0.00	0.00
Movement LOS	C	A			A					D		
d_A, Approach Delay [s/veh]	10.81			8.55			0.00			2.68		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	9.12											
Intersection LOS	A											
Intersection V/C	0.552											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	1.954
Crosswalk LOS	F	F	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	167	0	1133
d_b, Bicycle Delay [s]	14.70	25.21	30.00	5.63
l_b,int, Bicycle LOS Score for Intersection	2.212	2.677	4.132	1.560
Bicycle LOS	B	B	D	A

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Market St/SR-60 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	45.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.855

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	60.00	155.00	100.00	100.00	180.00	100.00	410.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	408	141	601	412	0	113	0	511	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	84	0	134	38	0	56	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	17	0	0	0	0	0	60	0	0	0
Total Hourly Volume [veh/h]	0	565	149	843	524	0	189	0	543	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	149	39	222	138	0	50	0	143	0	0	0
Total Analysis Volume [veh/h]	0	595	157	887	552	0	199	0	572	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	24	0	69	93	0	27	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	24	61	89	23	23	
g / C, Green / Cycle	0.20	0.51	0.74	0.19	0.19	
(v / s)_i Volume / Saturation Flow Rate	0.16	0.49	0.15	0.11	0.20	
s, saturation flow rate [veh/h]	3618	1810	3618	1810	2859	
c, Capacity [veh/h]	733	915	2683	347	548	
d1, Uniform Delay [s]	45.67	28.74	4.73	44.05	48.50	
k, delay calibration	0.50	0.40	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	9.55	20.27	0.17	1.50	30.67	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.81	0.97	0.21	0.57	1.04	
d, Delay for Lane Group [s/veh]	55.22	49.01	4.90	45.55	79.17	
Lane Group LOS	E	D	A	D	F	
Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.16	27.63	1.71	5.47	10.41	
50th-Percentile Queue Length [ft/ln]	229.12	690.65	42.71	136.83	260.29	
95th-Percentile Queue Length [veh/ln]	14.13	36.25	3.07	9.31	16.05	
95th-Percentile Queue Length [ft/ln]	353.24	906.14	76.87	232.75	401.17	

Movement, Approach, & Intersection Results

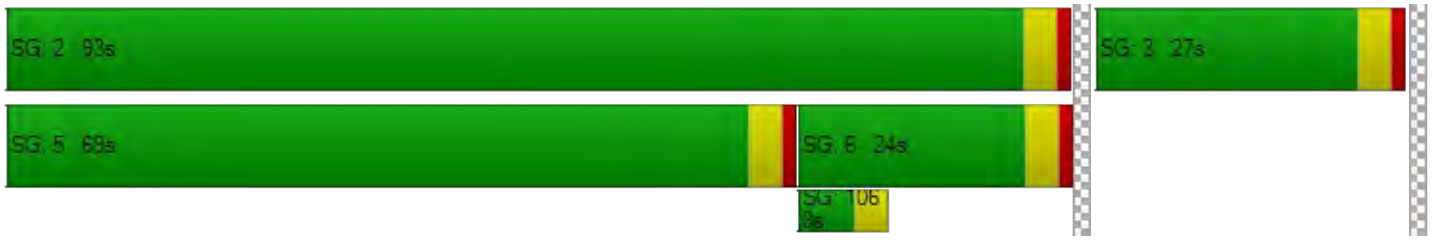
d_M, Delay for Movement [s/veh]	0.00	55.22	0.00	49.01	4.90	0.00	45.55	0.00	79.17	0.00	0.00	0.00
Movement LOS		E		D	A		D		F			
d_A, Approach Delay [s/veh]	44.16			32.09			70.50			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	45.21											
Intersection LOS	D											
Intersection V/C	0.855											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.303
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	1483	383	0
d_b, Bicycle Delay [s]	41.67	4.00	39.20	60.00
l_b,int, Bicycle LOS Score for Intersection	2.050	2.747	1.560	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Sierra Ave/20th St

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.147

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	1350.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	18	0	0	3	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	150	0	25	45	0	52
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	5
Total Hourly Volume [veh/h]	171	0	25	49	0	47
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	0	7	13	0	12
Total Analysis Volume [veh/h]	180	0	26	52	0	49
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	23	0	29	52	38	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	14	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	72	72	2	78	4	4
g / C, Green / Cycle	0.80	0.80	0.03	0.87	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.11	0.00	0.01	0.03	0.00	0.03
s, saturation flow rate [veh/h]	1710	1454	3163	1710	1629	1454
c, Capacity [veh/h]	1364	1160	87	1488	67	60
d1, Uniform Delay [s]	2.05	0.00	42.91	0.79	0.00	42.81
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	0.00	1.89	0.04	0.00	22.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.00	0.30	0.03	0.00	0.82
d, Delay for Lane Group [s/veh]	2.25	0.00	44.80	0.83	0.00	65.64
Lane Group LOS	A	A	D	A	A	E
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.42	0.00	0.30	0.02	0.00	1.43
50th-Percentile Queue Length [ft/ln]	10.38	0.00	7.45	0.45	0.00	35.67
95th-Percentile Queue Length [veh/ln]	0.75	0.00	0.54	0.03	0.00	2.57
95th-Percentile Queue Length [ft/ln]	18.69	0.00	13.41	0.81	0.00	64.21

Movement, Approach, & Intersection Results

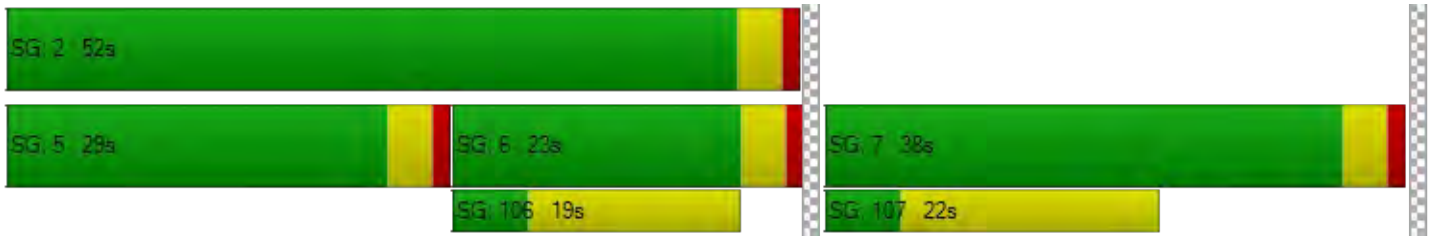
d_M, Delay for Movement [s/veh]	2.25	0.00	44.80	0.83	0.00	65.64
Movement LOS	A	A	D	A	A	E
d_A, Approach Delay [s/veh]	2.25		15.49		65.64	
Approach LOS	A		B		E	
d_I, Intersection Delay [s/veh]	15.73					
Intersection LOS	B					
Intersection V/C	0.147					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.042	2.382	2.166
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	422	1067	756
d_b, Bicycle Delay [s]	28.01	9.80	17.42
l_b,int, Bicycle LOS Score for Intersection	1.857	1.688	1.560
Bicycle LOS	A	A	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Interim Year AM.pdf

Scenario 13 OY AM
2/15/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound		Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Right	Left	Right	
1	Sierra Ave/I-10 Ramps	552	981	518	635	1080	881	1016	690	558	658	7569

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Sierra Ave/Slover Ave	123	1289	133	778	1203	338	217	334	68	80	327	562	5452

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Sierra Ave/Santa Ana Ave	201	1230	61	227	866	138	137	93	84	61	140	141	3379

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Sierra Ave/Jurupa Ave	520	910	58	39	494	287	306	223	314	151	290	118	3710

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Armstrong Rd/Sierra Ave	1292	328	135	26	443	59	62	32	824	217	84	29	3531

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
6	Armstrong/30th St	1712	44	15	1478	77	37	3363

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
7	Valley Way/SR-60 WB Off Ramp	107	1112	1503	12	61	201	228	118	659	4001

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
8	Valley Way/SR-60 WB On Ramp	257	1219	1329	602	3407

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR-60 EB Ramps/Mission Blvd	14	2	5	661	5	53	122	405	7	6	436	335	2051

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
10	Valley Way/Mission Blvd	19	442	53	489	419	473	585	355	20	66	215	743	3879

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
11	Jurupa Rd/Mission Blvd	30	202	830	26	153	951	2192

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	Pacific Ave/Mission Blvd	180	66	120	35	91	121	117	715	90	181	708	32	2456

ID	Intersection Name	Northbound		Southbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Thru	Right	
13	Cedar Ave/I-10 WB Ramp	411	1507	1672	847	767	4	484	5692

ID	Intersection Name	Northbound		Southbound		Eastbound			Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	
14	Cedar Ave/I-10 EB Ramps	1357	561	496	1959	562	4	687	5626

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
15	Cedar Ave/Orange St	10	1438	4	126	1975	538	321	6	15	0	1	160	4594

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	Cedar Ave/Slover Ave	207	1036	20	142	1510	292	306	189	127	28	244	125	4226

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Cedar Ave/Santa Ana Ave	139	1076	24	54	1563	65	90	98	157	55	107	52	3480

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	Cedar Ave/Jurupa Ave	225	951	51	103	1373	313	129	95	112	50	118	160	3680

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Cedar Ave/7th St	100	1093	9	23	1347	52	51	11	177	52	17	16	2948

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	Rubidoux Blvd/Market St	58	452	469	717	731	142	77	82	74	339	83	707	3931

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	Agua Mansa Rd/Market St	0	4	3	206	0	398	443	753	44	0	816	412	3079

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
22	Rubidoux Blvd/SR-60 WB Off Ramp	71	994	1190	26	35	328	455	98	135	3332

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
23	Rubidoux Blvd/SrR-60 WB On Ramp	320	1064	1066	912	3362

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	Left	Right	
24	Rubidoux Blvd/SR-60 EB Ramps	652	570	273	775	722	12	215	9	4	3232

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Market St/Rivera St	20	1398	306	45	1165	4	0	0	34	306	4	72	3354

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
26	Market St/SR-60 WB Ramp	222	529	1286	219	83	1194	3533

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Thru	Right	Left	Thru	Left	2	
27	Market St/SR-60 EB Ramp	565	166	843	524	189	603	2890

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
28	Sierra Ave/20th St	171	0	25	49	0	52	297

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Rio Vista Specific Plan

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Report File: C:\...\Interim Year PM.pdf

Scenario 14 OY PM
2/15/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Ave/I-10 Ramps	Signalized	HCM 7th Edition	SB Left	0.818	31.2	C
2	Sierra Ave/Slover Ave	Signalized	HCM 7th Edition	EB Left	0.956	69.9	E
3	Sierra Ave/Santa Ana Ave	Signalized	HCM 7th Edition	EB Left	0.684	38.6	D
4	Sierra Ave/Jurupa Ave	Signalized	HCM 7th Edition	EB Left	0.748	43.7	D
5	Armstrong Rd/Sierra Ave	Signalized	HCM 7th Edition	EB Left	0.792	54.1	D
6	Armstrong/30th St	Signalized	HCM 7th Edition	WB Right	0.753	6.4	A
7	Valley Way/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	EB Left	1.128	136.2	F
8	Valley Way/SR-60 WB On Ramp	Signalized	HCM 7th Edition	NB Left	0.641	8.1	A
9	SR-60 EB Ramps/Mission Blvd	Signalized	HCM 7th Edition	SB Right	0.718	119.5	F
10	Valley Way/Mission Blvd	Signalized	HCM 7th Edition	NB Left	0.796	46.3	D
11	Jurupa Rd/Mission Blvd	Two-way stop	HCM 7th Edition	NB Left	1.958	1,412.7	F
12	Pacific Ave/Mission Blvd	Signalized	HCM 7th Edition	EB Left	0.650	24.1	C
13	Cedar Ave/I-10 WB Ramp	Signalized	HCM 7th Edition	NB Left	0.576	15.2	B
14	Cedar Ave/I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.734	23.9	C
15	Cedar Ave/Orange St	Signalized	HCM 7th Edition	EB Left	0.808	33.3	C
16	Cedar Ave/Slover Ave	Signalized	HCM 7th Edition	EB Left	0.815	58.8	E
17	Cedar Ave/Santa Ana Ave	Signalized	HCM 7th Edition	NB Left	0.827	57.3	E
			HCM 7th				

18	Cedar Ave/Jurupa Ave	Signalized	HCM 7th Edition	EB Left	2.634	240.2	F
19	Cedar Ave/7th St	Signalized	HCM 7th Edition	EB Right	0.790	30.1	C
20	Rubidoux Blvd/Market St	Signalized	HCM 7th Edition	WB Right	1.081	121.8	F
21	Agua Mansa Rd/Market St	Signalized	HCM 7th Edition	WB Thru	0.868	66.1	E
22	Rubidoux Blvd/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	WB Left	1.075	64.3	E
23	Rubidoux Blvd/SrR-60 WB On Ramp	Two-way stop	HCM 7th Edition	NB Left	1.130	145.2	F
24	Rubidoux Blvd/SR-60 EB Ramps	Signalized	HCM 7th Edition	EB Left	0.879	75.0	E
25	Market St/Rivera St	Signalized	HCM 7th Edition	NB Left	0.600	18.9	B
26	Market St/SR-60 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.752	19.4	B
27	Market St/SR-60 EB Ramp	Signalized	HCM 7th Edition	EBR2	1.046	116.3	F
28	Sierra Ave/20th St	Signalized	HCM 7th Edition	WB Right	0.132	11.6	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Ave/I-10 Ramps

Control Type:	Signalized	Delay (sec / veh):	31.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.818

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	565.00	100.00	100.00	325.00	100.00	305.00	440.00	100.00	1500.00	1205.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	390.00	0.00	0.00	665.00	0.00	0.00	1215.00	0.00	0.00	1150.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	591	1241	718	519	918	749	902	0	437	427	0	589
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	171	89	51	0	57	0	0	0	78	28	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	90	0	0	88	0	0	59	0	0	70
Total Hourly Volume [veh/h]	868	1553	808	612	1140	796	1064	0	535	532	0	625
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	228	409	213	161	300	209	280	0	141	140	0	164
Total Analysis Volume [veh/h]	914	1635	851	644	1200	838	1120	0	563	560	0	658
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna
Signal Group	1	6	0	5	2	0	3	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	0	0	5	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	40	32	0	40	32	0	48	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	5	0	0
Pedestrian Clearance [s]	0	23	0	0	23	0	39	0	0	35	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No		No	No		No			No		
Maximum Recall	No	No		No	No		No			No		
Pedestrian Recall	No	No		No	No		No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	L
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	34	42	25	33	41	41
g / C, Green / Cycle	0.28	0.35	0.21	0.28	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.26	0.32	0.18	0.23	0.32	0.16
s, saturation flow rate [veh/h]	3514	5176	3514	5176	3514	3514
c, Capacity [veh/h]	984	1810	735	1443	1199	1199
d1, Uniform Delay [s]	42.03	37.09	45.94	40.63	38.23	30.98
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.52	7.88	3.52	5.73	4.05	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.90	0.88	0.83	0.93	0.47
d, Delay for Lane Group [s/veh]	46.55	44.97	49.46	46.36	42.28	31.27
Lane Group LOS	D	D	D	D	D	C
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.38	15.92	9.53	11.66	16.17	6.33
50th-Percentile Queue Length [ft/ln]	334.50	397.88	238.32	291.53	404.29	158.17
95th-Percentile Queue Length [veh/ln]	19.38	22.46	14.60	17.26	22.77	10.45
95th-Percentile Queue Length [ft/ln]	484.47	561.44	364.90	431.54	569.17	261.30

Movement, Approach, & Intersection Results

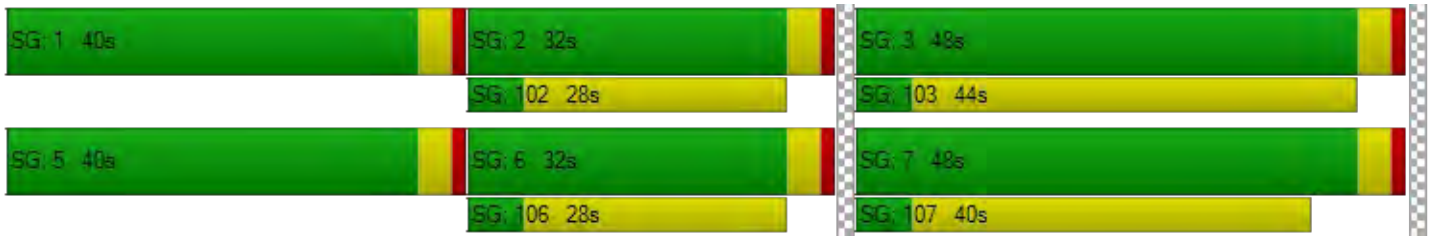
d_M, Delay for Movement [s/veh]	46.55	44.97	0.00	49.46	46.36	0.00	42.28	0.00	0.00	31.27	0.00	0.00
Movement LOS	D	D		D	D		D			C		
d_A, Approach Delay [s/veh]	34.58			33.14			28.61			14.78		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	31.21											
Intersection LOS	C											
Intersection V/C	0.818											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.603	3.505	2.854	2.696
Crosswalk LOS	D	D	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	467	467	733	733
d_b, Bicycle Delay [s]	35.27	35.27	24.07	24.07
l_b,int, Bicycle LOS Score for Intersection	2.962	2.574	1.560	1.560
Bicycle LOS	C	B	A	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	69.9
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.956

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	265.00	100.00	675.00	675.00	100.00	100.00	345.00	100.00	320.00	275.00	100.00	465.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	600.00	0.00	0.00	0.00
Speed [mph]	50.00			40.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	164	1274	177	687	973	148	346	687	89	219	385	894
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	195	3	37	125	1	12	15	1	6	26	104
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	21	0	0	18	0	0	11	0	0	116
Total Hourly Volume [veh/h]	196	1698	191	848	1273	158	420	826	95	264	480	1043
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	447	50	223	335	42	111	217	25	69	126	274
Total Analysis Volume [veh/h]	206	1787	201	893	1340	166	442	869	100	278	505	1098
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	137.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	11	40	0	35	64	0	15	40	0	20	45	45
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	31	0	0	27	0	0	31	0	0	31	31
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	7	40	40	31	64	64	11	35	35	13	37	72
g / C, Green / Cycle	0.05	0.30	0.30	0.23	0.47	0.47	0.08	0.26	0.26	0.10	0.27	0.53
(v / s)_i Volume / Saturation Flow Rate	0.06	0.29	0.29	0.25	0.28	0.28	0.13	0.24	0.06	0.08	0.14	0.38
s, saturation flow rate [veh/h]	3514	5176	1776	3514	3618	1796	3514	3618	1615	3514	3618	2859
c, Capacity [veh/h]	182	1534	527	807	1716	852	286	940	420	336	991	1524
d1, Uniform Delay [s]	64.00	46.78	46.80	52.00	25.77	26.00	62.00	48.68	39.43	59.95	41.36	23.89
k, delay calibration	0.11	0.50	0.50	0.12	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	73.52	15.92	31.52	53.16	1.45	3.06	248.44	4.49	0.29	5.20	0.41	1.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.13	0.96	0.97	1.11	0.58	0.60	1.54	0.92	0.24	0.83	0.51	0.72
d, Delay for Lane Group [s/veh]	137.52	62.70	78.32	105.16	27.22	29.06	310.44	53.17	39.72	65.15	41.77	25.03
Lane Group LOS	F	E	E	F	C	C	F	D	D	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.91	17.86	20.69	19.34	11.63	12.30	14.69	14.42	2.61	4.79	6.94	12.48
50th-Percentile Queue Length [ft/ln]	122.81	446.38	517.18	483.49	290.83	307.38	367.33	360.42	65.30	119.81	173.44	311.92
95th-Percentile Queue Length [veh/ln]	8.83	24.79	28.15	28.10	17.23	18.05	23.86	20.64	4.70	8.38	11.26	18.27
95th-Percentile Queue Length [ft/ln]	220.87	619.63	703.66	702.40	430.67	451.14	596.41	516.09	117.54	209.57	281.43	456.74

Movement, Approach, & Intersection Results

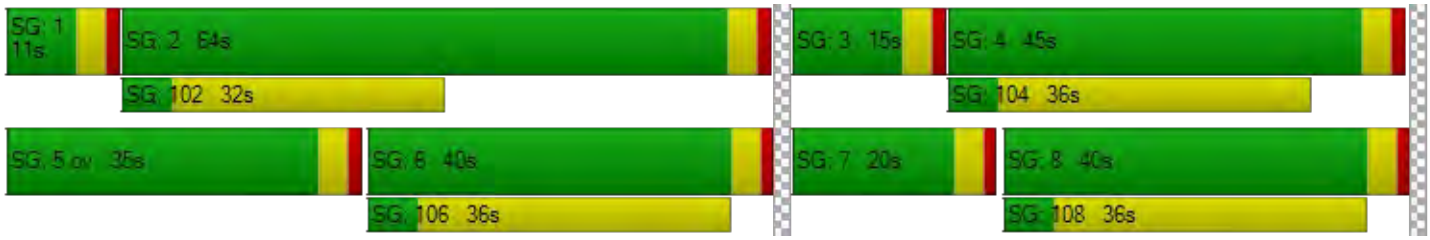
d_M, Delay for Movement [s/veh]	137.52	65.39	78.32	105.16	27.69	29.06	310.44	53.17	39.72	65.15	41.77	25.03
Movement LOS	F	E	E	F	C	C	F	D	D	E	D	C
d_A, Approach Delay [s/veh]	73.35			56.62			132.81			35.45		
Approach LOS	E			E			F			D		
d_I, Intersection Delay [s/veh]	69.86											
Intersection LOS	E											
Intersection V/C	0.956											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	58.80	58.80	58.80	58.80
l_p,int, Pedestrian LOS Score for Intersectio	3.612	3.742	3.185	3.754
Crosswalk LOS	D	D	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	889	533	607
d_b, Bicycle Delay [s]	36.30	20.83	36.30	32.73
l_b,int, Bicycle LOS Score for Intersection	2.473	2.889	2.733	3.207
Bicycle LOS	B	C	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	38.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.684

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	285.00	100.00	210.00	375.00	100.00	100.00	240.00	100.00	100.00	300.00	100.00	350.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	535.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	190	1384	84	114	988	114	197	181	123	80	130	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	57	1	53	70	8	22	20	0	0	15	121
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	10	0	0	14	0	0	15	0	0	23
Total Hourly Volume [veh/h]	224	1690	90	188	1236	129	254	234	130	94	168	210
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	445	24	49	325	34	67	62	34	25	44	55
Total Analysis Volume [veh/h]	236	1779	95	198	1301	136	267	246	137	99	177	221
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	11	30	0	13	40	0	9	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	43	43	7	43	43	9	19	19	5	15	15
g / C, Green / Cycle	0.08	0.48	0.48	0.08	0.48	0.48	0.10	0.21	0.21	0.06	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.07	0.34	0.06	0.06	0.26	0.26	0.15	0.07	0.08	0.05	0.05	0.14
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1809	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	273	2484	775	270	1733	867	181	759	339	101	598	267
d1, Uniform Delay [s]	41.03	18.54	12.93	40.64	16.61	16.61	40.50	30.15	30.70	42.46	32.96	36.32
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.97	1.80	0.32	3.84	1.27	2.54	220.46	0.25	0.78	38.12	0.27	6.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.72	0.12	0.73	0.55	0.55	1.48	0.32	0.40	0.98	0.30	0.83
d, Delay for Lane Group [s/veh]	48.99	20.34	13.25	44.48	17.88	19.15	260.96	30.39	31.48	80.59	33.23	42.77
Lane Group LOS	D	C	B	D	B	B	F	C	C	F	C	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.74	8.72	1.00	2.17	6.31	6.62	14.93	2.19	2.53	3.19	1.66	4.97
50th-Percentile Queue Length [ft/ln]	68.48	217.99	24.94	54.18	157.70	165.49	373.35	54.86	63.33	79.70	41.38	124.25
95th-Percentile Queue Length [veh/ln]	4.93	13.56	1.80	3.90	10.43	10.84	24.17	3.95	4.56	5.74	2.98	8.63
95th-Percentile Queue Length [ft/ln]	123.26	339.06	44.89	97.53	260.67	270.97	604.20	98.75	113.99	143.45	74.48	215.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.99	20.34	13.25	44.48	18.22	19.15	260.96	30.39	31.48	80.59	33.23	42.77
Movement LOS	D	C	B	D	B	B	F	C	C	F	C	D
d_A, Approach Delay [s/veh]	23.23			21.47			125.33			46.90		
Approach LOS	C			C			F			D		
d_I, Intersection Delay [s/veh]	38.61											
Intersection LOS	D											
Intersection V/C	0.684											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.528	3.547	2.742	2.719
Crosswalk LOS	D	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	800	711
d_b, Bicycle Delay [s]	22.76	22.76	16.20	18.69
l_b,int, Bicycle LOS Score for Intersection	2.726	2.467	2.108	1.989
Bicycle LOS	B	B	B	A

Sequence

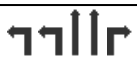
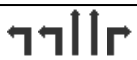
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	43.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	0	2	0	1
Entry Pocket Length [ft]	685.00	100.00	675.00	385.00	100.00	260.00	375.00	100.00	100.00	280.00	100.00	270.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	265	924	103	90	528	234	489	243	333	134	238	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	68	22	0	0	57	14	35	8	196	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	12	0	0	29	0	0	59	0	0	10
Total Hourly Volume [veh/h]	381	1112	110	106	680	261	612	295	530	158	284	88
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	100	293	29	28	179	69	161	78	139	42	75	23
Total Analysis Volume [veh/h]	401	1171	116	112	716	275	644	311	558	166	299	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	45	0	9	36	36	25	50	0	11	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	27	27	0	27	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	45	45	5	36	61	21	42	42	7	28	28
g / C, Green / Cycle	0.12	0.39	0.39	0.04	0.31	0.53	0.18	0.36	0.36	0.06	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.11	0.32	0.07	0.03	0.20	0.17	0.18	0.09	0.35	0.05	0.08	0.06
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	428	1415	632	153	1132	856	642	1322	590	214	881	393
d1, Uniform Delay [s]	50.07	31.52	22.97	54.34	33.85	15.29	47.00	25.34	35.38	53.23	35.86	34.90
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.36	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.03	5.69	0.64	6.62	2.69	0.99	17.37	0.09	20.89	5.95	0.23	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.83	0.18	0.73	0.63	0.32	1.00	0.24	0.95	0.78	0.34	0.24
d, Delay for Lane Group [s/veh]	60.10	37.21	23.61	60.97	36.54	16.28	64.37	25.43	56.27	59.18	36.08	35.21
Lane Group LOS	E	D	C	E	D	B	F	C	E	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.04	14.46	2.04	1.69	8.52	3.95	10.40	2.86	17.68	2.50	3.42	2.09
50th-Percentile Queue Length [ft/ln]	150.89	361.51	50.96	42.22	213.00	98.66	259.95	71.55	442.07	62.49	85.60	52.25
95th-Percentile Queue Length [veh/ln]	10.06	20.70	3.67	3.04	13.31	7.10	15.71	5.15	24.58	4.50	6.16	3.76
95th-Percentile Queue Length [ft/ln]	251.62	517.42	91.73	75.99	332.68	177.58	392.87	128.78	614.48	112.47	154.09	94.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.10	37.21	23.61	60.97	36.54	16.28	64.37	25.43	56.27	59.18	36.08	35.21
Movement LOS	E	D	C	E	D	B	F	C	E	E	D	D
d_A, Approach Delay [s/veh]	41.71			33.97			53.38			42.81		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	43.71											
Intersection LOS	D											
Intersection V/C	0.748											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.85	48.85	48.85	48.85
l_p,int, Pedestrian LOS Score for Intersectio	3.471	3.399	3.294	2.829
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	713	557	800	557
d_b, Bicycle Delay [s]	23.81	29.95	20.70	29.95
l_b,int, Bicycle LOS Score for Intersection	2.962	2.494	2.857	2.028
Bicycle LOS	C	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Armstrong Rd/Sierra Ave

Control Type:	Signalized	Delay (sec / veh):	54.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.792

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	1	0	0	1	1	0	0
Entry Pocket Length [ft]	490.00	100.00	100.00	310.00	100.00	270.00	100.00	100.00	75.00	195.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			55.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1181	737	38	8	185	40	171	59	700	54	45	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	69	39	115	2	121	0	16	36	185	84	21	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	16	0	0	5	0	0	101	0	0	6
Total Hourly Volume [veh/h]	1463	909	144	11	339	42	218	106	910	148	74	54
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	385	239	38	3	89	11	57	28	239	39	19	14
Total Analysis Volume [veh/h]	1540	957	152	12	357	44	229	112	958	156	78	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	0	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	0.0	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	67	72	0	11	16	0	30	47	0	20	37	0
Vehicle Extension [s]	3.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	3.3	0.0	3.3	3.3	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	5.30	5.30	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.30	3.30	3.30	3.30	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	62	96	96	2	37	37	21	15	14	8	8
g / C, Green / Cycle	0.41	0.64	0.64	0.01	0.25	0.25	0.14	0.10	0.09	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.44	0.50	0.09	0.00	0.19	0.03	0.13	0.03	0.09	0.04	0.04
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1645
c, Capacity [veh/h]	1445	1221	1038	47	465	395	251	362	169	104	90
d1, Uniform Delay [s]	44.15	19.30	10.58	73.27	52.70	44.00	63.70	62.68	67.47	69.58	69.77
k, delay calibration	0.11	0.50	0.50	0.04	0.50	0.50	0.18	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	33.45	5.08	0.30	1.06	11.56	0.57	18.54	0.48	8.33	7.35	10.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.07	0.78	0.15	0.26	0.77	0.11	0.91	0.31	0.92	0.67	0.72
d, Delay for Lane Group [s/veh]	77.60	24.38	10.87	74.33	64.26	44.57	82.24	63.16	75.80	76.93	80.09
Lane Group LOS	F	C	B	E	E	D	F	E	E	E	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	32.45	23.52	1.98	0.23	13.75	1.32	9.65	1.96	6.27	2.84	2.70
50th-Percentile Queue Length [ft/ln]	811.28	587.89	49.55	5.82	343.82	33.10	241.20	49.00	156.76	70.90	67.42
95th-Percentile Queue Length [veh/ln]	43.80	31.47	3.57	0.42	19.83	2.38	14.74	3.53	10.38	5.10	4.85
95th-Percentile Queue Length [ft/ln]	1094.97	786.71	89.20	10.48	495.86	59.59	368.55	88.19	259.42	127.62	121.35

Movement, Approach, & Intersection Results

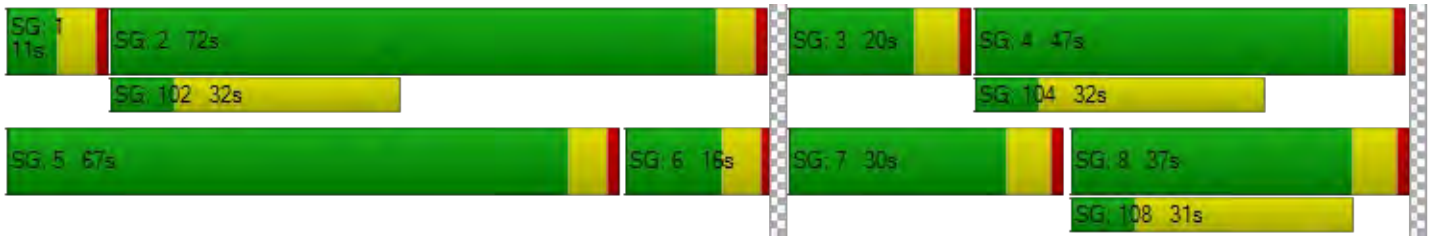
d_M, Delay for Movement [s/veh]	77.60	24.38	10.87	74.33	64.26	44.57	82.24	63.16	0.00	75.80	77.25	80.09
Movement LOS	F	C	B	E	E	D	F	E		E	E	F
d_A, Approach Delay [s/veh]	54.54			62.46			20.71			77.03		
Approach LOS	D			E			C			E		
d_I, Intersection Delay [s/veh]	54.08											
Intersection LOS	D											
Intersection V/C	0.792											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	64.40	64.40	0.00	64.40
l_p,int, Pedestrian LOS Score for Intersectio	3.275	2.819	0.000	2.486
Crosswalk LOS	C	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	889	143	547	413
d_b, Bicycle Delay [s]	23.13	64.68	39.60	47.20
l_b,int, Bicycle LOS Score for Intersection	5.957	2.249	1.841	1.805
Bicycle LOS	F	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Armstrong/30th St

Control Type:	Signalized	Delay (sec / veh):	6.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.753

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	135.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1904	56	32	917	22	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	223	0	0	403	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	7	0	0	0	3
Total Hourly Volume [veh/h]	2470	59	38	1485	26	29
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	650	16	10	391	7	8
Total Analysis Volume [veh/h]	2600	62	40	1563	27	31
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	5	5	0
Maximum Green [s]	45	0	30	5	30	0
Amber [s]	4.3	0.0	4.3	4.3	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	32	0	11	21	88	0
Vehicle Extension [s]	3.0	0.0	2.0	3.0	2.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	19	0	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.3	3.3	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	0.00	3.30	2.00
g_i, Effective Green Time [s]	105	105	105	94	5
g / C, Green / Cycle	0.88	0.88	0.88	0.79	0.04
(v / s)_i Volume / Saturation Flow Rate	0.72	0.04	0.35	0.43	0.03
s, saturation flow rate [veh/h]	3618	1615	113	3618	1700
c, Capacity [veh/h]	3176	1418	173	2844	76
d1, Uniform Delay [s]	3.18	0.93	12.76	4.83	56.70
k, delay calibration	0.50	0.50	0.50	0.50	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.48	0.06	3.10	0.77	5.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.04	0.23	0.55	0.77
d, Delay for Lane Group [s/veh]	5.66	0.99	15.86	5.60	62.58
Lane Group LOS	A	A	B	A	E
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.35	0.05	0.84	5.18	1.88
50th-Percentile Queue Length [ft/ln]	83.71	1.36	21.00	129.48	46.94
95th-Percentile Queue Length [veh/ln]	6.03	0.10	1.51	8.91	3.38
95th-Percentile Queue Length [ft/ln]	150.68	2.44	37.81	222.78	84.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	5.66	0.99	15.86	5.60	62.58	62.58
Movement LOS	A	A	B	A	E	E
d_A, Approach Delay [s/veh]	5.55		5.85		62.58	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	6.43					
Intersection LOS	A					
Intersection V/C	0.753					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.569	0.000	1.859
Crosswalk LOS	D	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	445	262	1400
d_b, Bicycle Delay [s]	36.27	45.33	5.40
l_b,int, Bicycle LOS Score for Intersection	3.762	2.882	1.660
Bicycle LOS	D	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Valley Way/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	136.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.128

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	280.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	30	1155	0	0	809	4	230	0	85	294	60	572
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	174	0	0	403	0	0	0	0	0	0	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	1	0	0	10	0	0	73
Total Hourly Volume [veh/h]	35	1537	0	0	1358	4	271	0	90	347	71	652
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	404	0	0	357	1	71	0	24	91	19	172
Total Analysis Volume [veh/h]	37	1618	0	0	1429	4	285	0	95	365	75	686
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	10	62	0	0	52	0	27	0	0	0	51	0
Vehicle Extension [s]	3.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	0.0	0.0	3.3	0.0	3.4	0.0	0.0	0.0	3.3	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	5.40	5.30	5.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	3.40	3.30	3.30
g_i, Effective Green Time [s]	4	57	48	48	22	46	46
g / C, Green / Cycle	0.03	0.41	0.34	0.34	0.15	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.02	0.45	0.38	0.38	0.22	0.20	0.46
s, saturation flow rate [veh/h]	1810	3618	1900	1898	1757	1810	1639
c, Capacity [veh/h]	52	1465	653	652	271	591	535
d1, Uniform Delay [s]	67.42	41.65	45.96	45.96	59.20	39.78	47.15
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.17	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.55	57.56	65.01	65.41	201.72	1.64	200.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	1.10	1.10	1.10	1.40	0.62	1.42
d, Delay for Lane Group [s/veh]	83.97	99.21	110.96	111.36	260.92	41.42	247.86
Lane Group LOS	F	F	F	F	F	D	F
Critical Lane Group	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.53	35.81	33.59	33.63	24.66	10.82	48.17
50th-Percentile Queue Length [ft/ln]	38.29	895.30	839.83	840.82	616.41	270.59	1204.27
95th-Percentile Queue Length [veh/ln]	2.76	49.01	45.94	46.01	37.77	16.22	72.38
95th-Percentile Queue Length [ft/ln]	68.92	1225.21	1148.42	1150.34	944.19	405.47	1809.45

Movement, Approach, & Intersection Results

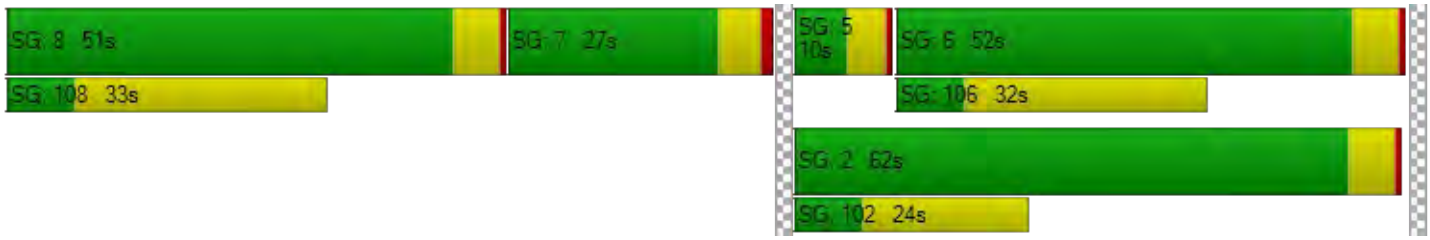
d_M, Delay for Movement [s/veh]	83.97	99.21	0.00	0.00	111.16	111.36	260.92	0.00	260.92	41.42	247.86	247.86
Movement LOS	F	F			F	F	F		F	D	F	F
d_A, Approach Delay [s/veh]	98.87			111.16			260.92			180.94		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	136.22											
Intersection LOS	F											
Intersection V/C	1.128											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	59.43	59.43	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.651	2.195	2.520
Crosswalk LOS	F	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	810	667	309	653
d_b, Bicycle Delay [s]	24.78	31.09	50.07	31.76
l_b,int, Bicycle LOS Score for Intersection	2.925	2.743	2.203	3.538
Bicycle LOS	C	B	B	D

Sequence

Ring 1	8	7	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Valley Way/SR-60 WB On Ramp

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.641

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No			
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	168	1202	981	198	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	174	147	255	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	49	0	0
Total Hourly Volume [veh/h]	198	1592	1305	440	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	419	343	116	0	0
Total Analysis Volume [veh/h]	208	1676	1374	463	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	63.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	5	0	0	0
Maximum Green [s]	30	40	40	0	0	0
Amber [s]	4.1	4.8	4.8	0.0	0.0	0.0
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0
Split [s]	25	140	115	0	0	0
Vehicle Extension [s]	3.0	2.0	2.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	3.3	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	140	140	140	140	
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	
g_i, Effective Green Time [s]	18	135	112	112	
g / C, Green / Cycle	0.13	0.96	0.80	0.80	
(v / s)_i Volume / Saturation Flow Rate	0.11	0.46	0.48	0.53	
s, saturation flow rate [veh/h]	1810	3618	1900	1745	
c, Capacity [veh/h]	233	3481	1521	1396	
d1, Uniform Delay [s]	60.01	0.19	5.40	5.89	
k, delay calibration	0.11	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	11.16	0.48	1.79	2.44	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.89	0.48	0.60	0.66	
d, Delay for Lane Group [s/veh]	71.18	0.67	7.19	8.33	
Lane Group LOS	E	A	A	A	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.85	0.23	8.19	9.06	
50th-Percentile Queue Length [ft/ln]	196.25	5.79	204.87	226.53	
95th-Percentile Queue Length [veh/ln]	12.45	0.42	12.89	14.00	
95th-Percentile Queue Length [ft/ln]	311.13	10.43	322.24	349.95	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.18	0.67	7.57	8.33	0.00	0.00
Movement LOS	E	A	A	A		
d_A, Approach Delay [s/veh]	8.45		7.76		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.11					
Intersection LOS	A					
Intersection V/C	0.641					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.147
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1924	1567	0
d_b, Bicycle Delay [s]	0.10	3.28	70.00
l_b,int, Bicycle LOS Score for Intersection	3.114	3.116	4.132
Bicycle LOS	C	C	D

Sequence

Ring 1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: SR-60 EB Ramps/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	119.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.718

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	1120.00	100.00	100.00	200.00	100.00	100.00	260.00	100.00	340.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	490.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	20	1	15	1274	4	108	83	472	20	12	312	115
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	131	0	0	0	21	0	0	12	44
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	13	0	0	2	0	0	18
Total Hourly Volume [veh/h]	24	1	16	1634	5	114	98	578	22	14	380	162
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	4	430	1	30	26	152	6	4	100	43
Total Analysis Volume [veh/h]	25	1	17	1720	5	120	103	608	23	15	400	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	0	3	0	0	4	0	5	2	0	1	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	5
Maximum Green [s]	0	15	0	0	35	0	25	35	0	15	35	35
Amber [s]	0.0	4.1	0.0	0.0	4.8	0.0	4.1	5.2	0.0	4.1	5.2	5.2
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.5	0.0	1.0	0.5	0.5
Split [s]	0	11	0	0	53	0	11	45	0	11	45	45
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	3.0	2.0	2.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	25	0	0	17	0	0	32	32
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	3.8	0.0	3.1	3.7	0.0	3.1	3.7	3.7
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		No			No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.10	5.80	5.80	5.10	5.70	5.70	5.10	5.70	5.80
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.80	3.80	3.10	3.70	3.70	3.10	3.70	0.00
g_i, Effective Green Time [s]	4	47	47	8	45	45	2	39	92
g / C, Green / Cycle	0.03	0.39	0.39	0.07	0.38	0.38	0.02	0.33	0.77
(v / s)_i Volume / Saturation Flow Rate	0.02	0.51	0.52	0.06	0.17	0.17	0.01	0.11	0.11
s, saturation flow rate [veh/h]	1729	1810	1782	1810	1900	1876	1810	3618	1615
c, Capacity [veh/h]	55	712	701	117	716	707	31	1191	1243
d1, Uniform Delay [s]	57.66	36.40	36.40	55.66	27.97	27.97	58.47	30.36	3.55
k, delay calibration	0.04	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.40	143.53	152.23	18.20	1.98	2.01	11.64	0.76	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	1.30	1.32	0.88	0.44	0.44	0.49	0.34	0.14
d, Delay for Lane Group [s/veh]	66.05	179.93	188.63	73.85	29.95	29.98	70.11	31.12	3.60
Lane Group LOS	E	F	F	E	C	C	E	C	A
Critical Lane Group	Yes	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.43	48.45	49.41	3.60	6.95	6.87	0.54	4.36	0.81
50th-Percentile Queue Length [ft/ln]	35.87	1211.29	1235.26	90.11	173.64	171.71	13.52	108.95	20.15
95th-Percentile Queue Length [veh/ln]	2.58	70.62	72.43	6.49	11.27	11.17	0.97	7.78	1.45
95th-Percentile Queue Length [ft/ln]	64.57	1765.48	1810.87	162.20	281.70	279.17	24.33	194.54	36.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.05	66.05	66.05	183.96	188.63	188.63	73.85	29.97	29.98	70.11	31.12	3.60
Movement LOS	E	E	E	F	F	F	E	C	C	E	C	A
d_A, Approach Delay [s/veh]	66.05			184.28			36.12			24.09		
Approach LOS	E			F			D			C		
d_I, Intersection Delay [s/veh]	119.53											
Intersection LOS	F											
Intersection V/C	0.718											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.768	2.775	2.695	0.000
Crosswalk LOS	A	C	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	98	787	655	655
d_b, Bicycle Delay [s]	54.25	22.08	27.14	27.14
l_b,int, Bicycle LOS Score for Intersection	1.634	4.625	2.167	2.058
Bicycle LOS	A	E	B	B

Sequence

Ring 1	4	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Valley Way/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	46.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.796

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	3	1	0	1	1	0	1
Entry Pocket Length [ft]	145.00	100.00	510.00	170.00	100.00	150.00	410.00	100.00	180.00	260.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	385	82	424	335	208	597	1013	31	52	192	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	18	0	72	31	44	131	21	0	0	12	25
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	10	0	0	29	0	0	4	0	0	52
Total Hourly Volume [veh/h]	28	472	87	572	426	260	835	1216	33	61	239	471
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	124	23	151	112	68	220	320	9	16	63	124
Total Analysis Volume [veh/h]	29	497	92	602	448	274	879	1280	35	64	252	496
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	71.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	4	6	0	4	6	6	4	6	0	4	6	6
Maximum Green [s]	25	30	0	35	30	30	35	45	0	25	45	45
Amber [s]	3.6	4.8	0.0	3.6	4.8	4.8	3.6	4.8	0.0	3.6	4.8	4.8
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	14	32	0	33	51	51	40	64	0	11	35	35
Vehicle Extension [s]	2.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	2.0	3.0	3.0
Walk [s]	0	5	0	5	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	23	39	39	0	34	0	0	24	24
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	3.5	0.0	2.0	3.5	3.5
I2, Clearance Lost Time [s]	2.6	3.8	0.0	2.6	3.8	3.8	2.6	3.8	0.0	2.6	3.8	3.8
Minimum Recall	No	No		No	No	No	No	Yes		No	Yes	Yes
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.80	5.80	4.60	5.80	4.60	4.60	7.30	7.30	4.60	7.30	6.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.80	3.80	2.60	3.80	0.00	2.60	3.80	3.80	2.60	3.80	0.00
g_i, Effective Green Time [s]	3	22	22	28	47	88	35	61	61	6	32	66
g / C, Green / Cycle	0.02	0.15	0.15	0.20	0.34	0.63	0.25	0.44	0.44	0.05	0.23	0.47
(v / s)_i Volume / Saturation Flow Rate	0.02	0.14	0.06	0.17	0.12	0.10	0.25	0.35	0.02	0.04	0.07	0.31
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	2859	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	40	560	250	713	1215	1801	889	1584	707	82	832	783
d1, Uniform Delay [s]	68.07	57.96	53.01	53.68	35.24	10.59	52.11	34.25	22.62	66.15	44.60	26.78
k, delay calibration	0.04	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.33	4.96	0.90	2.85	0.19	0.04	11.75	4.55	0.13	5.98	0.94	3.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.89	0.37	0.84	0.37	0.15	0.99	0.81	0.05	0.78	0.30	0.63
d, Delay for Lane Group [s/veh]	77.39	62.92	53.92	56.52	35.42	10.63	63.86	38.80	22.75	72.13	45.53	30.66
Lane Group LOS	E	E	D	E	D	B	E	D	C	E	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.12	8.83	2.92	10.25	5.72	1.65	16.39	19.12	0.68	2.38	3.71	12.78
50th-Percentile Queue Length [ft/ln]	27.98	220.74	73.05	256.17	142.96	41.15	409.74	477.91	17.01	59.45	92.74	319.51
95th-Percentile Queue Length [veh/ln]	2.01	13.70	5.26	15.50	9.64	2.96	23.03	26.29	1.22	4.28	6.68	18.64
95th-Percentile Queue Length [ft/ln]	50.37	342.57	131.49	387.42	241.01	74.07	575.72	657.17	30.62	107.00	166.94	466.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.39	62.92	53.92	56.52	35.42	10.63	63.86	38.80	22.75	72.13	45.53	30.66
Movement LOS	E	E	D	E	D	B	E	D	C	E	D	C
d_A, Approach Delay [s/veh]	62.26			39.88			48.58			38.54		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	46.31											
Intersection LOS	D											
Intersection V/C	0.796											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	0.00	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersectio	2.777	0.000	3.203	3.219
Crosswalk LOS	C	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	374	646	831	417
d_b, Bicycle Delay [s]	46.25	32.10	23.90	43.85
l_b,int, Bicycle LOS Score for Intersection	2.078	2.676	3.373	2.272
Bicycle LOS	B	B	C	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Jurupa Rd/Mission Blvd

Control Type:	Two-way stop	Delay (sec / veh):	1,412.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.958

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	280.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	14	245	1479	47	120	635
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	93	0	2	37
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	292	1838	55	144	786
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	77	484	14	38	207
Total Analysis Volume [veh/h]	18	307	1935	58	152	827
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.96	1.19	0.02	0.00	0.52	0.01
d_M, Delay for Movement [s/veh]	1412.70	1035.09	0.00	0.00	29.90	0.00
Movement LOS	F	F	A	A	D	A
95th-Percentile Queue Length [veh/ln]	31.59	31.59	0.00	0.00	2.80	0.00
95th-Percentile Queue Length [ft/ln]	789.65	789.65	0.00	0.00	70.00	0.00
d_A, Approach Delay [s/veh]	1056.01		0.00		4.64	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	105.47					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 12: Pacific Ave/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	130.00	100.00	130.00	130.00	100.00	115.00	275.00	100.00	50.00	265.00	100.00	230.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	91	36	66	29	27	77	136	1234	161	170	583	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	28	0	12	7	14	24	0	72	0	0	21
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	11	0	0	26	0	0	5
Total Hourly Volume [veh/h]	132	70	70	46	39	94	184	1456	236	201	688	48
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	18	18	12	10	25	48	383	62	53	181	13
Total Analysis Volume [veh/h]	139	74	74	48	41	99	194	1533	248	212	724	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	4	6	0	4	5	0
Maximum Green [s]	0	30	0	0	30	0	25	45	0	25	45	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.5	0.0	4.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	36	0	0	36	0	27	32	0	22	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	2.5	3.5	0.0	2.5	3.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	16	16	16	16	16	16	12	46	46	12	47	47
g / C, Green / Cycle	0.18	0.18	0.18	0.18	0.18	0.18	0.13	0.52	0.52	0.14	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.11	0.04	0.05	0.04	0.02	0.06	0.11	0.42	0.15	0.12	0.20	0.03
s, saturation flow rate [veh/h]	1269	1900	1615	1259	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	250	340	289	230	340	289	234	1868	834	250	1901	849
d1, Uniform Delay [s]	37.90	31.59	31.81	36.33	31.02	32.34	38.22	18.26	12.43	37.85	12.67	10.47
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.93	0.32	0.46	0.45	0.16	0.70	7.39	4.19	0.91	7.76	0.58	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.22	0.26	0.21	0.12	0.34	0.83	0.82	0.30	0.85	0.38	0.06
d, Delay for Lane Group [s/veh]	39.84	31.90	32.28	36.78	31.18	33.04	45.61	22.46	13.34	45.61	13.25	10.60
Lane Group LOS	D	C	C	D	C	C	D	C	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.06	1.39	1.40	0.98	0.75	1.92	4.49	12.76	2.78	4.91	4.02	0.48
50th-Percentile Queue Length [ft/ln]	76.52	34.69	35.11	24.58	18.84	47.89	112.14	318.88	69.53	122.77	100.52	12.05
95th-Percentile Queue Length [veh/ln]	5.51	2.50	2.53	1.77	1.36	3.45	7.96	18.61	5.01	8.55	7.24	0.87
95th-Percentile Queue Length [ft/ln]	137.73	62.44	63.20	44.24	33.91	86.20	198.97	465.31	125.15	213.63	180.94	21.69

Movement, Approach, & Intersection Results

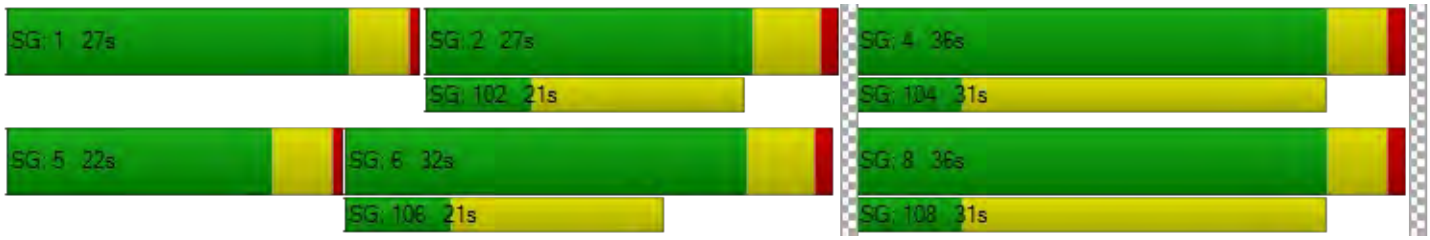
d_M, Delay for Movement [s/veh]	39.84	31.90	32.28	36.78	31.18	33.04	45.61	22.46	13.34	45.61	13.25	10.60
Movement LOS	D	C	C	D	C	C	D	C	B	D	B	B
d_A, Approach Delay [s/veh]	35.84			33.59			23.59			20.06		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	24.15											
Intersection LOS	C											
Intersection V/C	0.650											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersectio	2.342	2.274	3.331	3.103
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	689	589	478
d_b, Bicycle Delay [s]	19.34	19.34	22.40	26.07
l_b,int, Bicycle LOS Score for Intersection	2.046	1.888	3.210	2.378
Bicycle LOS	B	A	C	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Cedar Ave/I-10 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	15.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	230.00	100.00	230.00	100.00	100.00	100.00	485.00	100.00	485.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	221	1349	0	0	1185	594	0	0	0	285	0	448
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	302	151	0	0	67	0	0	0	9	115	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	70	0	0	1	0	0	53
Total Hourly Volume [veh/h]	563	1743	0	0	1465	631	0	0	9	451	0	476
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	148	459	0	0	386	166	0	0	2	119	0	125
Total Analysis Volume [veh/h]	593	1835	0	0	1542	664	0	0	9	475	0	501
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	20	39	0	0	19	0	0	0	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	13	39	22	22		13	13	13
g / C, Green / Cycle	0.21	0.64	0.37	0.37		0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.17	0.35	0.18	0.23		0.13	0.13	0.18
s, saturation flow rate [veh/h]	3514	5176	8626	2859		1810	1810	2859
c, Capacity [veh/h]	734	3329	3172	1051		404	404	639
d1, Uniform Delay [s]	22.59	5.92	14.61	15.62		20.82	20.82	21.93
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	2.18	0.66	0.54	2.89		1.36	1.36	2.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.55	0.49	0.63		0.59	0.59	0.78
d, Delay for Lane Group [s/veh]	24.77	6.58	15.14	18.51		22.18	22.18	24.09
Lane Group LOS	C	A	B	B		C	C	C
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.74	2.67	2.79	3.53		2.84	2.84	3.18
50th-Percentile Queue Length [ft/ln]	93.44	66.77	69.83	88.24		71.05	71.05	79.49
95th-Percentile Queue Length [veh/ln]	6.73	4.81	5.03	6.35		5.12	5.12	5.72
95th-Percentile Queue Length [ft/ln]	168.19	120.19	125.70	158.83		127.89	127.89	143.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.77	6.58	0.00	0.00	15.14	18.51	0.00	0.00	0.00	22.18	22.18	24.09
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	11.02			16.16			0.00			23.16		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	15.15											
Intersection LOS	B											
Intersection V/C	0.576											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.342	2.590
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	500	0	567
d_b, Bicycle Delay [s]	5.21	16.88	30.00	15.41
l_b,int, Bicycle LOS Score for Intersection	2.895	2.311	4.132	3.257
Bicycle LOS	C	B	D	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Cedar Ave/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	23.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	2	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	600.00	100.00	600.00	100.00	100.00	100.00	380.00	100.00	380.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1090.00
Speed [mph]	40.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1015	350	367	1102	0	556	6	187	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	452	267	0	190	0	0	0	129	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	68	0	0	0	0	0	35	0	0	0
Total Hourly Volume [veh/h]	0	1650	612	433	1490	0	656	7	315	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	434	161	114	392	0	173	2	83	0	0	0
Total Analysis Volume [veh/h]	0	1737	644	456	1568	0	691	7	332	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	44	0	14	58	0	0	27	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	85	85	85	85	85	85	85	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	43	43	10	57	20	20	20	
g / C, Green / Cycle	0.50	0.50	0.12	0.67	0.24	0.24	0.24	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.40	0.13	0.30	0.19	0.19	0.21	
s, saturation flow rate [veh/h]	8626	1615	3514	5176	1810	1811	1615	
c, Capacity [veh/h]	4343	813	413	3459	430	430	384	
d1, Uniform Delay [s]	13.12	17.42	37.50	6.71	30.60	30.60	31.09	
k, delay calibration	0.50	0.50	0.11	0.50	0.12	0.12	0.14	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.28	7.78	54.86	0.43	4.05	4.01	7.69	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.40	0.79	1.10	0.45	0.81	0.81	0.87	
d, Delay for Lane Group [s/veh]	13.39	25.20	92.36	7.14	34.65	34.61	38.78	
Lane Group LOS	B	C	F	A	C	C	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.71	10.72	7.25	3.50	6.93	6.92	7.05	
50th-Percentile Queue Length [ft/ln]	92.71	268.12	181.21	87.50	173.18	173.05	176.18	
95th-Percentile Queue Length [veh/ln]	6.68	16.10	12.11	6.30	11.24	11.24	11.40	
95th-Percentile Queue Length [ft/ln]	166.88	402.40	302.85	157.49	281.08	280.91	285.03	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	13.39	25.20	92.36	7.14	0.00	34.63	34.61	38.78	0.00	0.00	0.00
Movement LOS		B	C	F	A		C	C	D			
d_A, Approach Delay [s/veh]	16.59			26.34			35.97			0.00		
Approach LOS	B			C			D			A		
d_I, Intersection Delay [s/veh]	23.89											
Intersection LOS	C											
Intersection V/C	0.734											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.482	2.286
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	941	1271	541	0
d_b, Bicycle Delay [s]	11.91	5.65	22.61	42.50
l_b,int, Bicycle LOS Score for Intersection	2.368	2.673	3.317	4.132
Bicycle LOS	B	B	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Cedar Ave/Orange St

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	160.00	100.00	100.00	140.00	100.00	100.00	400.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	814	2	85	955	246	280	22	15	11	7	272
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	719	0	0	319	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	29	0	0	2	0	0	32
Total Hourly Volume [veh/h]	20	1680	2	100	1446	261	330	26	16	13	8	289
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	442	1	26	381	69	87	7	4	3	2	76
Total Analysis Volume [veh/h]	21	1768	2	105	1522	275	347	27	17	14	8	304
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	27	66	0	9	48	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	71	62	62	71	65	65	26	26	26	26
g / C, Green / Cycle	0.68	0.59	0.59	0.68	0.62	0.62	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.06	0.47	0.47	0.25	0.42	0.17	0.32	0.02	0.02	0.19
s, saturation flow rate [veh/h]	363	1900	1899	420	3618	1615	1084	1779	1383	1615
c, Capacity [veh/h]	271	1126	1126	290	2224	993	275	440	399	400
d1, Uniform Delay [s]	10.46	16.31	16.31	16.61	13.45	9.39	44.99	30.47	30.11	36.61
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	5.55	5.56	3.49	1.73	0.69	143.38	0.10	0.06	5.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.79	0.79	0.36	0.68	0.28	1.26	0.10	0.06	0.76
d, Delay for Lane Group [s/veh]	10.58	21.85	21.87	20.10	15.19	10.08	188.37	30.57	30.16	42.05
Lane Group LOS	B	C	C	C	B	B	F	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.14	15.89	15.89	0.96	10.88	2.80	18.19	0.87	0.43	7.74
50th-Percentile Queue Length [ft/ln]	3.47	397.21	397.31	24.03	272.07	70.04	454.77	21.80	10.76	193.56
95th-Percentile Queue Length [veh/ln]	0.25	22.43	22.43	1.73	16.29	5.04	28.34	1.57	0.77	12.31
95th-Percentile Queue Length [ft/ln]	6.25	560.64	560.76	43.26	407.33	126.08	708.50	39.24	19.37	307.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	10.58	21.86	21.87	20.10	15.19	10.08	188.37	30.57	30.57	30.16	30.16	42.05
Movement LOS	B	C	C	C	B	B	F	C	C	C	C	D
d_A, Approach Delay [s/veh]	21.73			14.72			170.62			41.25		
Approach LOS	C			B			F			D		
d_I, Intersection Delay [s/veh]	33.35											
Intersection LOS	C											
Intersection V/C	0.808											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	0.00	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.199	0.000	2.207	2.246
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1181	838	495	495
d_b, Bicycle Delay [s]	8.80	17.72	29.72	29.72
l_b,int, Bicycle LOS Score for Intersection	3.037	3.153	2.208	2.150
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Cedar Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	58.8
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.815

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	115.00	100.00	100.00	250.00	100.00	80.00	190.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	96	541	25	116	773	89	189	355	135	19	261	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	549	1	9	278	32	156	11	35	11	2	22
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	14	0	0	19	0	0	17
Total Hourly Volume [veh/h]	147	1187	28	146	1190	123	379	430	175	33	310	153
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	312	7	38	313	32	100	113	46	9	82	40
Total Analysis Volume [veh/h]	155	1249	29	154	1253	129	399	453	184	35	326	161
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	60	0	18	59	0	27	45	0	12	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	62	62	13	62	62	23	40	40	4	21	21
g / C, Green / Cycle	0.10	0.46	0.46	0.10	0.46	0.46	0.17	0.30	0.30	0.03	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.09	0.34	0.34	0.09	0.37	0.37	0.22	0.13	0.11	0.02	0.13	0.14
s, saturation flow rate [veh/h]	1810	1900	1885	1810	1900	1839	1810	3618	1615	1810	1900	1693
c, Capacity [veh/h]	180	870	863	178	868	840	308	1075	480	51	294	262
d1, Uniform Delay [s]	59.86	29.96	29.99	59.94	31.50	31.70	56.00	38.12	37.64	65.02	55.68	55.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.45	0.11	0.11	0.11	0.16	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.32	5.54	5.62	11.56	7.85	8.50	152.29	0.26	0.50	15.29	10.69	14.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.74	0.74	0.86	0.80	0.81	1.29	0.42	0.38	0.69	0.87	0.89
d, Delay for Lane Group [s/veh]	71.19	35.50	35.61	71.50	39.35	40.19	208.29	38.39	38.14	80.31	66.37	70.14
Lane Group LOS	E	D	D	E	D	D	F	D	D	F	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.80	18.21	18.13	5.70	20.69	20.49	23.53	6.12	4.94	1.38	9.08	8.56
50th-Percentile Queue Length [ft/ln]	145.07	455.21	453.18	142.53	517.28	512.26	588.27	152.89	123.51	34.55	227.04	213.88
95th-Percentile Queue Length [veh/ln]	9.75	25.21	25.11	9.62	28.15	27.91	35.43	10.17	8.59	2.49	14.02	13.35
95th-Percentile Queue Length [ft/ln]	243.83	630.17	627.74	240.42	703.78	697.86	885.75	254.28	214.63	62.18	350.59	333.80

Movement, Approach, & Intersection Results

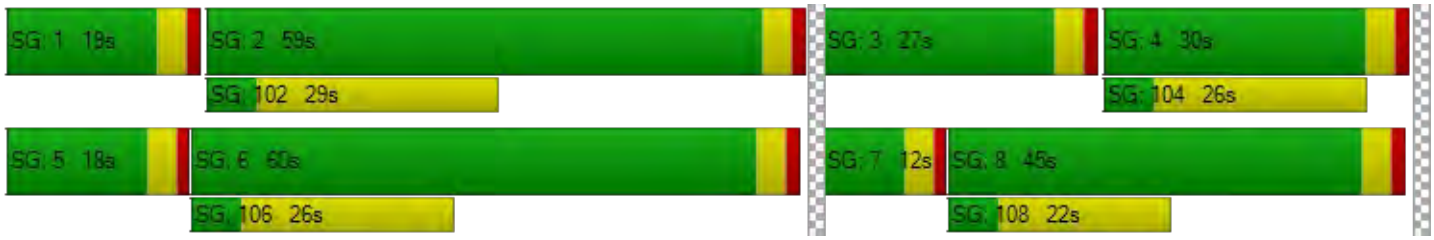
d_M, Delay for Movement [s/veh]	71.19	35.56	35.61	71.50	39.72	40.19	208.29	38.39	38.14	80.31	67.19	70.14
Movement LOS	E	D	D	E	D	D	F	D	D	F	E	E
d_A, Approach Delay [s/veh]	39.41			42.95			103.78			68.98		
Approach LOS	D			D			F			E		
d_I, Intersection Delay [s/veh]	58.75											
Intersection LOS	E											
Intersection V/C	0.815											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	58.80	58.80	58.80	58.80
l_p,int, Pedestrian LOS Score for Intersectio	2.896	3.225	2.875	2.817
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	815	607	385
d_b, Bicycle Delay [s]	23.11	23.70	32.73	44.00
l_b,int, Bicycle LOS Score for Intersection	2.744	2.838	2.430	2.004
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Cedar Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	57.3
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.827

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	290.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	148	631	53	70	765	48	62	135	122	22	132	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	543	0	0	290	0	49	3	46	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	6	0	0	19	0	0	5
Total Hourly Volume [veh/h]	241	1288	57	83	1193	51	122	162	171	26	157	46
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	339	15	22	314	13	32	43	45	7	41	12
Total Analysis Volume [veh/h]	254	1356	60	87	1256	54	128	171	180	27	165	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	66	0	10	62	0	0	29	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	62	62	6	58	58	25	25
g / C, Green / Cycle	0.10	0.59	0.59	0.06	0.55	0.55	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.14	0.37	0.38	0.05	0.35	0.35	0.34	0.14
s, saturation flow rate [veh/h]	1810	1900	1872	1810	1900	1873	1411	1709
c, Capacity [veh/h]	172	1122	1105	103	1050	1034	379	445
d1, Uniform Delay [s]	47.50	14.06	14.13	49.03	16.10	16.13	41.79	35.08
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	220.04	2.73	2.82	16.25	2.84	2.91	137.58	1.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.47	0.63	0.64	0.84	0.63	0.63	1.26	0.54
d, Delay for Lane Group [s/veh]	267.54	16.79	16.95	65.28	18.95	19.03	179.37	36.10
Lane Group LOS	F	B	B	E	B	B	F	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	15.01	11.13	11.12	2.72	11.09	10.99	24.48	5.34
50th-Percentile Queue Length [ft/ln]	375.27	278.35	278.09	67.91	277.20	274.71	611.92	133.58
95th-Percentile Queue Length [veh/ln]	24.22	16.61	16.59	4.89	16.55	16.42	36.79	9.13
95th-Percentile Queue Length [ft/ln]	605.58	415.15	414.83	122.24	413.73	410.62	919.84	228.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	267.54	16.87	16.95	65.28	18.99	19.03	179.37	179.37	179.37	36.10	36.10	36.10
Movement LOS	F	B	B	E	B	B	F	F	F	D	D	D
d_A, Approach Delay [s/veh]	55.00			21.87			179.37			36.10		
Approach LOS	D			C			F			D		
d_I, Intersection Delay [s/veh]	57.31											
Intersection LOS	E											
Intersection V/C	0.827											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	2.972	3.073	2.227	2.101
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1181	1105	476	476
d_b, Bicycle Delay [s]	8.80	10.52	30.48	30.48
l_b,int, Bicycle LOS Score for Intersection	2.942	2.717	2.381	1.964
Bicycle LOS	C	B	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Cedar Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	240.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.634

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	190.00	100.00	100.00	345.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	180.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	78	736	76	105	800	45	51	198	72	45	64	69
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	92	317	0	0	198	139	295	40	215	0	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	9	0	0	19	0	0	30	0	0	8
Total Hourly Volume [veh/h]	184	1185	81	124	1142	173	355	274	270	53	93	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	312	21	33	301	46	93	72	71	14	24	19
Total Analysis Volume [veh/h]	194	1247	85	131	1202	182	374	288	284	56	98	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	40	0	9	39	0	0	36	0	0	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	36	36	5	35	35	32	32	32	32
g / C, Green / Cycle	0.07	0.42	0.42	0.06	0.41	0.41	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.11	0.35	0.36	0.07	0.37	0.38	2.15	0.18	0.52	0.05
s, saturation flow rate [veh/h]	1810	1900	1858	1810	1900	1814	308	1615	295	1615
c, Capacity [veh/h]	128	805	787	106	782	747	182	608	169	608
d1, Uniform Delay [s]	39.50	21.84	21.92	40.00	23.34	23.54	40.34	20.05	26.92	17.35
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	242.06	9.92	10.48	120.60	15.28	17.29	1199.43	0.56	49.31	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.52	0.83	0.84	1.23	0.90	0.91	3.64	0.47	0.91	0.13
d, Delay for Lane Group [s/veh]	281.56	31.75	32.40	160.60	38.63	40.83	1239.78	20.61	76.22	17.44
Lane Group LOS	F	C	C	F	D	D	F	C	E	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	11.11	12.64	12.60	5.75	15.60	15.58	64.36	4.02	5.43	0.94
50th-Percentile Queue Length [ft/ln]	277.86	316.00	314.92	143.82	390.08	389.57	1609.04	100.44	135.85	23.40
95th-Percentile Queue Length [veh/ln]	18.60	18.47	18.42	10.25	22.08	22.06	108.86	7.23	9.26	1.69
95th-Percentile Queue Length [ft/ln]	465.09	461.76	460.44	256.26	552.03	551.42	2721.46	180.79	231.43	42.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	281.56	32.05	32.40	160.60	39.54	40.83	1239.78	1239.78	20.61	76.22	76.22	17.44
Movement LOS	F	C	C	F	D	D	F	F	C	E	E	B
d_A, Approach Delay [s/veh]	63.79			50.16			873.77			56.63		
Approach LOS	E			D			F			E		
d_I, Intersection Delay [s/veh]	240.16											
Intersection LOS	F											
Intersection V/C	2.634											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	3.300	3.489	2.618	2.276
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	847	824	753	753
d_b, Bicycle Delay [s]	14.12	14.71	16.52	16.52
l_b,int, Bicycle LOS Score for Intersection	2.826	2.825	3.170	1.954
Bicycle LOS	C	C	C	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Cedar Ave/7th St

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.790

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	295.00	100.00	100.00	190.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	125	776	12	45	796	33	30	29	293	40	12	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	69	400	2	2	378	32	9	0	53	2	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	7	0	0	40	0	0	3
Total Hourly Volume [veh/h]	217	1316	14	55	1317	64	44	34	359	49	14	29
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	346	4	14	347	17	12	9	94	13	4	8
Total Analysis Volume [veh/h]	228	1385	15	58	1386	67	46	36	378	52	15	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	52	0	11	47	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	51	51	4	43	43	23	23
g / C, Green / Cycle	0.13	0.57	0.57	0.04	0.48	0.48	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.13	0.37	0.37	0.03	0.38	0.39	0.28	0.13
s, saturation flow rate [veh/h]	1810	1900	1893	1810	1900	1869	1658	743
c, Capacity [veh/h]	241	1076	1072	81	908	893	468	251
d1, Uniform Delay [s]	38.67	13.40	13.42	42.42	19.94	20.00	34.28	27.25
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.33	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.58	3.06	3.09	11.17	7.53	7.82	29.96	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.65	0.65	0.72	0.80	0.81	0.98	0.39
d, Delay for Lane Group [s/veh]	55.26	16.47	16.51	53.60	27.47	27.82	64.24	28.23
Lane Group LOS	E	B	B	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.77	8.71	8.70	1.46	12.89	12.84	13.90	1.81
50th-Percentile Queue Length [ft/ln]	144.35	217.72	217.62	36.41	322.36	321.12	347.43	45.23
95th-Percentile Queue Length [veh/ln]	9.72	13.55	13.54	2.62	18.78	18.72	20.01	3.26
95th-Percentile Queue Length [ft/ln]	242.88	338.71	338.58	65.55	469.59	468.06	500.27	81.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.26	16.49	16.51	53.60	27.63	27.82	64.24	64.24	64.24	28.23	28.23	28.23
Movement LOS	E	B	B	D	C	C	E	E	E	C	C	C
d_A, Approach Delay [s/veh]	21.92			28.64			64.24			28.23		
Approach LOS	C			C			E			C		
d_I, Intersection Delay [s/veh]	30.10											
Intersection LOS	C											
Intersection V/C	0.790											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.511	3.346	2.172	1.807
Crosswalk LOS	D	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1067	956	511	511
d_b, Bicycle Delay [s]	9.80	12.27	24.94	24.94
l_b,int, Bicycle LOS Score for Intersection	2.904	2.812	2.385	1.726
Bicycle LOS	C	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Rubidoux Blvd/Market St

Control Type:	Signalized	Delay (sec / veh):	121.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.081

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	2	0	0
Entry Pocket Length [ft]	245.00	100.00	330.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	25	354	433	469	604	52	47	111	29	276	60	535
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.1800	1.1800	1.1800	1.1800	1.0000	1.0000	1.0000	1.0000	1.1800	1.0000	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	149	48	292	191	14	52	41	49	103	11	125
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	56	0	0	0	0	0	0	0	0	76
Total Hourly Volume [veh/h]	38	567	503	845	904	66	99	152	78	429	71	680
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	149	132	222	238	17	26	40	21	113	19	179
Total Analysis Volume [veh/h]	40	597	529	889	952	69	104	160	82	452	75	716
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	0	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	0.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	15	45	0	34	64	0	15	32	0	39	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	5.0	0.0	3.0	4.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.00	7.00	7.00	5.00	6.00	6.00	5.00	7.00	5.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	5.00	5.00	3.00	4.00	4.00	3.00	5.00	3.00	4.00	4.00
g_i, Effective Green Time [s]	8	38	38	29	60	60	10	37	22	50	50
g / C, Green / Cycle	0.05	0.25	0.25	0.19	0.40	0.40	0.07	0.25	0.15	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.33	0.25	0.26	0.04	0.06	0.13	0.13	0.04	0.44
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1793	3514	1900	1615
c, Capacity [veh/h]	99	916	409	679	1443	644	121	440	520	633	538
d1, Uniform Delay [s]	68.57	50.08	56.00	60.50	36.78	28.31	69.32	49.38	62.48	34.70	50.00
k, delay calibration	0.11	0.50	0.50	0.17	0.50	0.50	0.11	0.11	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.67	3.59	149.02	142.49	2.38	0.33	16.02	1.08	4.61	0.08	160.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.65	1.29	1.31	0.66	0.11	0.86	0.55	0.87	0.12	1.33
d, Delay for Lane Group [s/veh]	71.24	53.67	205.02	202.99	39.16	28.65	85.34	50.45	67.09	34.79	210.95
Lane Group LOS	E	D	F	F	D	C	F	D	E	C	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.53	10.22	31.90	26.00	14.20	1.59	4.51	8.11	8.80	1.96	44.17
50th-Percentile Queue Length [ft/ln]	38.24	255.57	797.61	650.05	355.06	39.78	112.74	202.84	219.99	48.96	1104.23
95th-Percentile Queue Length [veh/ln]	2.75	15.47	47.24	39.07	20.38	2.86	7.99	12.79	13.66	3.52	65.10
95th-Percentile Queue Length [ft/ln]	68.84	386.66	1181.09	976.70	509.58	71.61	199.81	319.63	341.61	88.12	1627.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.24	53.67	205.02	202.99	39.16	28.65	85.34	50.45	50.45	67.09	34.79	210.95
Movement LOS	E	D	F	F	D	C	F	D	D	E	C	F
d_A, Approach Delay [s/veh]	122.94			115.03			60.94			148.01		
Approach LOS	F			F			E			F		
d_I, Intersection Delay [s/veh]	121.78											
Intersection LOS	F											
Intersection V/C	1.081											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	64.40	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.285	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	507	773	333	667
d_b, Bicycle Delay [s]	41.81	28.21	52.08	33.33
l_b,int, Bicycle LOS Score for Intersection	2.568	3.135	2.131	3.736
Bicycle LOS	B	C	B	D

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Agua Mansa Rd/Market St

Control Type:	Signalized	Delay (sec / veh):	66.1
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.868

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	2	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	200.00	85.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			30.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	120	0	316	491	532	0	0	534	174
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	39	188	0	103	52	325	4	0	134	81
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	4	0	0	48	0	0	0	0	0	29
Total Hourly Volume [veh/h]	0	0	35	330	0	428	631	953	4	0	764	257
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	87	0	113	166	251	1	0	201	68
Total Analysis Volume [veh/h]	0	0	37	347	0	451	664	1003	4	0	804	271
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	44	44	0	30	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	1.5	3.0	0.0	1.5	3.0	0.0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.2	0.0	0.0	3.9	0.0	2.2	4.5	0.0	2.2	4.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.20	5.90	5.90	4.20	6.50	6.50	4.20	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.90	3.90	2.20	4.50	4.50	2.20	4.50	4.50
g_i, Effective Green Time [s]	41	40	40	40	63	63	0	24	24
g / C, Green / Cycle	0.34	0.33	0.33	0.33	0.53	0.53	0.00	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.28	0.37	0.28	0.00	0.00	0.22	0.17
s, saturation flow rate [veh/h]	1615	1393	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	552	481	540	600	1905	851	2	708	316
d1, Uniform Delay [s]	26.75	35.58	36.91	40.10	18.60	13.48	0.00	48.25	46.62
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	9.07	14.23	69.39	0.23	0.00	0.00	65.01	6.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.72	0.84	1.11	0.53	0.00	0.00	1.13	0.86
d, Delay for Lane Group [s/veh]	26.98	44.65	51.13	109.49	18.83	13.48	0.00	113.26	53.30
Lane Group LOS	C	D	D	F	B	B	A	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.77	10.16	14.22	28.98	9.00	0.05	0.00	16.63	8.15
50th-Percentile Queue Length [ft/ln]	19.21	253.96	355.40	724.58	224.93	1.30	0.00	415.84	203.85
95th-Percentile Queue Length [veh/ln]	1.38	15.39	20.40	40.42	13.92	0.09	0.00	24.87	12.84
95th-Percentile Queue Length [ft/ln]	34.57	384.64	509.98	1010.48	347.91	2.35	0.00	621.84	320.93

Movement, Approach, & Intersection Results

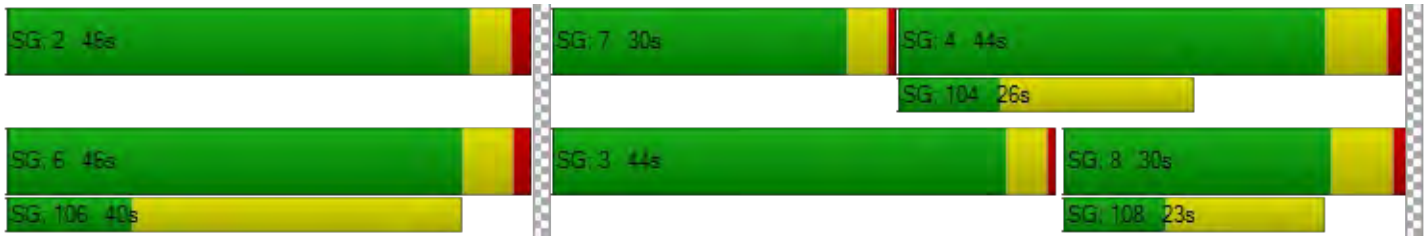
d_M, Delay for Movement [s/veh]	26.98	26.98	26.98	44.65	51.13	51.13	109.49	18.83	13.48	0.00	113.26	53.30
Movement LOS	C	C	C	D	D	D	F	B	B	A	F	D
d_A, Approach Delay [s/veh]	26.98			48.31			54.84			98.14		
Approach LOS	C			D			D			F		
d_I, Intersection Delay [s/veh]	66.10											
Intersection LOS	E											
Intersection V/C	0.868											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	13.0	15.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	47.70	45.94	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.751	2.609	2.998	0.000
Crosswalk LOS	A	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	668	625	392
d_b, Bicycle Delay [s]	26.14	26.60	28.36	38.80
l_b,int, Bicycle LOS Score for Intersection	1.627	2.956	2.938	2.470
Bicycle LOS	A	C	C	B

Sequence

Ring 1	-	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	3	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Rubidoux Blvd/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	64.3
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.075

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	85.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	61	783	0	0	863	12	13	0	135	448	72	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	89	168	0	0	378	16	7	0	91	0	65	54
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	3	0	0	25	0	0	16
Total Hourly Volume [veh/h]	161	1092	0	0	1396	27	22	0	225	529	150	147
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	287	0	0	367	7	6	0	59	139	39	39
Total Analysis Volume [veh/h]	169	1149	0	0	1469	28	23	0	237	557	158	155
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	4	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	35	0	0	35	0	20	0	0	0	30	0
Maximum Green [s]	0	25	0	0	25	0	35	0	0	0	20	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	4.8	0.0	0.0	0.0	4.8	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	48	0	0	48	0	37	0	0	0	37	0
Vehicle Extension [s]	0.0	3.5	0.0	0.0	3.5	0.0	2.0	0.0	0.0	0.0	3.5	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	3.8	0.0	0.0	0.0	3.8	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.80	5.80	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.40	3.40	3.80	3.80	3.80	3.80
g_i, Effective Green Time [s]	43	43	43	43	31	31	31	31
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.47	0.32	0.39	0.40	0.02	0.15	0.60	0.10
s, saturation flow rate [veh/h]	356	3618	1900	1888	1083	1615	1189	1615
c, Capacity [veh/h]	139	1813	952	946	96	593	512	593
d1, Uniform Delay [s]	39.99	15.50	17.45	17.52	42.29	19.95	30.05	18.83
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.50	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	146.69	1.70	6.51	6.73	0.48	0.16	190.30	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.22	0.63	0.79	0.79	0.24	0.40	1.40	0.26
d, Delay for Lane Group [s/veh]	186.68	17.20	23.95	24.25	42.77	20.12	220.34	19.11
Lane Group LOS	F	B	C	C	D	C	F	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.47	7.53	12.14	12.24	0.49	3.38	37.55	2.08
50th-Percentile Queue Length [ft/ln]	211.63	188.35	303.61	305.93	12.23	84.41	938.63	51.88
95th-Percentile Queue Length [veh/ln]	14.85	12.04	17.86	17.97	0.88	6.08	57.58	3.74
95th-Percentile Queue Length [ft/ln]	371.18	300.88	446.49	449.35	22.02	151.95	1439.52	93.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	186.68	17.20	0.00	0.00	24.10	24.25	42.77	0.00	20.12	220.34	220.34	19.11
Movement LOS	F	B			C	C	D		C	F	F	B
d_A, Approach Delay [s/veh]	38.93			24.10			22.12			184.49		
Approach LOS	D			C			C			F		
d_I, Intersection Delay [s/veh]	64.30											
Intersection LOS	E											
Intersection V/C	1.075											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	42.6
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	32.21	0.00	10.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.089	0.000	2.251
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1002	1002	734	734
d_b, Bicycle Delay [s]	10.58	10.58	17.03	17.03
l_b,int, Bicycle LOS Score for Intersection	2.647	2.797	1.560	3.022
Bicycle LOS	B	C	A	C

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Rubidoux Blvd/SrR-60 WB On Ramp

Control Type:	Two-way stop	Delay (sec / veh):	145.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.130

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	145.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	203	843	953	494	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	257	157	311	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	240	1252	1282	894	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	329	337	235	0	0
Total Analysis Volume [veh/h]	253	1318	1349	941	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.13	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	145.18	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	11.72	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	293.03	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	23.38		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	9.51					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 24: Rubidoux Blvd/SR-60 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	75.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.879

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	145.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	484	235	61	918	0	531	46	379	19	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	63	0	83	74	0	193	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	28	0	0	0	0	0	45	0	0	0
Total Hourly Volume [veh/h]	0	634	249	155	1157	0	820	54	402	22	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	167	66	41	304	0	216	14	106	6	0	0
Total Analysis Volume [veh/h]	0	667	262	163	1218	0	863	57	423	23	0	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Permiss	Split
Signal Group	0	2	0	1	6	0	0	4	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	5	0	0
Maximum Green [s]	0	35	0	30	35	0	0	35	0	20	0	0
Amber [s]	0.0	4.4	0.0	4.1	4.4	0.0	0.0	4.8	0.0	4.4	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	43	0	12	55	0	0	53	0	12	0	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	3.0	0.0	2.0	0.0	0.0
Walk [s]	0	4	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	33	0	0	18	0	0	28	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	3.1	3.4	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.10	5.40	5.80	5.80	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.10	3.40	3.80	3.80	3.40	3.40
g_i, Effective Green Time [s]	38	38	11	53	47	47	3	3
g / C, Green / Cycle	0.31	0.31	0.09	0.45	0.39	0.39	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.24	0.27	0.09	0.34	0.51	0.26	0.01	0.00
s, saturation flow rate [veh/h]	1900	1728	1810	3618	1815	1615	1810	1615
c, Capacity [veh/h]	597	543	160	1611	714	635	42	37
d1, Uniform Delay [s]	37.34	38.58	54.69	27.84	36.40	29.92	58.00	57.30
k, delay calibration	0.50	0.50	0.04	0.50	0.50	0.20	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.62	15.76	24.97	3.36	140.37	2.22	4.16	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.86	1.02	0.76	1.29	0.67	0.55	0.03
d, Delay for Lane Group [s/veh]	46.96	54.34	79.66	31.20	176.77	32.14	62.16	57.41
Lane Group LOS	D	D	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.60	14.79	5.85	14.66	47.97	10.20	0.73	0.03
50th-Percentile Queue Length [ft/ln]	340.12	369.64	146.37	366.57	1199.23	254.95	18.36	0.76
95th-Percentile Queue Length [veh/ln]	19.65	21.09	9.89	20.94	69.78	15.44	1.32	0.06
95th-Percentile Queue Length [ft/ln]	491.35	527.29	247.21	523.57	1744.46	385.88	33.05	1.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	49.20	54.34	79.66	31.20	0.00	176.77	176.77	32.14	62.16	0.00	57.41
Movement LOS		D	D	F	C		F	F	C	E		E
d_A, Approach Delay [s/veh]	50.65			36.92			131.22			61.96		
Approach LOS	D			D			F			E		
d_I, Intersection Delay [s/veh]	74.99											
Intersection LOS	E											
Intersection V/C	0.879											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	52.27
l_p,int, Pedestrian LOS Score for Intersectio	3.051	0.000	2.544	2.159
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	627	827	787	110
d_b, Bicycle Delay [s]	28.29	20.65	22.08	53.58
l_b,int, Bicycle LOS Score for Intersection	2.349	2.699	3.850	1.560
Bicycle LOS	B	B	D	A

Sequence

Ring 1	4	3	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Market St/Rivera St

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.600

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	165.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	729	226	89	1006	1	1	13	53	201	0	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	306	0	11	572	0	0	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	27	0	0	0	0	0	6	0	0	6
Total Hourly Volume [veh/h]	11	1166	240	116	1759	1	1	15	57	237	0	58
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	307	63	31	463	0	0	4	15	62	0	15
Total Analysis Volume [veh/h]	12	1227	253	122	1852	1	1	16	60	249	0	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	6	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	5	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	30	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	59	59	26	76	0	0	9	0	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	14	0	10	0	0	10	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	77	77	10	86	86	6	6	11	11	11
g / C, Green / Cycle	0.01	0.64	0.64	0.08	0.71	0.71	0.05	0.05	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.34	0.16	0.07	0.49	0.49	0.01	0.04	0.07	0.07	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1894	1615	1810	1810	1615
c, Capacity [veh/h]	25	2331	1041	151	1356	1356	94	80	161	161	144
d1, Uniform Delay [s]	58.73	11.49	9.00	54.06	9.60	9.60	54.67	56.27	53.45	53.45	51.72
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.21	0.86	0.55	9.78	2.81	2.81	0.90	12.80	7.56	7.56	1.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.53	0.24	0.81	0.68	0.68	0.18	0.75	0.77	0.77	0.42
d, Delay for Lane Group [s/veh]	71.93	12.34	9.56	63.83	12.41	12.41	55.57	69.06	61.01	61.01	53.69
Lane Group LOS	E	B	A	E	B	B	E	E	E	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.45	7.96	2.64	3.94	11.85	11.85	0.52	2.09	4.01	4.01	1.82
50th-Percentile Queue Length [ft/ln]	11.17	199.05	66.10	98.54	296.26	296.33	13.03	52.34	100.34	100.34	45.52
95th-Percentile Queue Length [veh/ln]	0.80	12.59	4.76	7.09	17.50	17.50	0.94	3.77	7.22	7.22	3.28
95th-Percentile Queue Length [ft/ln]	20.10	314.75	118.97	177.37	437.40	437.48	23.46	94.22	180.61	180.61	81.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.93	12.34	9.56	63.83	12.41	12.41	55.57	55.57	69.06	61.01	61.01	53.69
Movement LOS	E	B	A	E	B	B	E	E	E	E	E	D
d_A, Approach Delay [s/veh]	12.35			15.58			66.08			59.57		
Approach LOS	B			B			E			E		
d_I, Intersection Delay [s/veh]	18.88											
Intersection LOS	B											
Intersection V/C	0.600											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	51.34	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.265	0.000	2.334
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	917	1200	83	367
d_b, Bicycle Delay [s]	17.60	9.60	55.10	40.02
l_b,int, Bicycle LOS Score for Intersection	2.813	3.189	1.697	2.081
Bicycle LOS	C	C	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Market St/SR-60 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	185.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	249	341	0	0	1071	187	0	0	0	89	0	626
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	102	0	0	522	51	0	0	0	0	0	204
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	27	0	0	0	0	0	94
Total Hourly Volume [veh/h]	294	504	0	0	1786	245	0	0	0	105	0	849
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	77	133	0	0	470	64	0	0	0	28	0	223
Total Analysis Volume [veh/h]	309	531	0	0	1880	258	0	0	0	111	0	894
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	35	72	0	0	37	0	0	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C		L
C, Cycle Length [s]	120	120	120		120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00
g_i, Effective Green Time [s]	23	103	76		9
g / C, Green / Cycle	0.19	0.86	0.63		0.08
(v / s)_i Volume / Saturation Flow Rate	0.17	0.15	0.52		0.06
s, saturation flow rate [veh/h]	1810	3618	3618		1810
c, Capacity [veh/h]	340	3093	2292		142
d1, Uniform Delay [s]	47.69	1.48	16.78		54.29
k, delay calibration	0.20	0.50	0.50		0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00
d2, Incremental Delay [s]	15.40	0.12	3.44		9.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00
PF, progression factor	1.00	1.00	1.00		1.00

Lane Group Results

X, volume / capacity	0.91	0.17	0.82		0.78
d, Delay for Lane Group [s/veh]	63.10	1.60	20.22		63.32
Lane Group LOS	E	A	C		E
Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	10.21	0.44	17.97		3.62
50th-Percentile Queue Length [ft/ln]	255.33	10.98	449.30		90.59
95th-Percentile Queue Length [veh/ln]	15.45	0.79	24.92		6.52
95th-Percentile Queue Length [ft/ln]	386.36	19.76	623.12		163.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.10	1.60	0.00	0.00	20.22	0.00	0.00	0.00	0.00	63.32	0.00	0.00
Movement LOS	E	A			C					E		
d_A, Approach Delay [s/veh]	24.22			17.89			0.00			7.32		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	19.35											
Intersection LOS	B											
Intersection V/C	0.752											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	1.998
Crosswalk LOS	F	F	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1133	550	0	733
d_b, Bicycle Delay [s]	11.27	31.54	60.00	24.07
l_b,int, Bicycle LOS Score for Intersection	2.253	3.111	4.132	1.560
Bicycle LOS	B	C	D	A

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Market St/SR-60 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	116.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.046

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	60.00	155.00	100.00	100.00	180.00	100.00	410.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	514	59	393	592	0	134	0	856	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	0	432	90	0	54	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	7	0	0	0	0	0	101	0	0	0
Total Hourly Volume [veh/h]	0	655	63	896	789	0	212	0	909	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	172	17	236	208	0	56	0	239	0	0	0
Total Analysis Volume [veh/h]	0	689	66	943	831	0	223	0	957	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	66	87	0	33	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	17	62	83	29	29	
g / C, Green / Cycle	0.14	0.52	0.69	0.24	0.24	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.52	0.23	0.12	0.33	
s, saturation flow rate [veh/h]	3618	1810	3618	1810	2859	
c, Capacity [veh/h]	512	935	2502	437	691	
d1, Uniform Delay [s]	51.50	29.00	7.41	39.35	45.50	
k, delay calibration	0.50	0.48	0.50	0.11	0.21	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	167.66	31.04	0.36	0.92	177.21	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.34	1.01	0.33	0.51	1.39	
d, Delay for Lane Group [s/veh]	219.16	60.04	7.76	40.28	222.71	
Lane Group LOS	F	F	A	D	F	
Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	19.41	32.33	3.75	5.75	27.10	
50th-Percentile Queue Length [ft/ln]	485.28	808.20	93.63	143.75	677.48	
95th-Percentile Queue Length [veh/ln]	30.06	41.95	6.74	9.68	41.79	
95th-Percentile Queue Length [ft/ln]	751.56	1048.84	168.53	242.07	1044.83	

Movement, Approach, & Intersection Results

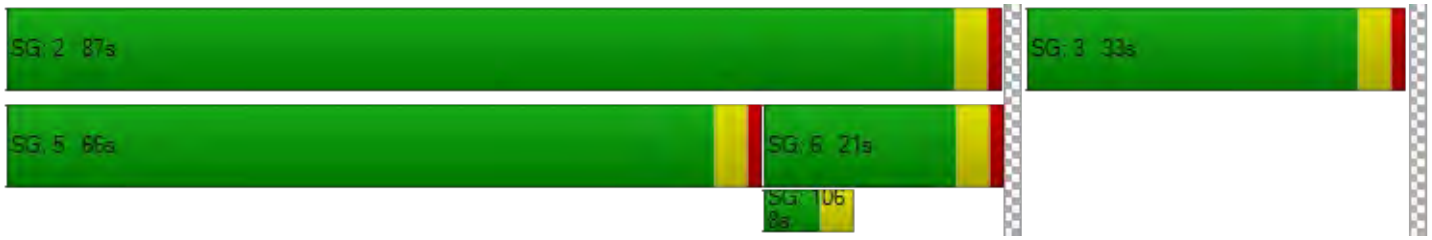
d_M, Delay for Movement [s/veh]	0.00	219.16	0.00	60.04	7.76	0.00	40.28	0.00	222.71	0.00	0.00	0.00
Movement LOS		F		F	A		D		F			
d_A, Approach Delay [s/veh]	200.80			35.55			188.23			0.00		
Approach LOS	F			D			F			A		
d_I, Intersection Delay [s/veh]	116.26											
Intersection LOS	F											
Intersection V/C	1.046											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.358
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	283	1383	483	0
d_b, Bicycle Delay [s]	44.20	5.70	34.50	60.00
l_b,int, Bicycle LOS Score for Intersection	2.128	3.023	1.560	4.132
Bicycle LOS	B	C	A	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Sierra Ave/20th St

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.132

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	1350.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	9	0	0	17	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	105	0	58	151	0	41
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	4
Total Hourly Volume [veh/h]	116	0	58	171	0	37
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	0	15	45	0	10
Total Analysis Volume [veh/h]	122	0	61	180	0	39
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	23	0	21	44	31	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	14	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	57	4	64	3	3
g / C, Green / Cycle	0.75	0.75	0.05	0.86	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.07	0.00	0.02	0.11	0.00	0.03
s, saturation flow rate [veh/h]	1710	1454	3163	1710	1629	1454
c, Capacity [veh/h]	1288	1094	154	1462	62	56
d1, Uniform Delay [s]	2.46	0.00	34.61	0.88	0.00	35.64
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	0.00	1.65	0.17	0.00	14.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.00	0.40	0.12	0.00	0.70
d, Delay for Lane Group [s/veh]	2.61	0.00	36.26	1.05	0.00	50.30
Lane Group LOS	A	A	D	A	A	D
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.29	0.00	0.55	0.07	0.00	0.90
50th-Percentile Queue Length [ft/ln]	7.18	0.00	13.70	1.75	0.00	22.42
95th-Percentile Queue Length [veh/ln]	0.52	0.00	0.99	0.13	0.00	1.61
95th-Percentile Queue Length [ft/ln]	12.92	0.00	24.66	3.16	0.00	40.35

Movement, Approach, & Intersection Results

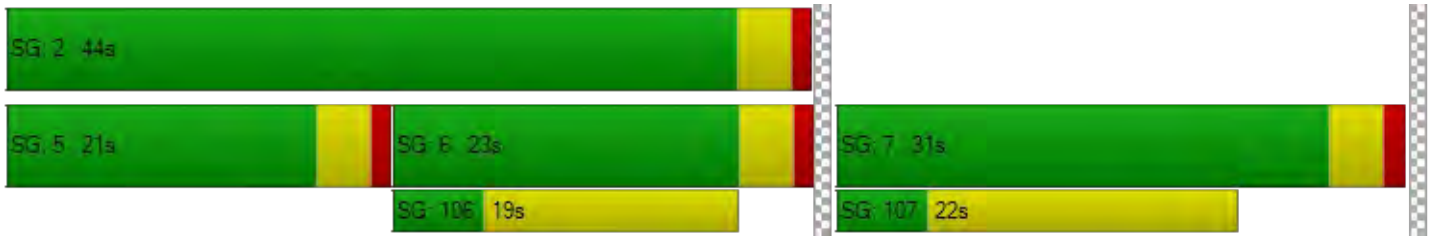
d_M, Delay for Movement [s/veh]	2.61	0.00	36.26	1.05	0.00	50.30
Movement LOS	A	A	D	A	A	D
d_A, Approach Delay [s/veh]	2.61		9.96		50.30	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	11.65					
Intersection LOS	B					
Intersection V/C	0.132					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.063	2.398	2.163
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	507	1067	720
d_b, Bicycle Delay [s]	20.91	8.17	15.36
l_b,int, Bicycle LOS Score for Intersection	1.761	1.957	1.560
Bicycle LOS	A	A	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Interim Year PM.pdf

Scenario 14 OY PM
2/15/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound		Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Right	Left	Right	
1	Sierra Ave/I-10 Ramps	868	1553	898	612	1140	884	1064	594	532	695	8840

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Sierra Ave/Slover Ave	196	1698	212	848	1273	176	420	826	106	264	480	1159	7658

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Sierra Ave/Santa Ana Ave	224	1690	100	188	1236	143	254	234	145	94	168	233	4709

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Sierra Ave/Jurupa Ave	381	1112	122	106	680	290	612	295	589	158	284	98	4727

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Armstrong Rd/Sierra Ave	1463	909	160	11	339	47	218	106	1011	148	74	60	4546

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
6	Armstrong/30th St	2470	66	38	1485	26	32	4117

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
7	Valley Way/SR-60 WB Off Ramp	35	1537	1358	5	271	100	347	71	725	4449

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
8	Valley Way/SR-60 WB On Ramp	198	1592	1305	489	3584

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR-60 EB Ramps/Mission Blvd	24	1	18	1634	5	127	98	578	24	14	380	180	3083

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
10	Valley Way/Mission Blvd	28	472	97	572	426	289	835	1216	37	61	239	523	4795

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
11	Jurupa Rd/Mission Blvd	17	292	1838	55	144	786	3132

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	Pacific Ave/Mission Blvd	132	70	78	46	39	105	184	1456	262	201	688	53	3314

ID	Intersection Name	Northbound		Southbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Thru	Right	
13	Cedar Ave/I-10 WB Ramp	563	1743	1465	701	451	0	529	5452

ID	Intersection Name	Northbound		Southbound		Eastbound			Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	
14	Cedar Ave/I-10 EB Ramps	1650	680	433	1490	656	7	350	5266

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
15	Cedar Ave/Orange St	20	1680	2	100	1446	290	330	26	18	13	8	321	4254

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	Cedar Ave/Slover Ave	147	1187	31	146	1190	137	379	430	194	33	310	170	4354

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Cedar Ave/Santa Ana Ave	241	1288	63	83	1193	57	122	162	190	26	157	51	3633

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	Cedar Ave/Jurupa Ave	184	1185	90	124	1142	192	355	274	300	53	93	81	4073

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Cedar Ave/7th St	217	1316	16	55	1317	71	44	34	399	49	14	32	3564

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	Rubidoux Blvd/Market St	38	567	559	845	904	66	99	152	78	429	71	756	4564

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	Agua Mansa Rd/Market St	0	0	39	330	0	476	631	953	4	0	764	286	3483

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
22	Rubidoux Blvd/SR-60 WB Off Ramp	161	1092	1396	30	22	250	529	150	163	3793

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
23	Rubidoux Blvd/SrR-60 WB On Ramp	240	1252	1282	894	3668

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	Left	Right	
24	Rubidoux Blvd/SR-60 EB Ramps	634	277	155	1157	820	54	447	22	1	3567

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Market St/Rivera St	11	1166	267	116	1759	1	1	15	63	237	0	64	3700

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
26	Market St/SR-60 WB Ramp	294	504	1786	272	105	943	3904

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Thru	Right	Left	Thru	Left	2	
27	Market St/SR-60 EB Ramp	655	70	896	789	212	1010	3632

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
28	Sierra Ave/20th St	116	0	58	171	0	41	386

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Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\2045 AM.pdf

Scenario 5 2045 AM
2/15/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Ave/I-10 Ramps	Signalized	HCM 7th Edition	NB Left	0.694	24.7	C
2	Sierra Ave/Slover Ave	Signalized	HCM 7th Edition	EB Left	0.655	41.6	D
3	Sierra Ave/Santa Ana Ave	Signalized	HCM 7th Edition	EB Left	0.496	24.5	C
4	Sierra Ave/Jurupa Ave	Signalized	HCM 7th Edition	WB Left	0.595	37.7	D
5	Armstrong Rd/Sierra Ave	Signalized	HCM 7th Edition	NB Left	0.832	69.7	E
6	Armstrong/30th St	Signalized	HCM 7th Edition	WB Left	0.644	13.2	B
7	Valley Way/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	WB Right	1.162	152.1	F
8	Valley Way/SR-60 WB On Ramp	Signalized	HCM 7th Edition	NB Left	0.721	12.6	B
9	SR-60 EB Ramps/Mission Blvd	Signalized	HCM 7th Edition	WB Left	0.447	30.7	C
10	Valley Way/Mission Blvd	Signalized	HCM 7th Edition	NB Left	0.747	41.1	D
11	Jurupa Rd/Mission Blvd	Two-way stop	HCM 7th Edition	NB Left	0.936	277.2	F
12	Pacific Ave/Mission Blvd	Signalized	HCM 7th Edition	WB Left	0.575	28.1	C
13	Cedar Ave/I-10 WB Ramp	Signalized	HCM 7th Edition	NB Left	0.628	16.7	B
14	Cedar Ave/I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.881	40.3	D
15	Cedar Ave/Orange St	Signalized	HCM 7th Edition	EB Left	0.847	35.1	D
16	Cedar Ave/Slover Ave	Signalized	HCM 7th Edition	NB Left	0.986	82.6	F
17	Cedar Ave/Santa Ana Ave	Signalized	HCM 7th Edition	NB Left	0.787	28.6	C

18	Cedar Ave/Jurupa Ave	Signalized	HCM 7th Edition	NB Left	0.804	41.1	D
19	Cedar Ave/7th St	Signalized	HCM 7th Edition	SB Left	0.591	16.3	B
20	Rubidoux Blvd/Market St	Signalized	HCM 7th Edition	SB Left	0.993	103.9	F
21	Agua Mansa Rd/Market St	Signalized	HCM 7th Edition	EB Left	0.752	118.5	F
22	Rubidoux Blvd/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	WB Left	1.177	88.8	F
23	Rubidoux Blvd/SrR-60 WB On Ramp	Two-way stop	HCM 7th Edition	NB Left	1.248	177.0	F
24	Rubidoux Blvd/SR-60 EB Ramps	Signalized	HCM 7th Edition	EB Left	0.964	95.3	F
25	Market St/Rivera St	Signalized	HCM 7th Edition	EB Right	0.543	15.8	B
26	Market St/SR-60 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.653	14.1	B
27	Market St/SR-60 EB Ramp	Signalized	HCM 7th Edition	EBR2	0.855	44.8	D
28	Sierra Ave/20th St	Signalized	HCM 7th Edition	WB Right	0.176	19.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Ave/I-10 Ramps

Control Type:	Signalized	Delay (sec / veh):	24.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	565.00	100.00	100.00	325.00	100.00	305.00	440.00	100.00	1500.00	1205.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	390.00	0.00	0.00	665.00	0.00	0.00	1215.00	0.00	0.00	1150.00
Speed [mph]	40.00			35.00			65.00			65.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	552	981	518	635	1080	881	1016	0	690	558	0	658
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	52	0	0	88	0	0	69	0	0	66
Total Hourly Volume [veh/h]	552	981	466	635	1080	793	1016	0	621	558	0	592
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	258	123	167	284	209	267	0	163	147	0	156
Total Analysis Volume [veh/h]	581	1033	491	668	1137	835	1069	0	654	587	0	623
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna
Signal Group	1	6	0	5	2	0	3	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	0	0	5	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	30	32	0	30	32	0	48	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	5	0	0
Pedestrian Clearance [s]	0	23	0	0	23	0	39	0	0	35	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No		No	No		No			No		
Maximum Recall	No	No		No	No		No			No		
Pedestrian Recall	No	No		No	No		No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	L
C, Cycle Length [s]	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	38	23	41	37	37
g / C, Green / Cycle	0.19	0.35	0.21	0.37	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.17	0.20	0.19	0.22	0.30	0.17
s, saturation flow rate [veh/h]	3514	5176	3514	5176	3514	3514
c, Capacity [veh/h]	664	1789	743	1904	1173	1173
d1, Uniform Delay [s]	43.34	29.42	42.23	28.16	35.07	29.30
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.82	1.37	4.27	1.39	3.15	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.58	0.90	0.60	0.91	0.50
d, Delay for Lane Group [s/veh]	47.16	30.79	46.51	29.55	38.22	29.63
Lane Group LOS	D	C	D	C	D	C
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.82	7.39	9.10	8.11	12.71	5.65
50th-Percentile Queue Length [ft/ln]	195.47	184.70	227.44	202.68	317.78	141.23
95th-Percentile Queue Length [veh/ln]	12.40	11.85	14.04	12.78	18.56	9.55
95th-Percentile Queue Length [ft/ln]	310.11	296.14	351.10	319.43	463.96	238.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.16	30.79	0.00	46.51	29.55	0.00	38.22	0.00	0.00	29.63	0.00	0.00
Movement LOS	D	C		D	C		D			C		
d_A, Approach Delay [s/veh]	28.46			24.89			24.18			14.75		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	24.70											
Intersection LOS	C											
Intersection V/C	0.694											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	3.484	3.422	3.045	2.906
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	509	509	800	800
d_b, Bicycle Delay [s]	30.56	30.56	19.80	19.80
l_b,int, Bicycle LOS Score for Intersection	2.447	2.552	1.560	1.560
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	41.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.655

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	265.00	100.00	675.00	675.00	100.00	100.00	345.00	100.00	320.00	275.00	100.00	465.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	600.00	0.00	0.00	0.00
Speed [mph]	50.00			40.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	123	1289	133	778	1203	377	217	334	68	80	327	562
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	13	0	0	38	0	0	7	0	0	56
Total Hourly Volume [veh/h]	123	1289	120	778	1203	339	217	334	61	80	327	506
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	339	32	205	317	89	57	88	16	21	86	133
Total Analysis Volume [veh/h]	129	1357	126	819	1266	357	228	352	64	84	344	533
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	137.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	40	0	29	57	0	11	41	0	10	40	40
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	31	0	0	27	0	0	31	0	0	31	31
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	6	57	57	25	75	75	7	18	18	5	15	44
g / C, Green / Cycle	0.05	0.47	0.47	0.21	0.63	0.63	0.06	0.15	0.15	0.04	0.13	0.37
(v / s)_i Volume / Saturation Flow Rate	0.04	0.21	0.21	0.23	0.30	0.32	0.06	0.10	0.04	0.02	0.10	0.19
s, saturation flow rate [veh/h]	3514	5176	1796	3514	3618	1700	3514	3618	1615	3514	3618	2859
c, Capacity [veh/h]	185	2446	849	732	2274	1069	205	530	236	138	461	1055
d1, Uniform Delay [s]	55.92	21.19	21.20	47.50	11.84	12.10	56.50	48.43	45.52	56.74	50.50	29.37
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.73	0.60	1.73	58.02	0.72	1.68	65.10	1.44	0.61	4.30	2.44	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.45	0.45	1.12	0.48	0.50	1.11	0.66	0.27	0.61	0.75	0.51
d, Delay for Lane Group [s/veh]	60.65	21.79	22.93	105.52	12.56	13.78	121.60	49.87	46.13	61.04	52.93	29.74
Lane Group LOS	E	C	C	F	B	B	F	D	D	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.98	6.55	7.10	16.56	7.24	7.58	4.88	4.96	1.70	1.30	4.97	5.71
50th-Percentile Queue Length [ft/ln]	49.55	163.83	177.50	413.95	181.08	189.40	122.05	124.00	42.48	32.43	124.16	142.67
95th-Percentile Queue Length [veh/ln]	3.57	10.75	11.47	24.64	11.66	12.09	8.77	8.61	3.06	2.33	8.62	9.62
95th-Percentile Queue Length [ft/ln]	89.20	268.79	286.75	616.01	291.43	302.25	219.13	215.32	76.46	58.37	215.53	240.61

Movement, Approach, & Intersection Results

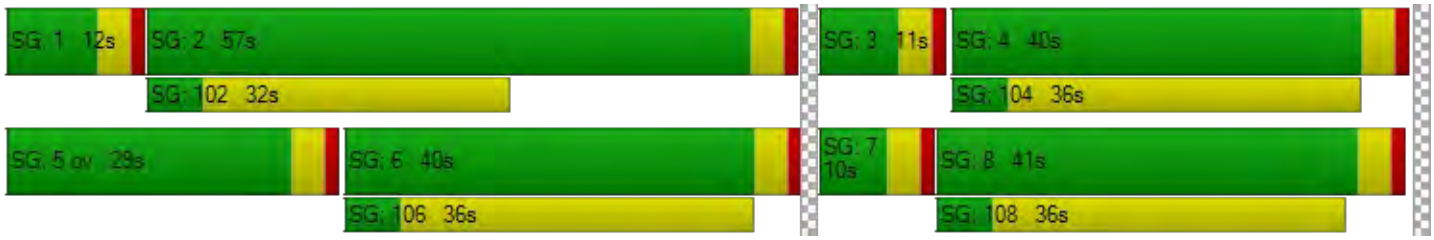
d_M, Delay for Movement [s/veh]	60.65	22.01	22.93	105.52	12.73	13.78	121.60	49.87	46.13	61.04	52.93	29.74
Movement LOS	E	C	C	F	B	B	F	D	D	E	D	C
d_A, Approach Delay [s/veh]	25.17			44.01			74.89			40.78		
Approach LOS	C			D			E			D		
d_I, Intersection Delay [s/veh]	41.61											
Intersection LOS	D											
Intersection V/C	0.655											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.433	3.591	3.028	3.364
Crosswalk LOS	C	D	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	883	617	600
d_b, Bicycle Delay [s]	29.40	18.70	28.70	29.40
l_b,int, Bicycle LOS Score for Intersection	2.230	2.924	2.097	2.399
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	285.00	100.00	210.00	375.00	100.00	100.00	240.00	100.00	100.00	300.00	100.00	350.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	535.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	227	1230	61	227	866	138	162	93	96	61	162	141
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	14	0	0	10	0	0	14
Total Hourly Volume [veh/h]	227	1230	55	227	866	124	162	93	86	61	162	127
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	324	14	60	228	33	43	24	23	16	43	33
Total Analysis Volume [veh/h]	239	1295	58	239	912	131	171	98	91	64	171	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	11	30	0	13	40	0	9	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	48	48	7	48	48	9	15	15	4	10	10
g / C, Green / Cycle	0.08	0.53	0.53	0.08	0.53	0.53	0.10	0.16	0.16	0.05	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.07	0.25	0.04	0.07	0.19	0.19	0.09	0.03	0.06	0.04	0.05	0.08
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1780	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	273	2762	862	273	1930	950	181	597	267	83	401	179
d1, Uniform Delay [s]	41.07	13.05	10.15	41.07	12.13	12.13	40.25	32.24	33.24	42.48	37.34	38.80
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.60	0.57	0.15	8.60	0.53	1.07	20.29	0.13	0.75	14.10	0.72	6.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.47	0.07	0.87	0.36	0.36	0.95	0.16	0.34	0.77	0.43	0.75
d, Delay for Lane Group [s/veh]	49.67	13.63	10.30	49.67	12.66	13.21	60.55	32.37	33.99	56.58	38.06	44.94
Lane Group LOS	D	B	B	D	B	B	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.80	4.67	0.51	2.80	3.54	3.63	4.64	0.89	1.75	1.69	1.74	3.07
50th-Percentile Queue Length [ft/ln]	69.91	116.70	12.71	69.91	88.56	90.86	115.97	22.36	43.70	42.14	43.42	76.69
95th-Percentile Queue Length [veh/ln]	5.03	8.21	0.92	5.03	6.38	6.54	8.17	1.61	3.15	3.03	3.13	5.52
95th-Percentile Queue Length [ft/ln]	125.84	205.29	22.88	125.84	159.40	163.54	204.27	40.25	78.66	75.85	78.15	138.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.67	13.63	10.30	49.67	12.79	13.21	60.55	32.37	33.99	56.58	38.06	44.94
Movement LOS	D	B	B	D	B	B	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	18.92			19.71			46.16			43.77		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	24.47											
Intersection LOS	C											
Intersection V/C	0.496											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.342	3.338	2.669	2.644
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	800	711
d_b, Bicycle Delay [s]	22.76	22.76	16.20	18.69
l_b,int, Bicycle LOS Score for Intersection	2.439	2.272	1.865	1.876
Bicycle LOS	B	B	A	A

Sequence

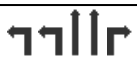
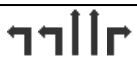
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	37.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.595

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	0	2	0	1
Entry Pocket Length [ft]	685.00	100.00	675.00	385.00	100.00	260.00	375.00	100.00	100.00	280.00	100.00	270.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	520	910	88	39	494	287	306	255	314	328	690	164
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	9	0	0	29	0	0	31	0	0	16
Total Hourly Volume [veh/h]	520	910	79	39	494	258	306	255	283	328	690	148
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	137	239	21	10	130	68	81	67	74	86	182	39
Total Analysis Volume [veh/h]	547	958	83	41	520	272	322	268	298	345	726	156
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	22	49	0	9	36	36	16	36	0	16	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	27	27	0	27	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	53	53	4	39	55	12	25	25	12	25	25
g / C, Green / Cycle	0.16	0.48	0.48	0.03	0.35	0.50	0.11	0.23	0.23	0.11	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.16	0.26	0.05	0.01	0.14	0.17	0.09	0.07	0.18	0.10	0.20	0.10
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	575	1752	782	116	1279	806	383	825	369	383	825	369
d1, Uniform Delay [s]	45.57	19.89	15.41	52.05	26.84	16.60	48.06	35.38	40.18	48.41	40.99	36.27
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.18	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.28	1.23	0.27	1.84	0.96	1.13	4.98	0.23	7.02	7.78	3.24	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.55	0.11	0.35	0.41	0.34	0.84	0.32	0.81	0.90	0.88	0.42
d, Delay for Lane Group [s/veh]	54.84	21.12	15.69	53.89	27.80	17.73	53.04	35.61	47.20	56.19	44.23	37.04
Lane Group LOS	D	C	B	D	C	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.72	7.93	1.08	0.56	5.01	4.02	4.46	2.92	8.04	4.98	9.57	3.58
50th-Percentile Queue Length [ft/ln]	192.91	198.35	27.11	14.10	125.32	100.40	111.45	73.11	200.95	124.57	239.27	89.42
95th-Percentile Queue Length [veh/ln]	12.27	12.55	1.95	1.02	8.68	7.23	7.92	5.26	12.69	8.64	14.64	6.44
95th-Percentile Queue Length [ft/ln]	306.80	313.84	48.81	25.38	217.12	180.73	198.02	131.60	317.19	216.09	366.11	160.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.84	21.12	15.69	53.89	27.80	17.73	53.04	35.61	47.20	56.19	44.23	37.04
Movement LOS	D	C	B	D	C	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	32.45			25.79			45.82			46.68		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	37.69											
Intersection LOS	D											
Intersection V/C	0.595											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	3.373	3.248	3.236	2.933
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	818	582	582	582
d_b, Bicycle Delay [s]	19.20	27.65	27.65	27.65
l_b,int, Bicycle LOS Score for Intersection	2.877	2.271	2.318	2.585
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Armstrong Rd/Sierra Ave

Control Type:	Signalized	Delay (sec / veh):	69.7
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.832

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	490.00	100.00	200.00	310.00	100.00	270.00	135.00	100.00	75.00	195.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			55.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1292	328	243	165	443	162	121	197	824	217	304	152
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	24	0	0	16	0	0	82	0	0	15
Total Hourly Volume [veh/h]	1292	328	219	165	443	146	121	197	742	217	304	137
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	340	86	58	43	117	38	32	52	195	57	80	36
Total Analysis Volume [veh/h]	1360	345	231	174	466	154	127	207	781	228	320	144
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	0	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	0.0	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	46	38	0	24	16	0	14	38	0	20	44	0
Vehicle Extension [s]	3.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	3.3	0.0	3.3	3.3	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	5.30	5.30	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.30	3.30	3.30	3.30	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	41	63	63	8	31	31	8	12	14	18	18
g / C, Green / Cycle	0.34	0.53	0.53	0.07	0.25	0.25	0.07	0.10	0.12	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.39	0.18	0.14	0.05	0.25	0.10	0.07	0.06	0.13	0.13	0.13
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1704
c, Capacity [veh/h]	1192	1000	850	235	483	410	121	368	211	288	259
d1, Uniform Delay [s]	39.65	16.45	15.71	54.96	44.24	36.91	56.00	51.34	53.00	49.52	49.58
k, delay calibration	0.11	0.50	0.50	0.04	0.50	0.50	0.04	0.11	0.06	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	66.02	0.95	0.79	1.73	33.22	2.61	38.48	1.35	46.63	6.70	7.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.14	0.34	0.27	0.74	0.97	0.38	1.05	0.56	1.08	0.84	0.85
d, Delay for Lane Group [s/veh]	105.67	17.39	16.50	56.69	77.46	39.52	94.48	52.69	99.63	56.22	57.34
Lane Group LOS	F	B	B	E	E	D	F	D	F	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	27.58	5.41	3.48	2.58	17.60	3.92	4.79	2.92	8.97	7.51	6.87
50th-Percentile Queue Length [ft/ln]	689.45	135.21	86.92	64.45	440.01	98.06	119.78	72.88	224.34	187.70	171.77
95th-Percentile Queue Length [veh/ln]	39.40	9.22	6.26	4.64	24.48	7.06	8.51	5.25	14.33	12.00	11.17
95th-Percentile Queue Length [ft/ln]	984.91	230.56	156.46	116.00	612.02	176.50	212.83	131.19	358.19	300.05	279.24

Movement, Approach, & Intersection Results

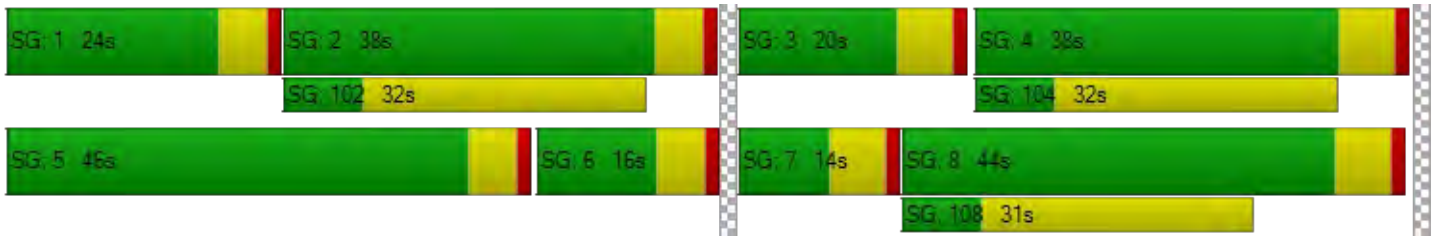
d_M, Delay for Movement [s/veh]	105.67	17.39	16.50	56.69	77.46	39.52	94.48	52.69	0.00	99.63	56.48	57.34
Movement LOS	F	B	B	E	E	D	F	D		F	E	E
d_A, Approach Delay [s/veh]	79.30			65.55			21.29			70.88		
Approach LOS	E			E			C			E		
d_I, Intersection Delay [s/veh]	69.68											
Intersection LOS	E											
Intersection V/C	0.832											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	0.00	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.148	2.758	0.000	2.684
Crosswalk LOS	C	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	545	178	533	633
d_b, Bicycle Delay [s]	31.76	49.78	32.27	28.02
l_b,int, Bicycle LOS Score for Intersection	4.794	2.896	1.835	2.143
Bicycle LOS	E	C	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Armstrong/30th St

Control Type:	Signalized	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.644

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	135.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1712	96	27	1478	186	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	10	0	0	0	6
Total Hourly Volume [veh/h]	1712	86	27	1478	186	58
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	451	23	7	389	49	15
Total Analysis Volume [veh/h]	1802	91	28	1556	196	61
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	5	5	0
Maximum Green [s]	45	0	30	5	30	0
Amber [s]	4.3	0.0	4.3	4.3	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	32	0	11	21	88	0
Vehicle Extension [s]	3.0	0.0	2.0	3.0	2.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	19	0	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.3	3.3	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	0.00	3.30	2.00
g_i, Effective Green Time [s]	91	91	91	80	20
g / C, Green / Cycle	0.76	0.76	0.76	0.67	0.16
(v / s)_i Volume / Saturation Flow Rate	0.50	0.06	0.12	0.43	0.15
s, saturation flow rate [veh/h]	3618	1615	243	3618	1759
c, Capacity [veh/h]	2746	1226	223	2415	287
d1, Uniform Delay [s]	6.94	3.69	10.62	11.64	49.18
k, delay calibration	0.50	0.50	0.04	0.50	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.24	0.12	0.09	1.34	3.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.07	0.13	0.64	0.89
d, Delay for Lane Group [s/veh]	8.18	3.81	10.71	12.98	53.11
Lane Group LOS	A	A	B	B	D
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	8.45	0.47	0.28	10.68	7.91
50th-Percentile Queue Length [ft/ln]	211.16	11.71	7.03	267.10	197.84
95th-Percentile Queue Length [veh/ln]	13.21	0.84	0.51	16.04	12.53
95th-Percentile Queue Length [ft/ln]	330.32	21.08	12.66	401.11	313.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.18	3.81	10.71	12.98	53.11	53.11
Movement LOS	A	A	B	B	D	D
d_A, Approach Delay [s/veh]	7.97		12.94		53.11	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	13.18					
Intersection LOS	B					
Intersection V/C	0.644					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.397	0.000	1.936
Crosswalk LOS	C	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	445	262	1400
d_b, Bicycle Delay [s]	36.27	45.33	5.40
l_b,int, Bicycle LOS Score for Intersection	3.130	2.866	1.994
Bicycle LOS	C	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Valley Way/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	152.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.162

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	280.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	160	1112	0	0	1503	27	76	0	201	228	171	659
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	3	0	0	20	0	0	66
Total Hourly Volume [veh/h]	160	1112	0	0	1503	24	76	0	181	228	171	593
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	293	0	0	396	6	20	0	48	60	45	156
Total Analysis Volume [veh/h]	168	1171	0	0	1582	25	80	0	191	240	180	624
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	14	67	0	0	53	0	22	0	0	0	51	0
Vehicle Extension [s]	3.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	0.0	0.0	3.3	0.0	3.4	0.0	0.0	0.0	3.3	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	5.40	5.30	5.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	3.40	3.30	3.30
g_i, Effective Green Time [s]	9	62	48	48	17	46	46
g / C, Green / Cycle	0.07	0.44	0.34	0.34	0.12	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.32	0.42	0.43	0.16	0.13	0.48
s, saturation flow rate [veh/h]	1810	3618	1900	1890	1668	1810	1671
c, Capacity [veh/h]	121	1594	647	644	198	591	546
d1, Uniform Delay [s]	65.30	32.38	46.15	46.15	61.70	36.62	47.15
k, delay calibration	0.11	0.50	0.50	0.50	0.32	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	183.12	3.05	121.34	124.24	185.78	0.45	223.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.38	0.73	1.24	1.25	1.37	0.41	1.47
d, Delay for Lane Group [s/veh]	248.42	35.42	167.49	170.39	247.48	37.07	270.20
Lane Group LOS	F	D	F	F	F	D	F
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	10.44	16.42	43.49	43.78	17.15	6.46	52.49
50th-Percentile Queue Length [ft/ln]	261.01	410.44	1087.35	1094.40	428.70	161.53	1312.34
95th-Percentile Queue Length [veh/ln]	17.29	23.06	62.19	62.73	26.94	10.63	79.39
95th-Percentile Queue Length [ft/ln]	432.18	576.57	1554.81	1568.35	673.45	265.74	1984.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	248.42	35.42	0.00	0.00	168.92	170.39	247.48	0.00	247.48	37.07	270.20	270.20
Movement LOS	F	D			F	F	F		F	D	F	F
d_A, Approach Delay [s/veh]	62.15			168.94			247.48			216.61		
Approach LOS	E			F			F			F		
d_I, Intersection Delay [s/veh]	152.06											
Intersection LOS	F											
Intersection V/C	1.162											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	59.43	59.43	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.455	2.279	2.476
Crosswalk LOS	F	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	881	681	237	653
d_b, Bicycle Delay [s]	21.90	30.43	54.38	31.76
l_b,int, Bicycle LOS Score for Intersection	2.664	2.888	2.040	3.391
Bicycle LOS	B	C	B	C

Sequence

Ring 1	8	7	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Valley Way/SR-60 WB On Ramp

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No			
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	257	1219	1329	602	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	60	0	0
Total Hourly Volume [veh/h]	257	1219	1329	542	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	321	350	143	0	0
Total Analysis Volume [veh/h]	271	1283	1399	571	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	68.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	5	0	0	0
Maximum Green [s]	30	40	40	0	0	0
Amber [s]	4.1	4.8	4.8	0.0	0.0	0.0
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0
Split [s]	29	140	111	0	0	0
Vehicle Extension [s]	3.0	2.0	2.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	3.3	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	140	140	140	140	
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	
g_i, Effective Green Time [s]	23	135	107	107	
g / C, Green / Cycle	0.16	0.96	0.77	0.77	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.35	0.52	0.57	
s, saturation flow rate [veh/h]	1810	3618	1900	1724	
c, Capacity [veh/h]	296	3481	1455	1320	
d1, Uniform Delay [s]	57.61	0.16	7.97	8.96	
k, delay calibration	0.22	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	19.34	0.30	2.55	3.88	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.92	0.37	0.68	0.75	
d, Delay for Lane Group [s/veh]	76.96	0.46	10.52	12.84	
Lane Group LOS	E	A	B	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.83	0.15	12.33	14.12	
50th-Percentile Queue Length [ft/ln]	270.71	3.64	308.18	352.94	
95th-Percentile Queue Length [veh/ln]	16.22	0.26	18.09	20.28	
95th-Percentile Queue Length [ft/ln]	405.62	6.56	452.14	506.99	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	76.96	0.46	11.21	12.84	0.00	0.00
Movement LOS	E	A	B	B		
d_A, Approach Delay [s/veh]	13.80		11.68		0.00	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	12.61					
Intersection LOS	B					
Intersection V/C	0.721					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.324
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1924	1510	0
d_b, Bicycle Delay [s]	0.10	4.20	70.00
l_b,int, Bicycle LOS Score for Intersection	2.842	3.234	4.132
Bicycle LOS	C	C	D

Sequence

Ring 1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: SR-60 EB Ramps/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.447

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	1120.00	100.00	100.00	200.00	100.00	100.00	260.00	100.00	340.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	490.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	14	2	5	661	5	73	128	405	7	6	436	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	7	0	0	1	0	0	34
Total Hourly Volume [veh/h]	14	2	4	661	5	66	128	405	6	6	436	301
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	1	1	174	1	17	34	107	2	2	115	79
Total Analysis Volume [veh/h]	15	2	4	696	5	69	135	426	6	6	459	317
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	0	3	0	0	4	0	5	2	0	1	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	5
Maximum Green [s]	0	15	0	0	35	0	25	35	0	15	35	35
Amber [s]	0.0	4.1	0.0	0.0	4.8	0.0	4.1	5.2	0.0	4.1	5.2	5.2
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.5	0.0	1.0	0.5	0.5
Split [s]	0	11	0	0	51	0	13	30	0	28	45	45
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	3.0	2.0	2.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	25	0	0	17	0	0	32	32
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	3.8	0.0	3.1	3.7	0.0	3.1	3.7	3.7
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		No			No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.10	5.80	5.80	5.10	5.70	5.70	5.10	5.70	5.80
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.80	3.80	3.10	3.70	3.70	3.10	3.70	0.00
g_i, Effective Green Time [s]	3	30	30	11	65	65	1	55	91
g / C, Green / Cycle	0.02	0.25	0.25	0.09	0.54	0.54	0.01	0.46	0.75
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.22	0.07	0.11	0.11	0.00	0.13	0.20
s, saturation flow rate [veh/h]	1777	1810	1772	1810	1900	1891	1810	3618	1615
c, Capacity [veh/h]	37	447	438	164	1031	1026	15	1665	1219
d1, Uniform Delay [s]	58.18	43.28	43.37	53.62	14.16	14.16	59.21	20.01	4.48
k, delay calibration	0.04	0.13	0.13	0.11	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.80	6.07	6.60	9.82	0.46	0.47	16.40	0.41	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.87	0.87	0.82	0.21	0.21	0.40	0.28	0.26
d, Delay for Lane Group [s/veh]	62.98	49.36	49.96	63.44	14.62	14.63	75.61	20.42	4.60
Lane Group LOS	E	D	D	E	B	B	E	C	A
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.69	11.60	11.52	4.35	2.98	2.97	0.25	3.89	1.85
50th-Percentile Queue Length [ft/ln]	17.17	290.08	287.99	108.73	74.54	74.26	6.14	97.16	46.35
95th-Percentile Queue Length [veh/ln]	1.24	17.19	17.09	7.77	5.37	5.35	0.44	7.00	3.34
95th-Percentile Queue Length [ft/ln]	30.91	429.74	427.15	194.23	134.17	133.68	11.06	174.89	83.43

Movement, Approach, & Intersection Results

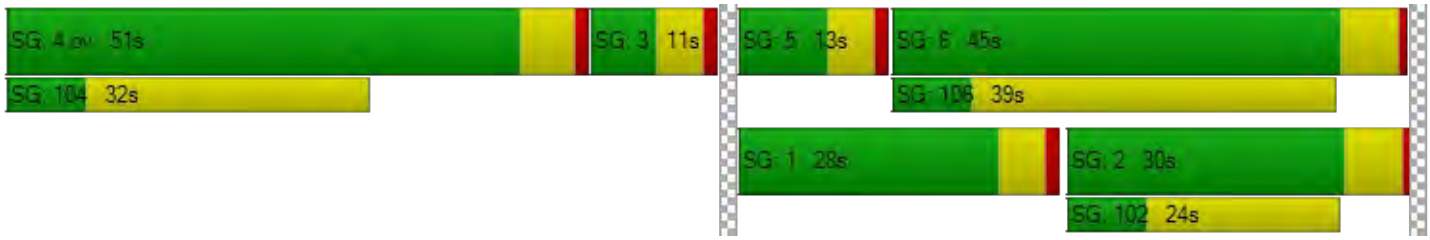
d_M, Delay for Movement [s/veh]	62.98	62.98	62.98	49.63	49.96	49.96	63.44	14.63	14.63	75.61	20.42	4.60
Movement LOS	E	E	E	D	D	D	E	B	B	E	C	A
d_A, Approach Delay [s/veh]	62.98			49.66			26.25			14.43		
Approach LOS	E			D			C			B		
d_I, Intersection Delay [s/veh]	30.71											
Intersection LOS	C											
Intersection V/C	0.447											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.746	2.515	2.642	0.000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	98	753	405	655
d_b, Bicycle Delay [s]	54.25	23.31	38.16	27.14
l_b,int, Bicycle LOS Score for Intersection	1.596	2.842	2.028	2.233
Bicycle LOS	A	C	B	B

Sequence

Ring 1	4	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Valley Way/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	41.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.747

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	3	1	0	1	1	0	1
Entry Pocket Length [ft]	145.00	100.00	510.00	170.00	100.00	150.00	410.00	100.00	180.00	260.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	442	53	489	419	473	585	355	32	73	215	743
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	47	0	0	3	0	0	74
Total Hourly Volume [veh/h]	19	442	48	489	419	426	585	355	29	73	215	669
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	116	13	129	110	112	154	93	8	19	57	176
Total Analysis Volume [veh/h]	20	465	51	515	441	448	616	374	31	77	226	704
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	76.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	4	6	0	4	6	6	4	6	0	4	6	6
Maximum Green [s]	25	30	0	35	30	30	35	45	0	25	45	45
Amber [s]	3.6	4.8	0.0	3.6	4.8	4.8	3.6	4.8	0.0	3.6	4.8	4.8
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	13	32	0	41	60	60	32	50	0	17	35	35
Vehicle Extension [s]	2.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	2.0	3.0	3.0
Walk [s]	0	5	0	5	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	23	39	39	0	34	0	0	24	24
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	3.5	0.0	2.0	3.5	3.5
I2, Clearance Lost Time [s]	2.6	3.8	0.0	2.6	3.8	3.8	2.6	3.8	0.0	2.6	3.8	3.8
Minimum Recall	No	No		No	No	No	No	Yes		No	Yes	Yes
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.80	5.80	4.60	5.80	4.60	4.60	7.30	7.30	4.60	7.30	6.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.80	3.80	2.60	3.80	0.00	2.60	3.80	3.80	2.60	3.80	0.00
g_i, Effective Green Time [s]	2	20	20	36	55	87	27	53	53	8	34	76
g / C, Green / Cycle	0.02	0.15	0.15	0.26	0.39	0.62	0.19	0.38	0.38	0.05	0.24	0.55
(v / s)_i Volume / Saturation Flow Rate	0.01	0.13	0.03	0.15	0.12	0.16	0.18	0.10	0.02	0.04	0.06	0.44
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	2859	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	30	529	236	913	1408	1775	669	1376	614	99	884	898
d1, Uniform Delay [s]	68.42	58.56	52.70	44.94	29.75	11.92	55.62	29.99	27.41	65.35	42.64	24.44
k, delay calibration	0.04	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.58	4.91	0.45	0.55	0.13	0.07	5.78	0.49	0.16	4.95	0.70	6.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.88	0.22	0.56	0.31	0.25	0.92	0.27	0.05	0.78	0.26	0.78
d, Delay for Lane Group [s/veh]	77.00	63.47	53.15	45.49	29.88	12.00	61.40	30.47	27.57	70.31	43.34	31.23
Lane Group LOS	E	E	D	D	C	B	E	C	C	E	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.77	8.27	1.59	7.68	5.09	2.98	10.96	4.37	0.67	2.83	3.22	19.05
50th-Percentile Queue Length [ft/ln]	19.36	206.81	39.78	191.96	127.27	74.55	274.09	109.26	16.87	70.64	80.60	476.19
95th-Percentile Queue Length [veh/ln]	1.39	12.99	2.86	12.22	8.79	5.37	16.39	7.80	1.21	5.09	5.80	26.21
95th-Percentile Queue Length [ft/ln]	34.84	324.73	71.61	305.57	219.78	134.20	409.84	194.98	30.37	127.16	145.09	655.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.00	63.47	53.15	45.49	29.88	12.00	61.40	30.47	27.57	70.31	43.34	31.23
Movement LOS	E	E	D	D	C	B	E	C	C	E	D	C
d_A, Approach Delay [s/veh]	63.00			29.90			49.04			36.93		
Approach LOS	E			C			D			D		
d_I, Intersection Delay [s/veh]	41.08											
Intersection LOS	D											
Intersection V/C	0.747											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	0.00	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersectio	2.749	0.000	2.989	3.098
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	374	774	631	417
d_b, Bicycle Delay [s]	46.25	26.29	32.78	43.85
l_b,int, Bicycle LOS Score for Intersection	2.006	2.757	2.404	2.451
Bicycle LOS	B	C	B	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Jurupa Rd/Mission Blvd

Control Type:	Two-way stop	Delay (sec / veh):	277.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.936

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	280.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	56	239	830	37	165	951
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	239	830	37	165	951
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	63	218	10	43	250
Total Analysis Volume [veh/h]	59	252	874	39	174	1001
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.94	0.44	0.01	0.00	0.23	0.01
d_M, Delay for Movement [s/veh]	277.24	226.40	0.00	0.00	11.19	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	17.35	17.35	0.00	0.00	0.89	0.00
95th-Percentile Queue Length [ft/ln]	433.70	433.70	0.00	0.00	22.20	0.00
d_A, Approach Delay [s/veh]	236.04		0.00		1.66	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	31.41					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 12: Pacific Ave/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	28.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.575

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	130.00	100.00	130.00	130.00	100.00	115.00	275.00	100.00	50.00	265.00	100.00	230.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	180	101	255	35	130	121	117	715	90	348	708	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	26	0	0	12	0	0	9	0	0	5
Total Hourly Volume [veh/h]	180	101	229	35	130	109	117	715	81	348	708	44
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	27	60	9	34	29	31	188	21	92	186	12
Total Analysis Volume [veh/h]	189	106	241	37	137	115	123	753	85	366	745	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	4	6	0	4	5	0
Maximum Green [s]	0	30	0	0	30	0	25	45	0	25	45	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.5	0.0	4.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	36	0	0	36	0	11	27	0	22	38	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	2.5	3.5	0.0	2.5	3.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	21	21	21	21	21	21	7	31	31	18	42	42
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.25	0.25	0.08	0.37	0.37	0.21	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.16	0.06	0.15	0.04	0.07	0.07	0.07	0.21	0.05	0.20	0.21	0.03
s, saturation flow rate [veh/h]	1146	1900	1615	1050	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	312	476	404	307	476	404	138	1329	593	373	1797	802
d1, Uniform Delay [s]	32.69	25.29	28.07	27.38	25.74	25.71	38.89	21.49	17.96	33.60	13.56	11.08
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.21	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.89	0.23	1.41	0.17	0.33	0.38	16.82	1.76	0.51	25.98	0.71	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.22	0.60	0.12	0.29	0.28	0.89	0.57	0.14	0.98	0.41	0.06
d, Delay for Lane Group [s/veh]	34.58	25.53	29.48	27.56	26.07	26.09	55.72	23.25	18.47	59.58	14.27	11.22
Lane Group LOS	C	C	C	C	C	C	E	C	B	E	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.80	1.70	4.36	0.62	2.23	1.88	3.08	5.83	1.12	9.76	4.17	0.43
50th-Percentile Queue Length [ft/ln]	95.00	42.42	109.05	15.48	55.87	47.01	77.10	145.71	28.06	244.00	104.35	10.85
95th-Percentile Queue Length [veh/ln]	6.84	3.05	7.79	1.11	4.02	3.38	5.55	9.79	2.02	14.88	7.51	0.78
95th-Percentile Queue Length [ft/ln]	171.00	76.36	194.68	27.86	100.56	84.62	138.77	244.70	50.50	372.09	187.83	19.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.58	25.53	29.48	27.56	26.07	26.09	55.72	23.25	18.47	59.58	14.27	11.22
Movement LOS	C	C	C	C	C	C	E	C	B	E	B	B
d_A, Approach Delay [s/veh]	30.50			26.27			26.98			28.48		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.14											
Intersection LOS	C											
Intersection V/C	0.575											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersectio	2.447	2.286	3.171	2.990
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	729	729	506	765
d_b, Bicycle Delay [s]	17.15	17.15	23.72	16.21
l_b,int, Bicycle LOS Score for Intersection	2.487	2.056	2.360	2.518
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Cedar Ave/I-10 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	230.00	100.00	230.00	100.00	100.00	100.00	485.00	100.00	485.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	411	1593	0	0	1768	847	0	0	0	767	4	484
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	85	0	0	0	0	0	48
Total Hourly Volume [veh/h]	411	1593	0	0	1768	762	0	0	0	767	4	436
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	108	419	0	0	465	201	0	0	0	202	1	115
Total Analysis Volume [veh/h]	433	1677	0	0	1861	802	0	0	0	807	4	459
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	23	39	0	0	16	0	0	0	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	10	36	22	22		16	16	16
g / C, Green / Cycle	0.17	0.60	0.37	0.37		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.12	0.32	0.22	0.28		0.22	0.22	0.16
s, saturation flow rate [veh/h]	3514	5176	8626	2859		1810	1810	2859
c, Capacity [veh/h]	592	3123	3178	1053		476	476	752
d1, Uniform Delay [s]	23.66	6.98	15.26	16.63		20.99	20.99	19.40
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.77	0.67	0.80	5.21		4.39	4.38	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.54	0.59	0.76		0.85	0.85	0.61
d, Delay for Lane Group [s/veh]	25.43	7.64	16.06	21.84		25.38	25.37	20.21
Lane Group LOS	C	A	B	C		C	C	C
Critical Lane Group	Yes	No	No	Yes		Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.75	2.90	3.54	4.75		5.37	5.37	2.59
50th-Percentile Queue Length [ft/ln]	68.72	72.39	88.53	118.87		134.36	134.31	64.79
95th-Percentile Queue Length [veh/ln]	4.95	5.21	6.37	8.33		9.18	9.17	4.67
95th-Percentile Queue Length [ft/ln]	123.69	130.30	159.35	208.28		229.41	229.34	116.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.43	7.64	0.00	0.00	16.06	21.84	0.00	0.00	0.00	25.38	25.37	20.21
Movement LOS	C	A			B	C				C	C	C
d_A, Approach Delay [s/veh]	11.29			17.80			0.00			23.51		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	16.73											
Intersection LOS	B											
Intersection V/C	0.628											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.341	2.649
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	400	0	567
d_b, Bicycle Delay [s]	5.21	19.20	30.00	15.41
l_b,int, Bicycle LOS Score for Intersection	2.720	2.466	4.132	3.734
Bicycle LOS	B	B	D	D

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Cedar Ave/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	40.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.881

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	2	0	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	600.00	100.00	600.00	100.00	100.00	100.00	100.00	100.00	380.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1090.00
Speed [mph]	40.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1357	561	496	1959	0	633	4	687	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	56	0	0	0	0	0	69	0	0	0
Total Hourly Volume [veh/h]	0	1357	505	496	1959	0	633	4	618	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	357	133	131	516	0	167	1	163	0	0	0
Total Analysis Volume [veh/h]	0	1428	532	522	2062	0	666	4	651	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	34	0	16	50	0	0	45	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	95	95	95	95	95	95	95	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	31	31	12	47	40	40	40	
g / C, Green / Cycle	0.33	0.33	0.13	0.49	0.42	0.42	0.42	
(v / s)_i Volume / Saturation Flow Rate	0.17	0.33	0.15	0.40	0.19	0.19	0.40	
s, saturation flow rate [veh/h]	8626	1615	3514	5176	1810	1811	1615	
c, Capacity [veh/h]	2802	525	444	2553	765	765	682	
d1, Uniform Delay [s]	25.95	32.07	41.50	20.27	19.44	19.44	26.54	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.41	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.67	42.85	84.67	2.87	0.40	0.40	21.99	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.51	1.01	1.18	0.81	0.44	0.44	0.95	
d, Delay for Lane Group [s/veh]	26.61	74.92	126.17	23.14	19.84	19.83	48.53	
Lane Group LOS	C	F	F	C	B	B	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.05	17.48	10.23	12.12	5.08	5.08	17.41	
50th-Percentile Queue Length [ft/ln]	126.33	437.06	255.72	303.06	126.93	126.91	435.34	
95th-Percentile Queue Length [veh/ln]	8.74	24.57	16.51	17.83	8.77	8.77	24.26	
95th-Percentile Queue Length [ft/ln]	218.50	614.13	412.74	445.81	219.32	219.29	606.44	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	26.61	74.92	126.17	23.14	0.00	19.83	19.83	48.53	0.00	0.00	0.00
Movement LOS		C	F	F	C		B	B	D			
d_A, Approach Delay [s/veh]	39.72			43.95			33.97			0.00		
Approach LOS	D			D			C			A		
d_I, Intersection Delay [s/veh]	40.29											
Intersection LOS	D											
Intersection V/C	0.881											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	38.93	38.93
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.629	2.262
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	632	968	863	0
d_b, Bicycle Delay [s]	22.24	12.64	15.35	47.50
l_b,int, Bicycle LOS Score for Intersection	2.225	2.981	3.853	4.132
Bicycle LOS	B	C	D	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Cedar Ave/Orange St

Control Type:	Signalized	Delay (sec / veh):	35.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.847

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	160.00	100.00	100.00	140.00	100.00	100.00	400.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	1685	4	126	1975	538	321	6	15	0	1	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	54	0	0	2	0	0	16
Total Hourly Volume [veh/h]	10	1685	4	126	1975	484	321	6	13	0	1	144
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	443	1	33	520	127	84	2	3	0	0	38
Total Analysis Volume [veh/h]	11	1774	4	133	2079	509	338	6	14	0	1	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	63	0	10	64	0	0	32	0	0	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	69	60	60	69	64	64	28	28	28	28
g / C, Green / Cycle	0.66	0.57	0.57	0.66	0.61	0.61	0.27	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.05	0.47	0.47	0.31	0.57	0.32	0.27	0.01	0.00	0.09
s, saturation flow rate [veh/h]	207	1900	1898	426	3618	1615	1254	1691	1414	1617
c, Capacity [veh/h]	173	1087	1086	280	2188	977	283	451	406	431
d1, Uniform Delay [s]	23.20	18.07	18.08	20.18	19.27	11.97	45.69	28.57	0.00	31.18
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.41	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	6.87	6.89	5.67	10.63	1.99	112.13	0.04	0.00	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.82	0.82	0.47	0.95	0.52	1.19	0.04	0.00	0.35
d, Delay for Lane Group [s/veh]	23.35	24.93	24.97	25.85	29.89	13.95	157.82	28.61	0.00	31.68
Lane Group LOS	C	C	C	C	C	B	F	C	A	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.08	17.34	17.35	1.40	23.20	6.61	16.26	0.38	0.00	3.19
50th-Percentile Queue Length [ft/ln]	2.03	433.60	433.84	34.95	579.96	165.29	406.53	9.49	0.00	79.66
95th-Percentile Queue Length [veh/ln]	0.15	24.17	24.19	2.52	31.10	10.83	25.16	0.68	0.00	5.74
95th-Percentile Queue Length [ft/ln]	3.65	604.35	604.63	62.90	777.43	270.71	628.90	17.08	0.00	143.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.35	24.95	24.97	25.85	29.89	13.95	157.82	28.61	28.61	0.00	31.68	31.68
Movement LOS	C	C	C	C	C	B	F	C	C	A	C	C
d_A, Approach Delay [s/veh]	24.94			26.72			150.60			31.68		
Approach LOS	C			C			F			C		
d_I, Intersection Delay [s/veh]	35.07											
Intersection LOS	D											
Intersection V/C	0.847											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	0.00	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.319	0.000	2.266	2.185
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1124	1143	533	533
d_b, Bicycle Delay [s]	10.08	9.64	28.23	28.23
l_b,int, Bicycle LOS Score for Intersection	3.036	3.849	2.154	1.838
Bicycle LOS	C	D	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Cedar Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	82.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.986

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	115.00	100.00	100.00	250.00	100.00	80.00	190.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	258	1036	20	142	1510	292	334	226	127	28	311	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	29	0	0	13	0	0	13
Total Hourly Volume [veh/h]	258	1036	18	142	1510	263	334	226	114	28	311	112
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	273	5	37	397	69	88	59	30	7	82	29
Total Analysis Volume [veh/h]	272	1091	19	149	1589	277	352	238	120	29	327	118
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	54	0	15	52	0	21	26	0	25	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	59	59	11	57	57	17	31	31	3	17	17
g / C, Green / Cycle	0.11	0.49	0.49	0.09	0.47	0.47	0.14	0.26	0.26	0.03	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.15	0.29	0.29	0.08	0.49	0.52	0.19	0.07	0.07	0.02	0.12	0.12
s, saturation flow rate [veh/h]	1810	1900	1889	1810	1900	1805	1810	3618	1615	1810	1900	1732
c, Capacity [veh/h]	196	929	923	166	897	853	256	937	418	49	274	250
d1, Uniform Delay [s]	53.50	22.16	22.17	53.95	31.66	31.66	51.50	35.26	35.58	57.73	49.98	50.14
k, delay calibration	0.16	0.50	0.50	0.11	0.50	0.50	0.29	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	184.22	2.85	2.87	15.47	40.85	59.78	181.66	0.14	0.37	10.99	6.76	8.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.39	0.60	0.60	0.90	1.04	1.09	1.37	0.25	0.29	0.59	0.84	0.86
d, Delay for Lane Group [s/veh]	237.72	25.01	25.04	69.42	72.52	91.44	233.16	35.40	35.96	68.72	56.74	58.52
Lane Group LOS	F	C	C	E	F	F	F	D	D	E	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	15.83	11.51	11.46	5.09	34.41	37.18	20.35	2.68	2.75	0.99	6.99	6.65
50th-Percentile Queue Length [ft/ln]	395.80	287.71	286.54	127.18	860.31	929.56	508.70	66.98	68.78	24.84	174.81	166.17
95th-Percentile Queue Length [veh/ln]	25.13	17.07	17.01	8.79	45.42	50.55	31.54	4.82	4.95	1.79	11.33	10.88
95th-Percentile Queue Length [ft/ln]	628.20	426.80	425.34	219.66	1135.50	1263.78	788.48	120.57	123.81	44.72	283.23	271.88

Movement, Approach, & Intersection Results

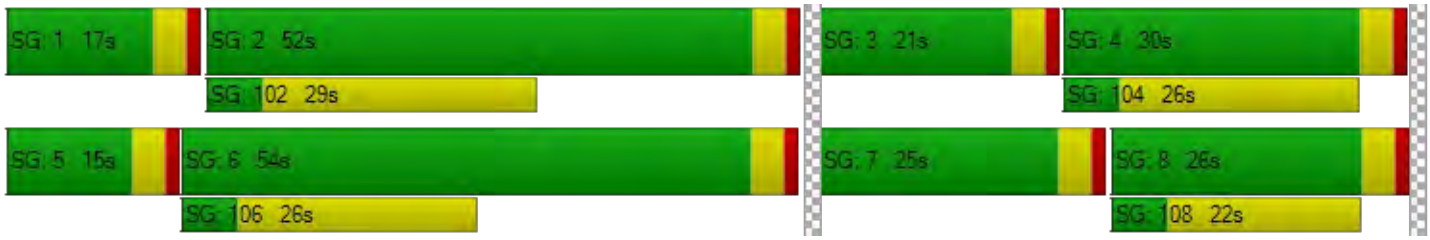
d_M, Delay for Movement [s/veh]	237.72	25.02	25.04	69.42	80.33	91.44	233.16	35.40	35.96	68.72	57.27	58.52
Movement LOS	F	C	C	E	F	F	F	D	D	E	E	E
d_A, Approach Delay [s/veh]	66.89			81.05			133.54			58.28		
Approach LOS	E			F			F			E		
d_I, Intersection Delay [s/veh]	82.56											
Intersection LOS	F											
Intersection V/C	0.986											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.133	3.293	3.006	2.729
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	800	367	433
d_b, Bicycle Delay [s]	20.42	21.60	40.02	36.82
l_b,int, Bicycle LOS Score for Intersection	2.701	3.246	2.156	1.961
Bicycle LOS	B	C	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Cedar Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	28.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.787

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	290.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	139	1076	24	63	1563	65	90	98	157	55	107	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	7	0	0	16	0	0	11
Total Hourly Volume [veh/h]	139	1076	22	63	1563	58	90	98	141	55	107	96
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	283	6	17	411	15	24	26	37	14	28	25
Total Analysis Volume [veh/h]	146	1133	23	66	1645	61	95	103	148	58	113	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	65	0	9	62	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	61	61	5	58	58	22	22
g / C, Green / Cycle	0.08	0.61	0.61	0.05	0.58	0.58	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.08	0.31	0.31	0.04	0.45	0.45	0.25	0.18
s, saturation flow rate [veh/h]	1810	1900	1887	1810	1900	1876	1368	1491
c, Capacity [veh/h]	145	1163	1155	86	1102	1088	347	372
d1, Uniform Delay [s]	46.00	10.82	10.82	47.05	16.03	16.14	40.41	36.71
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.34	0.16
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	36.90	1.53	1.54	12.93	5.36	5.62	38.95	4.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.01	0.50	0.50	0.76	0.78	0.78	1.00	0.73
d, Delay for Lane Group [s/veh]	82.90	12.35	12.37	59.99	21.39	21.76	79.36	40.87
Lane Group LOS	F	B	B	E	C	C	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.94	6.50	6.46	1.88	14.23	14.32	12.21	6.50
50th-Percentile Queue Length [ft/ln]	123.60	162.47	161.61	46.97	355.73	358.06	305.24	162.46
95th-Percentile Queue Length [veh/ln]	8.61	10.68	10.63	3.38	20.42	20.53	17.94	10.68
95th-Percentile Queue Length [ft/ln]	215.37	266.99	265.86	84.55	510.38	513.22	448.51	266.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	82.90	12.36	12.37	59.99	21.57	21.76	79.36	79.36	79.36	40.87	40.87	40.87
Movement LOS	F	B	B	E	C	C	E	E	E	D	D	D
d_A, Approach Delay [s/veh]	20.27			23.01			79.36			40.87		
Approach LOS	C			C			E			D		
d_I, Intersection Delay [s/veh]	28.64											
Intersection LOS	C											
Intersection V/C	0.787											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	3.319	3.364	2.192	2.047
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1220	1160	440	440
d_b, Bicycle Delay [s]	7.61	8.82	30.42	30.42
l_b,int, Bicycle LOS Score for Intersection	2.635	3.027	2.157	2.027
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Cedar Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	41.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	190.00	100.00	100.00	345.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	180.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	225	951	51	103	1373	313	129	95	112	50	118	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	31	0	0	11	0	0	16
Total Hourly Volume [veh/h]	225	951	46	103	1373	282	129	95	101	50	118	144
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	250	12	27	361	74	34	25	27	13	31	38
Total Analysis Volume [veh/h]	237	1001	48	108	1445	297	136	100	106	53	124	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	26	0	11	26	0	0	48	0	0	48	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	48	48	6	47	47	19	19	19	19
g / C, Green / Cycle	0.08	0.56	0.56	0.08	0.56	0.56	0.22	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.13	0.28	0.28	0.06	0.46	0.48	0.19	0.07	0.13	0.09
s, saturation flow rate [veh/h]	1810	1900	1870	1810	1900	1792	1248	1615	1382	1615
c, Capacity [veh/h]	149	1070	1053	138	1059	999	340	354	358	354
d1, Uniform Delay [s]	39.00	11.23	11.23	38.55	15.45	16.12	32.63	27.74	29.76	28.61
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	272.53	1.63	1.66	9.15	7.42	10.08	2.55	0.47	1.06	0.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.59	0.49	0.49	0.78	0.83	0.87	0.69	0.30	0.49	0.43
d, Delay for Lane Group [s/veh]	311.53	12.85	12.89	47.70	22.86	26.19	35.18	28.21	30.82	29.44
Lane Group LOS	F	B	B	D	C	C	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	14.22	5.42	5.35	2.45	13.37	14.34	4.67	1.76	3.26	2.61
50th-Percentile Queue Length [ft/ln]	355.52	135.38	133.72	61.19	334.35	358.52	116.83	43.98	81.38	65.37
95th-Percentile Queue Length [veh/ln]	23.33	9.23	9.14	4.41	19.37	20.55	8.22	3.17	5.86	4.71
95th-Percentile Queue Length [ft/ln]	583.16	230.79	228.55	110.14	484.29	513.79	205.46	79.16	146.48	117.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	311.53	12.87	12.89	47.70	24.17	26.19	35.18	35.18	28.21	30.82	30.82	29.44
Movement LOS	F	B	B	D	C	C	D	D	C	C	C	C
d_A, Approach Delay [s/veh]	67.91			25.87			33.02			30.18		
Approach LOS	E			C			C			C		
d_I, Intersection Delay [s/veh]	41.09											
Intersection LOS	D											
Intersection V/C	0.804											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	3.231	3.468	2.406	2.224
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	518	518	1035	1035
d_b, Bicycle Delay [s]	23.35	23.35	9.89	9.89
l_b,int, Bicycle LOS Score for Intersection	2.625	3.111	2.142	2.129
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Cedar Ave/7th St

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	295.00	100.00	100.00	190.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	100	1093	9	23	1347	52	52	11	183	52	17	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	5	0	0	18	0	0	2
Total Hourly Volume [veh/h]	100	1093	8	23	1347	47	52	11	165	52	17	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	288	2	6	354	12	14	3	43	14	4	4
Total Analysis Volume [veh/h]	105	1151	8	24	1418	49	55	12	174	55	18	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	24	0	55	67	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	73	73	3	68	68	17	17
g / C, Green / Cycle	0.07	0.70	0.70	0.02	0.65	0.65	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.06	0.31	0.31	0.01	0.39	0.39	0.14	0.09
s, saturation flow rate [veh/h]	1810	1900	1895	1810	1900	1878	1669	940
c, Capacity [veh/h]	131	1327	1324	47	1238	1223	312	208
d1, Uniform Delay [s]	47.93	6.88	6.88	50.50	10.41	10.44	42.95	40.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.54	1.05	1.05	8.51	2.11	2.15	4.08	1.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.44	0.44	0.51	0.60	0.60	0.77	0.42
d, Delay for Lane Group [s/veh]	58.47	7.93	7.93	59.01	12.53	12.59	47.03	41.37
Lane Group LOS	E	A	A	E	B	B	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.98	4.54	4.54	0.71	8.39	8.35	6.47	2.18
50th-Percentile Queue Length [ft/ln]	74.42	113.61	113.39	17.74	209.75	208.69	161.85	54.46
95th-Percentile Queue Length [veh/ln]	5.36	8.04	8.03	1.28	13.14	13.09	10.65	3.92
95th-Percentile Queue Length [ft/ln]	133.96	201.01	200.71	31.94	328.51	327.14	266.18	98.03

Movement, Approach, & Intersection Results

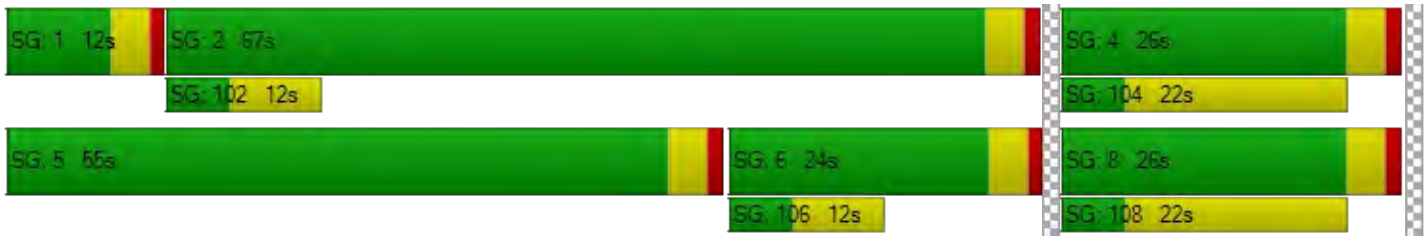
d_M, Delay for Movement [s/veh]	58.47	7.93	7.93	59.01	12.56	12.59	47.03	47.03	47.03	41.37	41.37	41.37
Movement LOS	E	A	A	E	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.13			13.31			47.03			41.37		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	16.26											
Intersection LOS	B											
Intersection V/C	0.591											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.341	3.278	1.927	1.782
Crosswalk LOS	C	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	381	1200	419	419
d_b, Bicycle Delay [s]	34.40	8.40	32.80	32.80
l_b,int, Bicycle LOS Score for Intersection	2.603	2.794	1.987	1.708
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Rubidoux Blvd/Market St

Control Type:	Signalized	Delay (sec / veh):	103.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.993

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	2	0	0
Entry Pocket Length [ft]	245.00	100.00	330.00	270.00	100.00	370.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	59	452	469	849	731	158	89	95	85	368	90	707
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	47	0	0	0	0	0	0	0	0	71
Total Hourly Volume [veh/h]	59	452	422	849	731	158	89	95	85	368	90	636
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	1.0000	1.0000	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	119	111	223	192	40	22	24	21	97	23	167
Total Analysis Volume [veh/h]	59	476	444	894	769	158	89	95	85	387	90	669
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	0	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	0.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	15	42	0	36	63	0	15	39	0	33	57	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	1.5	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	5.0	0.0	3.0	4.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.00	7.00	7.00	5.00	6.00	6.00	5.00	7.00	5.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	5.00	5.00	3.00	4.00	4.00	3.00	5.00	3.00	4.00	4.00
g_i, Effective Green Time [s]	9	35	35	31	58	58	10	41	19	51	51
g / C, Green / Cycle	0.06	0.23	0.23	0.21	0.39	0.39	0.07	0.27	0.13	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.03	0.13	0.27	0.25	0.21	0.10	0.05	0.10	0.11	0.05	0.41
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1754	3514	1900	1615
c, Capacity [veh/h]	111	845	377	726	1396	623	118	477	449	649	551
d1, Uniform Delay [s]	68.34	50.73	57.48	59.50	35.93	31.36	68.95	44.30	64.12	34.16	49.40
k, delay calibration	0.11	0.50	0.50	0.16	0.50	0.50	0.11	0.04	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.94	2.71	103.94	107.91	1.57	0.98	9.41	0.18	5.00	0.10	112.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.56	1.18	1.23	0.55	0.25	0.76	0.38	0.86	0.14	1.21
d, Delay for Lane Group [s/veh]	72.28	53.44	161.42	167.41	37.50	32.34	78.36	44.48	69.12	34.25	161.44
Lane Group LOS	E	D	F	F	D	C	E	D	E	C	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.28	8.03	24.75	24.28	10.95	3.99	3.64	5.43	7.44	2.27	37.14
50th-Percentile Queue Length [ft/ln]	56.90	200.79	618.64	606.98	273.74	99.68	91.05	135.85	186.10	56.82	928.42
95th-Percentile Queue Length [veh/ln]	4.10	12.68	35.99	35.97	16.38	7.18	6.56	9.26	11.92	4.09	53.25
95th-Percentile Queue Length [ft/ln]	102.42	316.98	899.69	899.17	409.40	179.43	163.88	231.43	297.97	102.28	1331.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.28	53.44	161.42	167.41	37.50	32.34	78.36	44.48	44.48	69.12	34.25	161.44
Movement LOS	E	D	F	F	D	C	E	D	D	E	C	F
d_A, Approach Delay [s/veh]	103.55			100.83			55.69			120.28		
Approach LOS	F			F			E			F		
d_I, Intersection Delay [s/veh]	103.87											
Intersection LOS	F											
Intersection V/C	0.993											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	64.40	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.343	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	467	760	427	680
d_b, Bicycle Delay [s]	44.08	28.83	46.41	32.67
l_b,int, Bicycle LOS Score for Intersection	2.406	3.062	2.003	3.568
Bicycle LOS	B	C	B	D

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Agua Mansa Rd/Market St

Control Type:	Signalized	Delay (sec / veh):	118.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	2	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	200.00	85.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	0	4	3	206	0	398	443	993	44	0	886	445
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	40	0	0	4	0	0	45
Total Hourly Volume [veh/h]	0	4	3	206	0	358	443	993	40	0	886	400
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	54	0	94	117	261	11	0	233	105
Total Analysis Volume [veh/h]	0	4	3	217	0	377	466	1045	42	0	933	421
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	14	35	0	9	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	1.5	3.0	0.0	1.5	3.0	0.0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.2	0.0	0.0	3.9	0.0	2.2	4.5	0.0	2.2	4.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.20	5.90	5.90	4.20	6.50	6.50	4.20	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.90	3.90	2.20	4.50	4.50	2.20	4.50	4.50
g_i, Effective Green Time [s]	41	40	40	10	33	33	0	24	24
g / C, Green / Cycle	0.45	0.45	0.45	0.11	0.37	0.37	0.00	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.00	0.15	0.23	0.26	0.29	0.03	0.00	0.26	0.26
s, saturation flow rate [veh/h]	1766	1431	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	802	683	720	197	1332	595	3	945	422
d1, Uniform Delay [s]	13.50	16.37	18.05	40.10	25.25	18.43	0.00	33.11	33.23
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	1.22	2.72	629.71	1.05	0.05	0.00	11.04	19.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.32	0.52	2.37	0.78	0.07	0.00	0.99	1.00
d, Delay for Lane Group [s/veh]	13.52	17.59	20.76	669.81	26.30	18.48	0.00	44.15	53.22
Lane Group LOS	B	B	C	F	C	B	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.08	2.99	5.83	38.60	9.16	0.53	0.00	10.82	10.83
50th-Percentile Queue Length [ft/ln]	2.04	74.73	145.76	965.08	229.06	13.36	0.00	270.50	270.75
95th-Percentile Queue Length [veh/ln]	0.15	5.38	9.79	60.52	14.13	0.96	0.00	16.21	16.23
95th-Percentile Queue Length [ft/ln]	3.68	134.52	244.76	1513.03	353.16	24.05	0.00	405.37	405.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.52	13.52	13.52	17.59	20.76	20.76	669.81	26.30	18.48	0.00	44.15	53.22
Movement LOS	B	B	B	B	C	C	F	C	B	A	D	D
d_A, Approach Delay [s/veh]	13.52			19.60			219.18			46.97		
Approach LOS	B			B			F			D		
d_I, Intersection Delay [s/veh]	118.51											
Intersection LOS	F											
Intersection V/C	0.752											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	13.0	15.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	32.94	32.94	31.25	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.734	2.590	3.172	0.000
Crosswalk LOS	A	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	907	891	633	522
d_b, Bicycle Delay [s]	13.45	13.83	21.01	24.57
l_b,int, Bicycle LOS Score for Intersection	1.571	2.606	2.844	2.714
Bicycle LOS	A	B	C	B

Sequence

Ring 1	-	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	3	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Rubidoux Blvd/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	88.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.177

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	85.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	71	994	0	0	1190	26	35	0	328	769	98	135
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	3	0	0	33	0	0	14
Total Hourly Volume [veh/h]	71	994	0	0	1190	23	35	0	295	769	98	121
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	262	0	0	313	6	9	0	78	202	26	32
Total Analysis Volume [veh/h]	75	1046	0	0	1253	24	37	0	311	809	103	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	4	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	35	0	0	35	0	20	0	0	0	30	0
Maximum Green [s]	0	25	0	0	25	0	35	0	0	0	20	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	4.8	0.0	0.0	0.0	4.8	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	41	0	0	41	0	49	0	0	0	49	0
Vehicle Extension [s]	0.0	3.5	0.0	0.0	3.5	0.0	2.0	0.0	0.0	0.0	3.5	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	3.8	0.0	0.0	0.0	3.8	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.80	5.80	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.40	3.40	3.80	3.80	3.80	3.80
g_i, Effective Green Time [s]	36	36	36	36	43	43	43	43
g / C, Green / Cycle	0.40	0.40	0.40	0.40	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.17	0.29	0.34	0.34	0.03	0.19	0.84	0.08
s, saturation flow rate [veh/h]	440	3618	1900	1887	1169	1615	1088	1615
c, Capacity [veh/h]	109	1431	752	747	91	775	598	775
d1, Uniform Delay [s]	43.86	23.13	24.76	24.85	44.88	15.07	27.00	13.21
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.50	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	30.05	3.33	11.55	12.02	1.10	0.12	245.15	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.73	0.85	0.86	0.41	0.40	1.53	0.16
d, Delay for Lane Group [s/veh]	73.91	26.45	36.32	36.87	45.98	15.19	272.15	13.33
Lane Group LOS	E	C	D	D	D	B	F	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.53	9.32	13.73	13.85	0.85	3.92	53.78	1.39
50th-Percentile Queue Length [ft/ln]	63.36	233.08	343.36	346.34	21.15	98.08	1344.46	34.72
95th-Percentile Queue Length [veh/ln]	4.56	14.33	19.81	19.96	1.52	7.06	84.36	2.50
95th-Percentile Queue Length [ft/ln]	114.04	358.27	495.30	498.94	38.07	176.54	2109.11	62.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	73.91	26.45	0.00	0.00	36.59	36.87	45.98	0.00	15.19	272.15	272.15	13.33
Movement LOS	E	C			D	D	D		B	F	F	B
d_A, Approach Delay [s/veh]	29.63			36.59			18.47			240.51		
Approach LOS	C			D			B			F		
d_I, Intersection Delay [s/veh]	88.84											
Intersection LOS	F											
Intersection V/C	1.177											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	35.6
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	34.67	0.00	16.44
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.001	0.000	2.329
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	791	791	960	960
d_b, Bicycle Delay [s]	16.44	16.44	12.17	12.17
l_b,int, Bicycle LOS Score for Intersection	2.484	2.616	1.560	3.297
Bicycle LOS	B	B	A	C

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Rubidoux Blvd/SrR-60 WB On Ramp

Control Type:	Two-way stop	Delay (sec / veh):	177.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.248

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	145.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	320	1064	1066	912	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	320	1064	1066	912	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	280	281	240	0	0
Total Analysis Volume [veh/h]	337	1120	1122	960	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.25	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	177.03	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	16.18	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	404.45	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	40.95		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	16.86					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 24: Rubidoux Blvd/SR-60 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	95.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.964

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	145.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	652	570	273	775	0	722	14	215	9	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	57	0	0	0	0	0	22	0	0	0
Total Hourly Volume [veh/h]	0	652	513	273	775	0	722	14	193	9	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	172	135	72	204	0	190	4	51	2	0	1
Total Analysis Volume [veh/h]	0	686	540	287	816	0	760	15	203	9	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Permiss	Split
Signal Group	0	2	0	1	6	0	0	4	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	5	0	0
Maximum Green [s]	0	35	0	30	35	0	0	35	0	20	0	0
Amber [s]	0.0	4.4	0.0	4.1	4.4	0.0	0.0	4.8	0.0	4.4	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	43	0	18	61	0	0	48	0	11	0	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	3.0	0.0	2.0	0.0	0.0
Walk [s]	0	4	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	33	0	0	18	0	0	28	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	3.1	3.4	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.10	5.40	5.80	5.80	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.10	3.40	3.80	3.80	3.40	3.40
g_i, Effective Green Time [s]	38	38	17	59	42	42	2	2
g / C, Green / Cycle	0.31	0.31	0.14	0.50	0.35	0.35	0.01	0.01
(v / s)_i Volume / Saturation Flow Rate	0.32	0.37	0.16	0.23	0.43	0.13	0.00	0.00
s, saturation flow rate [veh/h]	1900	1644	1810	3618	1811	1615	1810	1615
c, Capacity [veh/h]	597	517	250	1792	637	568	27	24
d1, Uniform Delay [s]	41.14	41.14	51.70	19.74	38.90	28.85	58.53	58.38
k, delay calibration	0.50	0.50	0.11	0.50	0.50	0.11	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	43.72	101.92	76.34	0.84	111.43	0.38	2.72	1.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.03	1.19	1.15	0.46	1.22	0.36	0.34	0.17
d, Delay for Lane Group [s/veh]	84.86	143.06	128.03	20.58	150.33	29.23	61.25	59.60
Lane Group LOS	F	F	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	24.27	29.36	12.68	7.31	37.89	4.36	0.29	0.13
50th-Percentile Queue Length [ft/ln]	606.66	733.93	317.06	182.83	947.25	108.89	7.23	3.18
95th-Percentile Queue Length [veh/ln]	32.92	42.45	19.65	11.75	54.36	7.78	0.52	0.23
95th-Percentile Queue Length [ft/ln]	823.01	1061.15	491.36	293.71	1359.09	194.45	13.01	5.73

Movement, Approach, & Intersection Results

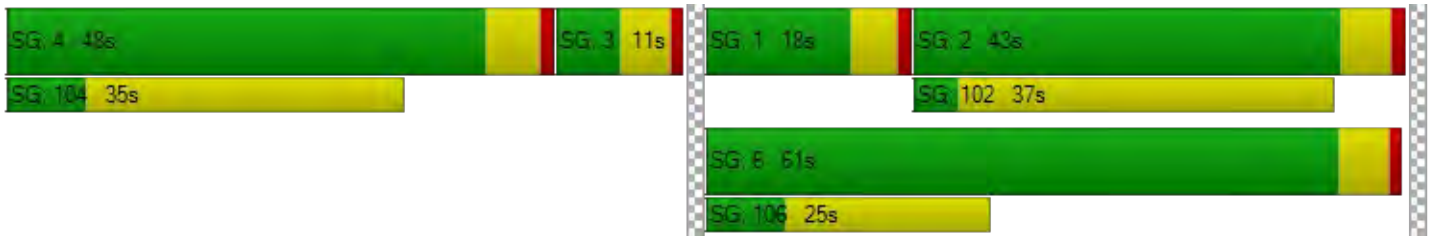
d_M, Delay for Movement [s/veh]	0.00	91.05	143.06	128.03	20.58	0.00	150.33	150.33	29.23	61.25	0.00	59.60
Movement LOS		F	F	F	C		F	F	C	E		E
d_A, Approach Delay [s/veh]	113.96			48.54			125.19			60.74		
Approach LOS	F			D			F			E		
d_I, Intersection Delay [s/veh]	95.32											
Intersection LOS	F											
Intersection V/C	0.964											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	52.27
l_p,int, Pedestrian LOS Score for Intersectio	2.984	0.000	2.364	2.302
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	627	927	703	93
d_b, Bicycle Delay [s]	28.29	17.28	25.22	54.53
l_b,int, Bicycle LOS Score for Intersection	2.618	2.470	3.210	1.560
Bicycle LOS	B	B	C	A

Sequence

Ring 1	4	3	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Market St/Rivera St

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	165.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1398	306	45	1165	4	0	0	34	306	4	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	31	0	0	0	0	0	3	0	0	7
Total Hourly Volume [veh/h]	20	1398	275	45	1165	4	0	0	31	306	4	65
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	368	72	12	307	1	0	0	8	81	1	17
Total Analysis Volume [veh/h]	21	1472	289	47	1226	4	0	0	33	322	4	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	6	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	5	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	30	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	23	23	9	23	0	0	42	0	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	14	0	10	0	0	10	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	66	66	4	67	67	3	3	12	12	12
g / C, Green / Cycle	0.02	0.66	0.66	0.04	0.67	0.67	0.03	0.03	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.01	0.41	0.18	0.03	0.32	0.32	0.00	0.02	0.09	0.09	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1898	1900	1615	1810	1812	1615
c, Capacity [veh/h]	40	2376	1061	66	1275	1274	60	51	208	209	186
d1, Uniform Delay [s]	48.37	9.92	7.17	47.65	7.99	7.99	0.00	47.89	43.02	43.02	40.86
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.12	1.22	0.63	13.19	1.31	1.31	0.00	13.22	6.27	6.26	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.62	0.27	0.71	0.48	0.48	0.00	0.65	0.78	0.78	0.37
d, Delay for Lane Group [s/veh]	58.48	11.15	7.80	60.84	9.30	9.30	0.00	61.11	49.29	49.28	42.06
Lane Group LOS	E	B	A	E	A	A	A	E	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	7.78	2.28	1.36	5.51	5.50	0.00	1.00	4.25	4.25	1.60
50th-Percentile Queue Length [ft/ln]	15.36	194.45	56.96	34.03	137.73	137.61	0.00	25.09	106.18	106.29	40.05
95th-Percentile Queue Length [veh/ln]	1.11	12.35	4.10	2.45	9.36	9.35	0.00	1.81	7.63	7.63	2.88
95th-Percentile Queue Length [ft/ln]	27.64	308.80	102.53	61.26	233.97	233.80	0.00	45.16	190.68	190.83	72.10

Movement, Approach, & Intersection Results

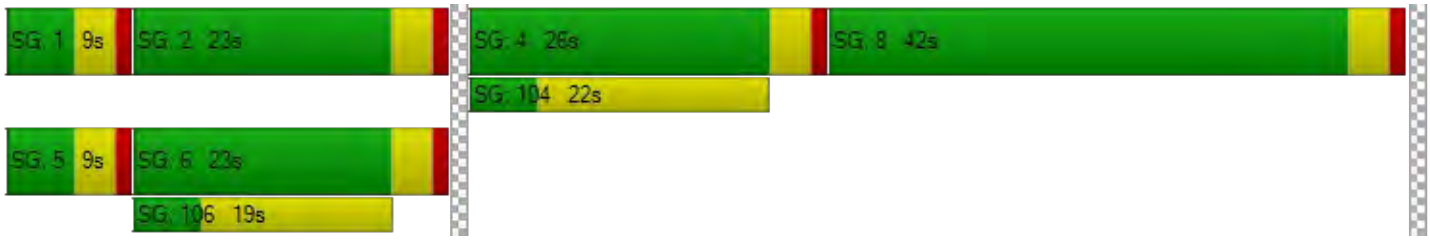
d_M, Delay for Movement [s/veh]	58.48	11.15	7.80	60.84	9.30	9.30	0.00	0.00	61.11	49.28	49.28	42.06
Movement LOS	E	B	A	E	A	A	A	A	E	D	D	D
d_A, Approach Delay [s/veh]	11.16			11.20			61.11			48.04		
Approach LOS	B			B			E			D		
d_I, Intersection Delay [s/veh]	15.82											
Intersection LOS	B											
Intersection V/C	0.543											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	41.41	0.00	41.41
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.132	0.000	2.335
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	380	380	760	440
d_b, Bicycle Delay [s]	32.81	32.81	19.22	30.42
l_b,int, Bicycle LOS Score for Intersection	3.055	2.613	1.619	2.221
Bicycle LOS	C	B	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Market St/SR-60 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.653

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	185.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	286	529	0	0	1286	219	0	0	0	194	0	1194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	22	0	0	0	0	0	119
Total Hourly Volume [veh/h]	286	529	0	0	1286	197	0	0	0	194	0	1075
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	75	139	0	0	338	52	0	0	0	51	0	283
Total Analysis Volume [veh/h]	301	557	0	0	1354	207	0	0	0	204	0	1132
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	20	37	0	0	17	0	0	0	0	38	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C		L
C, Cycle Length [s]	75	75	75		75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00
g_i, Effective Green Time [s]	14	56	38		11
g / C, Green / Cycle	0.19	0.75	0.51		0.14
(v / s)_i Volume / Saturation Flow Rate	0.17	0.15	0.37		0.11
s, saturation flow rate [veh/h]	1810	3618	3618		1810
c, Capacity [veh/h]	344	2718	1838		257
d1, Uniform Delay [s]	29.51	2.74	14.51		31.12
k, delay calibration	0.11	0.50	0.50		0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00
d2, Incremental Delay [s]	7.05	0.17	2.68		5.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00
PF, progression factor	1.00	1.00	1.00		1.00

Lane Group Results

X, volume / capacity	0.88	0.20	0.74		0.79
d, Delay for Lane Group [s/veh]	36.56	2.91	17.19		36.64
Lane Group LOS	D	A	B		D
Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	5.48	0.59	7.89		3.79
50th-Percentile Queue Length [ft/ln]	136.98	14.68	197.17		94.87
95th-Percentile Queue Length [veh/ln]	9.32	1.06	12.49		6.83
95th-Percentile Queue Length [ft/ln]	232.95	26.42	312.32		170.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.56	2.91	0.00	0.00	17.19	0.00	0.00	0.00	0.00	36.64	0.00	0.00
Movement LOS	D	A			B					D		
d_A, Approach Delay [s/veh]	14.71			15.00			0.00			5.84		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	14.13											
Intersection LOS	B											
Intersection V/C	0.653											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	29.04
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.010
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	880	347	0	907
d_b, Bicycle Delay [s]	11.76	25.63	37.50	11.21
l_b,int, Bicycle LOS Score for Intersection	2.267	2.677	4.132	1.560
Bicycle LOS	B	B	D	A

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Market St/SR-60 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	44.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.855

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	60.00	155.00	100.00	100.00	180.00	100.00	410.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	565	202	843	524	0	189	0	603	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	20	0	0	0	0	0	60	0	0	0
Total Hourly Volume [veh/h]	0	565	182	843	524	0	189	0	543	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	149	48	222	138	0	50	0	143	0	0	0
Total Analysis Volume [veh/h]	0	595	192	887	552	0	199	0	572	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	24	0	69	93	0	27	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	24	61	89	23	23	
g / C, Green / Cycle	0.20	0.51	0.74	0.19	0.19	
(v / s)_i Volume / Saturation Flow Rate	0.16	0.49	0.15	0.11	0.20	
s, saturation flow rate [veh/h]	3618	1810	3618	1810	2859	
c, Capacity [veh/h]	733	915	2683	347	548	
d1, Uniform Delay [s]	45.67	28.74	4.73	44.05	48.50	
k, delay calibration	0.50	0.40	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	9.55	20.27	0.17	1.50	30.67	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.81	0.97	0.21	0.57	1.04	
d, Delay for Lane Group [s/veh]	55.22	49.01	4.90	45.55	79.17	
Lane Group LOS	E	D	A	D	F	
Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.16	27.63	1.71	5.47	10.41	
50th-Percentile Queue Length [ft/ln]	229.12	690.65	42.71	136.83	260.29	
95th-Percentile Queue Length [veh/ln]	14.13	36.25	3.07	9.31	16.05	
95th-Percentile Queue Length [ft/ln]	353.24	906.14	76.87	232.75	401.17	

Movement, Approach, & Intersection Results

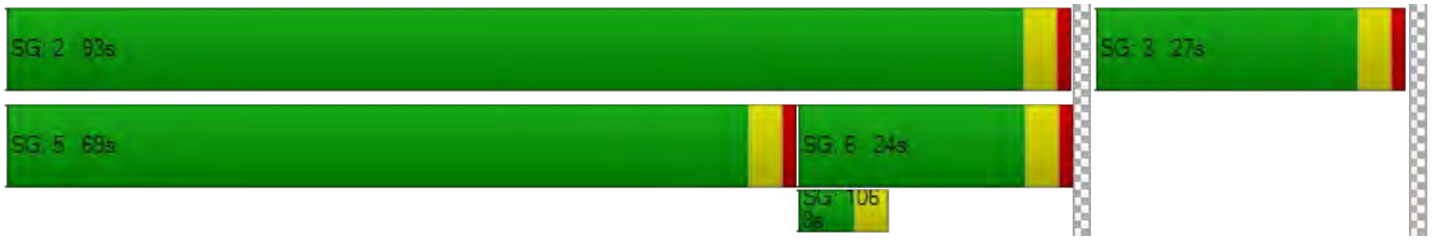
d_M, Delay for Movement [s/veh]	0.00	55.22	0.00	49.01	4.90	0.00	45.55	0.00	79.17	0.00	0.00	0.00
Movement LOS		E		D	A		D		F			
d_A, Approach Delay [s/veh]	42.29			32.09			70.50			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	44.81											
Intersection LOS	D											
Intersection V/C	0.855											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.303
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	1483	383	0
d_b, Bicycle Delay [s]	41.67	4.00	39.20	60.00
l_b,int, Bicycle LOS Score for Intersection	2.050	2.747	1.560	4.132
Bicycle LOS	B	B	A	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Sierra Ave/20th St

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.176

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	249	0	25	66	0	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	5
Total Hourly Volume [veh/h]	249	0	25	66	0	47
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	0	7	17	0	12
Total Analysis Volume [veh/h]	262	0	26	69	0	49
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	29	0	25	54	31	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	14	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R
C, Cycle Length [s]	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	42	2	49	4	4
g / C, Green / Cycle	0.50	0.03	0.57	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.14	0.01	0.04	0.00	0.03
s, saturation flow rate [veh/h]	1900	3514	1900	1810	1615
c, Capacity [veh/h]	942	101	1086	77	69
d1, Uniform Delay [s]	12.53	40.39	8.09	0.00	40.18
k, delay calibration	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	1.33	0.11	0.00	12.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.26	0.06	0.00	0.71
d, Delay for Lane Group [s/veh]	13.27	41.73	8.21	0.00	53.05
Lane Group LOS	B	D	A	A	D
Critical Lane Group	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.79	0.28	0.52	0.00	1.22
50th-Percentile Queue Length [ft/ln]	69.75	6.89	12.98	0.00	30.51
95th-Percentile Queue Length [veh/ln]	5.02	0.50	0.93	0.00	2.20
95th-Percentile Queue Length [ft/ln]	125.55	12.40	23.37	0.00	54.91

Movement, Approach, & Intersection Results

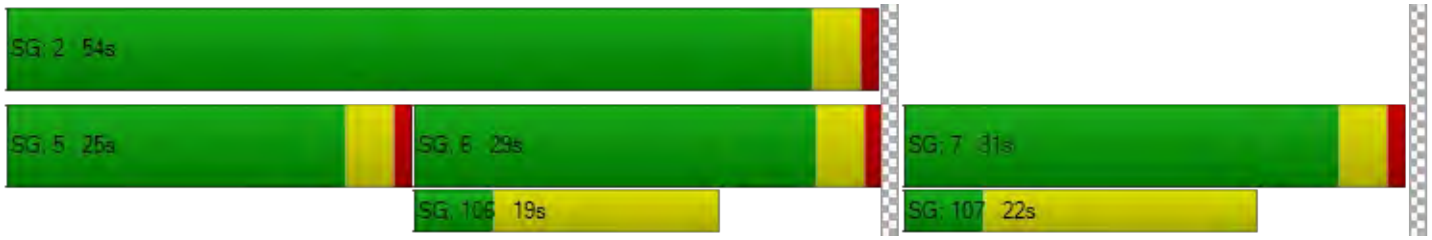
d_M, Delay for Movement [s/veh]	13.27	13.27	41.73	8.21	0.00	53.05
Movement LOS	B	B	D	A	A	D
d_A, Approach Delay [s/veh]	13.27		17.38		53.05	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	19.03					
Intersection LOS	B					
Intersection V/C	0.176					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.082	2.405	2.163
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	588	1176	635
d_b, Bicycle Delay [s]	21.18	7.21	19.79
l_b,int, Bicycle LOS Score for Intersection	1.992	1.716	1.560
Bicycle LOS	A	A	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Rio Vista Specific Plan

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Report File: C:\...\2045 AM.pdf

Scenario 5 2045 AM
2/15/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound		Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Right	Left	Right	
1	Sierra Ave/I-10 Ramps	552	981	518	635	1080	881	1016	690	558	658	7569

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Sierra Ave/Slover Ave	123	1289	133	778	1203	377	217	334	68	80	327	562	5491

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Sierra Ave/Santa Ana Ave	227	1230	61	227	866	138	162	93	96	61	162	141	3464

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Sierra Ave/Jurupa Ave	520	910	88	39	494	287	306	255	314	328	690	164	4395

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Armstrong Rd/Sierra Ave	1292	328	243	165	443	162	121	197	824	217	304	152	4448

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
6	Armstrong/30th St	1712	96	27	1478	186	64	3563

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
7	Valley Way/SR-60 WB Off Ramp	160	1112	1503	27	76	201	228	171	659	4137

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
8	Valley Way/SR-60 WB On Ramp	257	1219	1329	602	3407

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR-60 EB Ramps/Mission Blvd	14	2	5	661	5	73	128	405	7	6	436	335	2077

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
10	Valley Way/Mission Blvd	19	442	53	489	419	473	585	355	32	73	215	743	3898

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
11	Jurupa Rd/Mission Blvd	56	239	830	37	165	951	2278

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	Pacific Ave/Mission Blvd	180	101	255	35	130	121	117	715	90	348	708	49	2849

ID	Intersection Name	Northbound		Southbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Thru	Right	
13	Cedar Ave/I-10 WB Ramp	411	1593	1768	847	767	4	484	5874

ID	Intersection Name	Northbound		Southbound		Eastbound			Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	
14	Cedar Ave/I-10 EB Ramps	1357	561	496	1959	633	4	687	5697

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
15	Cedar Ave/Orange St	10	1685	4	126	1975	538	321	6	15	0	1	160	4841

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	Cedar Ave/Slover Ave	258	1036	20	142	1510	292	334	226	127	28	311	125	4409

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Cedar Ave/Santa Ana Ave	139	1076	24	63	1563	65	90	98	157	55	107	107	3544

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	Cedar Ave/Jurupa Ave	225	951	51	103	1373	313	129	95	112	50	118	160	3680

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Cedar Ave/7th St	100	1093	9	23	1347	52	52	11	183	52	17	16	2955

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	Rubidoux Blvd/Market St	59	452	469	849	731	158	89	95	85	368	90	707	4152

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	Agua Mansa Rd/Market St	0	4	3	206	0	398	443	993	44	0	886	445	3422

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
22	Rubidoux Blvd/SR-60 WB Off Ramp	71	994	1190	26	35	328	769	98	135	3646

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
23	Rubidoux Blvd/SrR-60 WB On Ramp	320	1064	1066	912	3362

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	Left	Right	
24	Rubidoux Blvd/SR-60 EB Ramps	652	570	273	775	722	14	215	9	4	3234

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Market St/Rivera St	20	1398	306	45	1165	4	0	0	34	306	4	72	3354

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
26	Market St/SR-60 WB Ramp	286	529	1286	219	194	1194	3708

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Thru	Right	Left	Thru	Left	2	
27	Market St/SR-60 EB Ramp	565	202	843	524	189	603	2926

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
28	Sierra Ave/20th St	249	0	25	66	0	52	392

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Rio Vista Specific Plan

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Scenario 6 2045 PM
2/15/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Ave/I-10 Ramps	Signalized	HCM 7th Edition	SB Left	0.818	30.8	C
2	Sierra Ave/Slover Ave	Signalized	HCM 7th Edition	WB Left	0.932	58.6	E
3	Sierra Ave/Santa Ana Ave	Signalized	HCM 7th Edition	EB Left	0.708	33.0	C
4	Sierra Ave/Jurupa Ave	Signalized	HCM 7th Edition	EB Left	0.770	44.3	D
5	Armstrong Rd/Sierra Ave	Signalized	HCM 7th Edition	EB Left	1.014	123.6	F
6	Armstrong/30th St	Signalized	HCM 7th Edition	WB Left	0.806	11.3	B
7	Valley Way/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	WB Right	1.143	142.4	F
8	Valley Way/SR-60 WB On Ramp	Signalized	HCM 7th Edition	NB Left	0.647	8.1	A
9	SR-60 EB Ramps/Mission Blvd	Signalized	HCM 7th Edition	SB Right	0.732	126.9	F
10	Valley Way/Mission Blvd	Signalized	HCM 7th Edition	NB Left	0.801	47.2	D
11	Jurupa Rd/Mission Blvd	Two-way stop	HCM 7th Edition	NB Left	2.001	1,445.0	F
12	Pacific Ave/Mission Blvd	Signalized	HCM 7th Edition	EB Left	0.812	48.4	D
13	Cedar Ave/I-10 WB Ramp	Signalized	HCM 7th Edition	NB Left	0.576	15.2	B
14	Cedar Ave/I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.740	24.5	C
15	Cedar Ave/Orange St	Signalized	HCM 7th Edition	EB Left	0.815	48.9	D
16	Cedar Ave/Slover Ave	Signalized	HCM 7th Edition	SB Left	0.835	59.0	E
17	Cedar Ave/Santa Ana Ave	Signalized	HCM 7th Edition	NB Left	0.817	36.3	D

18	Cedar Ave/Jurupa Ave	Signalized	HCM 7th Edition	EB Left	2.564	231.9	F
19	Cedar Ave/7th St	Signalized	HCM 7th Edition	EB Right	0.790	30.1	C
20	Rubidoux Blvd/Market St	Signalized	HCM 7th Edition	WB Right	1.107	129.1	F
21	Agua Mansa Rd/Market St	Signalized	HCM 7th Edition	EB Left	0.914	80.7	F
22	Rubidoux Blvd/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	WB Left	1.385	138.9	F
23	Rubidoux Blvd/SrR-60 WB On Ramp	Two-way stop	HCM 7th Edition	NB Left	1.130	145.2	F
24	Rubidoux Blvd/SR-60 EB Ramps	Signalized	HCM 7th Edition	EB Left	0.879	75.0	E
25	Market St/Rivera St	Signalized	HCM 7th Edition	NB Left	0.600	18.6	B
26	Market St/SR-60 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.839	26.8	C
27	Market St/SR-60 EB Ramp	Signalized	HCM 7th Edition	EBR2	1.046	115.8	F
28	Sierra Ave/20th St	Signalized	HCM 7th Edition	WB Right	0.277	8.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Ave/I-10 Ramps

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.818

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	565.00	100.00	100.00	325.00	100.00	305.00	440.00	100.00	1500.00	1205.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	390.00	0.00	0.00	665.00	0.00	0.00	1215.00	0.00	0.00	1150.00
Speed [mph]	40.00			35.00			65.00			65.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	870	1554	900	612	1142	884	1064	0	598	536	0	695
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	90	0	0	88	0	0	60	0	0	70
Total Hourly Volume [veh/h]	870	1554	810	612	1142	796	1064	0	538	536	0	625
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	229	409	213	161	301	209	280	0	142	141	0	164
Total Analysis Volume [veh/h]	916	1636	853	644	1202	838	1120	0	566	564	0	658
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna
Signal Group	1	6	0	5	2	0	3	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	0	0	5	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	40	45	0	27	32	0	48	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	5	0	0
Pedestrian Clearance [s]	0	23	0	0	23	0	39	0	0	35	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No		No	No		No			No		
Maximum Recall	No	No		No	No		No			No		
Pedestrian Recall	No	No		No	No		No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	L
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	34	44	23	33	41	41
g / C, Green / Cycle	0.28	0.37	0.19	0.28	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.26	0.32	0.18	0.23	0.32	0.16
s, saturation flow rate [veh/h]	3514	5176	3514	5176	3514	3514
c, Capacity [veh/h]	987	1901	674	1440	1198	1198
d1, Uniform Delay [s]	41.98	35.11	48.00	40.71	38.25	31.04
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.49	5.38	8.73	5.84	4.08	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.86	0.96	0.83	0.93	0.47
d, Delay for Lane Group [s/veh]	46.48	40.49	56.73	46.55	42.33	31.33
Lane Group LOS	D	D	E	D	D	C
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.40	15.10	10.21	11.70	15.06	5.93
50th-Percentile Queue Length [ft/ln]	335.12	377.39	255.33	292.58	376.52	148.13
95th-Percentile Queue Length [veh/ln]	19.41	21.47	15.45	17.31	21.43	9.92
95th-Percentile Queue Length [ft/ln]	485.24	536.68	386.35	432.84	535.63	247.93

Movement, Approach, & Intersection Results

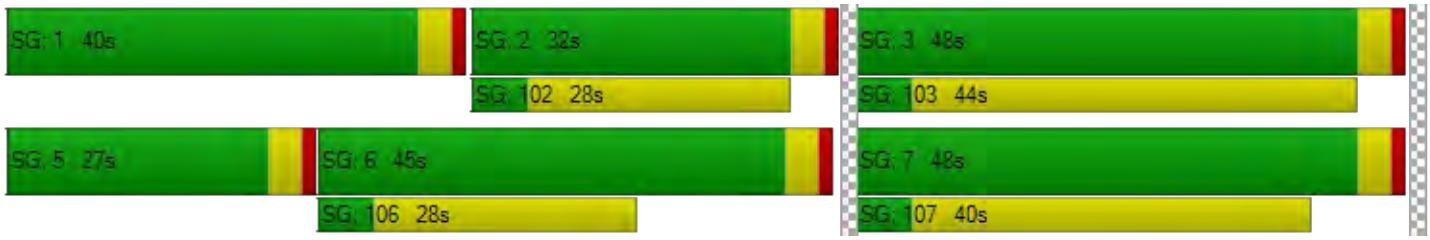
d_M, Delay for Movement [s/veh]	46.48	40.49	0.00	56.73	46.55	0.00	42.33	0.00	0.00	31.33	0.00	0.00
Movement LOS	D	D		E	D		D			C		
d_A, Approach Delay [s/veh]	32.37			35.01			28.59			14.86		
Approach LOS	C			D			C			B		
d_I, Intersection Delay [s/veh]	30.85											
Intersection LOS	C											
Intersection V/C	0.818											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.604	3.505	3.185	2.893
Crosswalk LOS	D	D	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	683	467	733	733
d_b, Bicycle Delay [s]	26.00	35.27	24.07	24.07
l_b,int, Bicycle LOS Score for Intersection	2.963	2.575	1.560	1.560
Bicycle LOS	C	B	A	A

Sequence

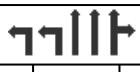
Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	58.6
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.932

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	265.00	100.00	675.00	675.00	100.00	100.00	345.00	100.00	320.00	275.00	100.00	465.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	600.00	0.00	0.00	0.00
Speed [mph]	50.00			40.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	196	1819	212	848	1354	176	420	826	106	264	480	1159
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	21	0	0	18	0	0	11	0	0	116
Total Hourly Volume [veh/h]	196	1819	191	848	1354	158	420	826	95	264	480	1043
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	479	50	223	356	42	111	217	25	69	126	274
Total Analysis Volume [veh/h]	206	1915	201	893	1425	166	442	869	100	278	505	1098
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	33	40	0	35	42	0	20	46	0	14	40	40
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	31	0	0	27	0	0	31	0	0	31	31
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	10	43	43	31	63	63	16	35	35	10	29	64
g / C, Green / Cycle	0.08	0.32	0.32	0.23	0.47	0.47	0.12	0.26	0.26	0.07	0.22	0.48
(v / s)_i Volume / Saturation Flow Rate	0.06	0.30	0.30	0.25	0.29	0.30	0.13	0.24	0.06	0.08	0.14	0.38
s, saturation flow rate [veh/h]	3514	5176	1784	3514	3618	1802	3514	3618	1615	3514	3618	2859
c, Capacity [veh/h]	269	1631	562	807	1694	844	416	950	424	260	789	1365
d1, Uniform Delay [s]	61.13	45.47	45.52	52.00	26.93	27.22	59.50	48.31	39.13	62.50	47.96	29.93
k, delay calibration	0.11	0.50	0.50	0.12	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.25
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.50	15.25	30.50	53.16	1.73	3.68	39.00	3.98	0.28	46.15	0.87	2.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.96	0.97	1.11	0.62	0.64	1.06	0.91	0.24	1.07	0.64	0.80
d, Delay for Lane Group [s/veh]	65.63	60.72	76.02	105.16	28.66	30.90	98.50	52.29	39.41	108.65	48.83	32.58
Lane Group LOS	E	E	E	F	C	C	F	D	D	F	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.54	18.79	21.86	19.34	12.73	13.59	9.22	14.30	2.60	6.02	7.59	14.59
50th-Percentile Queue Length [ft/ln]	88.59	469.65	546.47	483.49	318.16	339.77	230.57	357.53	65.03	150.40	189.68	364.77
95th-Percentile Queue Length [veh/ln]	6.38	25.89	29.53	28.10	18.58	19.64	14.56	20.50	4.68	10.26	12.10	20.86
95th-Percentile Queue Length [ft/ln]	159.46	647.35	738.16	702.40	464.42	490.92	363.97	512.58	117.05	256.44	302.61	521.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.63	63.45	76.02	105.16	29.24	30.90	98.50	52.29	39.41	108.65	48.83	32.58
Movement LOS	E	E	E	F	C	C	F	D	D	F	D	C
d_A, Approach Delay [s/veh]	64.73			56.64			65.86			48.18		
Approach LOS	E			E			E			D		
d_I, Intersection Delay [s/veh]	58.60											
Intersection LOS	E											
Intersection V/C	0.932											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	58.80	58.80	58.80	58.80
l_p,int, Pedestrian LOS Score for Intersectio	3.650	3.773	3.185	3.754
Crosswalk LOS	D	D	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	563	622	533
d_b, Bicycle Delay [s]	36.30	34.85	32.03	36.30
l_b,int, Bicycle LOS Score for Intersection	2.526	2.936	2.733	3.207
Bicycle LOS	B	C	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	285.00	100.00	210.00	375.00	100.00	100.00	240.00	100.00	100.00	300.00	100.00	350.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	535.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	224	1695	100	188	1245	143	292	258	187	94	168	233
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	10	0	0	14	0	0	19	0	0	23
Total Hourly Volume [veh/h]	224	1695	90	188	1245	129	292	258	168	94	168	210
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	446	24	49	328	34	77	68	44	25	44	55
Total Analysis Volume [veh/h]	236	1784	95	198	1311	136	307	272	177	99	177	221
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	33	0	10	31	0	21	40	0	17	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	45	45	6	43	43	17	26	26	7	16	16
g / C, Green / Cycle	0.08	0.45	0.45	0.06	0.43	0.43	0.17	0.26	0.26	0.07	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.07	0.34	0.06	0.06	0.27	0.27	0.17	0.08	0.11	0.05	0.05	0.14
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1810	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	281	2317	723	211	1547	774	308	947	423	128	587	262
d1, Uniform Delay [s]	45.37	23.28	16.21	46.82	22.33	22.34	41.48	29.46	30.60	45.70	36.89	40.65
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.13	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.63	2.54	0.38	17.39	1.90	3.77	25.86	0.17	0.66	9.66	0.29	7.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.77	0.13	0.94	0.62	0.62	1.00	0.29	0.42	0.78	0.30	0.84
d, Delay for Lane Group [s/veh]	51.99	25.81	16.58	64.21	24.23	26.10	67.34	29.62	31.26	55.36	37.18	47.88
Lane Group LOS	D	C	B	E	C	C	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.01	11.01	1.24	2.85	8.36	8.77	9.50	2.55	3.49	2.70	1.88	5.63
50th-Percentile Queue Length [ft/ln]	75.29	275.30	31.00	71.27	208.90	219.28	237.50	63.67	87.27	67.45	46.98	140.83
95th-Percentile Queue Length [veh/ln]	5.42	16.45	2.23	5.13	13.10	13.63	14.55	4.58	6.28	4.86	3.38	9.53
95th-Percentile Queue Length [ft/ln]	135.52	411.36	55.79	128.29	327.42	340.71	363.87	114.61	157.09	121.40	84.57	238.14

Movement, Approach, & Intersection Results

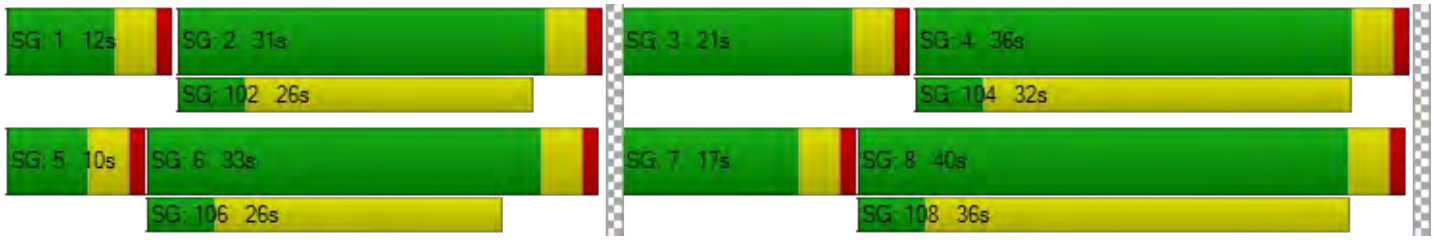
d_M, Delay for Movement [s/veh]	51.99	25.81	16.58	64.21	24.73	26.10	67.34	29.62	31.26	55.36	37.18	47.88
Movement LOS	D	C	B	E	C	C	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	28.32			29.59			45.32			45.56		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.01											
Intersection LOS	C											
Intersection V/C	0.708											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	3.544	3.563	2.776	2.729
Crosswalk LOS	D	D	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	540	720	640
d_b, Bicycle Delay [s]	25.21	26.65	20.48	23.12
l_b,int, Bicycle LOS Score for Intersection	2.728	2.472	2.199	1.989
Bicycle LOS	B	B	B	A

Sequence

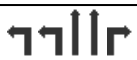
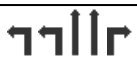
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 4: Sierra Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	44.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.770

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	0	2	0	1
Entry Pocket Length [ft]	685.00	100.00	675.00	385.00	100.00	260.00	375.00	100.00	100.00	280.00	100.00	270.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	381	1117	213	131	689	290	612	542	589	202	316	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	21	0	0	29	0	0	59	0	0	10
Total Hourly Volume [veh/h]	381	1117	192	131	689	261	612	542	530	202	316	88
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	100	294	51	34	181	69	161	143	139	53	83	23
Total Analysis Volume [veh/h]	401	1176	202	138	725	275	644	571	558	213	333	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	44	0	10	36	36	25	49	0	12	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	27	27	0	27	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	43	43	6	35	60	21	42	42	8	29	29
g / C, Green / Cycle	0.12	0.37	0.37	0.05	0.30	0.52	0.18	0.37	0.37	0.07	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.11	0.33	0.13	0.04	0.20	0.17	0.18	0.16	0.35	0.06	0.09	0.06
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	428	1348	602	183	1097	841	642	1326	592	244	917	409
d1, Uniform Delay [s]	50.07	33.53	25.86	53.77	34.92	15.93	47.00	27.41	35.26	52.99	35.30	34.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.38	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.03	8.00	1.50	6.12	3.14	1.04	17.37	0.22	20.95	9.28	0.24	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.87	0.34	0.75	0.66	0.33	1.00	0.43	0.94	0.87	0.36	0.23
d, Delay for Lane Group [s/veh]	60.10	41.53	27.37	59.89	38.06	16.97	64.37	27.63	56.21	62.27	35.54	34.29
Lane Group LOS	E	D	C	E	D	B	F	C	E	E	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.04	15.44	3.95	2.06	8.84	4.06	10.40	5.70	17.67	3.31	3.79	2.06
50th-Percentile Queue Length [ft/ln]	150.89	386.03	98.66	51.45	221.10	101.42	259.95	142.46	441.80	82.66	94.87	51.43
95th-Percentile Queue Length [veh/ln]	10.06	21.89	7.10	3.70	13.72	7.30	15.71	9.61	24.57	5.95	6.83	3.70
95th-Percentile Queue Length [ft/ln]	251.62	547.14	177.58	92.61	343.03	182.56	392.87	240.33	614.16	148.79	170.77	92.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.10	41.53	27.37	59.89	38.06	16.97	64.37	27.63	56.21	62.27	35.54	34.29
Movement LOS	E	D	C	E	D	B	F	C	E	E	D	C
d_A, Approach Delay [s/veh]	44.11			35.61			49.97			44.27		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	44.26											
Intersection LOS	D											
Intersection V/C	0.770											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.85	48.85	48.85	48.85
l_p,int, Pedestrian LOS Score for Intersectio	3.518	3.408	3.347	2.915
Crosswalk LOS	D	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	696	557	783	557
d_b, Bicycle Delay [s]	24.46	29.95	21.30	29.95
l_b,int, Bicycle LOS Score for Intersection	3.045	2.522	3.071	2.095
Bicycle LOS	C	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Armstrong Rd/Sierra Ave

Control Type:	Signalized	Delay (sec / veh):	123.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.014

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	490.00	100.00	200.00	310.00	100.00	270.00	135.00	100.00	75.00	195.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			55.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1463	909	191	62	339	120	388	307	1011	167	254	278
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	19	0	0	12	0	0	101	0	0	28
Total Hourly Volume [veh/h]	1463	909	172	62	339	108	388	307	910	167	254	250
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	385	239	45	16	89	28	102	81	239	44	67	66
Total Analysis Volume [veh/h]	1540	957	181	65	357	114	408	323	958	176	267	263
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	0	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	0.0	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	54	70	0	11	27	0	32	44	0	25	37	0
Vehicle Extension [s]	3.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	3.3	0.0	3.3	3.3	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	5.30	5.30	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.30	3.30	3.30	3.30	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	49	70	70	5	26	26	26	36	16	27	27
g / C, Green / Cycle	0.32	0.47	0.47	0.03	0.17	0.17	0.17	0.24	0.11	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.44	0.50	0.11	0.02	0.19	0.07	0.23	0.09	0.10	0.14	0.16
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1615
c, Capacity [veh/h]	1141	886	753	110	329	279	314	875	199	339	288
d1, Uniform Delay [s]	50.65	40.02	24.05	71.70	62.02	55.18	62.00	47.34	65.84	58.92	60.49
k, delay calibration	0.20	0.50	0.50	0.04	0.50	0.50	0.50	0.11	0.04	0.11	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	159.80	54.19	0.75	1.87	74.48	4.36	156.79	0.26	5.46	4.10	14.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.35	1.08	0.24	0.59	1.09	0.41	1.30	0.37	0.89	0.79	0.91
d, Delay for Lane Group [s/veh]	210.45	94.21	24.80	73.57	136.50	59.55	218.79	47.60	71.30	63.02	75.04
Lane Group LOS	F	F	C	E	F	E	F	D	E	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	46.08	44.32	3.96	1.25	19.08	4.13	25.20	4.92	6.88	9.99	10.87
50th-Percentile Queue Length [ft/ln]	1151.99	1108.01	99.02	31.18	477.06	103.17	630.09	123.03	172.08	249.69	271.84
95th-Percentile Queue Length [veh/ln]	68.02	58.68	7.13	2.24	27.39	7.43	37.75	8.56	11.19	15.17	16.28
95th-Percentile Queue Length [ft/ln]	1700.52	1466.97	178.23	56.12	684.64	185.71	943.86	213.98	279.65	379.27	407.03

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	210.45	94.21	24.80	73.57	136.50	59.55	218.79	47.60	0.00	71.30	63.02	75.04
Movement LOS	F	F	C	E	F	E	F	D		E	E	E
d_A, Approach Delay [s/veh]	156.36			112.50			63.77			69.56		
Approach LOS	F			F			E			E		
d_I, Intersection Delay [s/veh]	123.58											
Intersection LOS	F											
Intersection V/C	1.014											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	64.40	64.40	0.00	64.40
l_p,int, Pedestrian LOS Score for Intersectio	3.292	2.986	0.000	2.708
Crosswalk LOS	C	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	863	289	507	413
d_b, Bicycle Delay [s]	24.25	54.87	41.81	47.20
l_b,int, Bicycle LOS Score for Intersection	6.010	2.464	2.163	2.165
Bicycle LOS	F	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Armstrong/30th St

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.806

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	135.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	2501	171	54	1503	80	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	17	0	0	0	6
Total Hourly Volume [veh/h]	2501	154	54	1503	80	49
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	658	41	14	396	21	13
Total Analysis Volume [veh/h]	2633	162	57	1582	84	52
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	5	5	0
Maximum Green [s]	45	0	30	5	30	0
Amber [s]	4.3	0.0	4.3	4.3	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	60	0	11	49	60	0
Vehicle Extension [s]	3.0	0.0	2.0	3.0	2.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	19	0	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.3	3.3	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	0.00	3.30	2.00
g_i, Effective Green Time [s]	99	99	99	88	11
g / C, Green / Cycle	0.83	0.83	0.83	0.74	0.09
(v / s)_i Volume / Saturation Flow Rate	0.73	0.10	0.57	0.44	0.08
s, saturation flow rate [veh/h]	3618	1615	99	3618	1730
c, Capacity [veh/h]	2994	1337	147	2662	164
d1, Uniform Delay [s]	6.55	1.98	29.95	7.43	53.35
k, delay calibration	0.50	0.50	0.50	0.50	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.08	0.19	7.55	0.98	4.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.12	0.39	0.59	0.83
d, Delay for Lane Group [s/veh]	10.63	2.17	37.50	8.42	57.40
Lane Group LOS	B	A	D	A	E
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	12.18	0.46	1.74	7.71	4.25
50th-Percentile Queue Length [ft/ln]	304.44	11.48	43.48	192.64	106.19
95th-Percentile Queue Length [veh/ln]	17.90	0.83	3.13	12.26	7.63
95th-Percentile Queue Length [ft/ln]	447.51	20.66	78.26	306.45	190.69

Movement, Approach, & Intersection Results

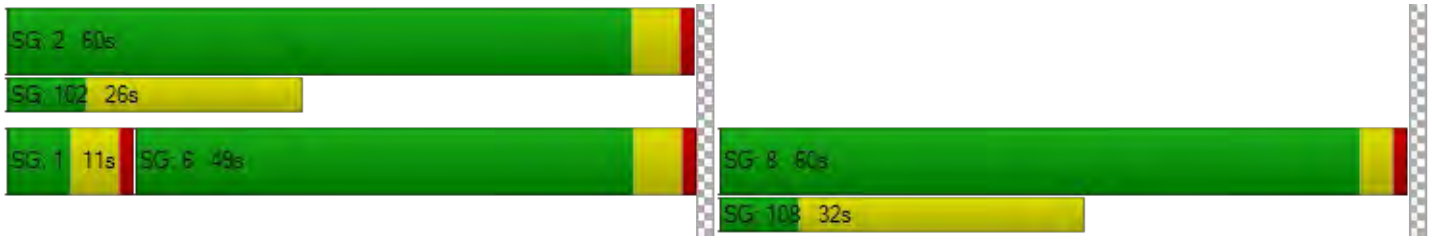
d_M, Delay for Movement [s/veh]	10.63	2.17	37.50	8.42	57.40	57.40
Movement LOS	B	A	D	A	E	E
d_A, Approach Delay [s/veh]	10.14		9.43		57.40	
Approach LOS	B		A		E	
d_I, Intersection Delay [s/veh]	11.29					
Intersection LOS	B					
Intersection V/C	0.806					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.648	0.000	1.972
Crosswalk LOS	D	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	912	728	933
d_b, Bicycle Delay [s]	17.77	24.26	17.07
l_b,int, Bicycle LOS Score for Intersection	3.880	2.912	1.794
Bicycle LOS	D	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Valley Way/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	142.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.143

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	280.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	38	1554	0	0	1376	5	271	0	100	347	75	738
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	1	0	0	10	0	0	74
Total Hourly Volume [veh/h]	38	1554	0	0	1376	4	271	0	90	347	75	664
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	409	0	0	362	1	71	0	24	91	20	175
Total Analysis Volume [veh/h]	40	1636	0	0	1448	4	285	0	95	365	79	699
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	10	62	0	0	52	0	27	0	0	0	51	0
Vehicle Extension [s]	3.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	0.0	0.0	3.3	0.0	3.4	0.0	0.0	0.0	3.3	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	5.40	5.30	5.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	3.40	3.30	3.30
g_i, Effective Green Time [s]	4	57	48	48	22	46	46
g / C, Green / Cycle	0.03	0.41	0.34	0.34	0.15	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.02	0.45	0.38	0.38	0.22	0.20	0.47
s, saturation flow rate [veh/h]	1810	3618	1900	1898	1757	1810	1640
c, Capacity [veh/h]	54	1465	650	650	271	591	535
d1, Uniform Delay [s]	67.38	41.65	46.03	46.03	59.20	39.78	47.15
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.17	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.99	62.38	71.64	72.05	201.72	1.64	214.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	1.12	1.12	1.12	1.40	0.62	1.45
d, Delay for Lane Group [s/veh]	85.37	104.03	117.67	118.09	260.92	41.42	261.40
Lane Group LOS	F	F	F	F	F	D	F
Critical Lane Group	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.67	36.79	34.69	34.73	24.66	10.82	50.21
50th-Percentile Queue Length [ft/ln]	41.70	919.82	867.29	868.32	616.41	270.59	1255.14
95th-Percentile Queue Length [veh/ln]	3.00	50.58	47.76	47.84	37.77	16.22	75.80
95th-Percentile Queue Length [ft/ln]	75.05	1264.46	1194.07	1196.05	944.19	405.47	1895.01

Movement, Approach, & Intersection Results

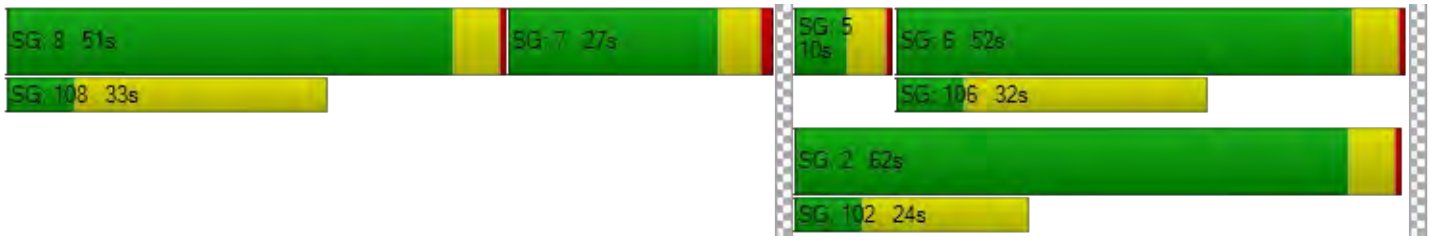
d_M, Delay for Movement [s/veh]	85.37	104.03	0.00	0.00	117.88	118.09	260.92	0.00	260.92	41.42	261.40	261.40
Movement LOS	F	F			F	F	F		F	D	F	F
d_A, Approach Delay [s/veh]	103.58			117.88			260.92			191.15		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	142.42											
Intersection LOS	F											
Intersection V/C	1.143											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	59.43	59.43	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.670	2.198	2.528
Crosswalk LOS	F	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	810	667	309	653
d_b, Bicycle Delay [s]	24.78	31.09	50.07	31.76
l_b,int, Bicycle LOS Score for Intersection	2.942	2.758	2.203	3.568
Bicycle LOS	C	C	B	D

Sequence

Ring 1	8	7	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Valley Way/SR-60 WB On Ramp

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.647

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No			
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	198	1609	1316	497	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	50	0	0
Total Hourly Volume [veh/h]	198	1609	1316	447	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	423	346	118	0	0
Total Analysis Volume [veh/h]	208	1694	1385	471	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	63.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	5	0	0	0
Maximum Green [s]	30	40	40	0	0	0
Amber [s]	4.1	4.8	4.8	0.0	0.0	0.0
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0
Split [s]	25	140	115	0	0	0
Vehicle Extension [s]	3.0	2.0	2.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	3.3	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	140	140	140	140	
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	
g_i, Effective Green Time [s]	18	135	112	112	
g / C, Green / Cycle	0.13	0.96	0.80	0.80	
(v / s)_i Volume / Saturation Flow Rate	0.11	0.47	0.49	0.53	
s, saturation flow rate [veh/h]	1810	3618	1900	1744	
c, Capacity [veh/h]	233	3481	1521	1396	
d1, Uniform Delay [s]	60.01	0.19	5.45	5.96	
k, delay calibration	0.11	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	11.16	0.49	1.83	2.52	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.89	0.49	0.61	0.66	
d, Delay for Lane Group [s/veh]	71.18	0.68	7.29	8.48	
Lane Group LOS	E	A	A	A	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.85	0.24	8.36	9.28	
50th-Percentile Queue Length [ft/ln]	196.25	5.91	209.12	231.89	
95th-Percentile Queue Length [veh/ln]	12.45	0.43	13.11	14.27	
95th-Percentile Queue Length [ft/ln]	311.13	10.64	327.70	356.76	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.18	0.68	7.68	8.48	0.00	0.00
Movement LOS	E	A	A	A		
d_A, Approach Delay [s/veh]	8.39		7.88		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	8.14					
Intersection LOS	A					
Intersection V/C	0.647					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.155
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1924	1567	0
d_b, Bicycle Delay [s]	0.10	3.28	70.00
l_b,int, Bicycle LOS Score for Intersection	3.129	3.132	4.132
Bicycle LOS	C	C	D

Sequence

Ring 1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: SR-60 EB Ramps/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	126.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	1120.00	100.00	100.00	200.00	100.00	100.00	260.00	100.00	340.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	490.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	24	1	18	1648	5	151	98	583	24	14	384	189
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	15	0	0	2	0	0	19
Total Hourly Volume [veh/h]	24	1	16	1648	5	136	98	583	22	14	384	170
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	4	434	1	36	26	153	6	4	101	45
Total Analysis Volume [veh/h]	25	1	17	1735	5	143	103	614	23	15	404	179
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	0	3	0	0	4	0	5	2	0	1	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	5
Maximum Green [s]	0	15	0	0	35	0	25	35	0	15	35	35
Amber [s]	0.0	4.1	0.0	0.0	4.8	0.0	4.1	5.2	0.0	4.1	5.2	5.2
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.5	0.0	1.0	0.5	0.5
Split [s]	0	11	0	0	53	0	11	45	0	11	45	45
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	3.0	2.0	2.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	25	0	0	17	0	0	32	32
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	3.8	0.0	3.1	3.7	0.0	3.1	3.7	3.7
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		No			No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.10	5.80	5.80	5.10	5.70	5.70	5.10	5.70	5.80
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.80	3.80	3.10	3.70	3.70	3.10	3.70	0.00
g_i, Effective Green Time [s]	4	47	47	8	45	45	2	39	92
g / C, Green / Cycle	0.03	0.39	0.39	0.07	0.38	0.38	0.02	0.33	0.77
(v / s)_i Volume / Saturation Flow Rate	0.02	0.52	0.53	0.06	0.17	0.17	0.01	0.11	0.11
s, saturation flow rate [veh/h]	1729	1810	1777	1810	1900	1876	1810	3618	1615
c, Capacity [veh/h]	55	712	699	117	716	707	31	1191	1243
d1, Uniform Delay [s]	57.66	36.40	36.40	55.66	28.02	28.02	58.47	30.40	3.57
k, delay calibration	0.04	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.40	154.98	165.43	18.20	2.02	2.05	11.64	0.77	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	1.32	1.35	0.88	0.45	0.45	0.49	0.34	0.14
d, Delay for Lane Group [s/veh]	66.05	191.38	201.83	73.85	30.04	30.07	70.11	31.17	3.62
Lane Group LOS	E	F	F	E	C	C	E	C	A
Critical Lane Group	Yes	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.43	50.72	51.85	3.60	7.03	6.95	0.54	4.41	0.85
50th-Percentile Queue Length [ft/ln]	35.87	1267.88	1296.18	90.11	175.68	173.74	13.52	110.19	21.22
95th-Percentile Queue Length [veh/ln]	2.58	74.37	76.53	6.49	11.37	11.27	0.97	7.85	1.53
95th-Percentile Queue Length [ft/ln]	64.57	1859.33	1913.28	162.20	284.36	281.82	24.33	196.27	38.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.05	66.05	66.05	196.16	201.83	201.83	73.85	30.05	30.07	70.11	31.17	3.62
Movement LOS	E	E	E	F	F	F	E	C	C	E	C	A
d_A, Approach Delay [s/veh]	66.05			196.60			36.15			23.90		
Approach LOS	E			F			D			C		
d_I, Intersection Delay [s/veh]	126.87											
Intersection LOS	F											
Intersection V/C	0.732											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.768	2.792	2.705	0.000
Crosswalk LOS	A	C	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	98	787	655	655
d_b, Bicycle Delay [s]	54.25	22.08	27.14	27.14
l_b,int, Bicycle LOS Score for Intersection	1.634	4.691	2.172	2.069
Bicycle LOS	A	E	B	B

Sequence

Ring 1	4	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Valley Way/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	47.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	3	1	0	1	1	0	1
Entry Pocket Length [ft]	145.00	100.00	510.00	170.00	100.00	150.00	410.00	100.00	180.00	260.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	476	97	572	428	298	849	1221	45	61	243	523
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	10	0	0	30	0	0	5	0	0	52
Total Hourly Volume [veh/h]	34	476	87	572	428	268	849	1221	40	61	243	471
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	125	23	151	113	71	223	321	11	16	64	124
Total Analysis Volume [veh/h]	36	501	92	602	451	282	894	1285	42	64	256	496
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	71.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	4	6	0	4	6	6	4	6	0	4	6	6
Maximum Green [s]	25	30	0	35	30	30	35	45	0	25	45	45
Amber [s]	3.6	4.8	0.0	3.6	4.8	4.8	3.6	4.8	0.0	3.6	4.8	4.8
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	15	32	0	33	50	50	40	64	0	11	35	35
Vehicle Extension [s]	2.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	2.0	3.0	3.0
Walk [s]	0	5	0	5	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	23	39	39	0	34	0	0	24	24
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	3.5	0.0	2.0	3.5	3.5
I2, Clearance Lost Time [s]	2.6	3.8	0.0	2.6	3.8	3.8	2.6	3.8	0.0	2.6	3.8	3.8
Minimum Recall	No	No		No	No	No	No	Yes		No	Yes	Yes
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.80	5.80	4.60	5.80	4.60	4.60	7.30	7.30	4.60	7.30	6.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.80	3.80	2.60	3.80	0.00	2.60	3.80	3.80	2.60	3.80	0.00
g_i, Effective Green Time [s]	4	22	22	28	46	88	35	61	61	6	32	66
g / C, Green / Cycle	0.03	0.16	0.16	0.20	0.33	0.63	0.25	0.44	0.44	0.05	0.23	0.47
(v / s)_i Volume / Saturation Flow Rate	0.02	0.14	0.06	0.17	0.12	0.10	0.25	0.36	0.03	0.04	0.07	0.31
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	2859	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	49	564	252	713	1200	1789	889	1580	705	82	829	782
d1, Uniform Delay [s]	67.60	57.89	52.89	53.68	35.72	10.87	52.30	34.44	22.80	66.15	44.77	26.89
k, delay calibration	0.04	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.64	4.98	0.89	2.85	0.20	0.04	15.52	4.70	0.16	5.98	0.97	3.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.89	0.37	0.84	0.38	0.16	1.01	0.81	0.06	0.78	0.31	0.63
d, Delay for Lane Group [s/veh]	75.24	62.87	53.77	56.52	35.91	10.91	67.82	39.15	22.96	72.13	45.74	30.79
Lane Group LOS	E	E	D	E	D	B	F	D	C	E	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.36	8.90	2.92	10.25	5.81	1.73	17.07	19.30	0.82	2.38	3.78	12.81
50th-Percentile Queue Length [ft/ln]	34.10	222.53	72.94	256.17	145.13	43.13	426.83	482.41	20.55	59.45	94.50	320.34
95th-Percentile Queue Length [veh/ln]	2.45	13.79	5.25	15.50	9.76	3.11	23.94	26.50	1.48	4.28	6.80	18.68
95th-Percentile Queue Length [ft/ln]	61.37	344.86	131.29	387.42	243.91	77.63	598.47	662.51	36.99	107.00	170.10	467.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	75.24	62.87	53.77	56.52	35.91	10.91	67.82	39.15	22.96	72.13	45.74	30.79
Movement LOS	E	E	D	E	D	B	F	D	C	E	D	C
d_A, Approach Delay [s/veh]	62.25			39.92			50.38			38.72		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	47.18											
Intersection LOS	D											
Intersection V/C	0.801											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	0.00	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersectio	2.782	0.000	3.215	3.221
Crosswalk LOS	C	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	374	631	831	417
d_b, Bicycle Delay [s]	46.25	32.78	23.90	43.85
l_b,int, Bicycle LOS Score for Intersection	2.087	2.686	3.396	2.276
Bicycle LOS	B	B	C	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Jurupa Rd/Mission Blvd

Control Type:	Two-way stop	Delay (sec / veh):	1,445.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.001

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	280.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	17	293	1843	61	144	789
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	293	1843	61	144	789
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	77	485	16	38	208
Total Analysis Volume [veh/h]	18	308	1940	64	152	831
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.00	1.20	0.02	0.00	0.52	0.01
d_M, Delay for Movement [s/veh]	1445.00	1058.77	0.00	0.00	30.38	0.00
Movement LOS	F	F	A	A	D	A
95th-Percentile Queue Length [veh/ln]	31.86	31.86	0.00	0.00	2.84	0.00
95th-Percentile Queue Length [ft/ln]	796.49	796.49	0.00	0.00	71.09	0.00
d_A, Approach Delay [s/veh]	1080.10		0.00		4.70	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	107.68					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 12: Pacific Ave/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	48.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.812

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	130.00	100.00	130.00	130.00	100.00	115.00	275.00	100.00	50.00	265.00	100.00	230.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	132	103	222	81	82	109	190	1456	262	443	688	58
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	22	0	0	11	0	0	26	0	0	6
Total Hourly Volume [veh/h]	132	103	200	81	82	98	190	1456	236	443	688	52
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	27	53	21	22	26	50	383	62	117	181	14
Total Analysis Volume [veh/h]	139	108	211	85	86	103	200	1533	248	466	724	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	4	6	0	4	5	0
Maximum Green [s]	0	30	0	0	30	0	25	45	0	25	45	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.5	0.0	4.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	36	0	0	36	0	67	27	0	67	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	2.5	3.5	0.0	2.5	3.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	25	25	25	25	25	25	17	55	55	36	74	74
g / C, Green / Cycle	0.19	0.19	0.19	0.19	0.19	0.19	0.13	0.42	0.42	0.28	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.11	0.06	0.13	0.08	0.05	0.06	0.11	0.42	0.15	0.26	0.20	0.03
s, saturation flow rate [veh/h]	1213	1900	1615	1077	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	217	359	306	188	359	306	231	1519	678	499	2055	917
d1, Uniform Delay [s]	55.13	45.31	49.16	54.28	44.76	45.65	55.64	37.70	25.84	45.95	15.16	12.56
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.12	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.12	0.46	2.79	1.70	0.34	0.65	9.52	25.33	1.52	9.39	0.48	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.30	0.69	0.45	0.24	0.34	0.87	1.01	0.37	0.93	0.35	0.06
d, Delay for Lane Group [s/veh]	58.24	45.77	51.94	55.98	45.10	46.29	65.16	63.03	27.36	55.35	15.64	12.68
Lane Group LOS	E	D	D	E	D	D	E	F	C	E	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.65	3.07	6.64	2.74	2.41	2.96	6.95	28.41	5.45	15.63	5.68	0.73
50th-Percentile Queue Length [ft/ln]	116.19	76.72	166.06	68.62	60.29	73.96	173.63	710.15	136.16	390.66	142.10	18.25
95th-Percentile Queue Length [veh/ln]	8.18	5.52	10.87	4.94	4.34	5.33	11.27	37.41	9.27	22.11	9.59	1.31
95th-Percentile Queue Length [ft/ln]	204.57	138.09	271.73	123.52	108.51	133.14	281.68	935.15	231.85	552.74	239.85	32.85

Movement, Approach, & Intersection Results

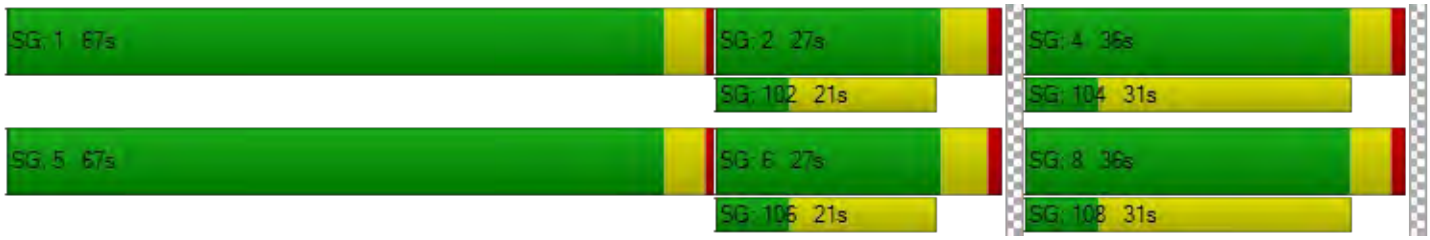
d_M, Delay for Movement [s/veh]	58.24	45.77	51.94	55.98	45.10	46.29	65.16	63.03	27.36	55.35	15.64	12.68
Movement LOS	E	D	D	E	D	D	E	F	C	E	B	B
d_A, Approach Delay [s/veh]	52.40			48.92			58.78			30.37		
Approach LOS	D			D			E			C		
d_I, Intersection Delay [s/veh]	48.42											
Intersection LOS	D											
Intersection V/C	0.812											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	54.47	54.47	54.47	54.47
l_p,int, Pedestrian LOS Score for Intersectio	2.498	2.324	3.352	3.272
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	477	477	331	331
d_b, Bicycle Delay [s]	37.70	37.70	45.28	45.28
l_b,int, Bicycle LOS Score for Intersection	2.352	2.030	3.215	2.592
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Cedar Ave/I-10 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	15.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	230.00	100.00	230.00	100.00	100.00	100.00	485.00	100.00	485.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	563	1743	0	0	1465	701	0	0	0	451	0	529
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	70	0	0	0	0	0	53
Total Hourly Volume [veh/h]	563	1743	0	0	1465	631	0	0	0	451	0	476
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	148	459	0	0	386	166	0	0	0	119	0	125
Total Analysis Volume [veh/h]	593	1835	0	0	1542	664	0	0	0	475	0	501
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	20	39	0	0	19	0	0	0	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	13	39	22	22		13	13	13
g / C, Green / Cycle	0.21	0.64	0.37	0.37		0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.17	0.35	0.18	0.23		0.13	0.13	0.18
s, saturation flow rate [veh/h]	3514	5176	8626	2859		1810	1810	2859
c, Capacity [veh/h]	734	3329	3172	1051		404	404	639
d1, Uniform Delay [s]	22.59	5.92	14.61	15.62		20.82	20.82	21.93
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	2.18	0.66	0.54	2.89		1.36	1.36	2.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.55	0.49	0.63		0.59	0.59	0.78
d, Delay for Lane Group [s/veh]	24.77	6.58	15.14	18.51		22.18	22.18	24.09
Lane Group LOS	C	A	B	B		C	C	C
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.74	2.67	2.79	3.53		2.84	2.84	3.18
50th-Percentile Queue Length [ft/ln]	93.44	66.77	69.83	88.24		71.05	71.05	79.49
95th-Percentile Queue Length [veh/ln]	6.73	4.81	5.03	6.35		5.12	5.12	5.72
95th-Percentile Queue Length [ft/ln]	168.19	120.19	125.70	158.83		127.89	127.89	143.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.77	6.58	0.00	0.00	15.14	18.51	0.00	0.00	0.00	22.18	22.18	24.09
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	11.02			16.16			0.00			23.16		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	15.15											
Intersection LOS	B											
Intersection V/C	0.576											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.342	2.590
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	500	0	567
d_b, Bicycle Delay [s]	5.21	16.88	30.00	15.41
l_b,int, Bicycle LOS Score for Intersection	2.895	2.311	4.132	3.257
Bicycle LOS	C	B	D	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Cedar Ave/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.740

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	600.00	100.00	600.00	100.00	100.00	100.00	100.00	100.00	380.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1090.00
Speed [mph]	40.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1650	680	433	1490	0	722	7	350	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	68	0	0	0	0	0	35	0	0	0
Total Hourly Volume [veh/h]	0	1650	612	433	1490	0	722	7	315	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	434	161	114	392	0	190	2	83	0	0	0
Total Analysis Volume [veh/h]	0	1737	644	456	1568	0	760	7	332	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	47	0	15	62	0	0	28	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	45	45	11	60	22	22	22	
g / C, Green / Cycle	0.50	0.50	0.12	0.67	0.24	0.24	0.24	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.40	0.13	0.30	0.21	0.21	0.21	
s, saturation flow rate [veh/h]	8626	1615	3514	5176	1810	1811	1615	
c, Capacity [veh/h]	4331	811	430	3461	439	439	391	
d1, Uniform Delay [s]	13.97	18.56	39.50	7.08	32.78	32.77	32.51	
k, delay calibration	0.50	0.50	0.11	0.50	0.18	0.18	0.17	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.28	7.89	38.89	0.43	9.04	8.96	7.81	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.40	0.79	1.06	0.45	0.87	0.87	0.85	
d, Delay for Lane Group [s/veh]	14.25	26.45	78.39	7.51	41.81	41.73	40.32	
Lane Group LOS	B	C	F	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	
50th-Percentile Queue Length [veh/ln]	4.02	11.51	6.87	3.83	8.82	8.81	7.47	
50th-Percentile Queue Length [ft/ln]	100.47	287.74	171.80	95.65	220.41	220.17	186.87	
95th-Percentile Queue Length [veh/ln]	7.23	17.07	11.44	6.89	13.69	13.67	11.96	
95th-Percentile Queue Length [ft/ln]	180.85	426.84	286.01	172.17	342.15	341.84	298.97	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	14.25	26.45	78.39	7.51	0.00	41.77	41.73	40.32	0.00	0.00	0.00
Movement LOS		B	C	F	A		D	D	D			
d_A, Approach Delay [s/veh]	17.55			23.48			41.33			0.00		
Approach LOS	B			C			D			A		
d_I, Intersection Delay [s/veh]	24.48											
Intersection LOS	C											
Intersection V/C	0.740											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.505	2.289
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	956	1289	533	0
d_b, Bicycle Delay [s]	12.27	5.69	24.20	45.00
l_b,int, Bicycle LOS Score for Intersection	2.368	2.673	3.431	4.132
Bicycle LOS	B	B	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Cedar Ave/Orange St

Control Type:	Signalized	Delay (sec / veh):	48.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.815

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	160.00	100.00	100.00	140.00	100.00	100.00	400.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1680	2	100	1446	290	330	26	18	13	8	321
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	29	0	0	2	0	0	32
Total Hourly Volume [veh/h]	20	1680	2	100	1446	261	330	26	16	13	8	289
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	442	1	26	381	69	87	7	4	3	2	76
Total Analysis Volume [veh/h]	21	1768	2	105	1522	275	347	27	17	14	8	304
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	62	0	9	58	0	0	49	0	0	49	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	67	58	58	67	60	60	45	45	45	45
g / C, Green / Cycle	0.56	0.48	0.48	0.56	0.50	0.50	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.06	0.47	0.47	0.24	0.42	0.17	0.32	0.02	0.01	0.19
s, saturation flow rate [veh/h]	373	1900	1899	434	3618	1615	1084	1779	1384	1621
c, Capacity [veh/h]	201	918	918	209	1820	813	287	667	534	608
d1, Uniform Delay [s]	20.60	29.98	29.99	27.05	25.57	17.85	50.05	24.03	26.20	29.02
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.36	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	22.12	22.17	8.36	4.74	1.13	114.65	0.04	0.02	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.96	0.96	0.50	0.84	0.34	1.21	0.07	0.03	0.51
d, Delay for Lane Group [s/veh]	20.83	52.10	52.17	35.41	30.31	18.98	164.70	24.07	26.22	29.70
Lane Group LOS	C	D	D	D	C	B	F	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.25	28.65	28.66	1.75	18.55	4.63	17.90	0.82	0.27	7.05
50th-Percentile Queue Length [ft/ln]	6.36	716.18	716.54	43.87	463.78	115.82	447.48	20.44	6.80	176.21
95th-Percentile Queue Length [veh/ln]	0.46	37.42	37.44	3.16	25.61	8.16	27.81	1.47	0.49	11.40
95th-Percentile Queue Length [ft/ln]	11.45	935.62	936.04	78.96	640.37	204.06	695.30	36.78	12.24	285.05

Movement, Approach, & Intersection Results

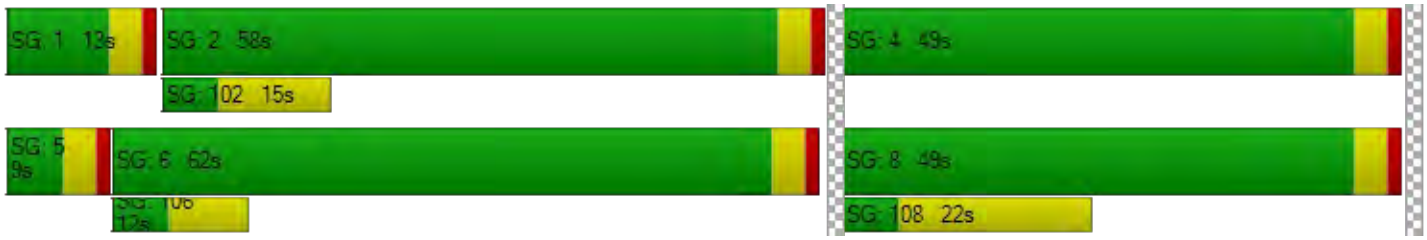
d_M, Delay for Movement [s/veh]	20.83	52.13	52.17	35.41	30.31	18.98	164.70	24.07	24.07	26.22	29.70	29.70
Movement LOS	C	D	D	D	C	B	F	C	C	C	C	C
d_A, Approach Delay [s/veh]	51.77			28.95			148.88			29.55		
Approach LOS	D			C			F			C		
d_I, Intersection Delay [s/veh]	48.89											
Intersection LOS	D											
Intersection V/C	0.815											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	0.00	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.205	0.000	2.210	2.236
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	967	900	750	750
d_b, Bicycle Delay [s]	16.02	18.15	23.44	23.44
l_b,int, Bicycle LOS Score for Intersection	3.037	3.153	2.208	2.150
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Cedar Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	59.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.835

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	115.00	100.00	100.00	250.00	100.00	80.00	190.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	160	1187	31	146	1190	137	379	491	217	33	358	170
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	14	0	0	22	0	0	17
Total Hourly Volume [veh/h]	160	1187	28	146	1190	123	379	491	195	33	358	153
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	312	7	38	313	32	100	129	51	9	94	40
Total Analysis Volume [veh/h]	168	1249	29	154	1253	129	399	517	205	35	377	161
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	42	0	11	41	0	22	43	0	9	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	46	46	7	45	45	18	33	33	3	18	18
g / C, Green / Cycle	0.08	0.44	0.44	0.07	0.43	0.43	0.17	0.32	0.32	0.03	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.09	0.34	0.34	0.09	0.37	0.37	0.22	0.14	0.13	0.02	0.15	0.15
s, saturation flow rate [veh/h]	1810	1900	1885	1810	1900	1839	1810	3618	1615	1810	1900	1711
c, Capacity [veh/h]	138	826	819	121	808	782	310	1141	509	56	332	299
d1, Uniform Delay [s]	48.50	25.33	25.35	49.00	27.44	27.62	43.50	28.71	28.19	50.27	41.94	42.06
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.28	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	112.14	7.06	7.17	137.89	11.93	13.03	142.19	0.28	0.51	10.81	5.88	7.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.22	0.78	0.78	1.28	0.86	0.87	1.29	0.45	0.40	0.62	0.84	0.86
d, Delay for Lane Group [s/veh]	160.64	32.39	32.52	186.89	39.37	40.64	185.69	29.00	28.70	61.08	47.82	49.20
Lane Group LOS	F	C	C	F	D	D	F	C	C	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.82	14.33	14.27	7.71	17.50	17.42	19.88	4.93	3.87	1.04	7.23	6.73
50th-Percentile Queue Length [ft/ln]	195.44	358.18	356.84	192.70	437.41	435.49	497.00	123.15	96.82	26.05	180.70	168.36
95th-Percentile Queue Length [veh/ln]	13.20	20.53	20.47	13.17	24.36	24.26	30.46	8.57	6.97	1.88	11.64	10.99
95th-Percentile Queue Length [ft/ln]	330.07	513.37	511.73	329.16	608.91	606.61	761.60	214.14	174.27	46.89	290.92	274.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	160.64	32.45	32.52	186.89	39.93	40.64	185.69	29.00	28.70	61.08	48.17	49.20
Movement LOS	F	C	C	F	D	D	F	C	C	E	D	D
d_A, Approach Delay [s/veh]	47.35			54.73			84.72			49.25		
Approach LOS	D			D			F			D		
d_I, Intersection Delay [s/veh]	58.96											
Intersection LOS	E											
Intersection V/C	0.835											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.084	3.213	3.059	2.836
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	724	705	743	495
d_b, Bicycle Delay [s]	21.38	22.02	20.74	29.72
l_b,int, Bicycle LOS Score for Intersection	2.755	2.838	2.503	2.046
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Cedar Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	36.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.817

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	290.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	241	1288	63	83	1193	57	122	162	190	28	157	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	6	0	0	19	0	0	10
Total Hourly Volume [veh/h]	241	1288	57	83	1193	51	122	162	171	28	157	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	339	15	22	314	13	32	43	45	7	41	22
Total Analysis Volume [veh/h]	254	1356	60	87	1256	54	128	171	180	29	165	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	17	53	0	9	45	0	0	33	0	0	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	49	49	5	41	41	29	29
g / C, Green / Cycle	0.14	0.52	0.52	0.05	0.43	0.43	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.14	0.37	0.38	0.05	0.35	0.35	0.33	0.17
s, saturation flow rate [veh/h]	1810	1900	1872	1810	1900	1873	1458	1700
c, Capacity [veh/h]	248	980	966	95	820	808	493	561
d1, Uniform Delay [s]	41.00	17.79	17.87	44.78	23.49	23.53	34.21	27.20
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.48	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	33.34	4.67	4.86	25.90	8.21	8.42	33.24	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.03	0.73	0.73	0.91	0.80	0.81	0.97	0.50
d, Delay for Lane Group [s/veh]	74.34	22.46	22.73	70.68	31.71	31.95	67.45	27.91
Lane Group LOS	F	C	C	E	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.80	11.73	11.73	2.64	13.40	13.31	15.27	5.15
50th-Percentile Queue Length [ft/ln]	195.12	293.20	293.32	66.10	335.10	332.65	381.83	128.63
95th-Percentile Queue Length [veh/ln]	12.52	17.34	17.35	4.76	19.41	19.29	21.68	8.87
95th-Percentile Queue Length [ft/ln]	313.10	433.61	433.76	118.99	485.21	482.21	542.06	221.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	74.34	22.59	22.73	70.68	31.82	31.95	67.45	67.45	67.45	27.91	27.91	27.91
Movement LOS	F	C	C	E	C	C	E	E	E	C	C	C
d_A, Approach Delay [s/veh]	30.47			34.25			67.45			27.91		
Approach LOS	C			C			E			C		
d_I, Intersection Delay [s/veh]	36.28											
Intersection LOS	D											
Intersection V/C	0.817											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	38.93	38.93	38.93	38.93
l_p,int, Pedestrian LOS Score for Intersectio	3.278	3.368	2.381	2.134
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1032	863	611	611
d_b, Bicycle Delay [s]	11.14	15.35	22.93	22.93
l_b,int, Bicycle LOS Score for Intersection	2.942	2.717	2.381	2.043
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Cedar Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	231.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.564

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	190.00	100.00	100.00	345.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	180.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	184	1185	90	124	1142	192	355	274	300	53	93	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	9	0	0	19	0	0	30	0	0	8
Total Hourly Volume [veh/h]	184	1185	81	124	1142	173	355	274	270	53	93	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	312	21	33	301	46	93	72	71	14	24	19
Total Analysis Volume [veh/h]	194	1247	85	131	1202	182	374	288	284	56	98	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	39	0	9	38	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	35	35	5	34	34	33	33	33	33
g / C, Green / Cycle	0.07	0.41	0.41	0.06	0.40	0.40	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.11	0.35	0.36	0.07	0.37	0.38	2.08	0.18	0.53	0.05
s, saturation flow rate [veh/h]	1810	1900	1858	1810	1900	1814	318	1615	292	1615
c, Capacity [veh/h]	128	782	765	106	760	726	190	627	171	627
d1, Uniform Delay [s]	39.50	22.74	22.83	40.00	24.29	24.49	40.15	19.30	26.37	16.70
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	242.06	11.73	12.42	120.60	18.78	21.32	1132.85	0.51	46.41	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.52	0.86	0.86	1.23	0.93	0.94	3.49	0.45	0.90	0.12
d, Delay for Lane Group [s/veh]	281.56	34.46	35.25	160.60	43.07	45.81	1172.99	19.81	72.78	16.79
Lane Group LOS	F	C	D	F	D	D	F	B	E	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	11.11	13.26	13.23	5.68	15.80	15.85	63.57	3.92	5.33	0.91
50th-Percentile Queue Length [ft/ln]	277.86	331.49	330.77	141.90	394.94	396.33	1589.19	97.92	133.24	22.83
95th-Percentile Queue Length [veh/ln]	18.60	19.23	19.20	10.14	22.32	22.38	107.86	7.05	9.12	1.64
95th-Percentile Queue Length [ft/ln]	465.09	480.79	479.90	253.49	557.90	559.57	2696.43	176.25	227.89	41.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	281.56	34.83	35.25	160.60	44.21	45.81	1172.99	1172.99	19.81	72.78	72.78	16.79
Movement LOS	F	C	D	F	D	D	F	F	B	E	E	B
d_A, Approach Delay [s/veh]	66.22			54.46			826.80			54.12		
Approach LOS	E			D			F			D		
d_I, Intersection Delay [s/veh]	231.91											
Intersection LOS	F											
Intersection V/C	2.564											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	3.300	3.805	2.618	2.276
Crosswalk LOS	C	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	824	800	776	776
d_b, Bicycle Delay [s]	14.71	15.30	15.91	15.91
l_b,int, Bicycle LOS Score for Intersection	2.826	2.825	3.170	1.954
Bicycle LOS	C	C	C	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Cedar Ave/7th St

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.790

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	295.00	100.00	100.00	190.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	217	1316	16	55	1317	71	44	34	399	49	14	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	7	0	0	40	0	0	3
Total Hourly Volume [veh/h]	217	1316	14	55	1317	64	44	34	359	49	14	29
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	346	4	14	347	17	12	9	94	13	4	8
Total Analysis Volume [veh/h]	228	1385	15	58	1386	67	46	36	378	52	15	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	53	0	10	47	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	51	51	4	43	43	23	23
g / C, Green / Cycle	0.13	0.57	0.57	0.04	0.48	0.48	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.13	0.37	0.37	0.03	0.38	0.39	0.28	0.13
s, saturation flow rate [veh/h]	1810	1900	1893	1810	1900	1869	1658	743
c, Capacity [veh/h]	241	1077	1073	80	908	893	468	251
d1, Uniform Delay [s]	38.67	13.36	13.38	42.49	19.94	20.00	34.28	27.25
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.33	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.58	3.05	3.07	11.90	7.53	7.82	29.96	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.65	0.65	0.73	0.80	0.81	0.98	0.39
d, Delay for Lane Group [s/veh]	55.26	16.41	16.45	54.39	27.47	27.82	64.24	28.23
Lane Group LOS	E	B	B	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.77	8.70	8.69	1.47	12.89	12.84	14.04	1.81
50th-Percentile Queue Length [ft/ln]	144.35	217.40	217.30	36.73	322.36	321.12	351.07	45.23
95th-Percentile Queue Length [veh/ln]	9.72	13.53	13.53	2.64	18.78	18.72	20.19	3.26
95th-Percentile Queue Length [ft/ln]	242.88	338.31	338.18	66.12	469.59	468.06	504.71	81.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.26	16.43	16.45	54.39	27.63	27.82	64.24	64.24	64.24	28.23	28.23	28.23
Movement LOS	E	B	B	D	C	C	E	E	E	C	C	C
d_A, Approach Delay [s/veh]	21.87			28.67			64.24			28.23		
Approach LOS	C			C			E			C		
d_I, Intersection Delay [s/veh]	30.09											
Intersection LOS	C											
Intersection V/C	0.790											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.511	3.346	2.105	1.807
Crosswalk LOS	D	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1089	956	511	511
d_b, Bicycle Delay [s]	9.34	12.27	24.94	24.94
l_b,int, Bicycle LOS Score for Intersection	2.904	2.812	2.385	1.726
Bicycle LOS	C	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Rubidoux Blvd/Market St

Control Type:	Signalized	Delay (sec / veh):	129.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.107

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	245.00	100.00	330.00	270.00	100.00	370.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	43	567	559	926	904	75	107	172	83	450	82	756
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	56	0	0	0	0	0	0	0	0	76
Total Hourly Volume [veh/h]	43	567	503	926	904	75	107	172	83	450	82	680
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	1.0000	1.0000	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	149	132	244	238	19	27	43	21	118	21	179
Total Analysis Volume [veh/h]	43	597	529	975	952	75	107	172	83	474	82	716
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	0	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	0.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	15	44	0	36	65	0	15	30	0	40	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	1.5	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	5.0	0.0	3.0	4.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.00	7.00	7.00	5.00	6.00	6.00	5.00	7.00	5.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	5.00	5.00	3.00	4.00	4.00	3.00	5.00	3.00	4.00	4.00
g_i, Effective Green Time [s]	8	37	37	31	61	61	10	35	23	49	49
g / C, Green / Cycle	0.06	0.25	0.25	0.21	0.40	0.40	0.07	0.23	0.15	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.33	0.28	0.26	0.05	0.06	0.14	0.13	0.04	0.44
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1797	3514	1900	1615
c, Capacity [veh/h]	101	892	398	726	1462	653	121	418	542	621	528
d1, Uniform Delay [s]	68.48	50.98	56.50	59.50	36.14	27.93	69.44	51.50	62.01	35.54	50.50
k, delay calibration	0.11	0.50	0.50	0.20	0.50	0.50	0.11	0.04	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.81	3.97	164.03	157.85	2.27	0.36	18.54	0.54	4.62	0.10	172.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.67	1.33	1.34	0.65	0.11	0.89	0.61	0.87	0.13	1.36
d, Delay for Lane Group [s/veh]	71.29	54.95	220.53	217.35	38.41	28.29	87.98	52.04	66.63	35.63	223.29
Lane Group LOS	E	D	F	F	D	C	F	D	E	D	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.64	10.36	32.74	29.32	14.05	1.72	4.66	8.57	9.03	2.12	44.51
50th-Percentile Queue Length [ft/ln]	41.12	258.94	818.59	732.90	351.13	42.97	116.61	214.18	225.80	52.88	1112.75
95th-Percentile Queue Length [veh/ln]	2.96	15.64	48.83	44.03	20.19	3.09	8.21	13.37	13.96	3.81	66.06
95th-Percentile Queue Length [ft/ln]	74.02	390.90	1220.82	1100.85	504.78	77.35	205.16	334.19	349.02	95.19	1651.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.29	54.95	220.53	217.35	38.41	28.29	87.98	52.04	52.04	66.63	35.63	223.29
Movement LOS	E	D	F	F	D	C	F	D	D	E	D	F
d_A, Approach Delay [s/veh]	130.48			125.18			62.66			152.81		
Approach LOS	F			F			E			F		
d_I, Intersection Delay [s/veh]	129.07											
Intersection LOS	F											
Intersection V/C	1.107											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	64.40	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.338	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	493	787	307	653
d_b, Bicycle Delay [s]	42.56	27.60	53.76	34.00
l_b,int, Bicycle LOS Score for Intersection	2.570	3.211	2.157	3.784
Bicycle LOS	B	C	B	D

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Agua Mansa Rd/Market St

Control Type:	Signalized	Delay (sec / veh):	80.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.914

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	2	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	200.00	85.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	39	330	0	476	631	1058	4	0	919	286
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	4	0	0	48	0	0	0	0	0	29
Total Hourly Volume [veh/h]	0	0	35	330	0	428	631	1058	4	0	919	257
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	87	0	113	166	278	1	0	242	68
Total Analysis Volume [veh/h]	0	0	37	347	0	451	664	1114	4	0	967	271
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	41	44	0	30	33	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	1.5	3.0	0.0	1.5	3.0	0.0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.2	0.0	0.0	3.9	0.0	2.2	4.5	0.0	2.2	4.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.20	5.90	5.90	4.20	6.50	6.50	4.20	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.90	3.90	2.20	4.50	4.50	2.20	4.50	4.50
g_i, Effective Green Time [s]	41	40	40	37	63	63	0	27	27
g / C, Green / Cycle	0.34	0.33	0.33	0.31	0.53	0.53	0.00	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.28	0.37	0.31	0.00	0.00	0.27	0.17
s, saturation flow rate [veh/h]	1615	1393	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	552	481	540	555	1905	851	2	799	357
d1, Uniform Delay [s]	26.75	35.58	36.91	41.60	19.42	13.48	0.00	46.75	43.77
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	9.07	14.23	105.08	0.29	0.00	0.00	97.42	3.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.72	0.84	1.20	0.58	0.00	0.00	1.21	0.76
d, Delay for Lane Group [s/veh]	26.98	44.65	51.13	146.68	19.71	13.48	0.00	144.17	47.12
Lane Group LOS	C	D	D	F	B	B	A	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.77	10.05	14.07	31.84	9.89	0.05	0.00	22.30	7.63
50th-Percentile Queue Length [ft/ln]	19.21	251.35	351.85	796.03	247.35	1.24	0.00	557.41	190.71
95th-Percentile Queue Length [veh/ln]	1.38	15.25	20.23	45.83	15.05	0.09	0.00	33.18	12.16
95th-Percentile Queue Length [ft/ln]	34.57	381.35	505.67	1145.74	376.32	2.22	0.00	829.60	303.95

Movement, Approach, & Intersection Results

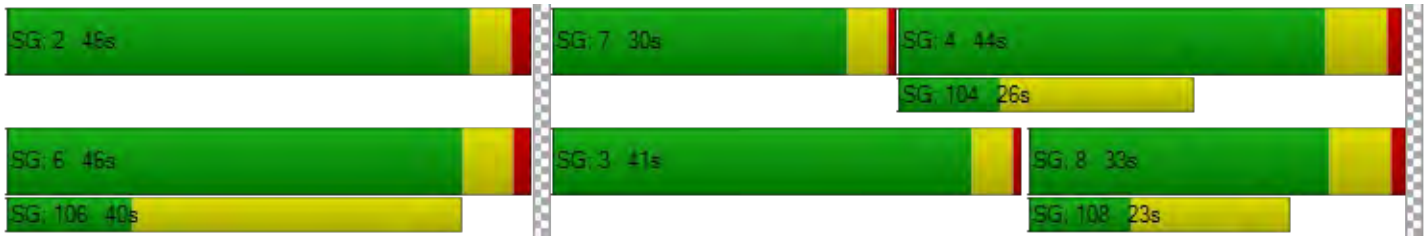
d_M, Delay for Movement [s/veh]	26.98	26.98	26.98	44.65	51.13	51.13	146.68	19.71	13.48	0.00	144.17	47.12
Movement LOS	C	C	C	D	D	D	F	B	B	A	F	D
d_A, Approach Delay [s/veh]	26.98			48.31			67.01			122.92		
Approach LOS	C			D			E			F		
d_I, Intersection Delay [s/veh]	80.71											
Intersection LOS	F											
Intersection V/C	0.914											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	13.0	15.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	47.70	45.94	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.751	2.707	3.335	0.000
Crosswalk LOS	A	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	668	625	442
d_b, Bicycle Delay [s]	26.14	26.60	28.36	36.43
l_b,int, Bicycle LOS Score for Intersection	1.627	2.956	3.030	2.605
Bicycle LOS	A	C	C	B

Sequence

Ring 1	-	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	3	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Rubidoux Blvd/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	138.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.385

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	85.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	161	1092	0	0	1396	30	22	0	250	851	150	163
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	3	0	0	25	0	0	16
Total Hourly Volume [veh/h]	161	1092	0	0	1396	27	22	0	225	851	150	147
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	287	0	0	367	7	6	0	59	224	39	39
Total Analysis Volume [veh/h]	169	1149	0	0	1469	28	23	0	237	896	158	155
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	4	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	35	0	0	35	0	20	0	0	0	30	0
Maximum Green [s]	0	25	0	0	25	0	35	0	0	0	20	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	4.8	0.0	0.0	0.0	4.8	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	38	0	0	0	38	0
Vehicle Extension [s]	0.0	3.5	0.0	0.0	3.5	0.0	2.0	0.0	0.0	0.0	3.5	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	3.8	0.0	0.0	0.0	3.8	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.80	5.80	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.40	3.40	3.80	3.80	3.80	3.80
g_i, Effective Green Time [s]	37	37	37	37	32	32	32	32
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.47	0.32	0.39	0.40	0.02	0.15	0.91	0.10
s, saturation flow rate [veh/h]	356	3618	1900	1888	1083	1615	1157	1615
c, Capacity [veh/h]	118	1655	869	864	90	650	549	650
d1, Uniform Delay [s]	39.27	17.25	19.42	19.51	40.00	16.74	27.19	15.80
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.50	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	237.46	2.43	10.93	11.40	0.55	0.13	421.01	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.44	0.69	0.86	0.87	0.26	0.36	1.92	0.24
d, Delay for Lane Group [s/veh]	276.73	19.68	30.35	30.90	40.55	16.86	448.20	16.02
Lane Group LOS	F	B	C	C	D	B	F	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	9.99	7.90	13.41	13.55	0.46	2.91	74.67	1.78
50th-Percentile Queue Length [ft/ln]	249.76	197.43	335.13	338.67	11.46	72.75	1866.66	44.60
95th-Percentile Queue Length [veh/ln]	17.98	12.51	19.41	19.58	0.83	5.24	120.27	3.21
95th-Percentile Queue Length [ft/ln]	449.56	312.65	485.24	489.57	20.63	130.95	3006.80	80.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	276.73	19.68	0.00	0.00	30.62	30.90	40.55	0.00	16.86	448.20	448.20	16.02
Movement LOS	F	B			C	C	D		B	F	F	B
d_A, Approach Delay [s/veh]	52.64			30.63			18.96			392.79		
Approach LOS	D			C			B			F		
d_I, Intersection Delay [s/veh]	138.90											
Intersection LOS	F											
Intersection V/C	1.385											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	36.6
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	29.76	0.00	11.77
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.085	0.000	2.384
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	915	915	805	805
d_b, Bicycle Delay [s]	11.77	11.77	14.28	14.28
l_b,int, Bicycle LOS Score for Intersection	2.647	2.797	1.560	3.581
Bicycle LOS	B	C	A	D

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Rubidoux Blvd/SrR-60 WB On Ramp

Control Type:	Two-way stop	Delay (sec / veh):	145.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.130

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	145.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	240	1252	1282	894	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	240	1252	1282	894	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	329	337	235	0	0
Total Analysis Volume [veh/h]	253	1318	1349	941	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.13	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	145.18	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	11.72	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	293.03	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	23.38		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	9.51					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 24: Rubidoux Blvd/SR-60 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	75.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.879

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	145.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	634	277	155	1157	0	820	54	447	22	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	28	0	0	0	0	0	45	0	0	0
Total Hourly Volume [veh/h]	0	634	249	155	1157	0	820	54	402	22	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	167	66	41	304	0	216	14	106	6	0	0
Total Analysis Volume [veh/h]	0	667	262	163	1218	0	863	57	423	23	0	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Permiss	Split
Signal Group	0	2	0	1	6	0	0	4	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	5	0	0
Maximum Green [s]	0	35	0	30	35	0	0	35	0	20	0	0
Amber [s]	0.0	4.4	0.0	4.1	4.4	0.0	0.0	4.8	0.0	4.4	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	43	0	12	55	0	0	53	0	12	0	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	3.0	0.0	2.0	0.0	0.0
Walk [s]	0	4	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	33	0	0	18	0	0	28	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	3.1	3.4	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.10	5.40	5.80	5.80	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.10	3.40	3.80	3.80	3.40	3.40
g_i, Effective Green Time [s]	38	38	11	53	47	47	3	3
g / C, Green / Cycle	0.31	0.31	0.09	0.45	0.39	0.39	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.24	0.27	0.09	0.34	0.51	0.26	0.01	0.00
s, saturation flow rate [veh/h]	1900	1728	1810	3618	1815	1615	1810	1615
c, Capacity [veh/h]	597	543	160	1611	714	635	42	37
d1, Uniform Delay [s]	37.34	38.58	54.69	27.84	36.40	29.92	58.00	57.30
k, delay calibration	0.50	0.50	0.04	0.50	0.50	0.20	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.62	15.76	24.97	3.36	140.37	2.22	4.16	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.86	1.02	0.76	1.29	0.67	0.55	0.03
d, Delay for Lane Group [s/veh]	46.96	54.34	79.66	31.20	176.77	32.14	62.16	57.41
Lane Group LOS	D	D	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.60	14.79	5.85	14.66	47.97	10.20	0.73	0.03
50th-Percentile Queue Length [ft/ln]	340.12	369.64	146.37	366.57	1199.23	254.95	18.36	0.76
95th-Percentile Queue Length [veh/ln]	19.65	21.09	9.89	20.94	69.78	15.44	1.32	0.06
95th-Percentile Queue Length [ft/ln]	491.35	527.29	247.21	523.57	1744.46	385.88	33.05	1.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	49.20	54.34	79.66	31.20	0.00	176.77	176.77	32.14	62.16	0.00	57.41
Movement LOS		D	D	F	C		F	F	C	E		E
d_A, Approach Delay [s/veh]	50.65			36.92			131.22			61.96		
Approach LOS	D			D			F			E		
d_I, Intersection Delay [s/veh]	74.99											
Intersection LOS	E											
Intersection V/C	0.879											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	52.27
l_p,int, Pedestrian LOS Score for Intersectio	3.051	0.000	2.544	2.159
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	627	827	787	110
d_b, Bicycle Delay [s]	28.29	20.65	22.08	53.58
l_b,int, Bicycle LOS Score for Intersection	2.349	2.699	3.850	1.560
Bicycle LOS	B	B	D	A

Sequence

Ring 1	4	3	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Market St/Rivera St

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.600

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	165.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	1166	267	116	1759	1	1	15	63	237	0	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	27	0	0	0	0	0	6	0	0	6
Total Hourly Volume [veh/h]	11	1166	240	116	1759	1	1	15	57	237	0	58
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	307	63	31	463	0	0	4	15	62	0	15
Total Analysis Volume [veh/h]	12	1227	253	122	1852	1	1	16	60	249	0	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	6	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	5	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	30	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	57	57	23	71	0	0	9	0	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	14	0	10	0	0	10	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	73	73	10	81	81	6	6	10	10	10
g / C, Green / Cycle	0.01	0.64	0.64	0.08	0.71	0.71	0.05	0.05	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.34	0.16	0.07	0.49	0.49	0.01	0.04	0.07	0.07	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1894	1615	1810	1810	1615
c, Capacity [veh/h]	25	2305	1029	151	1342	1342	95	81	163	163	146
d1, Uniform Delay [s]	56.27	11.46	8.98	51.78	9.66	9.66	52.36	53.89	51.11	51.11	49.47
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.90	0.89	0.57	9.66	2.92	2.93	0.89	12.52	7.19	7.19	1.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.53	0.25	0.81	0.69	0.69	0.18	0.74	0.76	0.76	0.42
d, Delay for Lane Group [s/veh]	69.17	12.35	9.55	61.44	12.59	12.59	53.25	66.41	58.30	58.30	51.38
Lane Group LOS	E	B	A	E	B	B	D	E	E	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.43	7.72	2.57	3.77	11.58	11.58	0.50	2.01	3.83	3.83	1.74
50th-Percentile Queue Length [ft/ln]	10.72	193.12	64.18	94.25	289.38	289.45	12.46	50.16	95.68	95.68	43.44
95th-Percentile Queue Length [veh/ln]	0.77	12.28	4.62	6.79	17.15	17.16	0.90	3.61	6.89	6.89	3.13
95th-Percentile Queue Length [ft/ln]	19.29	307.07	115.53	169.65	428.87	428.95	22.43	90.28	172.22	172.22	78.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.17	12.35	9.55	61.44	12.59	12.59	53.25	53.25	66.41	58.30	58.30	51.38
Movement LOS	E	B	A	E	B	B	D	D	E	E	E	D
d_A, Approach Delay [s/veh]	12.33			15.61			63.51			56.94		
Approach LOS	B			B			E			E		
d_I, Intersection Delay [s/veh]	18.62											
Intersection LOS	B											
Intersection V/C	0.600											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	48.85	0.00	48.85
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.270	0.000	2.332
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	922	1165	87	383
d_b, Bicycle Delay [s]	16.71	10.02	52.61	37.60
l_b,int, Bicycle LOS Score for Intersection	2.813	3.189	1.697	2.081
Bicycle LOS	C	C	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Market St/SR-60 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.839

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	185.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	366	504	0	0	1786	272	0	0	0	182	0	943
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	27	0	0	0	0	0	94
Total Hourly Volume [veh/h]	366	504	0	0	1786	245	0	0	0	182	0	849
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	96	133	0	0	470	64	0	0	0	48	0	223
Total Analysis Volume [veh/h]	385	531	0	0	1880	258	0	0	0	192	0	894
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	26	90	0	0	64	0	0	0	0	15	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C		L
C, Cycle Length [s]	105	105	105		105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00
g_i, Effective Green Time [s]	22	86	60		11
g / C, Green / Cycle	0.21	0.82	0.57		0.10
(v / s)_i Volume / Saturation Flow Rate	0.21	0.15	0.52		0.11
s, saturation flow rate [veh/h]	1810	3618	3618		1810
c, Capacity [veh/h]	379	2963	2067		190
d1, Uniform Delay [s]	41.50	2.01	20.08		47.00
k, delay calibration	0.26	0.50	0.50		0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00
d2, Incremental Delay [s]	37.46	0.13	7.40		33.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00
PF, progression factor	1.00	1.00	1.00		1.00

Lane Group Results

X, volume / capacity	1.02	0.18	0.91		1.01
d, Delay for Lane Group [s/veh]	78.96	2.15	27.48		80.60
Lane Group LOS	F	A	C		F
Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	13.29	0.59	19.61		6.64
50th-Percentile Queue Length [ft/ln]	332.34	14.69	490.27		165.99
95th-Percentile Queue Length [veh/ln]	19.44	1.06	26.87		10.92
95th-Percentile Queue Length [ft/ln]	485.90	26.44	671.83		272.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	78.96	2.15	0.00	0.00	27.48	0.00	0.00	0.00	0.00	80.60	0.00	0.00
Movement LOS	F	A			C					F		
d_A, Approach Delay [s/veh]	34.43			24.31			0.00			14.87		
Approach LOS	C			C			A			B		
d_I, Intersection Delay [s/veh]	26.81											
Intersection LOS	C											
Intersection V/C	0.839											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	43.89
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.022
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1638	1143	0	210
d_b, Bicycle Delay [s]	1.72	9.64	52.50	42.08
l_b,int, Bicycle LOS Score for Intersection	2.315	3.111	4.132	1.560
Bicycle LOS	B	C	D	A

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Market St/SR-60 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	115.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.046

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	60.00	155.00	100.00	100.00	180.00	100.00	410.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	655	81	896	789	0	212	0	1010	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	0	0	0	101	0	0	0
Total Hourly Volume [veh/h]	0	655	73	896	789	0	212	0	909	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	172	19	236	208	0	56	0	239	0	0	0
Total Analysis Volume [veh/h]	0	689	77	943	831	0	223	0	957	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	66	87	0	33	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	17	62	83	29	29	
g / C, Green / Cycle	0.14	0.52	0.69	0.24	0.24	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.52	0.23	0.12	0.33	
s, saturation flow rate [veh/h]	3618	1810	3618	1810	2859	
c, Capacity [veh/h]	512	935	2502	437	691	
d1, Uniform Delay [s]	51.50	29.00	7.41	39.35	45.50	
k, delay calibration	0.50	0.48	0.50	0.11	0.21	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	167.66	31.04	0.36	0.92	177.21	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.34	1.01	0.33	0.51	1.39	
d, Delay for Lane Group [s/veh]	219.16	60.04	7.76	40.28	222.71	
Lane Group LOS	F	F	A	D	F	
Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	19.41	32.33	3.75	5.75	27.10	
50th-Percentile Queue Length [ft/ln]	485.28	808.20	93.63	143.75	677.48	
95th-Percentile Queue Length [veh/ln]	30.06	41.95	6.74	9.68	41.79	
95th-Percentile Queue Length [ft/ln]	751.56	1048.84	168.53	242.07	1044.83	

Movement, Approach, & Intersection Results

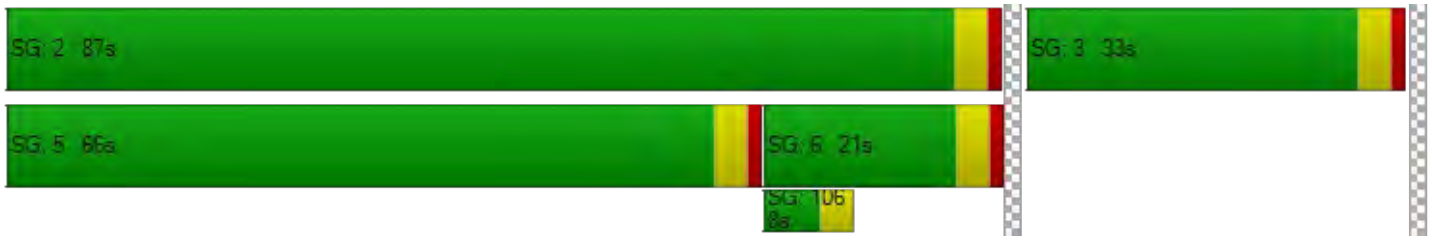
d_M, Delay for Movement [s/veh]	0.00	219.16	0.00	60.04	7.76	0.00	40.28	0.00	222.71	0.00	0.00	0.00
Movement LOS		F		F	A		D		F			
d_A, Approach Delay [s/veh]	198.16			35.55			188.23			0.00		
Approach LOS	F			D			F			A		
d_I, Intersection Delay [s/veh]	115.76											
Intersection LOS	F											
Intersection V/C	1.046											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.358
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	283	1383	483	0
d_b, Bicycle Delay [s]	44.20	5.70	34.50	60.00
l_b,int, Bicycle LOS Score for Intersection	2.128	3.023	1.560	4.132
Bicycle LOS	B	C	A	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Sierra Ave/20th St

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.277

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	426	0	58	283	0	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	4
Total Hourly Volume [veh/h]	426	0	58	283	0	37
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	112	0	15	74	0	10
Total Analysis Volume [veh/h]	448	0	61	298	0	39
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	39	0	25	64	36	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	14	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R
C, Cycle Length [s]	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	81	4	89	3	3
g / C, Green / Cycle	0.81	0.04	0.89	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.24	0.02	0.16	0.00	0.02
s, saturation flow rate [veh/h]	1900	3514	1900	1810	1615
c, Capacity [veh/h]	1528	146	1683	62	55
d1, Uniform Delay [s]	2.51	46.75	0.77	0.00	47.79
k, delay calibration	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.49	1.91	0.23	0.00	15.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.42	0.18	0.00	0.71
d, Delay for Lane Group [s/veh]	2.99	48.66	1.00	0.00	62.97
Lane Group LOS	A	D	A	A	E
Critical Lane Group	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.42	0.76	0.11	0.00	1.17
50th-Percentile Queue Length [ft/ln]	35.56	19.04	2.69	0.00	29.31
95th-Percentile Queue Length [veh/ln]	2.56	1.37	0.19	0.00	2.11
95th-Percentile Queue Length [ft/ln]	64.00	34.28	4.84	0.00	52.75

Movement, Approach, & Intersection Results

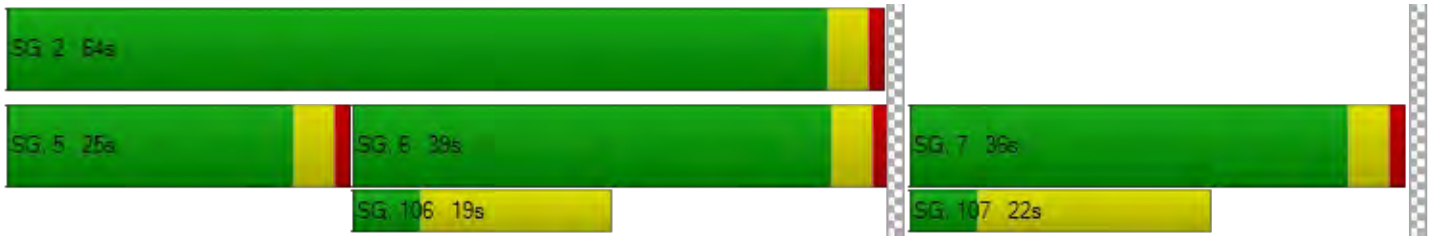
d_M, Delay for Movement [s/veh]	2.99	2.99	48.66	1.00	0.00	62.97
Movement LOS	A	A	D	A	A	E
d_A, Approach Delay [s/veh]	2.99		9.10		62.97	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	8.35					
Intersection LOS	A					
Intersection V/C	0.277					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.270	2.527	2.177
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	1200	640
d_b, Bicycle Delay [s]	21.13	8.00	23.12
l_b,int, Bicycle LOS Score for Intersection	2.299	2.152	1.560
Bicycle LOS	B	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\2045 PM.pdf

Scenario 6 2045 PM
2/15/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound		Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Right	Left	Right	
1	Sierra Ave/I-10 Ramps	870	1554	900	612	1142	884	1064	598	536	695	8855

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Sierra Ave/Slover Ave	196	1819	212	848	1354	176	420	826	106	264	480	1159	7860

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Sierra Ave/Santa Ana Ave	224	1695	100	188	1245	143	292	258	187	94	168	233	4827

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Sierra Ave/Jurupa Ave	381	1117	213	131	689	290	612	542	589	202	316	98	5180

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Armstrong Rd/Sierra Ave	1463	909	191	62	339	120	388	307	1011	167	254	278	5489

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
6	Armstrong/30th St	2501	171	54	1503	80	55	4364

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
7	Valley Way/SR-60 WB Off Ramp	38	1554	1376	5	271	100	347	75	738	4504

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
8	Valley Way/SR-60 WB On Ramp	198	1609	1316	497	3620

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR-60 EB Ramps/Mission Blvd	24	1	18	1648	5	151	98	583	24	14	384	189	3139

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
10	Valley Way/Mission Blvd	34	476	97	572	428	298	849	1221	45	61	243	523	4847

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
11	Jurupa Rd/Mission Blvd	17	293	1843	61	144	789	3147

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	Pacific Ave/Mission Blvd	132	103	222	81	82	109	190	1456	262	443	688	58	3826

ID	Intersection Name	Northbound		Southbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Thru	Right	
13	Cedar Ave/I-10 WB Ramp	563	1743	1465	701	451	0	529	5452

ID	Intersection Name	Northbound		Southbound		Eastbound			Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	
14	Cedar Ave/I-10 EB Ramps	1650	680	433	1490	722	7	350	5332

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
15	Cedar Ave/Orange St	20	1680	2	100	1446	290	330	26	18	13	8	321	4254

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	Cedar Ave/Slover Ave	160	1187	31	146	1190	137	379	491	217	33	358	170	4499

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Cedar Ave/Santa Ana Ave	241	1288	63	83	1193	57	122	162	190	28	157	95	3679

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	Cedar Ave/Jurupa Ave	184	1185	90	124	1142	192	355	274	300	53	93	81	4073

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Cedar Ave/7th St	217	1316	16	55	1317	71	44	34	399	49	14	32	3564

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	Rubidoux Blvd/Market St	43	567	559	926	904	75	107	172	83	450	82	756	4724

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	Agua Mansa Rd/Market St	0	0	39	330	0	476	631	1058	4	0	919	286	3743

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
22	Rubidoux Blvd/SR-60 WB Off Ramp	161	1092	1396	30	22	250	851	150	163	4115

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
23	Rubidoux Blvd/SrR-60 WB On Ramp	240	1252	1282	894	3668

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	Left	Right	
24	Rubidoux Blvd/SR-60 EB Ramps	634	277	155	1157	820	54	447	22	1	3567

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Market St/Rivera St	11	1166	267	116	1759	1	1	15	63	237	0	64	3700

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
26	Market St/SR-60 WB Ramp	366	504	1786	272	182	943	4053

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Thru	Right	Left	Thru	Left	2	
27	Market St/SR-60 EB Ramp	655	81	896	789	212	1010	3643

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
28	Sierra Ave/20th St	426	0	58	283	0	41	808

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Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Interim Year AM + P.pdf

Scenario 17 OY AM + P
2/15/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Ave/I-10 Ramps	Signalized	HCM 7th Edition	NB Left	0.723	25.3	C
2	Sierra Ave/Slover Ave	Signalized	HCM 7th Edition	WB Left	0.673	34.7	C
3	Sierra Ave/Santa Ana Ave	Signalized	HCM 7th Edition	WB Left	0.512	22.6	C
4	Sierra Ave/Jurupa Ave	Signalized	HCM 7th Edition	NB Left	0.594	33.7	C
5	Armstrong Rd/Sierra Ave	Signalized	HCM 7th Edition	WB Left	1.002	111.8	F
6	Armstrong/30th St	Signalized	HCM 7th Edition	WB Left	0.720	10.4	B
7	Valley Way/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	NB Left	1.170	163.7	F
8	Valley Way/SR-60 WB On Ramp	Signalized	HCM 7th Edition	NB Left	0.801	13.3	B
9	SR-60 EB Ramps/Mission Blvd	Signalized	HCM 7th Edition	WB Left	0.527	37.5	D
10	Valley Way/Mission Blvd	Signalized	HCM 7th Edition	EB Left	0.707	59.6	E
11	Jurupa Rd/Mission Blvd	Two-way stop	HCM 7th Edition	NB Left	0.576	140.5	F
12	Pacific Ave/Mission Blvd	Signalized	HCM 7th Edition	EB Left	0.487	23.3	C
13	Cedar Ave/I-10 WB Ramp	Signalized	HCM 7th Edition	SB Right	0.756	23.6	C
14	Cedar Ave/I-10 EB Ramps	Signalized	HCM 7th Edition	EB Right	1.087	69.8	E
15	Cedar Ave/Orange St	Signalized	HCM 7th Edition	EB Left	1.044	66.1	E
16	Cedar Ave/Slover Ave	Signalized	HCM 7th Edition	EB Left	1.109	128.7	F
17	Cedar Ave/Santa Ana Ave	Signalized	HCM 7th Edition	NB Left	0.963	56.5	E
			HCM 7th				

18	Cedar Ave/Jurupa Ave	Signalized	HCM 7th Edition	EB Left	5.515	500.6	F
19	Cedar Ave/7th St	Signalized	HCM 7th Edition	SB Left	0.776	21.5	C
20	Rubidoux Blvd/Market St	Signalized	HCM 7th Edition	WB Right	1.321	182.9	F
21	Agua Mansa Rd/Market St	Signalized	HCM 7th Edition	EB Left	0.860	81.2	F
22	Rubidoux Blvd/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	WB Left	0.916	36.3	D
23	Rubidoux Blvd/SrR-60 WB On Ramp	Two-way stop	HCM 7th Edition	NB Left	1.484	279.7	F
24	Rubidoux Blvd/SR-60 EB Ramps	Signalized	HCM 7th Edition	EB Left	1.125	152.8	F
25	Market St/Rivera St	Signalized	HCM 7th Edition	EB Right	0.675	17.7	B
26	Market St/SR-60 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.610	10.1	B
27	Market St/SR-60 EB Ramp	Signalized	HCM 7th Edition	SB Left	0.971	66.8	E
28	Sierra Ave/20th St	Signalized	HCM 7th Edition	WB Right	0.801	43.9	D
29	Armstrong Rd/Driveway 1	Two-way stop	HCM 7th Edition	WB Left	0.067	13.3	B
30	Driveway 2/20th St	Signalized	HCM 7th Edition	NB Left	0.494	10.8	B
31	Street A/20th St	Two-way stop	HCM 7th Edition	WB Left	0.123	26.0	D
32	Street B/20th St	Signalized	HCM 7th Edition	NB Left	0.525	11.7	B
33	Street M/20th Street	Roundabout	HCM 7th Edition	EB Thru		6.0	A
34	Driveway 3/20th St	Signalized	HCM 7th Edition	NB Right	0.760	9.1	A
35	Driveway 4/20th St	Signalized	HCM 7th Edition	SB Left	0.548	5.4	A
36	Driveway 5/20th St	Two-way stop	HCM 7th Edition	NB Right	0.056	11.3	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Ave/I-10 Ramps

Control Type:	Signalized	Delay (sec / veh):	25.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	565.00	100.00	100.00	325.00	100.00	305.00	440.00	100.00	1500.00	1205.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	390.00	0.00	0.00	665.00	0.00	0.00	1215.00	0.00	0.00	1150.00
Speed [mph]	40.00			35.00			65.00			65.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	415	804	418	538	840	747	861	0	448	432	0	558
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	176	32	63	0	89	0	0	0	368	61	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	56	0	0	88	0	0	90	0	0	66
Total Hourly Volume [veh/h]	666	981	500	635	1080	793	1016	0	807	571	0	592
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	175	258	132	167	284	209	267	0	212	150	0	156
Total Analysis Volume [veh/h]	701	1033	526	668	1137	835	1069	0	849	601	0	623
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna
Signal Group	1	6	0	5	2	0	3	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	0	0	5	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	25	32	0	25	32	0	48	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	5	0	0
Pedestrian Clearance [s]	0	23	0	0	23	0	39	0	0	35	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No		No	No		No			No		
Maximum Recall	No	No		No	No		No			No		
Pedestrian Recall	No	No		No	No		No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	L
C, Cycle Length [s]	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	37	21	37	35	35
g / C, Green / Cycle	0.20	0.35	0.20	0.35	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.20	0.20	0.19	0.22	0.30	0.17
s, saturation flow rate [veh/h]	3514	5176	3514	5176	3514	3514
c, Capacity [veh/h]	703	1805	703	1805	1184	1184
d1, Uniform Delay [s]	41.97	27.82	41.49	28.54	33.17	27.84
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.19	1.33	7.85	1.68	2.86	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.00	0.57	0.95	0.63	0.90	0.51
d, Delay for Lane Group [s/veh]	57.16	29.15	49.34	30.22	36.03	28.18
Lane Group LOS	E	C	D	C	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	10.24	6.95	9.11	7.99	11.90	5.45
50th-Percentile Queue Length [ft/ln]	255.94	173.78	227.65	199.73	297.43	136.19
95th-Percentile Queue Length [veh/ln]	15.48	11.28	14.05	12.62	17.55	9.28
95th-Percentile Queue Length [ft/ln]	387.12	281.88	351.37	315.62	438.85	231.88

Movement, Approach, & Intersection Results

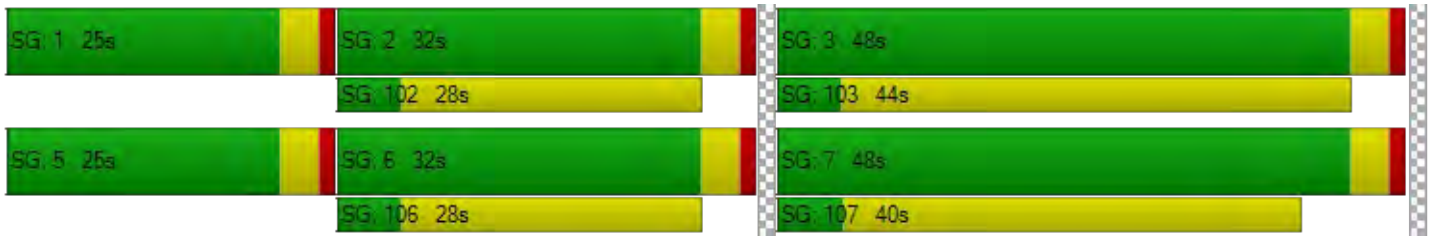
d_M, Delay for Movement [s/veh]	57.16	29.15	0.00	49.34	30.22	0.00	36.03	0.00	0.00	28.18	0.00	0.00
Movement LOS	E	C		D	C		D			C		
d_A, Approach Delay [s/veh]	31.41			25.91			20.53			14.20		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	25.29											
Intersection LOS	C											
Intersection V/C	0.723											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.497	3.420	3.085	2.909
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	533	838	838
d_b, Bicycle Delay [s]	28.23	28.23	17.72	17.72
l_b,int, Bicycle LOS Score for Intersection	2.513	2.552	1.560	1.560
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	34.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	265.00	100.00	675.00	675.00	100.00	100.00	345.00	100.00	320.00	275.00	100.00	465.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	600.00	0.00	0.00	0.00
Speed [mph]	50.00			40.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	1026	108	577	851	284	181	267	56	65	267	444
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	231	6	97	419	3	3	19	2	3	12	38
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	13	0	0	34	0	0	7	0	0	56
Total Hourly Volume [veh/h]	123	1442	120	778	1423	304	217	334	61	80	327	506
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	379	32	205	374	80	57	88	16	21	86	133
Total Analysis Volume [veh/h]	129	1518	126	819	1498	320	228	352	64	84	344	533
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	137.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	40	0	35	63	0	14	40	0	15	41	41
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	31	0	0	27	0	0	31	0	0	31	31
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	7	57	57	31	81	81	10	21	21	5	16	51
g / C, Green / Cycle	0.05	0.44	0.44	0.24	0.62	0.62	0.08	0.16	0.16	0.04	0.12	0.39
(v / s)_i Volume / Saturation Flow Rate	0.04	0.24	0.24	0.23	0.33	0.35	0.06	0.10	0.04	0.02	0.10	0.19
s, saturation flow rate [veh/h]	3514	5176	1806	3514	3618	1740	3514	3618	1615	3514	3618	2859
c, Capacity [veh/h]	181	2260	788	838	2257	1085	270	593	265	133	452	1126
d1, Uniform Delay [s]	60.72	26.98	26.98	49.15	13.79	14.21	59.23	50.34	47.32	61.64	55.01	29.33
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.18	0.93	2.64	10.07	0.91	2.13	7.05	0.95	0.47	4.84	2.68	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.54	0.54	0.98	0.53	0.56	0.84	0.59	0.24	0.63	0.76	0.47
d, Delay for Lane Group [s/veh]	65.90	27.91	29.62	59.22	14.70	16.34	66.27	51.29	47.79	66.48	57.70	29.64
Lane Group LOS	E	C	C	E	B	B	E	D	D	E	E	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.17	8.98	9.78	14.07	9.53	10.33	3.89	5.27	1.81	1.42	5.46	5.98
50th-Percentile Queue Length [ft/ln]	54.24	224.53	244.48	351.84	238.27	258.32	97.34	131.79	45.23	35.54	136.41	149.44
95th-Percentile Queue Length [veh/ln]	3.91	13.90	14.91	20.23	14.59	15.60	7.01	9.04	3.26	2.56	9.29	9.99
95th-Percentile Queue Length [ft/ln]	97.64	347.40	372.70	505.65	364.85	390.11	175.21	225.92	81.42	63.97	232.19	249.68

Movement, Approach, & Intersection Results

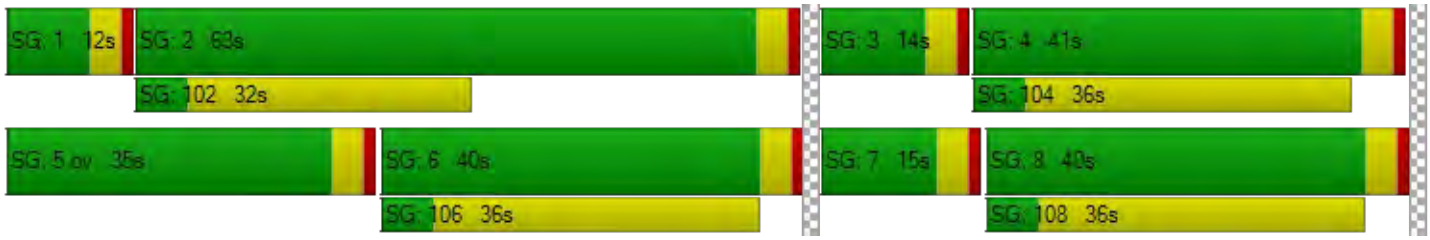
d_M, Delay for Movement [s/veh]	65.90	28.24	29.62	59.22	15.02	16.34	66.27	51.29	47.79	66.48	57.70	29.64
Movement LOS	E	C	C	E	B	B	E	D	D	E	E	C
d_A, Approach Delay [s/veh]	31.08			28.91			56.25			42.91		
Approach LOS	C			C			E			D		
d_I, Intersection Delay [s/veh]	34.71											
Intersection LOS	C											
Intersection V/C	0.673											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.31	56.31	56.31	56.31
l_p,int, Pedestrian LOS Score for Intersectio	3.508	3.640	3.025	3.368
Crosswalk LOS	D	D	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	554	908	554	569
d_b, Bicycle Delay [s]	33.98	19.39	33.98	33.27
l_b,int, Bicycle LOS Score for Intersection	2.296	3.029	2.097	2.399
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	285.00	100.00	210.00	375.00	100.00	100.00	240.00	100.00	100.00	300.00	100.00	350.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	535.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	170	1000	52	95	675	101	111	70	71	51	104	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	202	0	115	290	19	6	10	0	1	17	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	14	0	0	8	0	0	14
Total Hourly Volume [veh/h]	201	1382	55	227	1087	124	137	93	76	61	140	127
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	364	14	60	286	33	36	24	20	16	37	33
Total Analysis Volume [veh/h]	212	1455	58	239	1144	131	144	98	80	64	147	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	11	30	0	13	40	0	9	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	48	48	7	48	48	9	15	15	4	10	10
g / C, Green / Cycle	0.08	0.54	0.54	0.08	0.54	0.54	0.10	0.16	0.16	0.05	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.06	0.28	0.04	0.07	0.24	0.24	0.08	0.03	0.05	0.04	0.04	0.08
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1802	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	273	2777	866	273	1941	967	176	587	262	83	400	178
d1, Uniform Delay [s]	40.73	13.45	10.03	41.07	12.64	12.64	39.82	32.46	33.23	42.48	37.12	38.83
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.70	0.71	0.15	8.60	0.72	1.45	8.83	0.13	0.65	14.10	0.57	6.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.52	0.07	0.87	0.44	0.44	0.82	0.17	0.31	0.77	0.37	0.75
d, Delay for Lane Group [s/veh]	45.43	14.16	10.18	49.67	13.36	14.09	48.65	32.60	33.88	56.58	37.68	45.07
Lane Group LOS	D	B	B	D	B	B	D	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.35	5.43	0.50	2.80	4.52	4.70	3.44	0.90	1.53	1.72	1.52	3.14
50th-Percentile Queue Length [ft/ln]	58.78	135.82	12.60	69.91	113.12	117.55	86.01	22.46	38.26	42.89	37.88	78.48
95th-Percentile Queue Length [veh/ln]	4.23	9.26	0.91	5.03	8.01	8.26	6.19	1.62	2.75	3.09	2.73	5.65
95th-Percentile Queue Length [ft/ln]	105.81	231.38	22.68	125.84	200.33	206.45	154.83	40.42	68.87	77.20	68.19	141.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.43	14.16	10.18	49.67	13.55	14.09	48.65	32.60	33.88	56.58	37.68	45.07
Movement LOS	D	B	B	D	B	B	D	C	C	E	D	D
d_A, Approach Delay [s/veh]	17.87			19.30			40.10			44.06		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.57											
Intersection LOS	C											
Intersection V/C	0.512											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.406	3.412	2.646	2.598
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	800	711
d_b, Bicycle Delay [s]	22.76	22.76	16.20	18.69
l_b,int, Bicycle LOS Score for Intersection	2.512	2.400	1.832	1.856
Bicycle LOS	B	B	A	A

Sequence

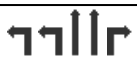
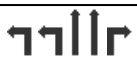
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	33.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.594

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	0	2	0	1
Entry Pocket Length [ft]	685.00	100.00	675.00	385.00	100.00	260.00	375.00	100.00	100.00	280.00	100.00	270.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	284	740	49	33	395	208	248	187	205	128	241	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	185	190	0	0	249	42	13	2	72	0	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	29	0	0	31	0	0	12
Total Hourly Volume [veh/h]	520	1063	52	39	715	258	306	223	283	151	290	106
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	137	280	14	10	188	68	81	59	74	40	76	28
Total Analysis Volume [veh/h]	547	1119	55	41	753	272	322	235	298	159	305	112
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	22	49	0	9	36	36	16	36	0	16	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	27	27	0	27	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	61	61	4	46	62	12	23	23	7	18	18
g / C, Green / Cycle	0.16	0.55	0.55	0.03	0.42	0.56	0.11	0.21	0.21	0.06	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.16	0.31	0.03	0.01	0.21	0.17	0.09	0.06	0.18	0.05	0.08	0.07
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	575	1988	888	115	1514	910	381	753	336	225	593	265
d1, Uniform Delay [s]	45.57	16.15	11.55	52.07	23.47	12.60	48.13	36.88	42.29	50.46	42.00	41.32
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.13	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.28	1.16	0.13	1.87	1.17	0.84	5.18	0.23	8.91	4.02	0.69	1.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.56	0.06	0.36	0.50	0.30	0.84	0.31	0.89	0.71	0.51	0.42
d, Delay for Lane Group [s/veh]	54.84	17.31	11.68	53.94	24.64	13.45	53.30	37.11	51.20	54.48	42.69	42.40
Lane Group LOS	D	B	B	D	C	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.72	8.20	0.59	0.56	6.88	3.33	4.47	2.62	8.37	2.23	3.76	2.75
50th-Percentile Queue Length [ft/ln]	192.91	204.94	14.67	14.11	172.06	83.28	111.77	65.44	209.31	55.75	93.96	68.84
95th-Percentile Queue Length [veh/ln]	12.27	12.89	1.06	1.02	11.18	6.00	7.94	4.71	13.12	4.01	6.77	4.96
95th-Percentile Queue Length [ft/ln]	306.80	322.33	26.40	25.39	279.62	149.90	198.46	117.79	327.94	100.35	169.13	123.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.84	17.31	11.68	53.94	24.64	13.45	53.30	37.11	51.20	54.48	42.69	42.40
Movement LOS	D	B	B	D	C	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	29.06			22.91			48.12			45.89		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.67											
Intersection LOS	C											
Intersection V/C	0.594											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	3.408	3.318	3.153	2.794
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	818	582	582	582
d_b, Bicycle Delay [s]	19.20	27.65	27.65	27.65
l_b,int, Bicycle LOS Score for Intersection	2.984	2.463	2.291	2.045
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Armstrong Rd/Sierra Ave

Control Type:	Signalized	Delay (sec / veh):	111.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.002

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	490.00	100.00	200.00	310.00	100.00	270.00	135.00	100.00	75.00	195.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			45.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	933	209	85	15	344	50	40	18	649	84	44	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	191	89	543	65	60	0	15	249	58	380	200	67
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	64	0	0	6	0	0	82	0	0	9
Total Hourly Volume [veh/h]	1292	336	579	83	466	53	62	270	742	479	252	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	340	88	152	22	123	14	16	71	195	126	66	22
Total Analysis Volume [veh/h]	1360	354	609	87	491	56	65	284	781	504	265	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	145
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	0	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	0.0	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	50	56	0	12	18	0	12	38	0	39	65	0
Vehicle Extension [s]	3.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	3.3	0.0	3.3	3.3	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	C
C, Cycle Length [s]	145	145	145	145	145	145	145	145	145	145	145
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	5.30	5.30	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.30	3.30	3.30	3.30	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	45	70	70	5	31	31	6	14	33	41	41
g / C, Green / Cycle	0.31	0.48	0.48	0.04	0.21	0.21	0.04	0.09	0.23	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.39	0.19	0.38	0.02	0.26	0.03	0.04	0.08	0.28	0.10	0.10
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1739
c, Capacity [veh/h]	1083	920	782	131	405	344	75	344	412	534	489
d1, Uniform Delay [s]	50.15	23.70	30.96	68.91	57.04	46.50	69.11	64.42	56.00	41.48	41.49
k, delay calibration	0.13	0.50	0.50	0.04	0.50	0.50	0.04	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	117.00	1.22	7.53	2.17	116.34	1.01	10.75	5.03	120.67	0.38	0.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.26	0.38	0.78	0.67	1.21	0.16	0.87	0.83	1.22	0.35	0.35
d, Delay for Lane Group [s/veh]	167.15	24.92	38.49	71.08	173.38	47.51	79.85	69.45	176.67	41.87	41.91
Lane Group LOS	F	C	D	E	F	D	E	E	F	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	37.16	8.09	19.11	1.61	27.56	1.73	2.63	5.41	28.61	5.30	4.86
50th-Percentile Queue Length [ft/ln]	929.05	202.21	477.82	40.25	689.06	43.20	65.81	135.35	715.30	132.50	121.53
95th-Percentile Queue Length [veh/ln]	53.97	12.75	26.28	2.90	40.04	3.11	4.74	9.23	41.66	9.08	8.48
95th-Percentile Queue Length [ft/ln]	1349.27	318.82	657.06	72.45	1001.04	77.75	118.45	230.75	1041.61	226.90	211.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	167.15	24.92	38.49	71.08	173.38	47.51	79.85	69.45	0.00	176.67	41.88	41.91
Movement LOS	F	C	D	E	F	D	E	E		F	D	D
d_A, Approach Delay [s/veh]	111.75			148.23			22.84			121.06		
Approach LOS	F			F			C			F		
d_I, Intersection Delay [s/veh]	111.77											
Intersection LOS	F											
Intersection V/C	1.002											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.92	61.92	0.00	61.92
l_p,int, Pedestrian LOS Score for Intersectio	3.116	2.670	0.000	2.832
Crosswalk LOS	C	B	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	699	175	441	814
d_b, Bicycle Delay [s]	30.66	60.36	44.03	25.50
l_b,int, Bicycle LOS Score for Intersection	5.498	2.616	1.848	2.275
Bicycle LOS	F	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Armstrong/30th St

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	135.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1191	37	13	1061	65	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	804	0	16	496	0	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	4	0	0	0	6
Total Hourly Volume [veh/h]	2209	40	31	1748	77	49
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	581	11	8	460	20	13
Total Analysis Volume [veh/h]	2325	42	33	1840	81	52
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	5	5	0
Maximum Green [s]	45	0	30	5	30	0
Amber [s]	4.3	0.0	4.3	4.3	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	46	0	11	35	44	0
Vehicle Extension [s]	3.0	0.0	2.0	3.0	2.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	19	0	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.3	3.3	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	0.00	3.30	2.00
g_i, Effective Green Time [s]	72	72	72	61	9
g / C, Green / Cycle	0.80	0.80	0.80	0.68	0.10
(v / s)_i Volume / Saturation Flow Rate	0.64	0.03	0.22	0.51	0.08
s, saturation flow rate [veh/h]	3618	1615	152	3618	1728
c, Capacity [veh/h]	2893	1291	207	2450	168
d1, Uniform Delay [s]	5.06	1.86	12.73	9.53	39.75
k, delay calibration	0.50	0.50	0.12	0.50	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.48	0.05	0.39	2.17	3.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.03	0.16	0.75	0.79
d, Delay for Lane Group [s/veh]	7.54	1.90	13.12	11.71	42.93
Lane Group LOS	A	A	B	B	D
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.63	0.08	0.43	10.40	3.02
50th-Percentile Queue Length [ft/ln]	140.80	1.96	10.79	260.07	75.52
95th-Percentile Queue Length [veh/ln]	9.52	0.14	0.78	15.69	5.44
95th-Percentile Queue Length [ft/ln]	238.11	3.52	19.43	392.31	135.94

Movement, Approach, & Intersection Results

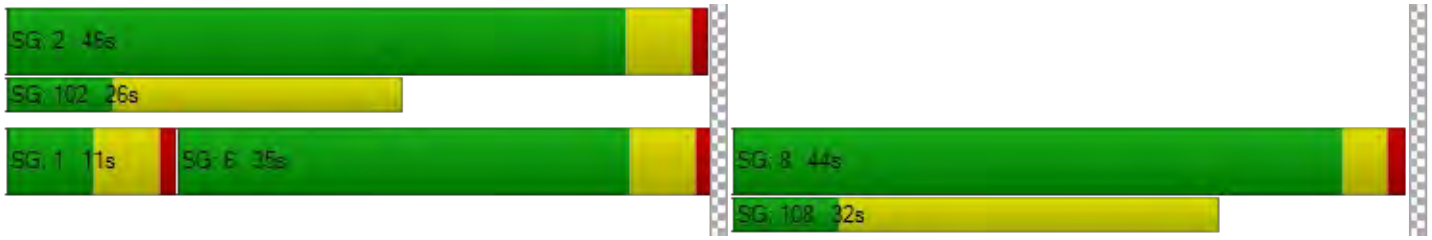
d_M, Delay for Movement [s/veh]	7.54	1.90	13.12	11.71	42.93	42.93
Movement LOS	A	A	B	B	D	D
d_A, Approach Delay [s/veh]	7.44		11.73		42.93	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	10.36					
Intersection LOS	B					
Intersection V/C	0.720					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	0.00	34.67
l_p,int, Pedestrian LOS Score for Intersectio	3.560	0.000	1.858
Crosswalk LOS	D	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	904	660	889
d_b, Bicycle Delay [s]	13.50	20.20	13.89
l_b,int, Bicycle LOS Score for Intersection	3.516	3.105	1.789
Bicycle LOS	D	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Valley Way/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	163.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.170

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	280.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	91	695	0	0	1082	10	52	0	170	193	100	546
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	763	0	0	474	12	15	0	0	0	0	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	2	0	0	20	0	0	66
Total Hourly Volume [veh/h]	107	1583	0	0	1751	22	76	0	181	228	118	593
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	417	0	0	461	6	20	0	48	60	31	156
Total Analysis Volume [veh/h]	113	1666	0	0	1843	23	80	0	191	240	124	624
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	11	67	0	0	56	0	22	0	0	0	51	0
Vehicle Extension [s]	3.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	0.0	0.0	3.3	0.0	3.4	0.0	0.0	0.0	3.3	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	5.40	5.30	5.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	3.40	3.30	3.30
g_i, Effective Green Time [s]	6	62	51	51	17	46	46
g / C, Green / Cycle	0.05	0.44	0.36	0.36	0.12	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.06	0.46	0.49	0.49	0.16	0.13	0.45
s, saturation flow rate [veh/h]	1810	3618	1900	1892	1668	1810	1656
c, Capacity [veh/h]	83	1594	688	685	198	591	541
d1, Uniform Delay [s]	66.80	39.15	44.65	44.65	61.70	36.62	47.15
k, delay calibration	0.11	0.50	0.50	0.50	0.32	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	180.71	35.28	169.60	172.19	185.78	0.45	183.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.37	1.04	1.36	1.36	1.37	0.41	1.38
d, Delay for Lane Group [s/veh]	247.51	74.43	214.25	216.84	247.48	37.07	231.04
Lane Group LOS	F	F	F	F	F	D	F
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	7.06	33.73	55.33	55.58	17.15	6.46	46.14
50th-Percentile Queue Length [ft/ln]	176.51	843.28	1383.19	1389.54	428.70	161.53	1153.56
95th-Percentile Queue Length [veh/ln]	12.31	44.75	81.14	81.64	26.94	10.63	68.82
95th-Percentile Queue Length [ft/ln]	307.81	1118.79	2028.57	2041.04	673.45	265.74	1720.60

Movement, Approach, & Intersection Results

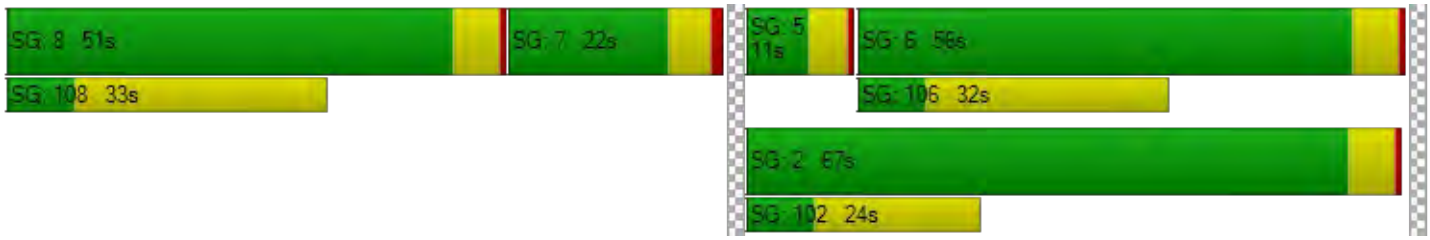
d_M, Delay for Movement [s/veh]	247.51	74.43	0.00	0.00	215.53	216.84	247.48	0.00	247.48	37.07	231.04	231.04
Movement LOS	F	F			F	F	F		F	D	F	F
d_A, Approach Delay [s/veh]	85.42			215.54			247.48			183.92		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	163.73											
Intersection LOS	F											
Intersection V/C	1.170											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	59.43	59.43	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.729	2.229	2.455
Crosswalk LOS	F	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	881	724	237	653
d_b, Bicycle Delay [s]	21.90	28.48	54.38	31.76
l_b,int, Bicycle LOS Score for Intersection	3.027	3.101	2.040	3.299
Bicycle LOS	C	C	B	C

Sequence

Ring 1	8	7	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Valley Way/SR-60 WB On Ramp

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No			
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	218	786	1039	406	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	763	160	314	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	79	0	0
Total Hourly Volume [veh/h]	257	1690	1386	714	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	445	365	188	0	0
Total Analysis Volume [veh/h]	271	1779	1459	752	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	68.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	5	0	0	0
Maximum Green [s]	30	40	40	0	0	0
Amber [s]	4.1	4.8	4.8	0.0	0.0	0.0
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0
Split [s]	29	140	111	0	0	0
Vehicle Extension [s]	3.0	2.0	2.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	3.3	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	140	140	140	140	
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	
g_i, Effective Green Time [s]	23	135	107	107	
g / C, Green / Cycle	0.16	0.96	0.77	0.77	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.49	0.58	0.65	
s, saturation flow rate [veh/h]	1810	3618	1900	1696	
c, Capacity [veh/h]	296	3481	1455	1299	
d1, Uniform Delay [s]	57.61	0.20	9.18	11.02	
k, delay calibration	0.22	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	19.34	0.54	3.78	7.15	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.92	0.51	0.76	0.85	
d, Delay for Lane Group [s/veh]	76.96	0.74	12.96	18.17	
Lane Group LOS	E	A	B	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.83	0.26	16.13	20.11	
50th-Percentile Queue Length [ft/ln]	270.71	6.52	403.27	502.78	
95th-Percentile Queue Length [veh/ln]	16.22	0.47	22.72	27.47	
95th-Percentile Queue Length [ft/ln]	405.62	11.73	567.94	686.65	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	76.96	0.74	14.23	18.17	0.00	0.00
Movement LOS	E	A	B	B		
d_A, Approach Delay [s/veh]	10.81		15.57		0.00	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	13.28					
Intersection LOS	B					
Intersection V/C	0.801					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.519
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1924	1510	0
d_b, Bicycle Delay [s]	0.10	4.20	70.00
l_b,int, Bicycle LOS Score for Intersection	3.251	3.449	4.132
Bicycle LOS	C	C	D

Sequence

Ring 1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: SR-60 EB Ramps/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	37.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.527

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	1120.00	100.00	100.00	200.00	100.00	100.00	260.00	100.00	340.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	490.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	12	2	4	364	4	45	103	338	6	5	354	234
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	598	0	0	0	6	0	0	18	59
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	5	0	0	1	0	0	34
Total Hourly Volume [veh/h]	14	2	4	1028	5	48	122	405	6	6	436	301
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	1	1	271	1	13	32	107	2	2	115	79
Total Analysis Volume [veh/h]	15	2	4	1082	5	51	128	426	6	6	459	317
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	0	3	0	0	4	0	5	2	0	1	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	5
Maximum Green [s]	0	15	0	0	35	0	25	35	0	15	35	35
Amber [s]	0.0	4.1	0.0	0.0	4.8	0.0	4.1	5.2	0.0	4.1	5.2	5.2
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.5	0.0	1.0	0.5	0.5
Split [s]	0	11	0	0	51	0	13	30	0	28	45	45
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	3.0	2.0	2.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	25	0	0	17	0	0	32	32
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	3.8	0.0	3.1	3.7	0.0	3.1	3.7	3.7
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		No			No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.10	5.80	5.80	5.10	5.70	5.70	5.10	5.70	5.80
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.80	3.80	3.10	3.70	3.70	3.10	3.70	0.00
g_i, Effective Green Time [s]	3	41	41	10	54	54	1	44	91
g / C, Green / Cycle	0.02	0.34	0.34	0.09	0.45	0.45	0.01	0.37	0.76
(v / s)_i Volume / Saturation Flow Rate	0.01	0.31	0.32	0.07	0.11	0.11	0.00	0.13	0.20
s, saturation flow rate [veh/h]	1777	1810	1791	1810	1900	1891	1810	3618	1615
c, Capacity [veh/h]	37	622	616	155	847	843	15	1333	1227
d1, Uniform Delay [s]	58.18	37.68	37.86	53.98	20.78	20.78	59.21	27.40	4.30
k, delay calibration	0.04	0.32	0.33	0.11	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.80	14.41	15.85	10.47	0.73	0.73	16.40	0.71	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.91	0.92	0.83	0.26	0.26	0.40	0.34	0.26
d, Delay for Lane Group [s/veh]	62.98	52.09	53.71	64.44	21.51	21.52	75.61	28.10	4.41
Lane Group LOS	E	D	D	E	C	C	E	C	A
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.69	18.06	18.36	4.16	3.81	3.79	0.25	4.73	1.79
50th-Percentile Queue Length [ft/ln]	17.17	451.57	458.94	103.94	95.19	94.84	6.14	118.16	44.71
95th-Percentile Queue Length [veh/ln]	1.24	25.03	25.38	7.48	6.85	6.83	0.44	8.29	3.22
95th-Percentile Queue Length [ft/ln]	30.91	625.82	634.61	187.09	171.34	170.71	11.06	207.29	80.48

Movement, Approach, & Intersection Results

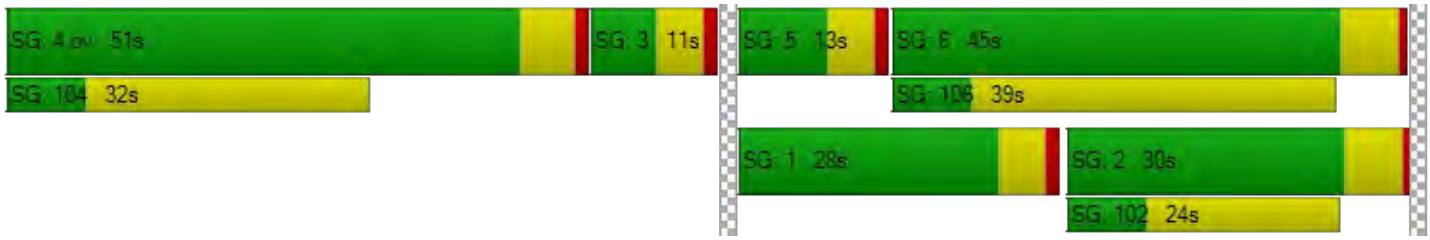
d_M, Delay for Movement [s/veh]	62.98	62.98	62.98	52.86	53.71	53.71	64.44	21.51	21.52	75.61	28.10	4.41
Movement LOS	E	E	E	D	D	D	E	C	C	E	C	A
d_A, Approach Delay [s/veh]	62.98			52.90			31.33			18.87		
Approach LOS	E			D			C			B		
d_I, Intersection Delay [s/veh]	37.51											
Intersection LOS	D											
Intersection V/C	0.527											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.746	2.614	2.634	0.000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	98	753	405	655
d_b, Bicycle Delay [s]	54.25	23.31	38.16	27.14
l_b,int, Bicycle LOS Score for Intersection	1.596	3.446	2.022	2.233
Bicycle LOS	A	C	B	B

Sequence

Ring 1	4	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Valley Way/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	59.6
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	3	1	0	1	1	0	1
Entry Pocket Length [ft]	145.00	100.00	510.00	170.00	100.00	150.00	410.00	100.00	180.00	260.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	16	364	45	403	329	351	300	296	17	56	167	588
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	116	0	13	88	59	598	6	0	0	18	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	47	0	0	2	0	0	74
Total Hourly Volume [veh/h]	19	546	48	489	476	426	952	355	18	66	215	669
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	144	13	129	125	112	251	93	5	17	57	176
Total Analysis Volume [veh/h]	20	575	51	515	501	448	1002	374	19	69	226	704
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	76.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	4	6	0	4	6	6	4	6	0	4	6	6
Maximum Green [s]	25	30	0	35	30	30	35	45	0	25	45	45
Amber [s]	3.6	4.8	0.0	3.6	4.8	4.8	3.6	4.8	0.0	3.6	4.8	4.8
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	9	32	0	33	56	56	40	50	0	25	35	35
Vehicle Extension [s]	2.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	2.0	3.0	3.0
Walk [s]	0	5	0	5	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	23	39	39	0	34	0	0	24	24
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	3.5	0.0	2.0	3.5	3.5
I2, Clearance Lost Time [s]	2.6	3.8	0.0	2.6	3.8	3.8	2.6	3.8	0.0	2.6	3.8	3.8
Minimum Recall	No	No		No	No	No	No	Yes		No	Yes	Yes
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.80	5.80	4.60	5.80	4.60	4.60	7.30	7.30	4.60	7.30	6.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.80	3.80	2.60	3.80	0.00	2.60	3.80	3.80	2.60	3.80	0.00
g_i, Effective Green Time [s]	2	24	24	28	51	92	35	58	58	7	30	64
g / C, Green / Cycle	0.02	0.17	0.17	0.20	0.36	0.66	0.25	0.41	0.41	0.05	0.21	0.46
(v / s)_i Volume / Saturation Flow Rate	0.01	0.16	0.03	0.15	0.14	0.16	0.29	0.10	0.01	0.04	0.06	0.44
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	2859	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	28	629	281	713	1306	1873	889	1498	669	90	764	753
d1, Uniform Delay [s]	68.58	56.82	49.34	52.12	33.18	9.87	52.30	26.79	24.31	65.69	46.45	35.36
k, delay calibration	0.04	0.11	0.11	0.11	0.11	0.11	0.13	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.17	5.77	0.31	1.40	0.19	0.07	61.71	0.40	0.08	4.96	0.99	20.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.91	0.18	0.72	0.38	0.24	1.13	0.25	0.03	0.76	0.30	0.93
d, Delay for Lane Group [s/veh]	79.75	62.58	49.65	53.52	33.37	9.93	114.01	27.19	24.39	70.65	47.44	55.65
Lane Group LOS	E	E	D	D	C	A	F	C	C	E	D	E
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.79	10.27	1.53	8.42	6.22	2.63	22.77	4.09	0.38	2.54	3.40	25.98
50th-Percentile Queue Length [ft/ln]	19.76	256.72	38.21	210.42	155.56	65.77	569.33	102.13	9.59	63.43	84.98	649.59
95th-Percentile Queue Length [veh/ln]	1.42	15.52	2.75	13.17	10.31	4.74	32.80	7.35	0.69	4.57	6.12	34.34
95th-Percentile Queue Length [ft/ln]	35.56	388.11	68.78	329.36	257.83	118.38	820.04	183.84	17.26	114.17	152.97	858.58

Movement, Approach, & Intersection Results

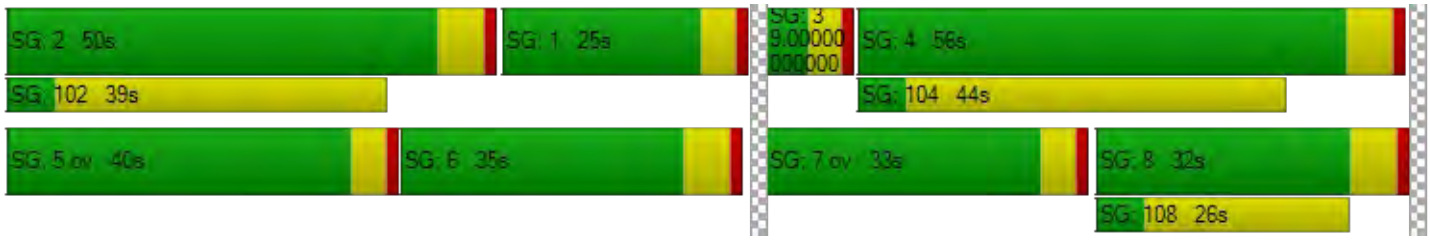
d_M, Delay for Movement [s/veh]	79.75	62.58	49.65	53.52	33.37	9.93	114.01	27.19	24.39	70.65	47.44	55.65
Movement LOS	E	E	D	D	C	A	F	C	C	E	D	E
d_A, Approach Delay [s/veh]	62.09			33.29			89.51			54.83		
Approach LOS	E			C			F			D		
d_I, Intersection Delay [s/veh]	59.61											
Intersection LOS	E											
Intersection V/C	0.707											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	0.00	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersectio	2.785	0.000	3.066	3.096
Crosswalk LOS	C	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	374	717	631	417
d_b, Bicycle Delay [s]	46.25	28.80	32.78	43.85
l_b,int, Bicycle LOS Score for Intersection	2.097	2.806	2.712	2.445
Bicycle LOS	B	C	B	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Jurupa Rd/Mission Blvd

Control Type:	Two-way stop	Delay (sec / veh):	140.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	280.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	25	170	687	22	127	748
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	14	19	0	41	68
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	215	830	26	191	951
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	57	218	7	50	250
Total Analysis Volume [veh/h]	32	226	874	27	201	1001
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.58	0.39	0.01	0.00	0.26	0.01
d_M, Delay for Movement [s/veh]	140.51	81.94	0.00	0.00	11.40	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	9.36	9.36	0.00	0.00	1.06	0.00
95th-Percentile Queue Length [ft/ln]	234.11	234.11	0.00	0.00	26.44	0.00
d_A, Approach Delay [s/veh]	89.21		0.00		1.91	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	10.72					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 12: Pacific Ave/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	130.00	100.00	130.00	130.00	100.00	115.00	275.00	100.00	50.00	265.00	100.00	230.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	111	39	102	14	68	85	93	606	65	153	600	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	49	124	0	75	68	59	21	0	13	0	0	110
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	12	0	0	16	0	0	9	0	0	14
Total Hourly Volume [veh/h]	180	170	108	92	148	143	131	715	81	181	708	122
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	45	28	24	39	38	34	188	21	48	186	32
Total Analysis Volume [veh/h]	189	179	114	97	156	151	138	753	85	191	745	128
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	4	6	0	4	5	0
Maximum Green [s]	0	30	0	0	30	0	25	45	0	25	45	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.5	0.0	4.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	36	0	0	36	0	17	27	0	17	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	2.5	3.5	0.0	2.5	3.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	24	24	24	24	24	24	8	31	31	10	33	33
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.39	0.39	0.13	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.17	0.09	0.07	0.09	0.08	0.09	0.08	0.21	0.05	0.11	0.21	0.08
s, saturation flow rate [veh/h]	1089	1900	1615	1103	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	311	564	479	302	564	479	174	1405	627	230	1518	677
d1, Uniform Delay [s]	30.78	21.84	21.29	28.62	21.55	21.83	35.36	18.89	15.79	34.06	16.98	14.64
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.93	0.32	0.25	0.61	0.26	0.37	7.84	1.47	0.45	7.46	1.14	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.32	0.24	0.32	0.28	0.32	0.79	0.54	0.14	0.83	0.49	0.19
d, Delay for Lane Group [s/veh]	32.71	22.16	21.54	29.23	21.82	22.20	43.20	20.36	16.24	41.52	18.11	15.26
Lane Group LOS	C	C	C	C	C	C	D	C	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.55	2.57	1.59	1.65	2.20	2.17	2.88	5.17	1.00	3.91	4.73	1.45
50th-Percentile Queue Length [ft/ln]	88.87	64.13	39.87	41.29	55.10	54.24	72.03	129.24	24.99	97.65	118.34	36.20
95th-Percentile Queue Length [veh/ln]	6.40	4.62	2.87	2.97	3.97	3.91	5.19	8.90	1.80	7.03	8.30	2.61
95th-Percentile Queue Length [ft/ln]	159.97	115.43	71.76	74.32	99.19	97.63	129.65	222.46	44.99	175.78	207.55	65.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.71	22.16	21.54	29.23	21.82	22.20	43.20	20.36	16.24	41.52	18.11	15.26
Movement LOS	C	C	C	C	C	C	D	C	B	D	B	B
d_A, Approach Delay [s/veh]	26.15			23.74			23.23			21.97		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.32											
Intersection LOS	C											
Intersection V/C	0.487											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.76	29.76	29.76	29.76
l_p,int, Pedestrian LOS Score for Intersectio	2.369	2.361	3.180	3.049
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	775	775	538	538
d_b, Bicycle Delay [s]	15.01	15.01	21.39	21.39
l_b,int, Bicycle LOS Score for Intersection	2.375	2.253	2.372	2.449
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Cedar Ave/I-10 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	23.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.756

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	230.00	100.00	230.00	100.00	100.00	100.00	485.00	100.00	485.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	273	1231	0	0	1321	718	0	0	0	441	3	410
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	191	72	0	0	204	0	0	0	20	583	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	85	0	0	2	0	0	48
Total Hourly Volume [veh/h]	513	1525	0	0	1763	762	0	0	20	1103	4	436
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	135	401	0	0	464	201	0	0	5	290	1	115
Total Analysis Volume [veh/h]	540	1605	0	0	1856	802	0	0	21	1161	4	459
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	14	36	0	0	22	0	0	0	0	0	24	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	10	32	18	18		20	20	20
g / C, Green / Cycle	0.17	0.53	0.30	0.30		0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.15	0.31	0.22	0.28		0.32	0.32	0.16
s, saturation flow rate [veh/h]	3514	5176	8626	2859		1810	1810	2859
c, Capacity [veh/h]	586	2760	2588	858		603	603	953
d1, Uniform Delay [s]	24.62	9.47	18.73	20.43		19.66	19.66	15.88
k, delay calibration	0.11	0.50	0.50	0.50		0.19	0.19	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	6.61	0.90	1.74	18.53		15.75	15.68	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.58	0.72	0.94		0.97	0.97	0.48
d, Delay for Lane Group [s/veh]	31.22	10.37	20.47	38.96		35.41	35.34	16.26
Lane Group LOS	C	B	C	D		D	D	B
Critical Lane Group	Yes	No	No	Yes		Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.90	3.67	4.19	6.85		9.51	9.50	2.24
50th-Percentile Queue Length [ft/ln]	97.59	91.84	104.74	171.22		237.77	237.50	55.94
95th-Percentile Queue Length [veh/ln]	7.03	6.61	7.54	11.14		14.57	14.55	4.03
95th-Percentile Queue Length [ft/ln]	175.65	165.31	188.53	278.52		364.21	363.87	100.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.22	10.37	0.00	0.00	20.47	38.96	0.00	0.00	0.00	35.38	35.34	16.26
Movement LOS	C	B			C	D				D	D	B
d_A, Approach Delay [s/veh]	15.62			26.05			0.00			29.97		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	23.56											
Intersection LOS	C											
Intersection V/C	0.756											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.393	2.729
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1067	600	0	667
d_b, Bicycle Delay [s]	6.53	14.70	30.00	13.33
l_b,int, Bicycle LOS Score for Intersection	2.739	2.465	4.132	4.318
Bicycle LOS	B	B	D	E

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Cedar Ave/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	69.8
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.087

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	2	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	600.00	100.00	600.00	100.00	100.00	100.00	380.00	100.00	380.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1090.00
Speed [mph]	40.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1029	404	420	1339	0	476	3	373	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	263	187	0	806	0	0	0	497	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	66	0	0	0	0	0	94	0	0	0
Total Hourly Volume [veh/h]	0	1477	598	496	2386	0	562	4	843	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	389	157	131	628	0	148	1	222	0	0	0
Total Analysis Volume [veh/h]	0	1555	629	522	2512	0	592	4	887	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	34	0	16	50	0	0	45	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	95	95	95	95	95	95	95	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	30	30	12	46	41	41	41	
g / C, Green / Cycle	0.32	0.32	0.13	0.48	0.43	0.43	0.43	
(v / s)_i Volume / Saturation Flow Rate	0.18	0.39	0.15	0.49	0.16	0.16	0.55	
s, saturation flow rate [veh/h]	8626	1615	3514	5176	1810	1811	1615	
c, Capacity [veh/h]	2724	510	444	2506	781	781	697	
d1, Uniform Delay [s]	27.13	32.50	41.50	24.50	18.37	18.37	27.00	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.88	121.17	84.67	18.54	0.31	0.31	133.73	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.57	1.23	1.18	1.00	0.38	0.38	1.27	
d, Delay for Lane Group [s/veh]	28.00	153.67	126.17	43.04	18.68	18.68	160.73	
Lane Group LOS	C	F	F	F	B	B	F	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.72	28.14	10.23	20.94	4.31	4.31	40.47	
50th-Percentile Queue Length [ft/ln]	142.91	703.39	255.72	523.51	107.70	107.69	1011.75	
95th-Percentile Queue Length [veh/ln]	9.64	41.68	16.51	28.50	7.71	7.71	59.61	
95th-Percentile Queue Length [ft/ln]	240.93	1042.02	412.74	712.44	192.80	192.78	1490.28	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	28.00	153.67	126.17	43.04	0.00	18.68	18.68	160.73	0.00	0.00	0.00
Movement LOS		C	F	F	F		B	B	F			
d_A, Approach Delay [s/veh]	64.19			57.34			103.64			0.00		
Approach LOS	E			E			F			A		
d_I, Intersection Delay [s/veh]	69.82											
Intersection LOS	E											
Intersection V/C	1.087											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	38.93	38.93
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.717	2.314
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	632	968	863	0
d_b, Bicycle Delay [s]	22.24	12.64	15.35	47.50
l_b,int, Bicycle LOS Score for Intersection	2.302	3.228	4.162	4.132
Bicycle LOS	B	C	D	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Cedar Ave/Orange St

Control Type:	Signalized	Delay (sec / veh):	66.1
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.044

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	160.00	100.00	100.00	140.00	100.00	100.00	400.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	1026	3	107	1143	456	272	5	13	0	1	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	450	0	0	1304	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	54	0	0	2	0	0	16
Total Hourly Volume [veh/h]	10	1661	4	126	2653	484	321	6	13	0	1	144
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	437	1	33	698	127	84	2	3	0	0	38
Total Analysis Volume [veh/h]	11	1748	4	133	2793	509	338	6	14	0	1	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	74	0	11	76	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	81	72	72	81	75	75	26	26	26	26
g / C, Green / Cycle	0.70	0.63	0.63	0.70	0.66	0.66	0.23	0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.08	0.46	0.46	0.32	0.77	0.32	0.27	0.01	0.00	0.09
s, saturation flow rate [veh/h]	137	1900	1898	411	3618	1615	1254	1691	1900	1615
c, Capacity [veh/h]	152	1190	1189	293	2372	1059	324	382	461	365
d1, Uniform Delay [s]	30.99	14.91	14.92	16.98	19.80	9.95	47.84	34.85	34.46	38.02
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.48	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	4.09	4.10	5.00	84.59	1.56	60.75	0.06	0.00	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.74	0.74	0.45	1.18	0.48	1.04	0.05	0.00	0.42
d, Delay for Lane Group [s/veh]	31.20	19.00	19.02	21.97	104.38	11.51	108.59	34.91	34.46	38.77
Lane Group LOS	C	B	B	C	F	B	F	C	C	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.08	15.33	15.33	1.28	54.21	6.14	14.87	0.45	0.02	3.74
50th-Percentile Queue Length [ft/ln]	1.90	383.14	383.27	32.09	1355.14	153.54	371.76	11.20	0.55	93.53
95th-Percentile Queue Length [veh/ln]	0.14	21.75	21.75	2.31	75.80	10.21	21.71	0.81	0.04	6.73
95th-Percentile Queue Length [ft/ln]	3.42	543.65	543.80	57.76	1894.99	255.14	542.85	20.16	0.99	168.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.20	19.01	19.02	21.97	104.38	11.51	108.59	34.91	34.91	34.46	34.46	38.77
Movement LOS	C	B	B	C	F	B	F	C	C	C	C	D
d_A, Approach Delay [s/veh]	19.09			87.43			104.47			38.75		
Approach LOS	B			F			F			D		
d_I, Intersection Delay [s/veh]	66.09											
Intersection LOS	E											
Intersection V/C	1.044											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.85	0.00	48.85	48.85
l_p,int, Pedestrian LOS Score for Intersectio	3.502	0.000	2.271	2.199
Crosswalk LOS	D	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1217	1252	452	452
d_b, Bicycle Delay [s]	8.80	8.04	34.44	34.44
l_b,int, Bicycle LOS Score for Intersection	3.014	4.438	2.154	1.838
Bicycle LOS	C	E	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Cedar Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	128.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.109

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	115.00	100.00	100.00	250.00	100.00	80.00	190.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	163	734	14	103	851	163	211	154	73	19	204	101
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	392	3	20	1184	100	57	7	41	6	3	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	29	0	0	13	0	0	13
Total Hourly Volume [veh/h]	207	1258	18	142	2188	263	306	189	114	28	244	112
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	331	5	37	576	69	81	50	30	7	64	29
Total Analysis Volume [veh/h]	218	1324	19	149	2303	277	322	199	120	29	257	118
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	54	0	15	54	0	20	26	0	25	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	62	62	11	62	62	16	28	28	3	15	15
g / C, Green / Cycle	0.09	0.52	0.52	0.09	0.52	0.52	0.13	0.23	0.23	0.03	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.12	0.35	0.35	0.08	0.68	0.70	0.18	0.06	0.07	0.02	0.10	0.11
s, saturation flow rate [veh/h]	1810	1900	1891	1810	1900	1831	1810	3618	1615	1810	1900	1704
c, Capacity [veh/h]	166	979	974	166	979	943	241	842	376	49	240	215
d1, Uniform Delay [s]	54.50	21.83	21.85	53.95	29.09	29.09	52.00	37.37	38.15	57.73	51.00	51.21
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.24	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	150.62	3.93	3.97	15.47	150.31	172.34	163.67	0.14	0.48	10.99	6.37	8.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.31	0.69	0.69	0.90	1.32	1.37	1.33	0.24	0.32	0.59	0.81	0.84
d, Delay for Lane Group [s/veh]	205.12	25.76	25.82	69.42	179.39	201.43	215.67	37.51	38.63	68.72	57.37	59.60
Lane Group LOS	F	C	C	E	F	F	F	D	D	E	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	11.94	14.88	14.86	5.09	66.74	70.08	18.21	2.40	2.99	0.99	5.91	5.62
50th-Percentile Queue Length [ft/ln]	298.56	372.10	371.49	127.18	1668.62	1752.01	455.21	60.10	74.75	24.84	147.73	140.52
95th-Percentile Queue Length [veh/ln]	19.32	21.21	21.18	8.79	97.19	103.62	28.29	4.33	5.38	1.79	9.90	9.51
95th-Percentile Queue Length [ft/ln]	483.03	530.28	529.54	219.66	2429.78	2590.60	707.34	108.19	134.55	44.72	247.39	237.73

Movement, Approach, & Intersection Results

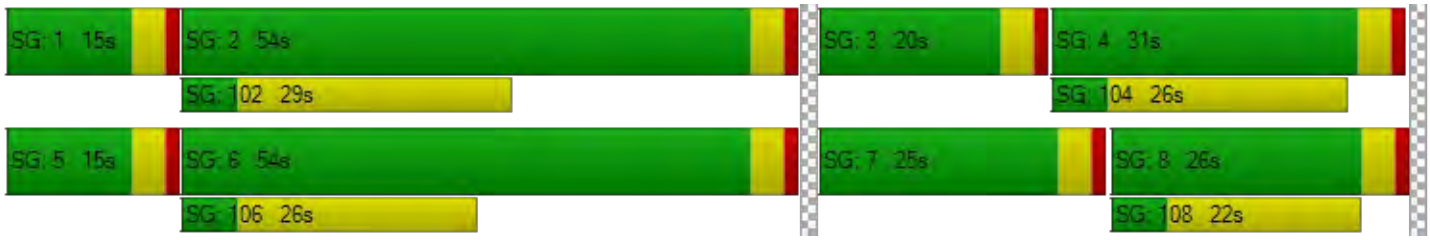
d_M, Delay for Movement [s/veh]	205.12	25.79	25.82	69.42	189.09	201.43	215.67	37.51	38.63	68.72	57.91	59.60
Movement LOS	F	C	C	E	F	F	F	D	D	E	E	E
d_A, Approach Delay [s/veh]	50.84			183.81			127.22			59.18		
Approach LOS	D			F			F			E		
d_I, Intersection Delay [s/veh]	128.66											
Intersection LOS	F											
Intersection V/C	1.109											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.103	3.492	2.828	2.699
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	367	450
d_b, Bicycle Delay [s]	20.42	20.42	40.02	36.04
l_b,int, Bicycle LOS Score for Intersection	2.849	3.835	2.099	1.904
Bicycle LOS	C	D	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Cedar Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	56.5
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.963

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	290.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	84	759	20	46	874	55	66	82	80	47	88	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	40	402	0	0	1210	0	12	1	63	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	7	0	0	16	0	0	5
Total Hourly Volume [veh/h]	139	1298	22	54	2241	58	90	98	141	55	107	47
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	342	6	14	590	15	24	26	37	14	28	12
Total Analysis Volume [veh/h]	146	1366	23	57	2359	61	95	103	148	58	113	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	80	0	9	75	0	0	31	0	0	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	76	76	5	71	71	27	27
g / C, Green / Cycle	0.08	0.63	0.63	0.04	0.59	0.59	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.08	0.37	0.37	0.03	0.64	0.64	0.24	0.16
s, saturation flow rate [veh/h]	1810	1900	1889	1810	1900	1883	1442	1385
c, Capacity [veh/h]	151	1205	1198	74	1124	1114	363	349
d1, Uniform Delay [s]	54.84	12.68	12.69	56.98	24.50	24.50	47.51	41.92
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.42	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	27.12	2.02	2.04	15.28	49.90	53.44	33.26	3.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.97	0.58	0.58	0.77	1.08	1.09	0.95	0.63
d, Delay for Lane Group [s/veh]	81.96	14.70	14.73	72.26	74.40	77.94	80.77	45.06
Lane Group LOS	F	B	B	E	F	F	F	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.53	10.90	10.87	2.03	45.11	45.81	13.81	6.13
50th-Percentile Queue Length [ft/ln]	138.27	272.46	271.83	50.66	1127.86	1145.30	345.15	153.29
95th-Percentile Queue Length [veh/ln]	9.39	16.31	16.28	3.65	59.76	61.02	19.90	10.19
95th-Percentile Queue Length [ft/ln]	234.69	407.81	407.02	91.19	1494.00	1525.56	497.49	254.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	81.96	14.72	14.73	72.26	76.12	77.94	80.77	80.77	80.77	45.06	45.06	45.06
Movement LOS	F	B	B	E	F	E	F	F	F	D	D	D
d_A, Approach Delay [s/veh]	21.11			76.08			80.77			45.06		
Approach LOS	C			E			F			D		
d_I, Intersection Delay [s/veh]	56.51											
Intersection LOS	E											
Intersection V/C	0.963											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.203	3.240	2.089	2.004
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1267	1183	450	450
d_b, Bicycle Delay [s]	8.07	10.00	36.04	36.04
l_b,int, Bicycle LOS Score for Intersection	2.828	3.609	2.157	1.931
Bicycle LOS	C	D	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Cedar Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	500.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	5.515

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	190.00	100.00	100.00	345.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	180.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	36	678	43	87	901	21	50	73	53	42	72	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	183	373	0	0	987	288	70	9	49	0	33	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	31	0	0	11	0	0	16
Total Hourly Volume [veh/h]	225	1173	46	103	2050	282	129	95	101	50	118	144
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	309	12	27	539	74	34	25	27	13	31	38
Total Analysis Volume [veh/h]	237	1235	48	108	2158	297	136	100	106	53	124	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	32	0	12	31	0	0	61	0	0	61	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	28	28	8	27	27	57	57	57	57
g / C, Green / Cycle	0.09	0.27	0.27	0.07	0.26	0.26	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.13	0.34	0.34	0.06	0.65	0.67	4.71	0.07	1.12	0.09
s, saturation flow rate [veh/h]	1810	1900	1875	1810	1900	1822	50	1615	158	1615
c, Capacity [veh/h]	155	513	506	135	492	472	81	874	130	874
d1, Uniform Delay [s]	48.00	38.32	38.32	47.83	38.91	38.91	34.11	11.83	32.59	12.20
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	244.66	130.42	132.76	10.44	679.54	727.61	891.05	0.06	205.03	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.53	1.26	1.26	0.80	2.50	2.60	2.91	0.12	1.36	0.17
d, Delay for Lane Group [s/veh]	292.66	168.74	171.08	58.27	718.46	766.52	925.16	11.89	237.63	12.29
Lane Group LOS	F	F	F	E	F	F	F	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	14.46	31.06	30.98	3.16	105.25	107.23	22.19	1.15	9.41	1.70
50th-Percentile Queue Length [ft/ln]	361.50	776.52	774.59	79.00	2631.23	2680.87	554.63	28.79	235.32	42.60
95th-Percentile Queue Length [veh/ln]	23.53	45.66	45.64	5.69	165.27	168.67	39.93	2.07	16.94	3.07
95th-Percentile Queue Length [ft/ln]	588.21	1141.38	1140.93	142.20	4131.68	4216.78	998.34	51.82	423.58	76.68

Movement, Approach, & Intersection Results

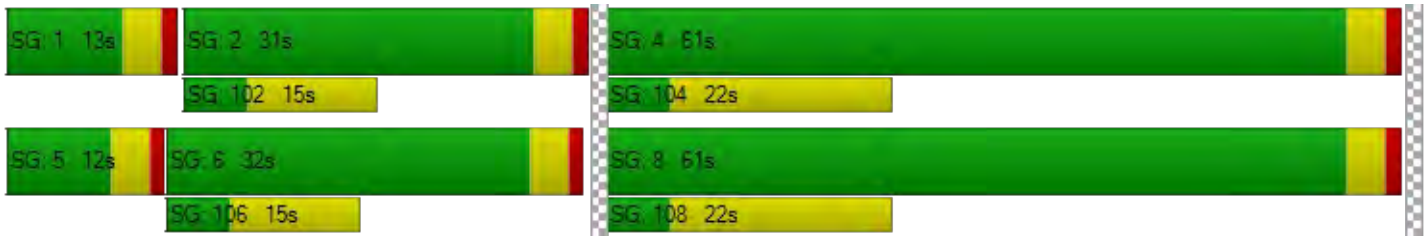
d_M, Delay for Movement [s/veh]	292.66	169.86	171.08	58.27	739.18	766.52	925.16	925.16	11.89	237.63	237.63	12.29
Movement LOS	F	F	F	E	F	F	F	F	B	F	F	B
d_A, Approach Delay [s/veh]	189.05			713.66			642.10			133.52		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	500.63											
Intersection LOS	F											
Intersection V/C	5.515											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.518	3.352	2.416	2.235
Crosswalk LOS	D	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	514	1086	1086
d_b, Bicycle Delay [s]	28.23	28.97	10.97	10.97
l_b,int, Bicycle LOS Score for Intersection	2.818	3.700	2.142	2.129
Bicycle LOS	C	D	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Cedar Ave/7th St

Control Type:	Signalized	Delay (sec / veh):	21.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.776

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	295.00	100.00	100.00	190.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	40	663	6	19	861	21	25	9	110	42	14	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	53	533	2	1	1008	27	21	0	47	2	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	5	0	0	18	0	0	2
Total Hourly Volume [veh/h]	100	1315	8	23	2024	47	51	11	159	52	17	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	346	2	6	533	12	13	3	42	14	4	4
Total Analysis Volume [veh/h]	105	1384	8	24	2131	49	54	12	167	55	18	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	34	0	55	76	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	82	82	3	77	77	18	18
g / C, Green / Cycle	0.07	0.72	0.72	0.02	0.67	0.67	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.06	0.37	0.37	0.01	0.57	0.58	0.14	0.10
s, saturation flow rate [veh/h]	1810	1900	1896	1810	1900	1885	1664	917
c, Capacity [veh/h]	130	1359	1356	45	1269	1259	297	193
d1, Uniform Delay [s]	52.57	7.36	7.36	55.40	14.86	15.02	47.51	44.62
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.99	1.38	1.39	9.39	7.68	8.11	4.62	1.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.51	0.51	0.53	0.86	0.87	0.78	0.46
d, Delay for Lane Group [s/veh]	63.55	8.75	8.75	64.80	22.54	23.12	52.13	46.29
Lane Group LOS	E	A	A	E	C	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.28	6.32	6.32	0.78	20.11	20.43	6.89	2.44
50th-Percentile Queue Length [ft/ln]	81.98	158.11	157.97	19.59	502.87	510.73	172.30	61.02
95th-Percentile Queue Length [veh/ln]	5.90	10.45	10.44	1.41	27.47	27.84	11.20	4.39
95th-Percentile Queue Length [ft/ln]	147.57	261.22	261.03	35.26	686.75	696.04	279.94	109.84

Movement, Approach, & Intersection Results

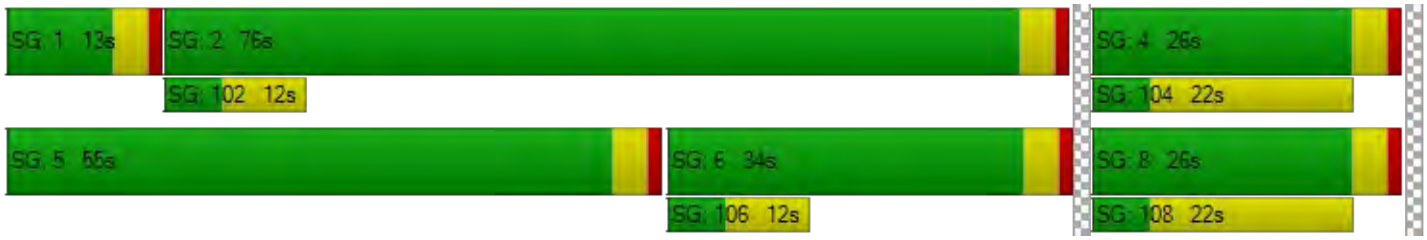
d_M, Delay for Movement [s/veh]	63.55	8.75	8.75	64.80	22.82	23.12	52.13	52.13	52.13	46.29	46.29	46.29
Movement LOS	E	A	A	E	C	C	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.59			23.29			52.13			46.29		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	21.48											
Intersection LOS	C											
Intersection V/C	0.776											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.85	48.85	48.85	48.85
l_p,int, Pedestrian LOS Score for Intersectio	3.650	3.588	1.962	1.786
Crosswalk LOS	D	D	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	522	1252	383	383
d_b, Bicycle Delay [s]	31.41	8.04	37.60	37.60
l_b,int, Bicycle LOS Score for Intersection	2.795	3.382	1.974	1.708
Bicycle LOS	C	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Rubidoux Blvd/Market St

Control Type:	Signalized	Delay (sec / veh):	182.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.321

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	2	0	0
Entry Pocket Length [ft]	245.00	100.00	330.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	8	228	277	520	544	88	64	72	62	261	41	397
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.1800	1.1800	1.1800	1.1800	1.0000	1.0000	1.0000	1.0000	1.1800	1.0000	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	298	183	142	103	89	750	250	209	215	31	494	239
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	47	0	0	0	0	0	0	0	0	71
Total Hourly Volume [veh/h]	306	452	422	717	731	838	314	281	277	339	535	636
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	81	119	111	189	192	221	83	74	73	89	141	167
Total Analysis Volume [veh/h]	322	476	444	755	769	882	331	296	292	357	563	669
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	0	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	0.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	19	34	0	31	46	0	19	38	0	17	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	5.0	0.0	3.0	4.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	7.00	7.00	5.00	6.00	6.00	5.00	7.00	5.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	5.00	5.00	3.00	4.00	4.00	3.00	5.00	3.00	4.00	4.00
g_i, Effective Green Time [s]	14	27	27	26	40	40	14	31	12	30	30
g / C, Green / Cycle	0.12	0.23	0.23	0.22	0.33	0.33	0.12	0.26	0.10	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.18	0.13	0.27	0.21	0.21	0.55	0.18	0.34	0.10	0.30	0.41
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1747	3514	1900	1615
c, Capacity [veh/h]	211	814	363	761	1206	538	211	451	351	475	404
d1, Uniform Delay [s]	53.00	41.50	46.50	46.89	33.87	40.00	53.00	44.50	54.00	45.00	45.00
k, delay calibration	0.31	0.50	0.50	0.11	0.50	0.50	0.33	0.35	0.11	0.28	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	251.01	3.06	122.14	13.33	2.59	295.61	270.27	147.41	26.36	95.44	306.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.53	0.58	1.22	0.99	0.64	1.64	1.57	1.30	1.02	1.19	1.66
d, Delay for Lane Group [s/veh]	304.01	44.56	168.64	60.22	36.45	335.61	323.27	191.91	80.36	140.44	351.48
Lane Group LOS	F	D	F	E	D	F	F	F	F	F	F
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	20.85	6.39	22.66	12.14	9.43	59.09	22.20	31.77	6.58	26.60	46.28
50th-Percentile Queue Length [ft/ln]	521.25	159.67	566.58	303.50	235.81	1477.18	554.92	794.17	164.50	664.98	1156.96
95th-Percentile Queue Length [veh/ln]	32.85	10.53	33.82	17.85	14.47	91.73	34.93	47.25	10.85	38.58	71.91
95th-Percentile Queue Length [ft/ln]	821.17	263.29	845.62	446.35	361.73	2293.15	873.35	1181.24	271.30	964.47	1797.63

Movement, Approach, & Intersection Results

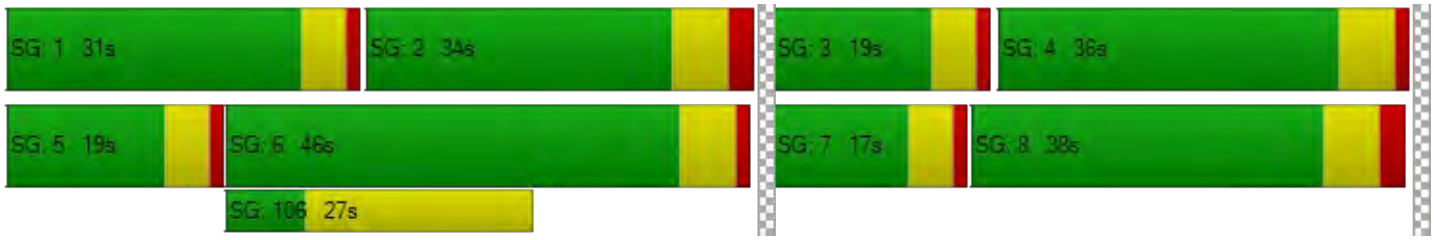
d_M, Delay for Movement [s/veh]	304.01	44.56	168.64	60.22	36.45	335.61	323.27	191.91	191.91	80.36	140.44	351.48
Movement LOS	F	D	F	E	D	F	F	F	F	F	F	F
d_A, Approach Delay [s/veh]	156.18			153.58			239.22			215.79		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	182.95											
Intersection LOS	F											
Intersection V/C	1.321											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.800	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	667	517	500
d_b, Bicycle Delay [s]	36.04	26.67	33.00	33.75
l_b,int, Bicycle LOS Score for Intersection	2.623	3.545	3.076	4.299
Bicycle LOS	B	D	C	E

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Agua Mansa Rd/Market St

Control Type:	Signalized	Delay (sec / veh):	81.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.860

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	2	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	200.00	85.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			30.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	0	3	0	123	0	312	283	547	3	0	455	196
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	61	0	30	109	308	40	0	731	181
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	40	0	0	4	0	0	41
Total Hourly Volume [veh/h]	0	4	3	206	0	358	443	953	40	0	1268	371
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	54	0	94	117	251	11	0	334	98
Total Analysis Volume [veh/h]	0	4	3	217	0	377	466	1003	42	0	1335	391
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	31	44	0	30	43	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	1.5	3.0	0.0	1.5	3.0	0.0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.2	0.0	0.0	3.9	0.0	2.2	4.5	0.0	2.2	4.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.20	5.90	5.90	4.20	6.50	6.50	4.20	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.90	3.90	2.20	4.50	4.50	2.20	4.50	4.50
g_i, Effective Green Time [s]	41	40	40	27	63	63	0	37	37
g / C, Green / Cycle	0.34	0.33	0.33	0.22	0.53	0.53	0.00	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.00	0.15	0.23	0.26	0.28	0.03	0.00	0.37	0.24
s, saturation flow rate [veh/h]	1766	1431	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	601	511	540	404	1905	851	2	1100	491
d1, Uniform Delay [s]	26.24	31.43	34.70	46.60	18.60	13.80	0.00	41.75	38.33
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.04	0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	2.58	7.33	93.59	0.23	0.02	0.00	97.93	4.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.43	0.70	1.15	0.53	0.05	0.00	1.21	0.80
d, Delay for Lane Group [s/veh]	26.28	34.02	42.03	140.19	18.83	13.83	0.00	139.68	43.12
Lane Group LOS	C	C	D	F	B	B	A	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.14	5.31	10.60	22.48	9.00	0.56	0.00	30.49	10.78
50th-Percentile Queue Length [ft/ln]	3.55	132.83	264.90	561.91	224.93	14.03	0.00	762.17	269.50
95th-Percentile Queue Length [veh/ln]	0.26	9.09	15.93	32.69	13.92	1.01	0.00	44.37	16.16
95th-Percentile Queue Length [ft/ln]	6.38	227.34	398.37	817.35	347.91	25.25	0.00	1109.28	404.12

Movement, Approach, & Intersection Results

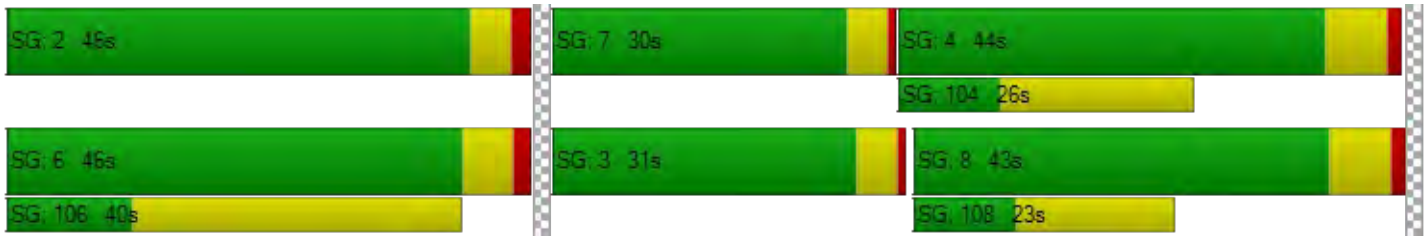
d_M, Delay for Movement [s/veh]	26.28	26.28	26.28	34.02	42.03	42.03	140.19	18.83	13.83	0.00	139.68	43.12
Movement LOS	C	C	C	C	D	D	F	B	B	A	F	D
d_A, Approach Delay [s/veh]	26.28			39.10			56.12			117.81		
Approach LOS	C			D			E			F		
d_I, Intersection Delay [s/veh]	81.17											
Intersection LOS	F											
Intersection V/C	0.860											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	13.0	15.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	47.70	45.94	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.749	2.509	3.010	0.000
Crosswalk LOS	A	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	668	625	608
d_b, Bicycle Delay [s]	26.14	26.60	28.36	29.05
l_b,int, Bicycle LOS Score for Intersection	1.571	2.606	2.809	3.017
Bicycle LOS	A	B	C	C

Sequence

Ring 1	-	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	3	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Rubidoux Blvd/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	36.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.916

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	85.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	37	587	0	0	872	18	16	0	158	386	67	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	501	0	0	345	5	16	0	142	0	19	68
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	3	0	0	33	0	0	16
Total Hourly Volume [veh/h]	71	1194	0	0	1374	23	35	0	295	455	98	145
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	314	0	0	362	6	9	0	78	120	26	38
Total Analysis Volume [veh/h]	75	1257	0	0	1446	24	37	0	311	479	103	153
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	4	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	35	0	0	35	0	20	0	0	0	30	0
Maximum Green [s]	0	25	0	0	25	0	35	0	0	0	20	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	4.8	0.0	0.0	0.0	4.8	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	41	0	0	41	0	39	0	0	0	39	0
Vehicle Extension [s]	0.0	3.5	0.0	0.0	3.5	0.0	2.0	0.0	0.0	0.0	3.5	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	3.8	0.0	0.0	0.0	3.8	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.80	5.80	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.40	3.40	3.80	3.80	3.80	3.80
g_i, Effective Green Time [s]	36	36	36	36	33	33	33	33
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.20	0.35	0.39	0.39	0.03	0.19	0.53	0.09
s, saturation flow rate [veh/h]	366	3618	1900	1889	1141	1615	1104	1615
c, Capacity [veh/h]	115	1610	846	841	118	670	540	670
d1, Uniform Delay [s]	39.09	18.88	20.09	20.17	39.28	16.95	26.77	15.12
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.50	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.32	3.83	11.80	12.24	0.56	0.19	61.29	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.78	0.87	0.87	0.31	0.46	1.08	0.23
d, Delay for Lane Group [s/veh]	64.42	22.72	31.89	32.41	39.85	17.14	88.06	15.33
Lane Group LOS	E	C	C	C	D	B	F	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.22	9.52	13.55	13.68	0.73	3.93	19.52	1.71
50th-Percentile Queue Length [ft/ln]	55.62	238.04	338.83	342.04	18.35	98.28	487.91	42.75
95th-Percentile Queue Length [veh/ln]	4.00	14.58	19.59	19.75	1.32	7.08	28.18	3.08
95th-Percentile Queue Length [ft/ln]	100.11	364.56	489.78	493.70	33.03	176.90	704.49	76.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.42	22.72	0.00	0.00	32.15	32.41	39.85	0.00	17.14	88.06	88.06	15.33
Movement LOS	E	C			C	C	D		B	F	F	B
d_A, Approach Delay [s/veh]	25.06			32.15			19.55			72.92		
Approach LOS	C			C			B			E		
d_I, Intersection Delay [s/veh]	36.31											
Intersection LOS	D											
Intersection V/C	0.916											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	35.6
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	29.76	0.00	12.32
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.136	0.000	2.206
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	890	890	830	830
d_b, Bicycle Delay [s]	12.32	12.32	13.69	13.69
l_b,int, Bicycle LOS Score for Intersection	2.659	2.775	1.560	2.799
Bicycle LOS	B	C	A	C

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Rubidoux Blvd/SrR-60 WB On Ramp

Control Type:	Two-way stop	Delay (sec / veh):	279.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.484

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	145.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	271	624	776	642	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	528	226	261	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	320	1264	1142	1019	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	333	301	268	0	0
Total Analysis Volume [veh/h]	337	1331	1202	1073	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.48	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	279.72	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	20.05	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	501.21	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	56.51		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	23.91					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 24: Rubidoux Blvd/SR-60 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	152.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.125

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	145.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	505	483	149	612	0	382	10	182	8	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	56	0	173	53	0	472	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	57	0	0	0	0	0	22	0	0	0
Total Hourly Volume [veh/h]	0	652	513	349	775	0	923	12	193	9	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	172	135	92	204	0	243	3	51	2	0	1
Total Analysis Volume [veh/h]	0	686	540	367	816	0	972	13	203	9	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Permiss	Split
Signal Group	0	2	0	1	6	0	0	4	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	5	0	0
Maximum Green [s]	0	35	0	30	35	0	0	35	0	20	0	0
Amber [s]	0.0	4.4	0.0	4.1	4.4	0.0	0.0	4.8	0.0	4.4	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	43	0	18	61	0	0	48	0	11	0	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	3.0	0.0	2.0	0.0	0.0
Walk [s]	0	4	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	33	0	0	18	0	0	28	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	3.1	3.4	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.10	5.40	5.80	5.80	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.10	3.40	3.80	3.80	3.40	3.40
g_i, Effective Green Time [s]	38	38	17	59	42	42	2	2
g / C, Green / Cycle	0.31	0.31	0.14	0.50	0.35	0.35	0.01	0.01
(v / s)_i Volume / Saturation Flow Rate	0.32	0.37	0.20	0.23	0.54	0.13	0.00	0.00
s, saturation flow rate [veh/h]	1900	1644	1810	3618	1811	1615	1810	1615
c, Capacity [veh/h]	597	517	250	1792	637	568	27	24
d1, Uniform Delay [s]	41.14	41.14	51.70	19.74	38.90	28.85	58.53	58.38
k, delay calibration	0.50	0.50	0.26	0.50	0.50	0.11	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	43.72	101.92	220.53	0.84	253.87	0.38	2.72	1.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.03	1.19	1.47	0.46	1.55	0.36	0.34	0.17
d, Delay for Lane Group [s/veh]	84.86	143.06	272.22	20.58	292.77	29.23	61.25	59.60
Lane Group LOS	F	F	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	24.27	29.36	22.71	7.31	63.07	4.36	0.29	0.13
50th-Percentile Queue Length [ft/ln]	606.66	733.93	567.81	182.83	1576.80	108.89	7.23	3.18
95th-Percentile Queue Length [veh/ln]	32.92	42.45	35.37	11.75	96.17	7.78	0.52	0.23
95th-Percentile Queue Length [ft/ln]	823.01	1061.15	884.37	293.71	2404.28	194.45	13.01	5.73

Movement, Approach, & Intersection Results

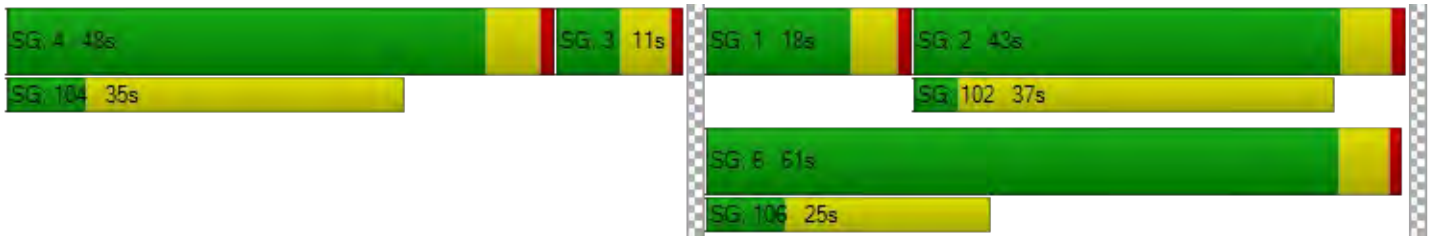
d_M, Delay for Movement [s/veh]	0.00	91.05	143.06	272.22	20.58	0.00	292.77	292.77	29.23	61.25	0.00	59.60
Movement LOS		F	F	F	C		F	F	C	E		E
d_A, Approach Delay [s/veh]	113.96			98.65			247.73			60.74		
Approach LOS	F			F			F			E		
d_I, Intersection Delay [s/veh]	152.77											
Intersection LOS	F											
Intersection V/C	1.125											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	52.27
l_p,int, Pedestrian LOS Score for Intersectio	2.984	0.000	2.444	2.332
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	627	927	703	93
d_b, Bicycle Delay [s]	28.29	17.28	25.22	54.53
l_b,int, Bicycle LOS Score for Intersection	2.618	2.536	3.556	1.560
Bicycle LOS	B	B	D	A

Sequence

Ring 1	4	3	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Market St/Rivera St

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.675

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	165.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	17	709	259	35	797	3	0	0	29	259	3	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1013	0	4	425	0	0	0	0	0	0	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	31	0	0	0	0	0	3	0	0	7
Total Hourly Volume [veh/h]	20	1850	275	45	1365	4	0	0	31	306	4	65
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	487	72	12	359	1	0	0	8	81	1	17
Total Analysis Volume [veh/h]	21	1947	289	47	1437	4	0	0	33	322	4	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	6	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	5	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	30	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	22	24	24	16	18	0	0	39	0	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	14	0	10	0	0	10	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	70	70	4	72	72	3	3	12	12	12
g / C, Green / Cycle	0.02	0.67	0.67	0.04	0.68	0.68	0.03	0.03	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.01	0.54	0.18	0.03	0.38	0.38	0.00	0.02	0.09	0.09	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1898	1900	1615	1810	1812	1615
c, Capacity [veh/h]	40	2417	1079	65	1295	1294	57	48	206	206	184
d1, Uniform Delay [s]	50.79	12.52	7.04	50.12	8.57	8.57	0.00	50.43	45.31	45.31	43.04
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.26	2.98	0.61	14.42	1.73	1.73	0.00	15.43	6.68	6.67	1.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.81	0.27	0.73	0.56	0.56	0.00	0.68	0.79	0.79	0.37
d, Delay for Lane Group [s/veh]	61.05	15.51	7.65	64.54	10.30	10.30	0.00	65.85	51.99	51.98	44.28
Lane Group LOS	E	B	A	E	B	B	A	E	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.64	13.87	2.33	1.44	7.25	7.24	0.00	1.07	4.49	4.50	1.69
50th-Percentile Queue Length [ft/ln]	16.11	346.67	58.27	36.10	181.17	181.09	0.00	26.79	112.33	112.45	42.34
95th-Percentile Queue Length [veh/ln]	1.16	19.97	4.20	2.60	11.66	11.66	0.00	1.93	7.97	7.98	3.05
95th-Percentile Queue Length [ft/ln]	28.99	499.34	104.88	64.97	291.54	291.43	0.00	48.22	199.24	199.40	76.20

Movement, Approach, & Intersection Results

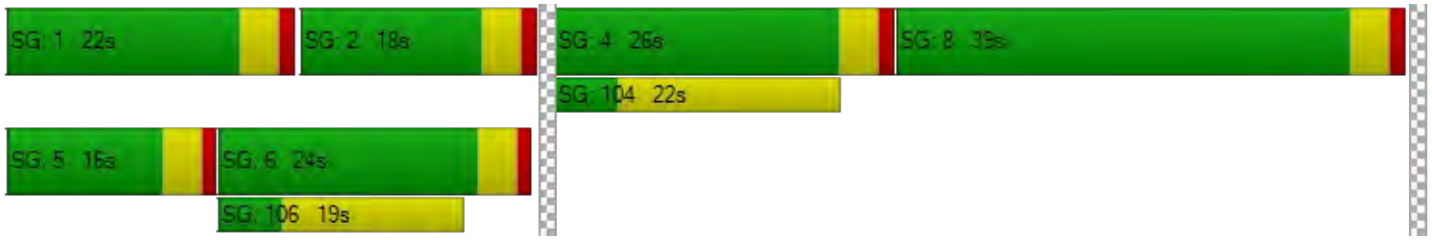
d_M, Delay for Movement [s/veh]	61.05	15.51	7.65	64.54	10.30	10.30	0.00	0.00	65.85	51.99	51.98	44.28
Movement LOS	E	B	A	E	B	B	A	A	E	D	D	D
d_A, Approach Delay [s/veh]	14.92			12.01			65.85			50.66		
Approach LOS	B			B			E			D		
d_I, Intersection Delay [s/veh]	17.66											
Intersection LOS	B											
Intersection V/C	0.675											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	43.89	0.00	43.89
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.317	0.000	2.337
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	381	267	667	419
d_b, Bicycle Delay [s]	34.40	39.43	23.33	32.80
l_b,int, Bicycle LOS Score for Intersection	3.447	2.787	1.619	2.221
Bicycle LOS	C	C	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Market St/SR-60 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.610

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	185.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	188	330	0	0	944	141	0	0	0	70	0	655
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	140	0	0	372	53	0	0	0	0	0	873
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	22	0	0	0	0	0	165
Total Hourly Volume [veh/h]	222	529	0	0	1486	197	0	0	0	83	0	1481
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	139	0	0	391	52	0	0	0	22	0	390
Total Analysis Volume [veh/h]	234	557	0	0	1564	207	0	0	0	87	0	1559
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	13	22	0	0	9	0	0	0	0	38	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C		L
C, Cycle Length [s]	60	60	60		60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00
g_i, Effective Green Time [s]	9	48	35		4
g / C, Green / Cycle	0.15	0.80	0.59		0.06
(v / s)_i Volume / Saturation Flow Rate	0.13	0.15	0.43		0.05
s, saturation flow rate [veh/h]	1810	3618	3618		1810
c, Capacity [veh/h]	271	2897	2114		119
d1, Uniform Delay [s]	24.89	1.41	9.13		27.51
k, delay calibration	0.11	0.50	0.50		0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00
d2, Incremental Delay [s]	7.94	0.15	2.38		8.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00
PF, progression factor	1.00	1.00	1.00		1.00

Lane Group Results

X, volume / capacity	0.86	0.19	0.74		0.73
d, Delay for Lane Group [s/veh]	32.84	1.55	11.51		35.83
Lane Group LOS	C	A	B		D
Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	3.45	0.06	5.31		1.42
50th-Percentile Queue Length [ft/ln]	86.20	1.49	132.72		35.38
95th-Percentile Queue Length [veh/ln]	6.21	0.11	9.09		2.55
95th-Percentile Queue Length [ft/ln]	155.16	2.68	227.19		63.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.84	1.55	0.00	0.00	11.51	0.00	0.00	0.00	0.00	35.83	0.00	0.00
Movement LOS	C	A			B					D		
d_A, Approach Delay [s/veh]	10.81			10.22			0.00			1.99		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	10.12											
Intersection LOS	B											
Intersection V/C	0.610											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	1.954
Crosswalk LOS	F	F	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	167	0	1133
d_b, Bicycle Delay [s]	14.70	25.21	30.00	5.63
l_b,int, Bicycle LOS Score for Intersection	2.212	2.850	4.132	1.560
Bicycle LOS	B	C	D	A

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Market St/SR-60 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	66.8
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.971

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	60.00	155.00	100.00	100.00	180.00	100.00	410.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	408	141	601	412	0	113	0	511	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	84	0	334	38	0	56	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	17	0	0	0	0	0	60	0	0	0
Total Hourly Volume [veh/h]	0	565	149	1043	524	0	189	0	543	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	149	39	274	138	0	50	0	143	0	0	0
Total Analysis Volume [veh/h]	0	595	157	1098	552	0	199	0	572	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	24	0	69	93	0	27	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	20	65	89	23	23	
g / C, Green / Cycle	0.17	0.54	0.74	0.19	0.19	
(v / s)_i Volume / Saturation Flow Rate	0.16	0.61	0.15	0.11	0.20	
s, saturation flow rate [veh/h]	3618	1810	3618	1810	2859	
c, Capacity [veh/h]	603	980	2683	347	548	
d1, Uniform Delay [s]	49.87	27.50	4.73	44.05	48.50	
k, delay calibration	0.50	0.50	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	33.57	67.76	0.17	1.50	30.67	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.99	1.12	0.21	0.57	1.04	
d, Delay for Lane Group [s/veh]	83.44	95.26	4.90	45.55	79.17	
Lane Group LOS	F	F	A	D	F	
Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.43	43.50	1.71	5.47	10.41	
50th-Percentile Queue Length [ft/ln]	285.81	1087.44	42.71	136.83	260.29	
95th-Percentile Queue Length [veh/ln]	16.98	59.44	3.07	9.31	16.05	
95th-Percentile Queue Length [ft/ln]	424.44	1486.11	76.87	232.75	401.17	

Movement, Approach, & Intersection Results

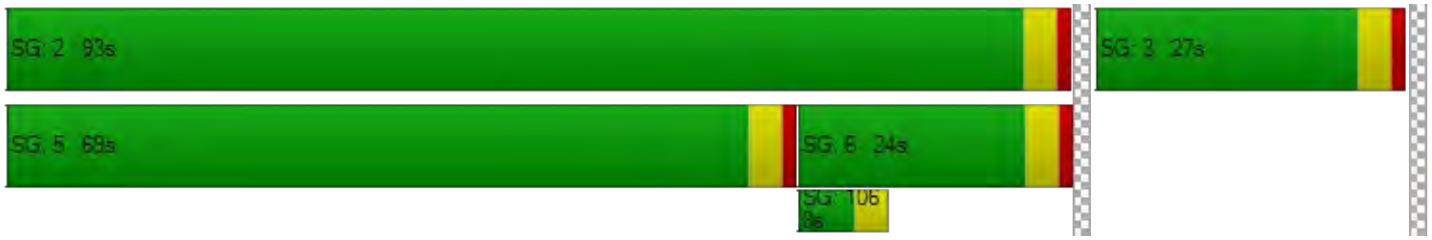
d_M, Delay for Movement [s/veh]	0.00	83.44	0.00	95.26	4.90	0.00	45.55	0.00	79.17	0.00	0.00	0.00
Movement LOS		F		F	A		D		F			
d_A, Approach Delay [s/veh]	66.73			65.03			70.50			0.00		
Approach LOS	E			E			E			A		
d_I, Intersection Delay [s/veh]	66.76											
Intersection LOS	E											
Intersection V/C	0.971											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.509
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	1483	383	0
d_b, Bicycle Delay [s]	41.67	4.00	39.20	60.00
l_b,int, Bicycle LOS Score for Intersection	2.050	2.921	1.560	4.132
Bicycle LOS	B	C	A	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Sierra Ave/20th St

Control Type:	Signalized	Delay (sec / veh):	43.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	1350.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	18	0	0	3	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	150	258	829	45	183	548
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	26	0	0	0	55
Total Hourly Volume [veh/h]	171	232	829	49	183	493
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	61	218	13	48	130
Total Analysis Volume [veh/h]	180	244	873	52	193	519
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	23	0	29	52	38	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	14	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	25	48	34	34
g / C, Green / Cycle	0.22	0.22	0.28	0.54	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.11	0.17	0.28	0.03	0.12	0.36
s, saturation flow rate [veh/h]	1710	1454	3163	1710	1629	1454
c, Capacity [veh/h]	369	314	879	920	608	542
d1, Uniform Delay [s]	30.94	33.26	32.42	9.91	20.06	27.50
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.42
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.56	17.18	12.73	0.12	0.30	26.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.78	0.99	0.06	0.32	0.96
d, Delay for Lane Group [s/veh]	35.50	50.45	45.15	10.03	20.36	53.61
Lane Group LOS	D	D	D	B	C	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.74	6.26	10.43	0.47	2.75	13.90
50th-Percentile Queue Length [ft/ln]	93.47	156.62	260.66	11.75	68.81	347.38
95th-Percentile Queue Length [veh/ln]	6.73	10.37	15.72	0.85	4.95	20.01
95th-Percentile Queue Length [ft/ln]	168.24	259.25	393.05	21.15	123.85	500.21

Movement, Approach, & Intersection Results

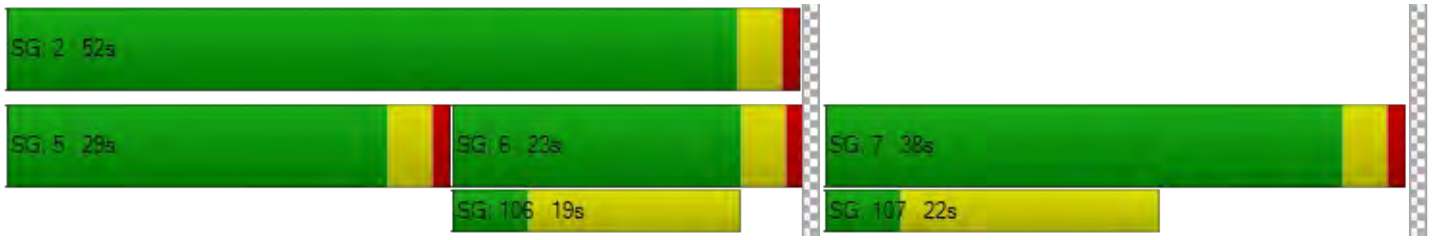
d_M, Delay for Movement [s/veh]	35.50	50.45	45.15	10.03	20.36	53.61
Movement LOS	D	D	D	B	C	D
d_A, Approach Delay [s/veh]	44.10		43.17		44.59	
Approach LOS	D		D		D	
d_I, Intersection Delay [s/veh]	43.85					
Intersection LOS	D					
Intersection V/C	0.801					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.280	2.738	2.832
Crosswalk LOS	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	422	1067	756
d_b, Bicycle Delay [s]	28.01	9.80	17.42
l_b,int, Bicycle LOS Score for Intersection	2.302	3.086	1.560
Bicycle LOS	B	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Armstrong Rd/Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	225	0	0	298	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	119	13	0	45	29	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	385	13	0	397	29	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	3	0	104	8	0
Total Analysis Volume [veh/h]	405	14	0	418	31	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.13	0.00	13.34	11.15
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.21	0.21
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	5.37	5.37
d_A, Approach Delay [s/veh]	0.00		0.00		13.34	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.48					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 30: Driveway 2/20th St

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.1800	1.1800	1.1800	1.1800	1.0000	1.0000	1.0000	1.0000	1.1800	1.0000	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	153	0	123	94	0	169	58	959	53	66	359	60
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	12	0	0	17	0	0	5	0	0	6
Total Hourly Volume [veh/h]	153	0	111	94	0	152	58	959	48	66	359	54
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	0	29	25	0	40	15	252	13	17	94	14
Total Analysis Volume [veh/h]	161	0	117	99	0	160	61	1009	51	69	378	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	15	37	37	37	37	37	37
g / C, Green / Cycle	0.25	0.25	0.62	0.62	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.21	0.17	0.06	0.28	0.28	0.13	0.12	0.12
s, saturation flow rate [veh/h]	1305	1562	969	1900	1868	541	1900	1815
c, Capacity [veh/h]	414	465	644	1182	1162	360	1182	1129
d1, Uniform Delay [s]	21.70	20.37	6.74	5.97	5.97	10.60	4.85	4.86
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.89	1.04	0.29	1.25	1.27	1.18	0.35	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.56	0.09	0.45	0.45	0.19	0.19	0.19
d, Delay for Lane Group [s/veh]	23.59	21.41	7.03	7.22	7.24	11.78	5.20	5.23
Lane Group LOS	C	C	A	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	3.66	3.13	0.33	2.62	2.58	0.59	0.86	0.84
50th-Percentile Queue Length [ft/ln]	91.40	78.29	8.33	65.48	64.59	14.66	21.49	20.90
95th-Percentile Queue Length [veh/ln]	6.58	5.64	0.60	4.71	4.65	1.06	1.55	1.50
95th-Percentile Queue Length [ft/ln]	164.53	140.92	15.00	117.87	116.26	26.39	38.67	37.62

Movement, Approach, & Intersection Results

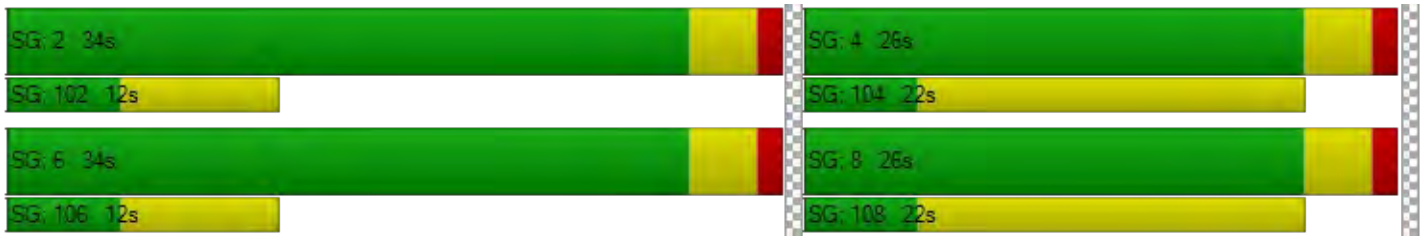
d_M, Delay for Movement [s/veh]	23.59	23.59	23.59	21.41	21.41	21.41	7.03	7.23	7.24	11.78	5.22	5.23
Movement LOS	C	C	C	C	C	C	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	23.59			21.41			7.22			6.12		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	10.77											
Intersection LOS	B											
Intersection V/C	0.494											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.013	2.001	2.996	2.884
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	1000	1000
d_b, Bicycle Delay [s]	12.03	12.03	7.50	7.50
l_b,int, Bicycle LOS Score for Intersection	2.038	2.015	2.489	1.980
Bicycle LOS	B	B	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Street A/20th St

Control Type:	Two-way stop	Delay (sec / veh):	26.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.123

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1167	8	32	462	23	74
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1167	8	32	462	23	74
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	307	2	8	122	6	19
Total Analysis Volume [veh/h]	1228	8	34	486	24	78
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.06	0.00	0.12	0.18
d_M, Delay for Movement [s/veh]	0.00	0.00	11.35	0.00	25.98	15.02
Movement LOS	A	A	B	A	D	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.06	0.03	0.41	0.64
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.44	0.72	10.30	16.06
d_A, Approach Delay [s/veh]	0.00		0.74		17.60	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.17					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 32: Street B/20th St

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.525

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	224	39	50	115	46	77	26	952	263	59	193	39
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	8	0	0	26	0	0	4
Total Hourly Volume [veh/h]	224	39	45	115	46	69	26	952	237	59	193	35
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	10	12	30	12	18	7	251	62	16	51	9
Total Analysis Volume [veh/h]	236	41	47	121	48	73	27	1002	249	62	203	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	36	0	0	24	0	0	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	15	15	15	37	37	37	37	37	37
g / C, Green / Cycle	0.24	0.24	0.24	0.24	0.62	0.62	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.18	0.05	0.09	0.07	0.02	0.34	0.34	0.14	0.06	0.07
s, saturation flow rate [veh/h]	1291	1736	1330	1717	1158	1900	1771	451	1900	1801
c, Capacity [veh/h]	403	424	422	419	690	1183	1103	245	1183	1121
d1, Uniform Delay [s]	22.40	18.06	19.72	18.45	7.92	6.47	6.49	18.16	4.56	4.57
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.36	0.24	0.37	0.38	0.11	1.81	1.97	2.47	0.17	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.21	0.29	0.29	0.04	0.55	0.55	0.25	0.10	0.11
d, Delay for Lane Group [s/veh]	23.76	18.30	20.09	18.82	8.03	8.28	8.46	20.63	4.74	4.76
Lane Group LOS	C	B	C	B	A	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	3.08	0.93	1.37	1.31	0.16	3.48	3.33	0.79	0.44	0.43
50th-Percentile Queue Length [ft/ln]	76.92	23.21	34.34	32.69	4.06	87.12	83.13	19.86	11.05	10.83
95th-Percentile Queue Length [veh/ln]	5.54	1.67	2.47	2.35	0.29	6.27	5.99	1.43	0.80	0.78
95th-Percentile Queue Length [ft/ln]	138.45	41.78	61.81	58.85	7.30	156.82	149.63	35.75	19.89	19.50

Movement, Approach, & Intersection Results

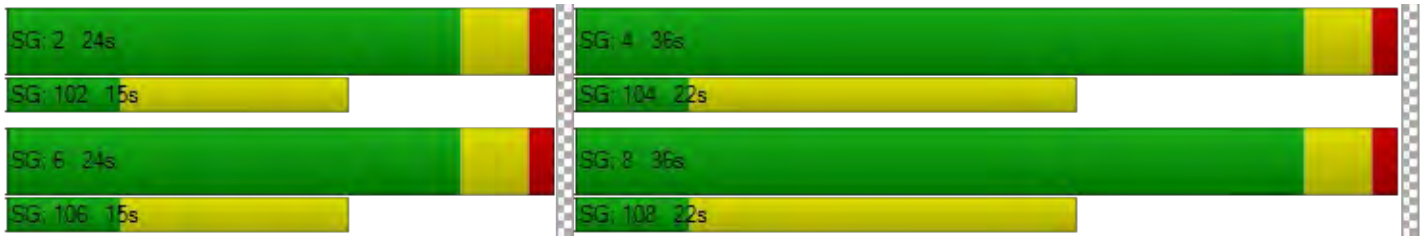
d_M, Delay for Movement [s/veh]	23.76	18.30	18.30	20.09	18.82	18.82	8.03	8.34	8.46	20.63	4.75	4.76
Movement LOS	C	B	B	C	B	B	A	A	A	C	A	A
d_A, Approach Delay [s/veh]	22.28			19.46			8.36			8.01		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	11.66											
Intersection LOS	B											
Intersection V/C	0.525											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.248	2.087	3.127	2.843
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1067	1067	667	667
d_b, Bicycle Delay [s]	6.53	6.53	13.33	13.33
l_b,int, Bicycle LOS Score for Intersection	2.102	1.972	2.635	1.812
Bicycle LOS	B	A	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Street M/20th Street

Control Type:	Roundabout	Delay (sec / veh):	6.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.1800	1.1800	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	31	18	16	1101	273	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	18	16	1101	273	10
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	5	4	290	72	3
Total Analysis Volume [veh/h]	33	19	17	1159	287	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	287		33		17	
Exiting Flow Rate [veh/h]	28		306		1192	
Demand Flow Rate [veh/h]	31	18	16	1101	273	10
Adjusted Demand Flow Rate [veh/h]	33	19	17	1159	287	11

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	1.00	1.00	1.00	1.00	1.00
Entry Flow Rate [veh/h]	52	553	624	141	158
Capacity of Entry and Bypass Lanes [veh/h]	1030	1378	1378	1399	1399
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1030	1378	1378	1399	1399
X, volume / capacity	0.05	0.40	0.45	0.10	0.11

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.16	1.97	2.42	0.33	0.38
95th-Percentile Queue Length [ft]	3.98	49.29	60.39	8.33	9.53
Approach Delay [s/veh]	3.93	6.70		3.42	
Approach LOS	A	A		A	
Intersection Delay [s/veh]	5.97				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 34: Driveway 3/20th St

Control Type:	Signalized	Delay (sec / veh):	9.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.1800	1.0000	1.0000	1.1800	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	42	0	84	78	0	25	138	816	179	357	217	423
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	0	84	78	0	25	138	816	179	357	217	423
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	0	22	21	0	7	36	215	47	94	57	111
Total Analysis Volume [veh/h]	44	0	88	82	0	26	145	859	188	376	228	445
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	46	46	46	46	46	46
g / C, Green / Cycle	0.10	0.10	0.77	0.77	0.77	0.77	0.77	0.77
(v / s)_i Volume / Saturation Flow Rate	0.07	0.07	0.19	0.28	0.28	0.69	0.12	0.28
s, saturation flow rate [veh/h]	1794	1472	777	1900	1783	547	1900	1615
c, Capacity [veh/h]	256	250	612	1461	1371	464	1461	1241
d1, Uniform Delay [s]	26.35	26.33	4.96	2.24	2.24	12.72	1.82	2.22
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.61	1.18	0.91	0.72	0.77	14.16	0.23	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.43	0.24	0.37	0.37	0.81	0.16	0.36
d, Delay for Lane Group [s/veh]	27.96	27.51	5.87	2.96	3.01	26.88	2.05	3.02
Lane Group LOS	C	C	A	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.85	1.50	0.65	0.67	0.65	5.22	0.22	0.59
50th-Percentile Queue Length [ft/ln]	46.17	37.49	16.15	16.69	16.19	130.52	5.54	14.63
95th-Percentile Queue Length [veh/ln]	3.32	2.70	1.16	1.20	1.17	8.97	0.40	1.05
95th-Percentile Queue Length [ft/ln]	83.11	67.48	29.06	30.04	29.14	224.20	9.98	26.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.96	27.96	27.96	27.51	27.51	27.51	5.87	2.98	3.01	26.88	2.05	3.02
Movement LOS	C	C	C	C	C	C	A	A	A	C	A	A
d_A, Approach Delay [s/veh]	27.96			27.51			3.34			11.36		
Approach LOS	C			C			A			B		
d_I, Intersection Delay [s/veh]	9.09											
Intersection LOS	A											
Intersection V/C	0.760											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.570	2.242	2.731	2.937
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	767	767	967	967
d_b, Bicycle Delay [s]	11.41	11.41	8.01	8.01
l_b,int, Bicycle LOS Score for Intersection	1.777	1.738	2.543	2.425
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Driveway 4/20th St

Control Type:	Signalized	Delay (sec / veh):	5.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	31	0	21	70	0	33	184	659	134	89	932	377
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	0	21	70	0	33	184	659	134	89	932	377
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	0	6	18	0	9	48	173	35	23	245	99
Total Analysis Volume [veh/h]	33	0	22	74	0	35	194	694	141	94	981	397
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	44	0	0	44	0	0	16	0	0	16	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	47	47	47	47	47	47
g / C, Green / Cycle	0.08	0.08	0.79	0.79	0.79	0.79	0.79	0.79
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.49	0.23	0.23	0.14	0.38	0.39
s, saturation flow rate [veh/h]	1812	1730	400	1900	1790	668	1900	1718
c, Capacity [veh/h]	244	242	363	1492	1406	576	1492	1349
d1, Uniform Delay [s]	26.12	26.91	8.97	1.79	1.79	3.53	2.22	2.25
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	1.31	5.55	0.49	0.52	0.61	1.10	1.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.45	0.53	0.29	0.29	0.16	0.48	0.49
d, Delay for Lane Group [s/veh]	26.58	28.23	14.53	2.28	2.31	4.14	3.32	3.54
Lane Group LOS	C	C	B	A	A	A	A	A
Critical Lane Group	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.74	1.53	1.76	0.33	0.32	0.31	0.71	0.72
50th-Percentile Queue Length [ft/ln]	18.44	38.26	43.99	8.15	7.97	7.74	17.84	18.04
95th-Percentile Queue Length [veh/ln]	1.33	2.75	3.17	0.59	0.57	0.56	1.28	1.30
95th-Percentile Queue Length [ft/ln]	33.19	68.87	79.18	14.67	14.35	13.93	32.10	32.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.58	26.58	26.58	28.23	28.23	28.23	14.53	2.29	2.31	4.14	3.38	3.54
Movement LOS	C	C	C	C	C	C	B	A	A	A	A	A
d_A, Approach Delay [s/veh]	26.58			28.23			4.60			3.47		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	5.40											
Intersection LOS	A											
Intersection V/C	0.548											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	1.971	2.313	2.868	2.974
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1333	1333	400	400
d_b, Bicycle Delay [s]	3.34	3.34	19.20	19.20
l_b,int, Bicycle LOS Score for Intersection	1.650	1.739	2.409	2.774
Bicycle LOS	A	A	B	C

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Driveway 5/20th St

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.056

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	1000.00
Speed [mph]	30.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	32	617	134	0	1398
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	32	617	134	0	1398
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	8	162	35	0	368
Total Analysis Volume [veh/h]	0	34	649	141	0	1472
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	11.25	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.18	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.42	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.25		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	B					

Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Interim Year AM + P.pdf

Scenario 17 OY AM + P
2/15/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound		Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Right	Left	Right	
1	Sierra Ave/I-10 Ramps	666	981	556	635	1080	881	1016	897	571	658	7941

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Sierra Ave/Slover Ave	123	1442	133	778	1423	338	217	334	68	80	327	562	5825

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Sierra Ave/Santa Ana Ave	201	1382	61	227	1087	138	137	93	84	61	140	141	3752

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Sierra Ave/Jurupa Ave	520	1063	58	39	715	287	306	223	314	151	290	118	4084

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Armstrong Rd/Sierra Ave	1292	336	643	83	466	59	62	270	824	479	252	94	4860

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
6	Armstrong/30th St	2209	44	31	1748	77	55	4164

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
7	Valley Way/SR-60 WB Off Ramp	107	1583	1751	24	76	201	228	118	659	4747

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
8	Valley Way/SR-60 WB On Ramp	257	1690	1386	793	4126

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR-60 EB Ramps/Mission Blvd	14	2	5	1028	5	53	122	405	7	6	436	335	2418

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
10	Valley Way/Mission Blvd	19	546	53	489	476	473	952	355	20	66	215	743	4407

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
11	Jurupa Rd/Mission Blvd	30	215	830	26	191	951	2243

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	Pacific Ave/Mission Blvd	180	170	120	92	148	159	131	715	90	181	708	136	2830

ID	Intersection Name	Northbound		Southbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Thru	Right	
13	Cedar Ave/I-10 WB Ramp	513	1525	1763	847	1103	4	484	6239

ID	Intersection Name	Northbound		Southbound		Eastbound			Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	
14	Cedar Ave/I-10 EB Ramps	1477	664	496	2386	562	4	937	6526

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
15	Cedar Ave/Orange St	10	1661	4	126	2653	538	321	6	15	0	1	160	5495

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	Cedar Ave/Slover Ave	207	1258	20	142	2188	292	306	189	127	28	244	125	5126

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Cedar Ave/Santa Ana Ave	139	1298	24	54	2241	65	90	98	157	55	107	52	4380

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	Cedar Ave/Jurupa Ave	225	1173	51	103	2050	313	129	95	112	50	118	160	4579

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Cedar Ave/7th St	100	1315	9	23	2024	52	51	11	177	52	17	16	3847

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	Rubidoux Blvd/Market St	306	452	469	717	731	838	314	281	277	339	535	707	5966

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	Agua Mansa Rd/Market St	0	4	3	206	0	398	443	953	44	0	1268	412	3731

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
22	Rubidoux Blvd/SR-60 WB Off Ramp	71	1194	1374	26	35	328	455	98	161	3742

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
23	Rubidoux Blvd/SrR-60 WB On Ramp	320	1264	1142	1019	3745

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	Left	Right	
24	Rubidoux Blvd/SR-60 EB Ramps	652	570	349	775	923	12	215	9	4	3509

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Market St/Rivera St	20	1850	306	45	1365	4	0	0	34	306	4	72	4006

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
26	Market St/SR-60 WB Ramp	222	529	1486	219	83	1646	4185

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Thru	Right	Left	Thru	Left	2	
27	Market St/SR-60 EB Ramp	565	166	1043	524	189	603	3090

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
28	Sierra Ave/20th St	171	258	829	49	183	548	2038

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
29	Armstrong Rd/Driveway 1	385	13	0	397	29	0	824

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
30	Driveway 2/20th St	153	0	123	94	0	169	58	959	53	66	359	60	2094

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
31	Street A/20th St	1167	8	32	462	23	74	1766

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
32	Street B/20th St	224	39	50	115	46	77	26	952	263	59	193	39	2083

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
33	Street M/20th Street	31	18	16	1101	273	10	1449

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
34	Driveway 3/20th St	42	0	84	78	0	25	138	816	179	357	217	423	2359

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
35	Driveway 4/20th St	31	0	21	70	0	33	184	659	134	89	932	377	2530

ID	Intersection Name	Northbound	Eastbound		Westbound	Total Volume
		Right	Thru	Right	Thru	
36	Driveway 5/20th St	32	617	134	1398	2181

Option 2: Copy of Armstrong Rd/Sierra Ave

Number	5											
Intersection	Armstrong Rd/Sierra Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	933	209	85	15	344	50	40	18	649	84	44	23
Total Analysis Volume [veh/h]	1360	354	609	87	491	56	65	284	781	504	265	89

Intersection Settings

Cycle Length [s]	145											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups			2,3									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	50	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	4.3	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	50	56	56	12	18	0	14	38	0	39	63	0
Walk [s]	0	7	7	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	25	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.31	0.48	0.75	0.04	0.21	0.21	0.05	0.09	0.23	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.39	0.19	0.38	0.02	0.26	0.03	0.04	0.08	0.28	0.10	0.10
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3		
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1739
c, Capacity [veh/h]	1083	920	1209	131	405	344	83	344	412	526	481
X, volume / capacity	1.26	0.38	0.50	0.67	1.21	0.16	0.78	0.83	1.22	0.35	0.35
d, Delay for Lane Group [s/veh]	167.15	24.92	8.87	71.08	173.38	47.51	74.42	69.45	176.67	42.40	42.44
Lane Group LOS	F	C	A	E	F	D	E	E	F	D	D

Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	37.16	8.09	7.58	1.61	27.56	1.73	2.53	5.41	28.61	5.34	4.90
50th-Percentile Queue Length [ft/ln]	929.05	202.21	189.50	40.25	689.06	43.20	63.35	135.35	715.30	133.45	122.40
95th-Percentile Queue Length [veh/ln]	53.97	12.75	12.10	2.90	40.04	3.11	4.56	9.23	41.66	9.13	8.52
95th-Percentile Queue Length [ft/ln]	1349.27	318.82	302.38	72.45	1001.04	77.75	114.03	230.75	1041.61	228.18	213.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	167.15	24.92	8.87	71.08	173.38	47.51	74.42	69.45	0.00	176.67	42.41	42.44
Movement LOS	F	C	A	E	F	D	E	E		F	D	D
Critical Movement	No	No	No	No	No	No	No	No	No	Yes	No	No
d_A, Approach Delay [s/veh]	103.98			148.23			22.51			121.28		
Approach LOS	F			F			C			F		
d_I, Intersection Delay [s/veh]	107.45											
Intersection LOS	F											
Intersection V/C	1.002											

Option 1: Copy of Valley Way/SR-60 WB Off Ramp

Number	7											
Intersection	Valley Way/SR-60 WB Off Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	91	695	0	0	1082	10	52	0	170	193	100	546
Total Analysis Volume [veh/h]	113	1666	0	0	1843	23	80	0	191	240	124	624

Intersection Settings

Cycle Length [s]	140											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	11	67	0	0	56	0	22	0	0	0	51	0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.05	0.44	0.36	0.36	0.12	0.12	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.06	0.46	0.49	0.49	0.04	0.12	0.20	0.39
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3		3	
s, saturation flow rate [veh/h]	1810	3618	1900	1892	1810	1615	1839	1615
c, Capacity [veh/h]	83	1594	688	685	215	191	600	527
X, volume / capacity	1.37	1.04	1.36	1.36	0.37	1.00	0.61	1.18
d, Delay for Lane Group [s/veh]	247.51	74.43	214.25	216.84	57.30	92.45	41.05	147.85
Lane Group LOS	F	F	F	F	E	F	D	F

Critical Lane Group	Yes	No	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	7.06	33.73	55.33	55.58	2.61	8.34	10.72	32.81
50th-Percentile Queue Length [ft/ln]	176.51	843.28	1383.19	1389.54	65.34	208.48	267.97	820.34
95th-Percentile Queue Length [veh/ln]	12.31	44.75	81.14	81.64	4.70	13.08	16.09	46.92
95th-Percentile Queue Length [ft/ln]	307.81	1118.79	2028.57	2041.04	117.61	326.88	402.20	1172.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	247.51	74.43	0.00	0.00	215.53	216.84	57.30	0.00	92.45	41.05	41.05	147.85
Movement LOS	F	F			F	F	E		F	D	D	F
Critical Movement	Yes	No			No	No	No		No	No	No	No
d_A, Approach Delay [s/veh]	85.42			215.54			82.08			108.51		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	139.40											
Intersection LOS	F											
Intersection V/C	1.060											

Option 1: Copy of Jurupa Rd/Mission Blvd

Number	11					
Intersection	Jurupa Rd/Mission Blvd					
Control Type	Two-way stop					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Base Volume Input [veh/h]	25	195	687	22	127	773
Total Analysis Volume [veh/h]	32	257	874	27	201	1032

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Capacity Analysis

Calculated Rank	0	2	1	1	2	1
v_c, Conflicting Flow Rate	0	437	0	0	901	0
v_c, Stage 1	0	437	0	0	901	0
v_c, Stage 2	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	0	573	0	0	763	0
c_p,x, Stage 1 [veh/h]	0	1324	0	0	2128	0
c_p,x, Stage 2 [veh/h]	0	1091	0	0	1636	0
c_m,x, Movement Capacity [veh/h]	0	573	100000	100000	763	100000
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	0	573	100000	100000	763	100000

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.45	0.01	0.00	0.26	0.01
d_M, Delay for Movement [s/veh]	0.00	16.29	0.00	0.00	11.40	0.00
Movement LOS		C	A	A	B	A
Critical Movement		Yes	No	No	No	No
95th-Percentile Queue Length [veh/ln]	0.00	2.31	0.00	0.00	1.06	0.00
95th-Percentile Queue Length [ft/ln]	0.00	57.64	0.00	0.00	26.44	0.00
d_A, Approach Delay [s/veh]	16.29		0.00		1.86	
Approach LOS	C		A		A	
V/C_I, Worst Movement V/C Ratio	0.45					
d_I, Worst Movement Control Delay [s/veh]	16.29					
d_I, Intersection Delay [s/veh]	2.71					
Intersection LOS	C					

Option 1: Copy of Cedar Ave/I-10 WB Ramp

Number	13											
Intersection	Cedar Ave/I-10 WB Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	273	1231	0	0	1321	721	0	0	0	441	3	413
Total Analysis Volume [veh/h]	540	1605	0	0	1856	806	0	0	21	1161	4	461

Intersection Settings

Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	2	0	0	0	4	4	0
Auxiliary Signal Groups						2,4						
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	5	5	0	0	5	5	0	0	0	5	5	0
Maximum Green [s]	30	30	0	0	30	30	0	0	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0
Split [s]	17	61	0	0	44	44	0	0	0	54	54	0
Walk [s]	0	5	0	0	5	5	0	0	0	5	5	0
Pedestrian Clearance [s]	0	10	0	0	7	7	0	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No	No				No		
Maximum Recall	No	No			No	No				No		
Pedestrian Recall	No	No			No	No				No		
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.11	0.50	0.35	0.82		0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.15	0.44	0.36	0.50		0.64	0.29
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	3514	3618	5176	1615		1810	1615
c, Capacity [veh/h]	397	1793	1800	1320		787	702
X, volume / capacity	1.36	0.90	1.03	0.61		1.48	0.66
d, Delay for Lane Group [s/veh]	216.33	33.70	67.11	5.94		253.44	27.75
Lane Group LOS	F	C	F	A		F	C

Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	14.72	20.27	21.03	4.79		69.09	10.04
50th-Percentile Queue Length [ft/ln]	367.99	506.74	525.84	119.75		1727.16	250.99
95th-Percentile Queue Length [veh/ln]	23.49	27.65	29.16	8.38		104.48	15.24
95th-Percentile Queue Length [ft/ln]	587.36	691.33	728.95	209.48		2612.07	380.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	216.33	33.70	0.00	0.00	67.11	5.94	0.00	0.00	0.00	253.44	0.00	27.75
Movement LOS	F	C			F	A				F		C
Critical Movement	No	No			No	No				Yes		No
d_A, Approach Delay [s/veh]	79.67			48.59			0.00			189.29		
Approach LOS	E			D			A			F		
d_I, Intersection Delay [s/veh]	94.46											
Intersection LOS	F											
Intersection V/C	1.154											

Option 1: Copy of Cedar Ave/I-10 EB Ramps

Number	14											
Intersection	Cedar Ave/I-10 EB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	1029	404	420	1339	0	476	3	376	0	0	0
Total Analysis Volume [veh/h]	0	1555	629	522	2512	0	592	4	892	0	0	0

Intersection Settings

Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	6	5	2	0	8	8	0	0	0	0
Auxiliary Signal Groups			6,8									
Lead / Lag	-	-	-	Lead	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	5	5	5	5	0	5	5	0	0	0	0
Maximum Green [s]	0	30	30	30	30	0	30	30	0	0	0	0
Amber [s]	0.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	38	28	66	0	49	49	0	0	0	0
Walk [s]	0	5	5	0	5	0	5	5	0	0	0	0
Pedestrian Clearance [s]	0	7	7	0	10	0	10	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No	No	No	No		No					
Maximum Recall		No	No	No	No		No					
Pedestrian Recall		No	No	No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.30	0.72	0.21	0.54	0.39	0.39	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.39	0.29	0.49	0.33	0.55	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	5176	1615	1810	5176	1810	1615	
c, Capacity [veh/h]	1530	1166	378	2790	708	632	
X, volume / capacity	1.02	0.54	1.38	0.90	0.84	1.41	
d, Delay for Lane Group [s/veh]	67.63	9.09	233.31	28.95	39.70	229.47	
Lane Group LOS	F	A	F	C	D	F	

Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	17.72	6.30	30.17	19.87	15.95	51.10	
50th-Percentile Queue Length [ft/ln]	443.01	157.50	754.29	496.76	398.79	1277.41	
95th-Percentile Queue Length [veh/ln]	24.88	10.42	45.68	27.18	22.50	77.03	
95th-Percentile Queue Length [ft/ln]	621.99	260.42	1141.90	679.52	562.54	1925.66	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	67.63	9.09	233.31	28.95	0.00	39.70	0.00	229.47	0.00	0.00	0.00
Movement LOS		F	A	F	C		D		F			
Critical Movement		No	No	Yes	No		No		No			
d_A, Approach Delay [s/veh]	50.77			64.11			153.77			0.00		
Approach LOS	D			E			F			A		
d_I, Intersection Delay [s/veh]	79.61											
Intersection LOS	E											
Intersection V/C	1.141											

Option 1: Copy of Cedar Ave/Orange St

Number	15											
Intersection	Cedar Ave/Orange St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	4	1026	3	110	1143	456	272	5	13	0	1	136
Total Analysis Volume [veh/h]	11	1748	4	137	2793	509	338	6	14	0	1	152

Intersection Settings

Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	3	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	74	0	11	76	0	0	30	0	0	30	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.75	0.68	0.68	0.75	0.71	1.72	1.00	0.11	1.00	0.11
(v / s)_i Volume / Saturation Flow Rate	0.19	0.46	0.46	0.49	0.77	0.32	0.19	0.01	0.00	0.09
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3	
s, saturation flow rate [veh/h]	59	1900	1898	279	3618	1615	1810	1691	1810	1617
c, Capacity [veh/h]	65	1288	1287	195	2557	2810	1809	190	1809	181
X, volume / capacity	0.17	0.68	0.68	0.70	1.09	0.18	0.19	0.11	0.00	0.84
d, Delay for Lane Group [s/veh]	35.24	14.35	14.37	32.46	66.02	0.14	0.12	47.69	0.00	61.86
Lane Group LOS	D	B	B	C	F	A	A	D	A	E

Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.30	12.89	12.89	3.58	44.90	0.11	0.06	0.55	0.00	4.98
50th-Percentile Queue Length [ft/ln]	7.62	322.26	322.35	89.53	1122.38	2.76	1.50	13.71	0.00	124.55
95th-Percentile Queue Length [veh/ln]	0.55	18.78	18.78	6.45	60.44	0.20	0.11	0.99	0.00	8.64
95th-Percentile Queue Length [ft/ln]	13.72	469.46	469.57	161.15	1510.94	4.98	2.69	24.69	0.00	216.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.24	14.36	14.37	32.46	66.02	0.14	0.12	47.69	47.69	0.00	61.86	61.86
Movement LOS	D	B	B	C	F	A	A	D	D	A	E	E
Critical Movement	No	No	No	No	Yes	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	14.49			54.93			2.78			61.86		
Approach LOS	B			D			A			E		
d_I, Intersection Delay [s/veh]	39.37											
Intersection LOS	D											
Intersection V/C	1.188											

Option 1: Copy of Cedar Ave/Slover Ave

Number	16											
Intersection	Cedar Ave/Slover Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	163	734	14	103	851	163	211	154	73	19	204	101
Total Analysis Volume [veh/h]	218	1324	19	149	2303	277	322	199	120	29	257	118

Intersection Settings

Cycle Length [s]	150											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	81	0	21	81	0	16	36	0	12	32	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.11	0.60	0.60	0.09	0.58	0.58	0.08	0.18	0.18	0.02	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.12	0.35	0.35	0.08	0.68	0.70	0.09	0.06	0.07	0.02	0.10	0.11
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1810	1900	1891	1810	1900	1831	3514	3618	1615	1810	1900	1704
c, Capacity [veh/h]	205	1132	1127	172	1098	1058	281	646	288	43	232	208
X, volume / capacity	1.06	0.59	0.60	0.87	1.18	1.22	1.15	0.31	0.42	0.67	0.84	0.87
d, Delay for Lane Group [s/veh]	119.84	21.25	21.29	79.13	120.34	139.28	143.94	53.83	55.64	89.24	72.09	74.99
Lane Group LOS	F	C	C	E	F	F	F	D	E	F	E	E
Critical Lane Group	X	N	N	N	X	X	X	N	N	X	X	X

Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	10.92	15.23	15.20	6.16	64.06	67.29	8.34	3.32	4.14	1.29	7.60	7.23
50th-Percentile Queue Length [ft/ln]	272.92	380.74	380.03	154.10	1601.55	1682.18	208.55	83.12	103.51	32.16	189.95	180.64
95th-Percentile Queue Length [veh/ln]	16.76	21.63	21.60	10.24	87.87	94.24	13.70	5.98	7.45	2.32	12.12	11.63
95th-Percentile Queue Length [ft/ln]	419.02	540.74	539.88	255.89	2196.74	2355.90	342.42	149.61	186.32	57.88	302.96	290.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	119.84	21.27	21.29	79.13	128.67	139.28	143.94	53.83	55.64	89.24	72.80	74.99
Movement LOS	F	C	C	E	F	F	F	D	E	F	E	E
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	35.03			127.04			99.44			74.62		
Approach LOS	D			F			F			E		
d_I, Intersection Delay [s/veh]	92.83											
Intersection LOS	F											
Intersection V/C	1.023											

Option 1: Copy of Cedar Ave/Santa Ana Ave

Number	17											
Intersection	Cedar Ave/Santa Ana Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	84	759	20	46	874	55	66	82	80	47	88	44
Total Analysis Volume [veh/h]	146	1366	23	57	2359	61	95	103	148	58	113	49

Intersection Settings

Cycle Length [s]	120											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	15	24	0	70	79	0	0	26	0	0	26	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.09	0.67	0.67	0.04	0.63	0.63	0.18	0.18	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.08	0.37	0.37	0.03	0.64	0.64	0.08	0.15	0.05	0.09
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3	
s, saturation flow rate [veh/h]	1810	1900	1889	1810	1900	1883	1243	1721	1147	1804
c, Capacity [veh/h]	166	1280	1272	78	1188	1177	167	316	91	331
X, volume / capacity	0.88	0.54	0.54	0.73	1.02	1.03	0.57	0.80	0.63	0.49
d, Delay for Lane Group [s/veh]	67.58	11.76	11.78	68.94	53.47	56.14	57.27	52.88	66.21	45.09
Lane Group LOS	E	B	B	E	F	F	E	D	E	D

Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.98	9.34	9.32	1.97	40.67	41.18	2.98	7.68	1.92	4.35
50th-Percentile Queue Length [ft/ln]	124.58	233.58	233.04	49.35	1016.64	1029.48	74.42	192.02	47.99	108.86
95th-Percentile Queue Length [veh/ln]	8.64	14.36	14.33	3.55	52.00	53.00	5.36	12.23	3.46	7.78
95th-Percentile Queue Length [ft/ln]	216.10	358.91	358.22	88.84	1299.97	1325.04	133.96	305.65	86.39	194.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	67.58	11.77	11.78	68.94	54.77	56.14	57.27	52.88	52.88	66.21	45.09	45.09
Movement LOS	E	B	B	E	D	E	E	D	D	E	D	D
Critical Movement	No	No	No	Yes	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	17.08			55.13			54.09			50.66		
Approach LOS	B			E			D			D		
d_I, Intersection Delay [s/veh]	42.08											
Intersection LOS	D											
Intersection V/C	0.869											

Option 1: Copy of Cedar Ave/Jurupa Ave

Number	18											
Intersection	Cedar Ave/Jurupa Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	36	678	43	87	901	21	50	73	53	42	72	136
Total Analysis Volume [veh/h]	237	1235	48	108	2158	297	136	100	106	53	124	152

Intersection Settings

Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	76	0	13	71	0	0	26	0	0	26	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.12	0.63	0.63	0.07	0.58	0.58	0.19	0.19	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.13	0.34	0.34	0.06	0.65	0.67	0.12	0.05	0.07	0.12	0.09
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3	
s, saturation flow rate [veh/h]	1810	1900	1875	1810	1900	1822	1121	1900	1615	1485	1615
c, Capacity [veh/h]	220	1196	1181	135	1107	1062	137	363	309	325	309
X, volume / capacity	1.08	0.54	0.54	0.80	1.11	1.16	0.99	0.28	0.34	0.55	0.49
d, Delay for Lane Group [s/veh]	101.42	13.68	13.75	62.56	86.07	105.18	88.62	40.10	40.90	44.35	42.72
Lane Group LOS	F	B	B	E	F	F	F	D	D	D	D
Critical Lane Group	Y	N	N	N	N	Y	Y	N	N	N	N

Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	9.26	8.63	8.58	3.45	46.80	50.52	5.16	2.42	2.61	4.70	3.88
50th-Percentile Queue Length [ft/ln]	231.47	215.63	214.38	86.23	1169.98	1262.90	128.98	60.39	65.21	117.46	96.97
95th-Percentile Queue Length [veh/ln]	14.69	13.44	13.38	6.21	63.20	69.84	8.88	4.35	4.70	8.25	6.98
95th-Percentile Queue Length [ft/ln]	367.21	336.04	334.44	155.21	1579.91	1745.91	222.11	108.70	117.38	206.33	174.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	101.42	13.71	13.75	62.56	94.31	105.18	88.62	40.10	40.90	44.35	44.35	42.72
Movement LOS	F	B	B	E	F	F	F	D	D	D	D	D
Critical Movement	No	No	No	No	No	Yes	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	27.39			94.23			59.64			43.60		
Approach LOS	C			F			E			D		
d_I, Intersection Delay [s/veh]	66.87											
Intersection LOS	E											
Intersection V/C	0.926											

Option 2: Copy of Rubidoux Blvd/Market St

Number	20											
Intersection	Rubidoux Blvd/Market St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	8	228	277	520	544	88	64	72	62	261	41	397
Total Analysis Volume [veh/h]	322	476	444	755	769	882	331	296	292	357	563	669

Intersection Settings

Cycle Length [s]	150											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	10	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	45	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	5.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	2.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	23	20	20	61	58	0	23	49	0	20	46	0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.12	0.22	0.37	0.24	0.35	0.35	0.12	0.28	0.10	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.18	0.13	0.27	0.21	0.21	0.55	0.18	0.34	0.10	0.30	0.41
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3		
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1747	3514	1900	1615
c, Capacity [veh/h]	217	803	595	836	1254	560	217	489	351	507	431
X, volume / capacity	1.48	0.59	0.75	0.90	0.61	1.58	1.52	1.20	1.02	1.11	1.55
d, Delay for Lane Group [s/veh]	304.77	55.48	49.50	59.42	42.90	316.44	323.35	163.19	93.86	126.31	315.26
Lane Group LOS	F	E	D	E	D	F	F	F	F	F	F

Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	22.51	8.20	15.14	13.91	11.83	61.67	23.86	33.26	8.04	29.16	47.39
50th-Percentile Queue Length [ft/ln]	562.85	204.91	378.50	347.80	295.80	1541.74	596.47	831.41	201.11	728.88	1184.63
95th-Percentile Queue Length [veh/ln]	34.98	12.89	21.52	20.03	17.47	94.63	37.07	47.62	12.78	40.55	72.53
95th-Percentile Queue Length [ft/ln]	874.38	322.28	538.03	500.72	436.82	2365.71	926.78	1190.57	319.38	1013.74	1813.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	304.77	55.48	49.50	59.42	42.90	316.44	323.35	163.19	163.19	93.86	126.31	315.26
Movement LOS	F	E	D	E	D	F	F	F	F	F	F	F
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	117.98			148.36			220.88			198.57		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	166.02											
Intersection LOS	F											
Intersection V/C	1.321											

Option 2: Copy of Agua Mansa Rd/Market St

Number	21											
Intersection	Agua Mansa Rd/Market St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	3	0	123	0	312	283	547	3	0	455	196
Total Analysis Volume [veh/h]	0	4	3	217	0	377	466	1003	42	0	1335	391

Intersection Settings

Cycle Length [s]	125											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	45	70	0	9	34	0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.34		0.33	0.33	0.15	0.54	0.54	0.00	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.00		0.15	0.23	0.13	0.28	0.03	0.00	0.37	0.24
so, Base Saturation Flow per Lane [pc/h/ln]	1900		1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3			3		
s, saturation flow rate [veh/h]	1766		1431	1615	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	593		511	533	524	1943	867	0	1404	627
X, volume / capacity	0.01		0.42	0.71	0.89	0.52	0.05	0.00	0.95	0.62
d, Delay for Lane Group [s/veh]	27.73		35.70	44.30	54.27	18.74	13.77	0.00	41.59	32.35
Lane Group LOS	C		D	D	D	B	B	A	D	C

Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.15	5.59	11.17	7.32	9.19	0.57	0.00	19.56	9.37
50th-Percentile Queue Length [ft/ln]	3.74	139.73	279.34	182.88	229.84	14.33	0.00	488.99	234.16
95th-Percentile Queue Length [veh/ln]	0.27	9.47	16.66	11.75	14.17	1.03	0.00	26.81	14.39
95th-Percentile Queue Length [ft/ln]	6.73	236.66	416.39	293.77	354.15	25.80	0.00	670.32	359.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.73	27.73	27.73	35.70	44.30	44.30	54.27	18.74	13.77	0.00	41.59	32.35
Movement LOS	C	C	C	D	D	D	D	B	B	A	D	C
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	27.73			41.16			29.56			39.49		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	35.82											
Intersection LOS	D											
Intersection V/C	0.735											

Option 1: Copy of Rubidoux Blvd/SR-60 WB Off Ramp

Number	22											
Intersection	Rubidoux Blvd/SR-60 WB Off Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	135	666	0	0	872	18	16	0	158	386	67	79
Total Analysis Volume [veh/h]	196	1355	0	0	1446	24	37	0	311	479	103	169

Intersection Settings

Cycle Length [s]	60											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	37	0	0	37	0	23	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	14	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.64	0.64	0.64	0.64	0.23	0.23	
(v / s)_i Volume / Saturation Flow Rate	0.54	0.37	0.39	0.39	0.02	0.19	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	366	3618	1900	1889	1810	1615	
c, Capacity [veh/h]	249	2311	1213	1207	413	368	
X, volume / capacity	0.79	0.59	0.61	0.61	0.09	0.84	
d, Delay for Lane Group [s/veh]	44.73	7.36	8.64	8.71	18.35	27.48	
Lane Group LOS	D	A	A	A	B	C	

Critical Lane Group	Yes	No	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.12	3.24	3.95	3.97	0.39	4.40	
50th-Percentile Queue Length [ft/ln]	102.88	80.94	98.77	99.34	9.71	109.97	
95th-Percentile Queue Length [veh/ln]	7.41	5.83	7.11	7.15	0.70	7.84	
95th-Percentile Queue Length [ft/ln]	185.18	145.68	177.79	178.81	17.48	195.96	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.73	7.36	0.00	0.00	8.67	8.71	18.35	0.00	27.48	0.00	0.00	0.00
Movement LOS	D	A			A	A	B		C			
Critical Movement	Yes	No			No	No	No		No			
d_A, Approach Delay [s/veh]	12.08			8.67			26.51			0.00		
Approach LOS	B			A			C			A		
d_I, Intersection Delay [s/veh]	12.08											
Intersection LOS	B											
Intersection V/C	0.728											

Option 1: Rubidoux Blvd/WB Ramps tight diamond alternative

Number	2223											
Intersection	Rubidoux Blvd/WB Ramps											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	320	1194	0	0	1142	1019	0	0	0	455	98	259
Total Analysis Volume [veh/h]	337	1257	0	0	1202	965	0	0	0	479	98	245

Intersection Settings

Cycle Length [s]	120											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	17	94	0	0	77	0	0	0	0	26	0	0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	14	0	0	7	0	0	0	0	17	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.11	0.75	0.61	0.61		0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.11	0.39	0.37	0.66		0.15	0.17
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	3163	3256	3256	1454		3163	1454
c, Capacity [veh/h]	343	2444	1982	885		578	266
X, volume / capacity	0.98	0.51	0.61	1.09		0.83	0.92
d, Delay for Lane Group [s/veh]	72.42	6.86	15.94	81.38		50.35	69.35
Lane Group LOS	E	A	B	F		D	E

Critical Lane Group	Yes	No	No	Yes		No	Yes
50th-Percentile Queue Length [veh/ln]	5.97	5.82	10.05	37.21		7.13	8.74
50th-Percentile Queue Length [ft/ln]	149.17	145.54	251.34	930.15		178.15	218.49
95th-Percentile Queue Length [veh/ln]	9.97	9.78	15.25	50.74		11.50	13.59
95th-Percentile Queue Length [ft/ln]	249.32	244.47	381.33	1268.48		287.59	339.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.42	6.86	0.00	0.00	15.94	81.38	0.00	0.00	0.00	50.35	0.00	69.35
Movement LOS	E	A			B	F				D		E
Critical Movement	No	No			No	Yes				No		No
d_A, Approach Delay [s/veh]	20.72			45.08			0.00			56.78		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	38.31											
Intersection LOS	D											
Intersection V/C	0.939											

Option 1: Copy of Rubidoux Blvd/SR-60 EB Ramps

Number	24											
Intersection	Rubidoux Blvd/SR-60 EB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	505	483	149	612	0	382	10	182	8	0	3
Total Analysis Volume [veh/h]	0	686	540	367	816	0	972	13	203	9	0	4

Intersection Settings

Cycle Length [s]	75											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	30	0	19	49	0	26	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	14	0	17	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.35	0.35	0.20	0.60	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.33	0.20	0.23	0.28	0.13	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	3618	1615	1810	3618	3514	1615	
c, Capacity [veh/h]	1254	560	362	2171	1031	474	
X, volume / capacity	0.55	0.96	1.01	0.38	0.94	0.43	
d, Delay for Lane Group [s/veh]	21.47	54.26	55.54	8.25	31.08	22.03	
Lane Group LOS	C	D	F	A	C	C	

Critical Lane Group	No	Yes	Yes	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	4.65	13.03	8.60	2.78	8.54	2.78	
50th-Percentile Queue Length [ft/ln]	116.19	325.83	214.93	69.56	213.59	69.42	
95th-Percentile Queue Length [veh/ln]	8.18	18.95	13.50	5.01	13.34	5.00	
95th-Percentile Queue Length [ft/ln]	204.58	473.85	337.51	125.20	333.43	124.96	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.47	54.26	55.54	8.25	0.00	31.08	0.00	22.03	0.00	0.00	0.00
Movement LOS		C	D	F	A		C		C			
Critical Movement		No	No	Yes	No		No		No			
d_A, Approach Delay [s/veh]	35.91			22.92			29.51			0.00		
Approach LOS	D			C			C			A		
d_I, Intersection Delay [s/veh]	29.53											
Intersection LOS	C											
Intersection V/C	0.814											

Option 1: Copy of Market St/SR-60 EB Ramp

Number	27											
Intersection	Market St/SR-60 EB Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Base Volume Input [veh/h]	0	408	141	601	412	0	113	0	511	0	0	0
Total Analysis Volume [veh/h]	0	595	157	1098	552	0	199	0	572	0	0	0

Intersection Settings

Cycle Length [s]	60											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	18	0	24	42	0	18	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.24	0.33	0.64	0.23	0.23	
(v / s)_i Volume / Saturation Flow Rate	0.16	0.31	0.15	0.11	0.20	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	
Arrival type	3	3		3		3
s, saturation flow rate [veh/h]	3618	3514	3618	1810	2859	
c, Capacity [veh/h]	858	1171	2305	415	656	
X, volume / capacity	0.69	0.94	0.24	0.48	0.87	
d, Delay for Lane Group [s/veh]	25.48	23.70	4.90	20.87	26.07	
Lane Group LOS	C	C	A	C	C	

Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.80	6.73	0.88	2.28	3.83	
50th-Percentile Queue Length [ft/ln]	95.02	168.17	22.10	56.92	95.71	
95th-Percentile Queue Length [veh/ln]	6.84	10.98	1.59	4.10	6.89	
95th-Percentile Queue Length [ft/ln]	171.04	274.50	39.78	102.46	172.28	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.48	0.00	23.70	4.90	0.00	20.87	0.00	26.07	0.00	0.00	0.00
Movement LOS		C		C	A		C		C			
Critical Movement		No	No	No	No		No		Yes			
d_A, Approach Delay [s/veh]	25.48			17.41			24.73			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	20.87											
Intersection LOS	C											
Intersection V/C	0.677											

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Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Interim Year PM + P.pdf
Scenario 18 OY PM + P
2/15/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Ave/I-10 Ramps	Signalized	HCM 7th Edition	NB Left	0.854	33.3	C
2	Sierra Ave/Slover Ave	Signalized	HCM 7th Edition	EB Left	0.982	75.0	E
3	Sierra Ave/Santa Ana Ave	Signalized	HCM 7th Edition	EB Left	0.719	38.4	D
4	Sierra Ave/Jurupa Ave	Signalized	HCM 7th Edition	EB Left	0.798	47.2	D
5	Armstrong Rd/Sierra Ave	Signalized	HCM 7th Edition	NB Left	0.978	106.0	F
6	Armstrong/30th St	Signalized	HCM 7th Edition	WB Right	0.882	13.3	B
7	Valley Way/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	EB Left	1.256	217.5	F
8	Valley Way/SR-60 WB On Ramp	Signalized	HCM 7th Edition	NB Left	0.742	8.9	A
9	SR-60 EB Ramps/Mission Blvd	Signalized	HCM 7th Edition	SB Right	0.819	195.9	F
10	Valley Way/Mission Blvd	Signalized	HCM 7th Edition	EB Left	0.925	87.6	F
11	Jurupa Rd/Mission Blvd	Two-way stop	HCM 7th Edition	NB Left	2.610	1,918.1	F
12	Pacific Ave/Mission Blvd	Signalized	HCM 7th Edition	WB Left	0.663	30.1	C
13	Cedar Ave/I-10 WB Ramp	Signalized	HCM 7th Edition	SB Right	0.645	17.5	B
14	Cedar Ave/I-10 EB Ramps	Signalized	HCM 7th Edition	EB Right	1.000	43.7	D
15	Cedar Ave/Orange St	Signalized	HCM 7th Edition	EB Left	0.962	50.3	D
16	Cedar Ave/Slover Ave	Signalized	HCM 7th Edition	EB Left	0.936	86.0	F
17	Cedar Ave/Santa Ana Ave	Signalized	HCM 7th Edition	NB Left	0.936	57.3	E
			HCM 7th				

18	Cedar Ave/Jurupa Ave	Signalized	HCM 7th Edition	EB Left	2.748	261.2	F
19	Cedar Ave/7th St	Signalized	HCM 7th Edition	SB Right	0.900	48.5	D
20	Rubidoux Blvd/Market St	Signalized	HCM 7th Edition	EB Left	1.406	232.8	F
21	Agua Mansa Rd/Market St	Signalized	HCM 7th Edition	WB Thru	0.959	96.7	F
22	Rubidoux Blvd/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	NB Left	1.241	77.0	E
23	Rubidoux Blvd/SrR-60 WB On Ramp	Two-way stop	HCM 7th Edition	NB Left	1.498	302.2	F
24	Rubidoux Blvd/SR-60 EB Ramps	Signalized	HCM 7th Edition	EB Left	0.972	105.0	F
25	Market St/Rivera St	Signalized	HCM 7th Edition	NB Left	0.703	21.4	C
26	Market St/SR-60 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.859	30.8	C
27	Market St/SR-60 EB Ramp	Signalized	HCM 7th Edition	SB Left	1.262	166.0	F
28	Sierra Ave/20th St	Signalized	HCM 7th Edition	WB Right	0.707	33.7	C
29	Armstrong Rd/Driveway 1	Two-way stop	HCM 7th Edition	WB Left	0.071	21.3	C
30	Driveway 2/20th St	Signalized	HCM 7th Edition	NB Left	0.338	7.1	A
31	Street A/20th St	Two-way stop	HCM 7th Edition	WB Right	0.040	10.2	B
32	Street B/20th St	Signalized	HCM 7th Edition	SB Left	0.321	6.3	A
33	Street M/20th Street	Roundabout	HCM 7th Edition	SB Left		5.2	A
34	Driveway 3/20th St	Signalized	HCM 7th Edition	WB Left	0.731	17.2	B
35	Driveway 4/20th St	Signalized	HCM 7th Edition	WB Left	0.604	13.8	B
36	Driveway 5/20th St	Two-way stop	HCM 7th Edition	NB Right	0.187	15.7	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Ave/I-10 Ramps

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	565.00	100.00	100.00	325.00	100.00	305.00	440.00	100.00	1500.00	1205.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	390.00	0.00	0.00	665.00	0.00	0.00	1215.00	0.00	0.00	1150.00
Speed [mph]	40.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	591	1241	718	519	918	749	902	0	437	427	0	589
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	315	89	77	0	57	0	0	0	198	71	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	92	0	0	88	0	0	71	0	0	70
Total Hourly Volume [veh/h]	1012	1553	832	612	1140	796	1064	0	643	575	0	625
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	266	409	219	161	300	209	280	0	169	151	0	164
Total Analysis Volume [veh/h]	1065	1635	876	644	1200	838	1120	0	677	605	0	658
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna
Signal Group	1	6	0	5	2	0	3	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	0	0	5	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	40	32	0	40	32	0	48	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	5	0	0
Pedestrian Clearance [s]	0	23	0	0	23	0	39	0	0	35	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No		No	No		No			No		
Maximum Recall	No	No		No	No		No			No		
Pedestrian Recall	No	No		No	No		No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	L
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	36	42	25	31	41	41
g / C, Green / Cycle	0.30	0.35	0.21	0.26	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.30	0.32	0.18	0.23	0.32	0.17
s, saturation flow rate [veh/h]	3514	5176	3514	5176	3514	3514
c, Capacity [veh/h]	1054	1810	735	1340	1199	1199
d1, Uniform Delay [s]	42.00	37.09	45.94	42.91	38.23	31.46
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.45	7.88	3.52	9.58	4.05	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.01	0.90	0.88	0.90	0.93	0.50
d, Delay for Lane Group [s/veh]	57.45	44.97	49.46	52.49	42.28	31.79
Lane Group LOS	F	D	D	D	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	17.32	15.92	9.53	12.43	16.17	6.94
50th-Percentile Queue Length [ft/ln]	432.99	397.88	238.32	310.82	404.29	173.60
95th-Percentile Queue Length [veh/ln]	24.30	22.46	14.60	18.22	22.77	11.27
95th-Percentile Queue Length [ft/ln]	607.59	561.44	364.90	455.38	569.17	281.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.45	44.97	0.00	49.46	52.49	0.00	42.28	0.00	0.00	31.79	0.00	0.00
Movement LOS	F	D		D	D		D			C		
d_A, Approach Delay [s/veh]	38.14			35.93			26.86			15.64		
Approach LOS	D			D			C			B		
d_I, Intersection Delay [s/veh]	33.30											
Intersection LOS	C											
Intersection V/C	0.854											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.626	3.505	2.882	2.705
Crosswalk LOS	D	D	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	467	467	733	733
d_b, Bicycle Delay [s]	35.27	35.27	24.07	24.07
l_b,int, Bicycle LOS Score for Intersection	3.045	2.574	1.560	1.560
Bicycle LOS	C	B	A	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	75.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.982

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	265.00	100.00	675.00	675.00	100.00	100.00	345.00	100.00	320.00	275.00	100.00	465.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	600.00	0.00	0.00	0.00
Speed [mph]	50.00			40.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	164	1274	177	687	973	148	346	687	89	219	385	894
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	364	3	37	288	1	12	15	1	6	26	104
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	21	0	0	18	0	0	11	0	0	116
Total Hourly Volume [veh/h]	196	1867	191	848	1436	158	420	826	95	264	480	1043
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	491	50	223	378	42	111	217	25	69	126	274
Total Analysis Volume [veh/h]	206	1965	201	893	1512	166	442	869	100	278	505	1098
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	137.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	11	40	0	35	64	0	15	40	0	20	45	45
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	31	0	0	27	0	0	31	0	0	31	31
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	7	40	40	31	64	64	11	35	35	13	37	72
g / C, Green / Cycle	0.05	0.30	0.30	0.23	0.47	0.47	0.08	0.26	0.26	0.10	0.27	0.53
(v / s)_i Volume / Saturation Flow Rate	0.06	0.31	0.31	0.25	0.31	0.32	0.13	0.24	0.06	0.08	0.14	0.38
s, saturation flow rate [veh/h]	3514	5176	1786	3514	3618	1807	3514	3618	1615	3514	3618	2859
c, Capacity [veh/h]	182	1534	530	807	1716	857	286	940	420	336	991	1524
d1, Uniform Delay [s]	64.00	47.49	47.49	52.00	26.90	27.25	62.00	48.68	39.43	59.95	41.36	23.89
k, delay calibration	0.11	0.50	0.50	0.12	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	73.52	36.89	53.38	53.16	1.89	4.06	248.44	4.49	0.29	5.20	0.41	1.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.13	1.05	1.05	1.11	0.65	0.66	1.54	0.92	0.24	0.83	0.51	0.72
d, Delay for Lane Group [s/veh]	137.52	84.38	100.86	105.16	28.79	31.31	310.44	53.17	39.72	65.15	41.77	25.03
Lane Group LOS	F	F	F	F	C	C	F	D	D	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.91	21.66	24.85	19.34	13.52	14.58	14.69	14.42	2.61	4.79	6.94	12.48
50th-Percentile Queue Length [ft/ln]	122.81	541.38	621.17	483.49	338.10	364.59	367.33	360.42	65.30	119.81	173.44	311.92
95th-Percentile Queue Length [veh/ln]	8.83	30.20	34.12	28.10	19.56	20.85	23.86	20.64	4.70	8.38	11.26	18.27
95th-Percentile Queue Length [ft/ln]	220.87	754.88	853.12	702.40	488.88	521.16	596.41	516.09	117.54	209.57	281.43	456.74

Movement, Approach, & Intersection Results

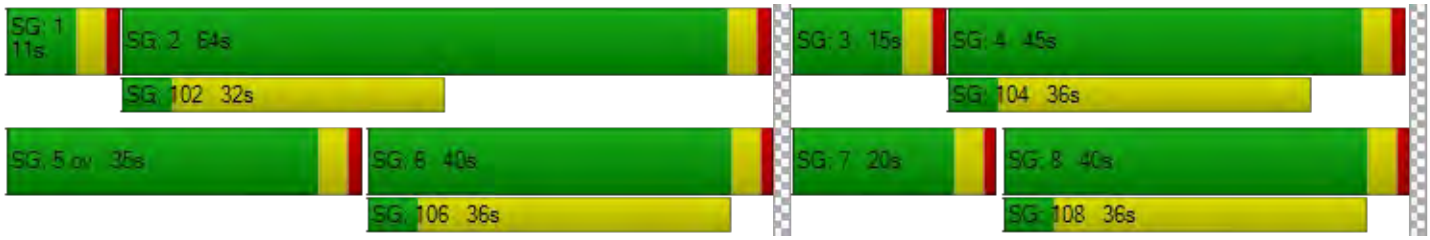
d_M, Delay for Movement [s/veh]	137.52	87.36	100.86	105.16	29.46	31.31	310.44	53.17	39.72	65.15	41.77	25.03
Movement LOS	F	F	F	F	C	C	F	D	D	E	D	C
d_A, Approach Delay [s/veh]	92.86			55.87			132.81			35.45		
Approach LOS	F			E			F			D		
d_I, Intersection Delay [s/veh]	75.04											
Intersection LOS	E											
Intersection V/C	0.982											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	58.80	58.80	58.80	58.80
l_p,int, Pedestrian LOS Score for Intersectio	3.675	3.792	3.185	3.754
Crosswalk LOS	D	D	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	889	533	607
d_b, Bicycle Delay [s]	36.30	20.83	36.30	32.73
l_b,int, Bicycle LOS Score for Intersection	2.547	2.984	2.733	3.207
Bicycle LOS	B	C	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	38.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.719

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	285.00	100.00	210.00	375.00	100.00	100.00	240.00	100.00	100.00	300.00	100.00	350.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	535.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	190	1384	84	114	988	114	197	181	123	80	130	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	226	1	53	233	8	22	20	0	0	15	121
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	10	0	0	14	0	0	15	0	0	23
Total Hourly Volume [veh/h]	224	1859	90	188	1399	129	254	234	130	94	168	210
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	489	24	49	368	34	67	62	34	25	44	55
Total Analysis Volume [veh/h]	236	1957	95	198	1473	136	267	246	137	99	177	221
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	11	30	0	13	40	0	9	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	43	43	7	43	43	9	19	19	5	15	15
g / C, Green / Cycle	0.08	0.48	0.48	0.08	0.48	0.48	0.10	0.21	0.21	0.06	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.07	0.38	0.06	0.06	0.30	0.30	0.15	0.07	0.08	0.05	0.05	0.14
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1819	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	273	2484	775	270	1733	871	181	759	339	101	598	267
d1, Uniform Delay [s]	41.03	19.57	12.93	40.64	17.34	17.36	40.50	30.15	30.70	42.46	32.96	36.32
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.97	2.62	0.32	3.84	1.66	3.29	220.46	0.25	0.78	38.12	0.27	6.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.79	0.12	0.73	0.62	0.62	1.48	0.32	0.40	0.98	0.30	0.83
d, Delay for Lane Group [s/veh]	48.99	22.18	13.25	44.48	19.00	20.65	260.96	30.39	31.48	80.59	33.23	42.77
Lane Group LOS	D	C	B	D	B	C	F	C	C	F	C	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.74	10.24	1.00	2.17	7.40	7.86	14.93	2.19	2.53	3.19	1.66	4.97
50th-Percentile Queue Length [ft/ln]	68.48	256.08	24.94	54.18	184.95	196.47	373.35	54.86	63.33	79.70	41.38	124.25
95th-Percentile Queue Length [veh/ln]	4.93	15.49	1.80	3.90	11.86	12.46	24.17	3.95	4.56	5.74	2.98	8.63
95th-Percentile Queue Length [ft/ln]	123.26	387.30	44.89	97.53	296.46	311.40	604.20	98.75	113.99	143.45	74.48	215.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.99	22.18	13.25	44.48	19.45	20.65	260.96	30.39	31.48	80.59	33.23	42.77
Movement LOS	D	C	B	D	B	C	F	C	C	F	C	D
d_A, Approach Delay [s/veh]	24.58			22.28			125.33			46.90		
Approach LOS	C			C			F			D		
d_I, Intersection Delay [s/veh]	38.40											
Intersection LOS	D											
Intersection V/C	0.719											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.591	3.618	2.742	2.719
Crosswalk LOS	D	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	800	711
d_b, Bicycle Delay [s]	22.76	22.76	16.20	18.69
l_b,int, Bicycle LOS Score for Intersection	2.824	2.561	2.108	1.989
Bicycle LOS	C	B	B	A

Sequence

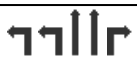
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	47.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.798

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	0	2	0	1
Entry Pocket Length [ft]	685.00	100.00	675.00	385.00	100.00	260.00	375.00	100.00	100.00	280.00	100.00	270.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	265	924	103	90	528	234	489	243	333	134	238	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	68	192	0	0	219	14	35	8	196	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	12	0	0	29	0	0	59	0	0	10
Total Hourly Volume [veh/h]	381	1282	110	106	842	261	612	295	530	158	284	88
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	100	337	29	28	222	69	161	78	139	42	75	23
Total Analysis Volume [veh/h]	401	1349	116	112	886	275	644	311	558	166	299	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	45	0	9	36	36	25	50	0	11	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	27	27	0	27	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	45	45	5	36	61	21	42	42	7	28	28
g / C, Green / Cycle	0.12	0.39	0.39	0.04	0.31	0.53	0.18	0.36	0.36	0.06	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.11	0.37	0.07	0.03	0.24	0.17	0.18	0.09	0.35	0.05	0.08	0.06
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	428	1415	632	153	1132	856	642	1322	590	214	881	393
d1, Uniform Delay [s]	50.07	33.99	22.97	54.34	35.95	15.29	47.00	25.34	35.38	53.23	35.86	34.90
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.36	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.03	15.12	0.64	6.62	5.43	0.99	17.37	0.09	20.89	5.95	0.23	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.95	0.18	0.73	0.78	0.32	1.00	0.24	0.95	0.78	0.34	0.24
d, Delay for Lane Group [s/veh]	60.10	49.11	23.61	60.97	41.38	16.28	64.37	25.43	56.27	59.18	36.08	35.21
Lane Group LOS	E	D	C	E	D	B	F	C	E	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.04	19.55	2.04	1.69	11.50	3.95	10.40	2.86	17.68	2.50	3.42	2.09
50th-Percentile Queue Length [ft/ln]	150.89	488.69	50.96	42.22	287.40	98.66	259.95	71.55	442.07	62.49	85.60	52.25
95th-Percentile Queue Length [veh/ln]	10.06	26.80	3.67	3.04	17.06	7.10	15.71	5.15	24.58	4.50	6.16	3.76
95th-Percentile Queue Length [ft/ln]	251.62	669.96	91.73	75.99	426.41	177.58	392.87	128.78	614.48	112.47	154.09	94.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.10	49.11	23.61	60.97	41.38	16.28	64.37	25.43	56.27	59.18	36.08	35.21
Movement LOS	E	D	C	E	D	B	F	C	E	E	D	D
d_A, Approach Delay [s/veh]	49.88			37.68			53.38			42.81		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	47.16											
Intersection LOS	D											
Intersection V/C	0.798											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.85	48.85	48.85	48.85
l_p,int, Pedestrian LOS Score for Intersectio	3.548	3.470	3.294	2.829
Crosswalk LOS	D	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	713	557	800	557
d_b, Bicycle Delay [s]	23.81	29.95	20.70	29.95
l_b,int, Bicycle LOS Score for Intersection	3.109	2.634	2.857	2.028
Bicycle LOS	C	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Armstrong Rd/Sierra Ave

Control Type:	Signalized	Delay (sec / veh):	106.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.978

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	1	0	0	1	1	0	0
Entry Pocket Length [ft]	490.00	100.00	100.00	310.00	100.00	270.00	100.00	100.00	75.00	195.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			55.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1181	737	38	8	185	40	171	59	700	54	45	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	69	65	532	12	136	0	16	202	185	391	194	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	58	0	0	5	0	0	101	0	0	7
Total Hourly Volume [veh/h]	1463	935	519	21	354	42	218	272	910	455	247	63
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	385	246	137	6	93	11	57	72	239	120	65	17
Total Analysis Volume [veh/h]	1540	984	546	22	373	44	229	286	958	479	260	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	0	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	0.0	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	57	62	0	11	16	0	40	38	0	39	37	0
Vehicle Extension [s]	3.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	3.3	0.0	3.3	3.3	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	5.30	5.30	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.30	3.30	3.30	3.30	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	52	77	77	3	29	29	21	14	33	26	26
g / C, Green / Cycle	0.34	0.51	0.51	0.02	0.19	0.19	0.14	0.09	0.22	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.44	0.52	0.34	0.01	0.20	0.03	0.13	0.08	0.26	0.09	0.09
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1769
c, Capacity [veh/h]	1211	977	831	71	361	306	252	343	398	333	310
d1, Uniform Delay [s]	49.15	36.43	26.73	72.46	60.77	50.62	63.59	66.71	58.50	55.95	55.96
k, delay calibration	0.18	0.50	0.50	0.04	0.50	0.50	0.04	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	124.68	30.52	4.05	0.92	56.60	0.98	5.02	5.28	113.10	1.19	1.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.27	1.01	0.66	0.31	1.03	0.14	0.91	0.83	1.20	0.51	0.51
d, Delay for Lane Group [s/veh]	173.83	66.94	30.78	73.38	117.37	51.60	68.62	71.99	171.60	57.14	57.24
Lane Group LOS	F	F	C	E	F	D	E	E	F	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	42.91	41.80	14.68	0.42	19.10	1.45	8.70	5.49	27.39	5.85	5.47
50th-Percentile Queue Length [ft/ln]	1072.82	1044.91	366.91	10.54	477.51	36.22	217.51	137.13	684.76	146.29	136.71
95th-Percentile Queue Length [veh/ln]	62.20	52.72	20.96	0.76	26.77	2.61	13.54	9.33	39.72	9.82	9.30
95th-Percentile Queue Length [ft/ln]	1555.08	1317.88	523.98	18.97	669.14	65.20	338.45	233.15	993.10	245.47	232.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	173.83	66.94	30.78	73.38	117.37	51.60	68.62	71.99	0.00	171.60	57.18	57.24
Movement LOS	F	F	C	E	F	D	E	E		F	E	E
d_A, Approach Delay [s/veh]	114.13			108.57			25.48			125.27		
Approach LOS	F			F			C			F		
d_I, Intersection Delay [s/veh]	106.03											
Intersection LOS	F											
Intersection V/C	0.978											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	64.40	64.40	0.00	64.40
l_p,int, Pedestrian LOS Score for Intersectio	3.530	2.837	0.000	2.782
Crosswalk LOS	D	C	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	756	143	427	413
d_b, Bicycle Delay [s]	29.02	64.68	46.41	47.20
l_b,int, Bicycle LOS Score for Intersection	6.721	2.292	1.984	2.230
Bicycle LOS	F	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Armstrong/30th St

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.882

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	135.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1904	56	32	917	22	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	662	0	4	721	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	7	0	0	0	4
Total Hourly Volume [veh/h]	2909	59	42	1803	26	32
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	766	16	11	474	7	8
Total Analysis Volume [veh/h]	3062	62	44	1898	27	34
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	5	5	0
Maximum Green [s]	45	0	30	5	30	0
Amber [s]	4.3	0.0	4.3	4.3	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	32	0	11	21	88	0
Vehicle Extension [s]	3.0	0.0	2.0	3.0	2.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	19	0	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.3	3.3	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	0.00	3.30	2.00
g_i, Effective Green Time [s]	105	105	105	94	6
g / C, Green / Cycle	0.88	0.88	0.88	0.78	0.05
(v / s)_i Volume / Saturation Flow Rate	0.85	0.04	0.62	0.52	0.04
s, saturation flow rate [veh/h]	3618	1615	71	3618	1696
c, Capacity [veh/h]	3168	1414	126	2836	79
d1, Uniform Delay [s]	6.04	0.97	40.07	5.89	56.54
k, delay calibration	0.50	0.50	0.50	0.50	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.92	0.06	7.42	1.27	5.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.97	0.04	0.35	0.67	0.77
d, Delay for Lane Group [s/veh]	15.96	1.02	47.49	7.16	62.23
Lane Group LOS	B	A	D	A	E
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.99	0.06	1.44	7.73	1.97
50th-Percentile Queue Length [ft/ln]	249.65	1.48	35.89	193.20	49.22
95th-Percentile Queue Length [veh/ln]	15.17	0.11	2.58	12.29	3.54
95th-Percentile Queue Length [ft/ln]	379.22	2.67	64.60	307.18	88.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.96	1.02	47.49	7.16	62.23	62.23
Movement LOS	B	A	D	A	E	E
d_A, Approach Delay [s/veh]	15.66		8.08		62.23	
Approach LOS	B		A		E	
d_I, Intersection Delay [s/veh]	13.34					
Intersection LOS	B					
Intersection V/C	0.882					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.802	0.000	1.869
Crosswalk LOS	D	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	445	262	1400
d_b, Bicycle Delay [s]	36.27	45.33	5.40
l_b,int, Bicycle LOS Score for Intersection	4.143	3.162	1.667
Bicycle LOS	D	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Valley Way/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	217.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.256

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	280.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	30	1155	0	0	809	4	230	0	85	294	60	572
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	607	0	0	716	3	3	0	0	0	0	50
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	1	0	0	10	0	0	73
Total Hourly Volume [veh/h]	35	1970	0	0	1671	7	274	0	90	347	71	652
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	518	0	0	440	2	72	0	24	91	19	172
Total Analysis Volume [veh/h]	37	2074	0	0	1759	7	288	0	95	365	75	686
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	10	62	0	0	52	0	27	0	0	0	51	0
Vehicle Extension [s]	3.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	0.0	0.0	3.3	0.0	3.4	0.0	0.0	0.0	3.3	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	5.40	5.30	5.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	3.40	3.30	3.30
g_i, Effective Green Time [s]	4	57	48	48	22	46	46
g / C, Green / Cycle	0.03	0.41	0.34	0.34	0.15	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.02	0.57	0.46	0.47	0.22	0.20	0.46
s, saturation flow rate [veh/h]	1810	3618	1900	1897	1757	1810	1639
c, Capacity [veh/h]	52	1465	653	652	271	591	535
d1, Uniform Delay [s]	67.42	41.65	45.96	45.96	59.20	39.78	47.15
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.17	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.55	191.10	168.80	169.63	206.25	1.64	200.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	1.42	1.35	1.35	1.41	0.62	1.42
d, Delay for Lane Group [s/veh]	83.97	232.75	214.76	215.59	265.45	41.42	247.86
Lane Group LOS	F	F	F	F	F	D	F
Critical Lane Group	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.53	62.99	52.41	52.49	25.00	10.82	48.17
50th-Percentile Queue Length [ft/ln]	38.29	1574.68	1310.24	1312.16	625.08	270.59	1204.27
95th-Percentile Queue Length [veh/ln]	2.76	93.83	76.89	77.04	38.33	16.22	72.38
95th-Percentile Queue Length [ft/ln]	68.92	2345.72	1922.33	1926.11	958.20	405.47	1809.45

Movement, Approach, & Intersection Results

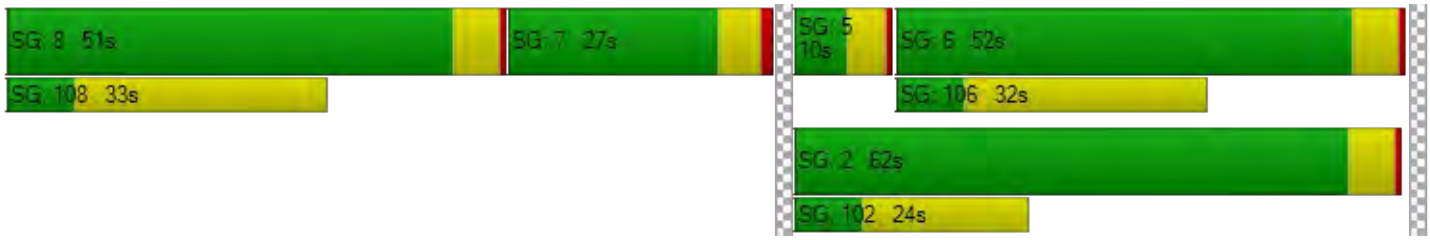
d_M, Delay for Movement [s/veh]	83.97	232.75	0.00	0.00	215.17	215.59	265.45	0.00	265.45	41.42	247.86	247.86
Movement LOS	F	F			F	F	F		F	D	F	F
d_A, Approach Delay [s/veh]	230.15			215.17			265.45			180.94		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	217.46											
Intersection LOS	F											
Intersection V/C	1.256											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	59.43	59.43	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.941	2.198	2.520
Crosswalk LOS	F	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	810	667	309	653
d_b, Bicycle Delay [s]	24.78	31.09	50.07	31.76
l_b,int, Bicycle LOS Score for Intersection	3.301	3.017	2.208	3.538
Bicycle LOS	C	C	B	D

Sequence

Ring 1	8	7	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Valley Way/SR-60 WB On Ramp

Control Type:	Signalized	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.742

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No			
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	168	1202	981	198	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	607	234	481	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	72	0	0
Total Hourly Volume [veh/h]	198	2025	1392	643	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	533	366	169	0	0
Total Analysis Volume [veh/h]	208	2132	1465	677	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	63.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	5	0	0	0
Maximum Green [s]	30	40	40	0	0	0
Amber [s]	4.1	4.8	4.8	0.0	0.0	0.0
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0
Split [s]	25	140	115	0	0	0
Vehicle Extension [s]	3.0	2.0	2.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	3.3	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	140	140	140	140	
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	
g_i, Effective Green Time [s]	18	135	112	112	
g / C, Green / Cycle	0.13	0.96	0.80	0.80	
(v / s)_i Volume / Saturation Flow Rate	0.11	0.59	0.56	0.63	
s, saturation flow rate [veh/h]	1810	3618	1900	1709	
c, Capacity [veh/h]	233	3481	1521	1368	
d1, Uniform Delay [s]	60.01	0.24	6.39	7.47	
k, delay calibration	0.11	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	11.16	0.81	2.76	4.53	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.89	0.61	0.70	0.78	
d, Delay for Lane Group [s/veh]	71.18	1.06	9.16	12.00	
Lane Group LOS	E	A	A	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.85	0.39	11.44	13.72	
50th-Percentile Queue Length [ft/ln]	196.25	9.83	285.93	343.07	
95th-Percentile Queue Length [veh/ln]	12.45	0.71	16.98	19.80	
95th-Percentile Queue Length [ft/ln]	311.13	17.70	424.59	494.95	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.18	1.06	9.92	12.00	0.00	0.00
Movement LOS	E	A	A	B		
d_A, Approach Delay [s/veh]	7.29		10.58		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	8.86					
Intersection LOS	A					
Intersection V/C	0.742					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.378
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1924	1567	0
d_b, Bicycle Delay [s]	0.10	3.28	70.00
l_b,int, Bicycle LOS Score for Intersection	3.490	3.386	4.132
Bicycle LOS	C	C	D

Sequence

Ring 1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: SR-60 EB Ramps/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	195.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.819

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	1120.00	100.00	100.00	200.00	100.00	100.00	260.00	100.00	340.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	490.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	20	1	15	1274	4	108	83	472	20	12	312	115
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	480	0	0	0	21	0	0	12	44
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	13	0	0	2	0	0	18
Total Hourly Volume [veh/h]	24	1	16	1983	5	114	98	578	22	14	380	162
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	4	522	1	30	26	152	6	4	100	43
Total Analysis Volume [veh/h]	25	1	17	2087	5	120	103	608	23	15	400	171
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	0	3	0	0	4	0	5	2	0	1	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	5
Maximum Green [s]	0	15	0	0	35	0	25	35	0	15	35	35
Amber [s]	0.0	4.1	0.0	0.0	4.8	0.0	4.1	5.2	0.0	4.1	5.2	5.2
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.5	0.0	1.0	0.5	0.5
Split [s]	0	11	0	0	53	0	11	45	0	11	45	45
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	3.0	2.0	2.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	25	0	0	17	0	0	32	32
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	3.8	0.0	3.1	3.7	0.0	3.1	3.7	3.7
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		No			No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.10	5.80	5.80	5.10	5.70	5.70	5.10	5.70	5.80
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.80	3.80	3.10	3.70	3.70	3.10	3.70	0.00
g_i, Effective Green Time [s]	4	47	47	8	45	45	2	39	92
g / C, Green / Cycle	0.03	0.39	0.39	0.07	0.38	0.38	0.02	0.33	0.77
(v / s)_i Volume / Saturation Flow Rate	0.02	0.61	0.62	0.06	0.17	0.17	0.01	0.11	0.11
s, saturation flow rate [veh/h]	1729	1810	1787	1810	1900	1876	1810	3618	1615
c, Capacity [veh/h]	55	712	703	117	716	707	31	1191	1243
d1, Uniform Delay [s]	57.66	36.40	36.40	55.66	27.97	27.97	58.47	30.36	3.55
k, delay calibration	0.04	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.40	256.17	265.10	18.20	1.98	2.01	11.64	0.76	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	1.55	1.57	0.88	0.44	0.44	0.49	0.34	0.14
d, Delay for Lane Group [s/veh]	66.05	292.57	301.50	73.85	29.95	29.98	70.11	31.12	3.60
Lane Group LOS	E	F	F	E	C	C	E	C	A
Critical Lane Group	Yes	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.43	70.72	71.57	3.60	6.95	6.87	0.54	4.36	0.81
50th-Percentile Queue Length [ft/ln]	35.87	1768.05	1789.18	90.11	173.64	171.71	13.52	108.95	20.15
95th-Percentile Queue Length [veh/ln]	2.58	108.03	109.70	6.49	11.27	11.17	0.97	7.78	1.45
95th-Percentile Queue Length [ft/ln]	64.57	2700.85	2742.55	162.20	281.70	279.17	24.33	194.54	36.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.05	66.05	66.05	296.77	301.50	301.50	73.85	29.97	29.98	70.11	31.12	3.60
Movement LOS	E	E	E	F	F	F	E	C	C	E	C	A
d_A, Approach Delay [s/veh]	66.05			297.03			36.12			24.09		
Approach LOS	E			F			D			C		
d_I, Intersection Delay [s/veh]	195.95											
Intersection LOS	F											
Intersection V/C	0.819											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.768	2.879	2.695	0.000
Crosswalk LOS	A	C	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	98	787	655	655
d_b, Bicycle Delay [s]	54.25	22.08	27.14	27.14
l_b,int, Bicycle LOS Score for Intersection	1.634	5.231	2.167	2.058
Bicycle LOS	A	F	B	B

Sequence

Ring 1	4	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Valley Way/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	87.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.925

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	3	1	0	1	1	0	1
Entry Pocket Length [ft]	145.00	100.00	510.00	170.00	100.00	150.00	410.00	100.00	180.00	260.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	385	82	424	335	208	597	1013	31	52	192	422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	103	0	72	118	44	480	21	0	0	12	25
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	10	0	0	29	0	0	4	0	0	52
Total Hourly Volume [veh/h]	28	557	87	572	513	260	1184	1216	33	61	239	471
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	147	23	151	135	68	312	320	9	16	63	124
Total Analysis Volume [veh/h]	29	586	92	602	540	274	1246	1280	35	64	252	496
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	71.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	4	6	0	4	6	6	4	6	0	4	6	6
Maximum Green [s]	25	30	0	35	30	30	35	45	0	25	45	45
Amber [s]	3.6	4.8	0.0	3.6	4.8	4.8	3.6	4.8	0.0	3.6	4.8	4.8
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	11	32	0	33	54	54	40	65	0	10	35	35
Vehicle Extension [s]	2.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	2.0	3.0	3.0
Walk [s]	0	5	0	5	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	23	39	39	0	34	0	0	24	24
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	3.5	0.0	2.0	3.5	3.5
I2, Clearance Lost Time [s]	2.6	3.8	0.0	2.6	3.8	3.8	2.6	3.8	0.0	2.6	3.8	3.8
Minimum Recall	No	No		No	No	No	No	Yes		No	Yes	Yes
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.80	5.80	4.60	5.80	4.60	4.60	7.30	7.30	4.60	7.30	6.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.80	3.80	2.60	3.80	0.00	2.60	3.80	3.80	2.60	3.80	0.00
g_i, Effective Green Time [s]	3	25	25	28	50	91	35	59	59	5	29	63
g / C, Green / Cycle	0.02	0.18	0.18	0.20	0.36	0.65	0.25	0.42	0.42	0.04	0.21	0.45
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.06	0.17	0.15	0.10	0.35	0.35	0.02	0.04	0.07	0.31
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	2859	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	38	639	285	713	1296	1865	889	1529	683	70	754	748
d1, Uniform Delay [s]	68.15	56.63	50.32	53.68	33.88	9.34	52.30	36.11	23.85	67.08	47.16	29.10
k, delay calibration	0.04	0.11	0.11	0.11	0.11	0.11	0.23	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.62	5.81	0.65	2.85	0.21	0.04	184.18	5.62	0.14	16.00	1.19	4.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.92	0.32	0.84	0.42	0.15	1.40	0.84	0.05	0.92	0.33	0.66
d, Delay for Lane Group [s/veh]	78.77	62.44	50.97	56.52	34.10	9.38	236.48	41.74	23.99	83.08	48.35	33.69
Lane Group LOS	E	E	D	E	C	A	F	D	C	F	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.13	10.47	2.83	10.25	6.82	1.51	37.89	19.90	0.70	2.57	3.84	13.50
50th-Percentile Queue Length [ft/ln]	28.26	261.64	70.69	256.17	170.59	37.86	947.20	497.46	17.57	64.23	96.05	337.56
95th-Percentile Queue Length [veh/ln]	2.03	15.77	5.09	15.50	11.11	2.73	56.97	27.21	1.26	4.62	6.92	19.53
95th-Percentile Queue Length [ft/ln]	50.87	394.28	127.24	387.42	277.68	68.15	1424.27	680.36	31.62	115.62	172.90	488.21

Movement, Approach, & Intersection Results

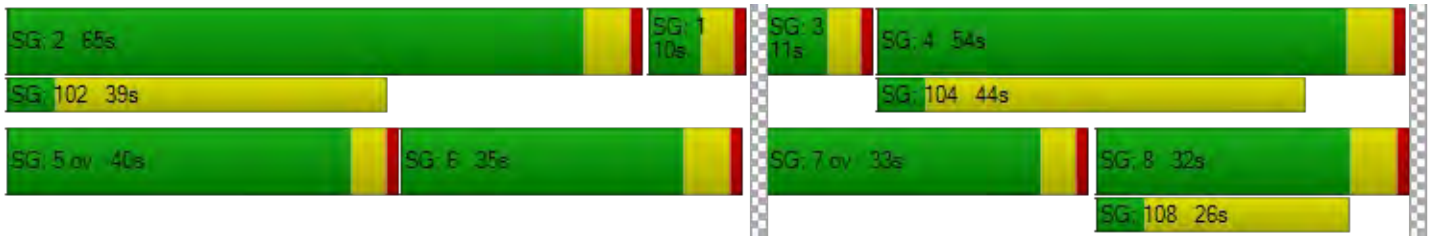
d_M, Delay for Movement [s/veh]	78.77	62.44	50.97	56.52	34.10	9.38	236.48	41.74	23.99	83.08	48.35	33.69
Movement LOS	E	E	D	E	C	A	F	D	C	F	D	C
d_A, Approach Delay [s/veh]	61.62			38.85			136.24			42.13		
Approach LOS	E			D			F			D		
d_I, Intersection Delay [s/veh]	87.65											
Intersection LOS	F											
Intersection V/C	0.925											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	0.00	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersectio	2.821	0.000	3.280	3.219
Crosswalk LOS	C	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	374	689	846	417
d_b, Bicycle Delay [s]	46.25	30.10	23.32	43.85
l_b,int, Bicycle LOS Score for Intersection	2.151	2.752	3.676	2.272
Bicycle LOS	B	C	D	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Jurupa Rd/Mission Blvd

Control Type:	Two-way stop	Delay (sec / veh):	1,918.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.610

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	280.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	14	245	1479	47	120	635
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	46	93	0	27	37
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	335	1838	55	169	786
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	88	484	14	44	207
Total Analysis Volume [veh/h]	18	353	1935	58	178	827
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.61	1.37	0.02	0.00	0.61	0.01
d_M, Delay for Movement [s/veh]	1918.12	1410.05	0.00	0.00	34.73	0.00
Movement LOS	F	F	A	A	D	A
95th-Percentile Queue Length [veh/ln]	38.35	38.35	0.00	0.00	3.71	0.00
95th-Percentile Queue Length [ft/ln]	958.82	958.82	0.00	0.00	92.64	0.00
d_A, Approach Delay [s/veh]	1434.70		0.00		6.15	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	159.83					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 12: Pacific Ave/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.663

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	130.00	100.00	130.00	130.00	100.00	115.00	275.00	100.00	50.00	265.00	100.00	230.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	91	36	66	29	27	77	136	1234	161	170	583	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	114	0	99	94	39	67	0	72	0	0	106
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	13	0	0	26	0	0	14
Total Hourly Volume [veh/h]	132	156	70	133	126	117	227	1456	236	201	688	124
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	41	18	35	33	31	60	383	62	53	181	33
Total Analysis Volume [veh/h]	139	164	74	140	133	123	239	1533	248	212	724	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	4	6	0	4	5	0
Maximum Green [s]	0	30	0	0	30	0	25	45	0	25	45	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.5	0.0	4.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	36	0	0	36	0	27	39	0	15	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	2.5	3.5	0.0	2.5	3.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	22	22	22	22	22	22	14	42	42	11	39	39
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.25	0.25	0.15	0.47	0.47	0.12	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.12	0.09	0.05	0.12	0.07	0.08	0.13	0.42	0.15	0.12	0.20	0.08
s, saturation flow rate [veh/h]	1141	1900	1615	1160	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	267	469	399	253	469	399	280	1700	759	211	1563	698
d1, Uniform Delay [s]	35.85	27.94	26.75	37.06	27.45	27.63	37.07	21.95	14.94	39.75	18.15	15.80
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.58	0.45	0.22	1.89	0.33	0.43	7.37	8.21	1.15	29.82	0.99	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.35	0.19	0.55	0.28	0.31	0.85	0.90	0.33	1.00	0.46	0.19
d, Delay for Lane Group [s/veh]	37.42	28.38	26.98	38.95	27.78	28.07	44.43	30.16	16.09	69.57	19.14	16.39
Lane Group LOS	D	C	C	D	C	C	D	C	B	F	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.97	2.92	1.26	3.06	2.33	2.17	5.47	15.11	3.14	6.23	5.12	1.66
50th-Percentile Queue Length [ft/ln]	74.31	73.07	31.56	76.59	58.13	54.33	136.85	377.68	78.56	155.71	128.08	41.54
95th-Percentile Queue Length [veh/ln]	5.35	5.26	2.27	5.51	4.19	3.91	9.31	21.48	5.66	10.34	8.83	2.99
95th-Percentile Queue Length [ft/ln]	133.76	131.53	56.81	137.86	104.64	97.80	232.78	537.04	141.41	258.47	220.87	74.77

Movement, Approach, & Intersection Results

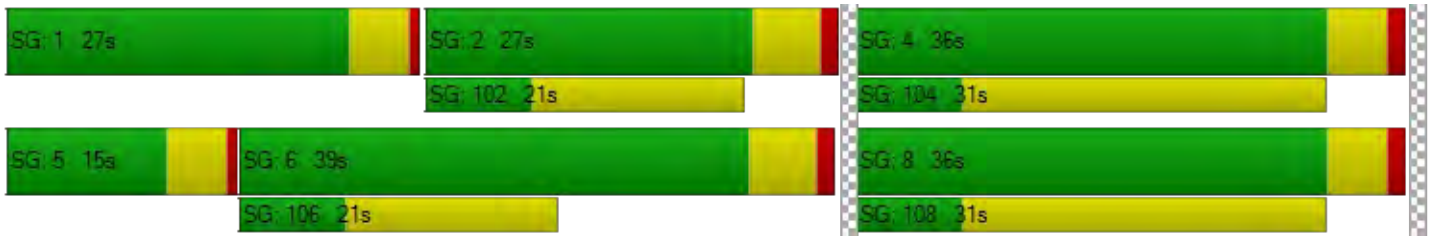
d_M, Delay for Movement [s/veh]	37.42	28.38	26.98	38.95	27.78	28.07	44.43	30.16	16.09	69.57	19.14	16.39
Movement LOS	D	C	C	D	C	C	D	C	B	F	B	B
d_A, Approach Delay [s/veh]	31.44			31.82			30.12			28.82		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	30.07											
Intersection LOS	C											
Intersection V/C	0.663											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
l_p,int, Pedestrian LOS Score for Intersectio	2.387	2.382	3.347	3.286
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	689	744	478
d_b, Bicycle Delay [s]	19.34	19.34	17.73	26.07
l_b,int, Bicycle LOS Score for Intersection	2.195	2.234	3.248	2.451
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Cedar Ave/I-10 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	230.00	100.00	230.00	100.00	100.00	100.00	485.00	100.00	485.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	221	1349	0	0	1185	594	0	0	0	285	0	448
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	522	213	0	0	110	0	0	0	9	278	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	70	0	0	1	0	0	53
Total Hourly Volume [veh/h]	783	1805	0	0	1508	631	0	0	9	614	0	476
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	206	475	0	0	397	166	0	0	2	162	0	125
Total Analysis Volume [veh/h]	824	1900	0	0	1587	664	0	0	9	646	0	501
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	20	39	0	0	19	0	0	0	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	16	38	18	18		14	14	14
g / C, Green / Cycle	0.26	0.64	0.31	0.31		0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.23	0.37	0.18	0.23		0.18	0.18	0.18
s, saturation flow rate [veh/h]	3514	5176	8626	2859		1810	1810	2859
c, Capacity [veh/h]	921	3292	2650	878		417	417	659
d1, Uniform Delay [s]	21.33	6.28	17.64	18.75		21.62	21.62	21.53
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	3.34	0.74	1.01	6.02		3.10	3.10	1.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.58	0.60	0.76		0.77	0.77	0.76
d, Delay for Lane Group [s/veh]	24.67	7.02	18.65	24.78		24.72	24.72	23.37
Lane Group LOS	C	A	B	C		C	C	C
Critical Lane Group	Yes	No	No	Yes		Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.25	2.94	3.33	4.28		4.18	4.18	3.12
50th-Percentile Queue Length [ft/ln]	131.24	73.50	83.36	106.92		104.61	104.61	78.08
95th-Percentile Queue Length [veh/ln]	9.01	5.29	6.00	7.67		7.53	7.53	5.62
95th-Percentile Queue Length [ft/ln]	225.18	132.30	150.06	191.72		188.30	188.30	140.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.67	7.02	0.00	0.00	18.65	24.78	0.00	0.00	0.00	24.72	24.72	23.37
Movement LOS	C	A			B	C				C	C	C
d_A, Approach Delay [s/veh]	12.36			20.46			0.00			24.13		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	17.54											
Intersection LOS	B											
Intersection V/C	0.645											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.455	2.629
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	500	0	567
d_b, Bicycle Delay [s]	5.21	16.88	30.00	15.41
l_b,int, Bicycle LOS Score for Intersection	3.058	2.326	4.132	3.540
Bicycle LOS	C	B	D	D

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Cedar Ave/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	43.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.000

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	2	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	600.00	100.00	600.00	100.00	100.00	100.00	380.00	100.00	380.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1090.00
Speed [mph]	40.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1015	350	367	1102	0	556	6	187	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	735	537	0	397	0	0	0	312	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	95	0	0	0	0	0	53	0	0	0
Total Hourly Volume [veh/h]	0	1933	855	433	1697	0	656	7	480	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	509	225	114	447	0	173	2	126	0	0	0
Total Analysis Volume [veh/h]	0	2035	900	456	1786	0	691	7	505	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	44	0	14	58	0	0	27	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	85	85	85	85	85	85	85	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	40	40	10	54	23	23	23	
g / C, Green / Cycle	0.47	0.47	0.12	0.64	0.27	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.56	0.13	0.35	0.19	0.19	0.31	
s, saturation flow rate [veh/h]	8626	1615	3514	5176	1810	1811	1615	
c, Capacity [veh/h]	4059	760	413	3288	490	490	437	
d1, Uniform Delay [s]	15.59	22.50	37.50	8.63	28.01	28.01	31.00	
k, delay calibration	0.50	0.50	0.11	0.50	0.12	0.12	0.37	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.44	96.04	54.86	0.65	2.11	2.10	87.92	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.50	1.18	1.10	0.54	0.71	0.71	1.16	
d, Delay for Lane Group [s/veh]	16.03	118.54	92.36	9.28	30.13	30.11	118.92	
Lane Group LOS	B	F	F	A	C	C	F	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.98	33.43	7.25	4.99	6.39	6.39	19.13	
50th-Percentile Queue Length [ft/ln]	124.52	835.68	181.21	124.78	159.73	159.65	478.16	
95th-Percentile Queue Length [veh/ln]	8.64	48.34	12.11	8.66	10.53	10.53	28.54	
95th-Percentile Queue Length [ft/ln]	216.02	1208.41	302.85	216.38	263.36	263.25	713.59	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	16.03	118.54	92.36	9.28	0.00	30.12	30.11	118.92	0.00	0.00	0.00
Movement LOS		B	F	F	A		C	C	F			
d_A, Approach Delay [s/veh]	47.47			26.18			67.39			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	43.74											
Intersection LOS	D											
Intersection V/C	1.000											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.562	2.424
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	941	1271	541	0
d_b, Bicycle Delay [s]	11.91	5.65	22.61	42.50
l_b,int, Bicycle LOS Score for Intersection	2.560	2.793	3.632	4.132
Bicycle LOS	B	C	D	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Cedar Ave/Orange St

Control Type:	Signalized	Delay (sec / veh):	50.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.962

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	160.00	100.00	100.00	140.00	100.00	100.00	400.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	814	2	85	955	246	280	22	15	11	7	272
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	1273	0	0	709	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	29	0	0	2	0	0	32
Total Hourly Volume [veh/h]	20	2234	2	100	1836	261	330	26	16	13	8	289
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	588	1	26	483	69	87	7	4	3	2	76
Total Analysis Volume [veh/h]	21	2352	2	105	1933	275	347	27	17	14	8	304
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	27	66	0	9	48	0	0	30	0	0	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	71	62	62	71	65	65	26	26	26	26
g / C, Green / Cycle	0.68	0.59	0.59	0.68	0.62	0.62	0.25	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.07	0.62	0.62	0.34	0.53	0.17	0.32	0.02	0.02	0.19
s, saturation flow rate [veh/h]	280	1900	1899	312	3618	1615	1084	1779	1383	1615
c, Capacity [veh/h]	212	1126	1126	223	2224	993	275	440	399	400
d1, Uniform Delay [s]	17.92	21.38	21.38	25.46	16.73	9.39	44.99	30.47	30.11	36.61
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	39.41	39.52	7.01	4.96	0.69	143.38	0.10	0.06	5.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	1.05	1.05	0.47	0.87	0.28	1.26	0.10	0.06	0.76
d, Delay for Lane Group [s/veh]	18.12	60.80	60.90	32.48	21.69	10.08	188.37	30.57	30.16	42.05
Lane Group LOS	B	F	F	C	C	B	F	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.14	35.94	35.97	1.11	17.88	2.80	18.19	0.87	0.43	7.74
50th-Percentile Queue Length [ft/ln]	3.54	898.62	899.16	27.86	446.99	70.04	454.77	21.80	10.76	193.56
95th-Percentile Queue Length [veh/ln]	0.25	47.54	47.58	2.01	24.81	5.04	28.34	1.57	0.77	12.31
95th-Percentile Queue Length [ft/ln]	6.37	1188.59	1189.52	50.15	620.36	126.08	708.50	39.24	19.37	307.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.12	60.85	60.90	32.48	21.69	10.08	188.37	30.57	30.57	30.16	30.16	42.05
Movement LOS	B	F	E	C	C	B	F	C	C	C	C	D
d_A, Approach Delay [s/veh]	60.47			20.80			170.62			41.25		
Approach LOS	E			C			F			D		
d_I, Intersection Delay [s/veh]	50.30											
Intersection LOS	D											
Intersection V/C	0.962											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	0.00	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.457	0.000	2.207	2.246
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1181	838	495	495
d_b, Bicycle Delay [s]	8.80	17.72	29.72	29.72
l_b,int, Bicycle LOS Score for Intersection	3.519	3.492	2.208	2.150
Bicycle LOS	D	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Cedar Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	86.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.936

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	115.00	100.00	100.00	250.00	100.00	80.00	190.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00			30.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	96	541	25	116	773	89	189	355	135	19	261	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	1103	1	9	668	32	156	11	35	11	2	22
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	14	0	0	19	0	0	17
Total Hourly Volume [veh/h]	147	1741	28	146	1580	123	379	430	175	33	310	153
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	458	7	38	416	32	100	113	46	9	82	40
Total Analysis Volume [veh/h]	155	1833	29	154	1663	129	399	453	184	35	326	161
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	60	0	18	59	0	27	45	0	12	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	62	62	13	62	62	23	40	40	4	21	21
g / C, Green / Cycle	0.10	0.46	0.46	0.10	0.46	0.46	0.17	0.30	0.30	0.03	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.09	0.49	0.49	0.09	0.47	0.48	0.22	0.13	0.11	0.02	0.13	0.14
s, saturation flow rate [veh/h]	1810	1900	1890	1810	1900	1853	1810	3618	1615	1810	1900	1693
c, Capacity [veh/h]	180	870	865	178	868	846	308	1075	480	51	294	262
d1, Uniform Delay [s]	59.86	36.61	36.61	59.94	36.67	36.67	56.00	38.12	37.64	65.02	55.68	55.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.45	0.11	0.11	0.11	0.16	0.17
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.32	51.24	53.33	11.56	39.16	47.63	152.29	0.26	0.50	15.29	10.69	14.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	1.07	1.08	0.86	1.03	1.06	1.29	0.42	0.38	0.69	0.87	0.89
d, Delay for Lane Group [s/veh]	71.19	87.85	89.94	71.50	75.82	84.29	208.29	38.39	38.14	80.31	66.37	70.14
Lane Group LOS	E	F	F	E	F	F	F	D	D	F	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.80	40.34	40.62	5.70	36.63	37.71	23.53	6.12	4.94	1.38	9.08	8.56
50th-Percentile Queue Length [ft/ln]	145.07	1008.51	1015.56	142.53	915.72	942.81	588.27	152.89	123.51	34.55	227.04	213.88
95th-Percentile Queue Length [veh/ln]	9.75	53.53	54.08	9.62	47.75	49.96	35.43	10.17	8.59	2.49	14.02	13.35
95th-Percentile Queue Length [ft/ln]	243.83	1338.28	1352.11	240.42	1193.79	1248.98	885.75	254.28	214.63	62.18	350.59	333.80

Movement, Approach, & Intersection Results

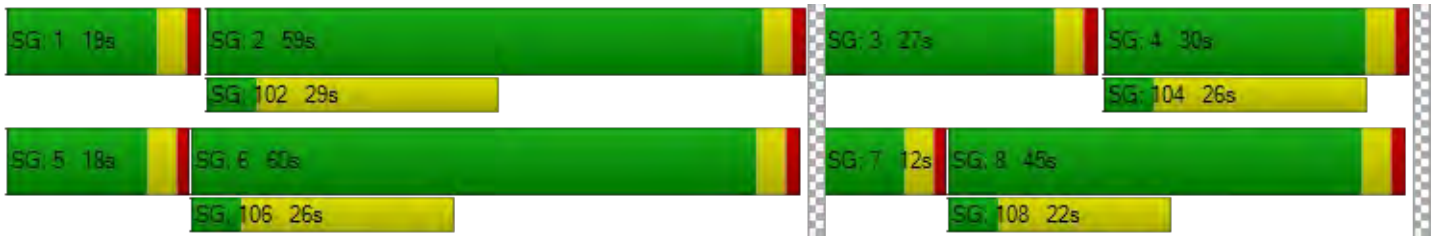
d_M, Delay for Movement [s/veh]	71.19	88.88	89.94	71.50	79.73	84.29	208.29	38.39	38.14	80.31	67.19	70.14
Movement LOS	E	F	F	E	E	F	F	D	D	F	E	E
d_A, Approach Delay [s/veh]	87.53			79.38			103.78			68.98		
Approach LOS	F			E			F			E		
d_I, Intersection Delay [s/veh]	85.95											
Intersection LOS	F											
Intersection V/C	0.936											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	58.80	58.80	58.80	58.80
l_p,int, Pedestrian LOS Score for Intersectio	3.089	3.440	2.875	2.817
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	830	815	607	385
d_b, Bicycle Delay [s]	23.11	23.70	32.73	44.00
l_b,int, Bicycle LOS Score for Intersection	3.226	3.177	2.430	2.004
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Cedar Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	57.3
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.936

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	290.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	148	631	53	70	765	48	62	135	122	22	132	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	66	1096	0	0	679	0	49	3	46	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	6	0	0	19	0	0	5
Total Hourly Volume [veh/h]	241	1841	57	83	1582	51	122	162	171	26	157	46
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	484	15	22	416	13	32	43	45	7	41	12
Total Analysis Volume [veh/h]	254	1938	60	87	1665	54	128	171	180	27	165	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	14	66	0	10	62	0	0	29	0	0	29	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	62	62	6	58	58	25	25
g / C, Green / Cycle	0.10	0.59	0.59	0.06	0.55	0.55	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.14	0.53	0.53	0.05	0.45	0.46	0.34	0.14
s, saturation flow rate [veh/h]	1810	1900	1880	1810	1900	1879	1411	1709
c, Capacity [veh/h]	172	1122	1110	103	1050	1038	379	445
d1, Uniform Delay [s]	47.50	18.57	18.79	49.03	19.23	19.36	41.79	35.08
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	220.04	10.71	11.59	16.25	7.18	7.55	137.58	1.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.47	0.89	0.90	0.84	0.82	0.83	1.26	0.54
d, Delay for Lane Group [s/veh]	267.54	29.28	30.38	65.28	26.42	26.91	179.37	36.10
Lane Group LOS	F	C	C	E	C	C	F	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	15.01	22.43	22.89	2.72	18.10	18.24	24.48	5.34
50th-Percentile Queue Length [ft/ln]	375.27	560.64	572.21	67.91	452.53	456.10	611.92	133.58
95th-Percentile Queue Length [veh/ln]	24.22	30.19	30.73	4.89	25.08	25.25	36.79	9.13
95th-Percentile Queue Length [ft/ln]	605.58	754.79	768.36	122.24	626.97	631.22	919.84	228.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	267.54	29.81	30.38	65.28	26.65	26.91	179.37	179.37	179.37	36.10	36.10	36.10
Movement LOS	F	C	C	E	C	C	F	F	F	D	D	D
d_A, Approach Delay [s/veh]	56.64			28.52			179.37			36.10		
Approach LOS	E			C			F			D		
d_I, Intersection Delay [s/veh]	57.28											
Intersection LOS	E											
Intersection V/C	0.936											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.165	3.266	2.227	2.101
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1181	1105	476	476
d_b, Bicycle Delay [s]	8.80	10.52	30.48	30.48
l_b,int, Bicycle LOS Score for Intersection	3.422	3.055	2.381	1.964
Bicycle LOS	C	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Cedar Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	261.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.748

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	190.00	100.00	100.00	345.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	180.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	78	736	76	105	800	45	51	198	72	45	64	69
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	92	870	0	0	587	139	295	40	215	0	17	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	9	0	0	19	0	0	30	0	0	8
Total Hourly Volume [veh/h]	184	1738	81	124	1531	173	355	274	270	53	93	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	457	21	33	403	46	93	72	71	14	24	19
Total Analysis Volume [veh/h]	194	1829	85	131	1612	182	374	288	284	56	98	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	40	0	9	39	0	0	36	0	0	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	36	36	5	35	35	32	32	32	32
g / C, Green / Cycle	0.07	0.42	0.42	0.06	0.41	0.41	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.11	0.50	0.51	0.07	0.47	0.49	2.15	0.18	0.52	0.05
s, saturation flow rate [veh/h]	1810	1900	1871	1810	1900	1834	308	1615	295	1615
c, Capacity [veh/h]	128	805	792	106	782	755	182	608	169	608
d1, Uniform Delay [s]	39.50	24.50	24.50	40.00	25.00	25.00	40.34	20.05	26.92	17.35
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	242.06	97.45	105.28	120.60	81.00	97.13	1199.43	0.56	49.31	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.52	1.19	1.21	1.23	1.15	1.19	3.64	0.47	0.91	0.13
d, Delay for Lane Group [s/veh]	281.56	121.95	129.78	160.60	106.00	122.13	1239.78	20.61	76.22	17.44
Lane Group LOS	F	F	F	F	F	F	F	C	E	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	11.11	35.81	36.98	5.75	32.24	34.51	64.36	4.02	5.43	0.94
50th-Percentile Queue Length [ft/ln]	277.86	895.15	924.44	143.82	805.99	862.69	1609.04	100.44	135.85	23.40
95th-Percentile Queue Length [veh/ln]	18.60	51.36	53.35	10.25	45.70	49.56	108.86	7.23	9.26	1.69
95th-Percentile Queue Length [ft/ln]	465.09	1284.02	1333.77	256.26	1142.55	1239.07	2721.46	180.79	231.43	42.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	281.56	125.68	129.78	160.60	113.15	122.13	1239.78	1239.78	20.61	76.22	76.22	17.44
Movement LOS	F	F	F	F	F	F	F	F	C	E	E	B
d_A, Approach Delay [s/veh]	140.19			117.23			873.77			56.63		
Approach LOS	F			F			F			E		
d_I, Intersection Delay [s/veh]	261.20											
Intersection LOS	F											
Intersection V/C	2.748											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	3.590	3.683	2.618	2.276
Crosswalk LOS	D	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	847	824	753	753
d_b, Bicycle Delay [s]	14.12	14.71	16.52	16.52
l_b,int, Bicycle LOS Score for Intersection	3.306	3.163	3.170	1.954
Bicycle LOS	C	C	C	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Cedar Ave/7th St

Control Type:	Signalized	Delay (sec / veh):	48.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.900

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	295.00	100.00	100.00	190.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	125	776	12	45	796	33	30	29	293	40	12	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	69	953	2	2	768	32	9	0	53	2	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	7	0	0	40	0	0	3
Total Hourly Volume [veh/h]	217	1869	14	55	1707	64	44	34	359	49	14	29
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	492	4	14	449	17	12	9	94	13	4	8
Total Analysis Volume [veh/h]	228	1967	15	58	1797	67	46	36	378	52	15	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	52	0	11	47	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	51	51	4	43	43	23	23
g / C, Green / Cycle	0.13	0.57	0.57	0.04	0.48	0.48	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.13	0.52	0.52	0.03	0.49	0.50	0.28	0.13
s, saturation flow rate [veh/h]	1810	1900	1895	1810	1900	1876	1658	743
c, Capacity [veh/h]	241	1076	1073	81	908	896	468	251
d1, Uniform Delay [s]	38.67	17.69	17.74	42.42	23.50	23.50	34.28	27.25
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.33	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.58	13.98	14.29	11.17	36.95	40.77	29.96	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.92	0.92	0.72	1.03	1.04	0.98	0.39
d, Delay for Lane Group [s/veh]	55.26	31.67	32.02	53.60	60.45	64.27	64.24	28.23
Lane Group LOS	E	C	C	D	F	F	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.77	18.72	18.84	1.46	25.42	26.05	13.90	1.81
50th-Percentile Queue Length [ft/ln]	144.35	468.01	471.08	36.41	635.47	651.26	347.43	45.23
95th-Percentile Queue Length [veh/ln]	9.72	25.82	25.96	2.62	34.39	35.47	20.01	3.26
95th-Percentile Queue Length [ft/ln]	242.88	645.41	649.05	65.55	859.87	886.64	500.27	81.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.26	31.84	32.02	53.60	62.29	64.27	64.24	64.24	64.24	28.23	28.23	28.23
Movement LOS	E	C	C	D	E	E	E	E	E	C	C	C
d_A, Approach Delay [s/veh]	34.26			62.09			64.24			28.23		
Approach LOS	C			E			E			C		
d_I, Intersection Delay [s/veh]	48.48											
Intersection LOS	D											
Intersection V/C	0.900											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.834	3.669	2.172	1.807
Crosswalk LOS	D	D	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1067	956	511	511
d_b, Bicycle Delay [s]	9.80	12.27	24.94	24.94
l_b,int, Bicycle LOS Score for Intersection	3.385	3.151	2.385	1.726
Bicycle LOS	C	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Rubidoux Blvd/Market St

Control Type:	Signalized	Delay (sec / veh):	232.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.406

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	2	0	0
Entry Pocket Length [ft]	245.00	100.00	330.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	25	354	433	469	604	52	47	111	29	276	60	535
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.1800	1.1800	1.1800	1.1800	1.0000	1.0000	1.0000	1.0000	1.1800	1.0000	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	212	149	48	292	191	407	610	410	348	103	322	125
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	56	0	0	0	0	0	0	0	0	76
Total Hourly Volume [veh/h]	237	567	503	845	904	459	657	521	377	429	382	680
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	149	132	222	238	121	173	137	99	113	101	179
Total Analysis Volume [veh/h]	249	597	529	889	952	483	692	548	397	452	402	716
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	0	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	0.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	19	37	0	28	46	0	39	62	0	23	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	5.0	0.0	3.0	4.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.00	7.00	7.00	5.00	6.00	6.00	5.00	7.00	5.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	5.00	5.00	3.00	4.00	4.00	3.00	5.00	3.00	4.00	4.00
g_i, Effective Green Time [s]	14	30	30	23	40	40	34	55	18	40	40
g / C, Green / Cycle	0.09	0.20	0.20	0.15	0.27	0.27	0.23	0.37	0.12	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.14	0.17	0.33	0.25	0.26	0.30	0.38	0.53	0.13	0.21	0.44
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1769	3514	1900	1615
c, Capacity [veh/h]	169	724	323	539	965	431	410	649	422	507	431
d1, Uniform Delay [s]	68.00	57.49	60.00	63.50	54.74	55.00	58.00	47.50	66.00	51.16	55.00
k, delay calibration	0.29	0.50	0.50	0.17	0.50	0.50	0.50	0.50	0.11	0.22	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	231.42	10.37	300.66	295.25	25.98	80.79	319.64	214.16	42.75	5.75	308.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.47	0.83	1.64	1.65	0.99	1.12	1.69	1.46	1.07	0.79	1.66
d, Delay for Lane Group [s/veh]	299.42	67.86	360.66	358.75	80.71	135.79	377.64	261.66	108.75	56.91	363.29
Lane Group LOS	F	E	F	F	F	F	F	F	F	E	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	17.19	11.60	38.90	32.11	20.77	25.38	51.98	62.65	10.60	14.92	53.13
50th-Percentile Queue Length [ft/ln]	429.68	290.07	972.57	802.85	519.23	634.55	1299.45	1566.34	264.95	372.96	1328.27
95th-Percentile Queue Length [veh/ln]	27.24	17.19	60.27	49.91	28.24	36.04	79.88	93.85	16.41	21.25	82.12
95th-Percentile Queue Length [ft/ln]	680.99	429.73	1506.74	1247.71	706.08	900.91	1996.89	2346.18	410.33	531.33	2053.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	299.42	67.86	360.66	358.75	80.71	135.79	377.64	261.66	261.66	108.75	56.91	363.29
Movement LOS	F	E	F	F	F	F	F	F	F	F	E	F
d_A, Approach Delay [s/veh]	222.44			198.52			310.69			211.56		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	232.83											
Intersection LOS	F											
Intersection V/C	1.406											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	64.40	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.831	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	533	733	533
d_b, Bicycle Delay [s]	48.00	40.33	30.08	40.33
l_b,int, Bicycle LOS Score for Intersection	2.740	3.477	4.261	4.276
Bicycle LOS	B	C	E	E

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 21: Agua Mansa Rd/Market St

Control Type:	Signalized	Delay (sec / veh):	96.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.959

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	2	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	200.00	85.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			30.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	120	0	316	491	532	0	0	534	174
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	39	188	0	103	52	694	4	0	445	81
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	4	0	0	48	0	0	0	0	0	29
Total Hourly Volume [veh/h]	0	0	35	330	0	428	631	1322	4	0	1075	257
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	87	0	113	166	348	1	0	283	68
Total Analysis Volume [veh/h]	0	0	37	347	0	451	664	1392	4	0	1132	271
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	39	44	0	30	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	1.5	3.0	0.0	1.5	3.0	0.0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.2	0.0	0.0	3.9	0.0	2.2	4.5	0.0	2.2	4.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.20	5.90	5.90	4.20	6.50	6.50	4.20	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.90	3.90	2.20	4.50	4.50	2.20	4.50	4.50
g_i, Effective Green Time [s]	41	40	40	35	63	63	0	29	29
g / C, Green / Cycle	0.34	0.33	0.33	0.29	0.53	0.53	0.00	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.28	0.37	0.38	0.00	0.00	0.31	0.17
s, saturation flow rate [veh/h]	1615	1393	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	552	481	540	525	1905	851	2	859	384
d1, Uniform Delay [s]	26.75	35.58	36.91	42.60	21.85	13.48	0.00	45.75	41.92
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	9.07	14.23	133.98	0.55	0.00	0.00	144.74	2.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.72	0.84	1.27	0.73	0.00	0.00	1.32	0.71
d, Delay for Lane Group [s/veh]	26.98	44.65	51.13	176.58	22.40	13.48	0.00	190.49	44.32
Lane Group LOS	C	D	D	F	C	B	A	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.77	10.16	14.22	34.89	14.72	0.05	0.00	29.58	7.37
50th-Percentile Queue Length [ft/ln]	19.21	253.96	355.40	872.25	367.92	1.30	0.00	739.59	184.28
95th-Percentile Queue Length [veh/ln]	1.38	15.39	20.40	51.03	21.01	0.09	0.00	44.35	11.82
95th-Percentile Queue Length [ft/ln]	34.57	384.64	509.98	1275.73	525.21	2.35	0.00	1108.77	295.60

Movement, Approach, & Intersection Results

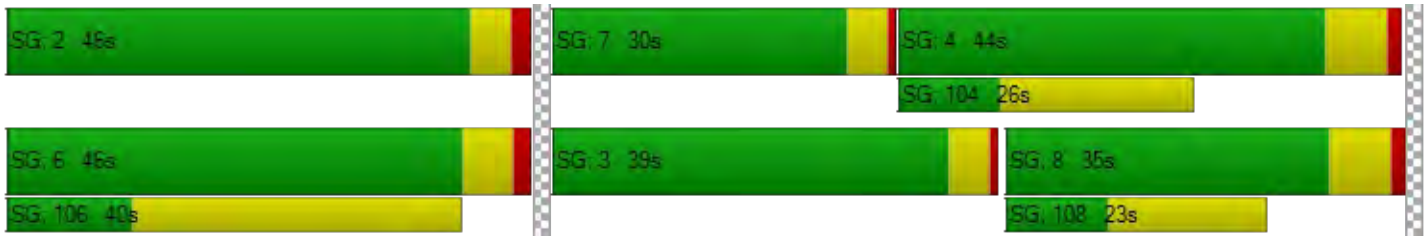
d_M, Delay for Movement [s/veh]	26.98	26.98	26.98	44.65	51.13	51.13	176.58	22.40	13.48	0.00	190.49	44.32
Movement LOS	C	C	C	D	D	D	F	C	B	A	F	D
d_A, Approach Delay [s/veh]	26.98			48.31			72.08			162.26		
Approach LOS	C			D			E			F		
d_I, Intersection Delay [s/veh]	96.72											
Intersection LOS	F											
Intersection V/C	0.959											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	13.0	15.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	47.70	45.94	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.751	2.609	3.115	0.000
Crosswalk LOS	A	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	668	625	475
d_b, Bicycle Delay [s]	26.14	26.60	28.36	34.88
l_b,int, Bicycle LOS Score for Intersection	1.627	2.956	3.259	2.741
Bicycle LOS	A	C	C	B

Sequence

Ring 1	-	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	3	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Rubidoux Blvd/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	77.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.241

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	85.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	61	783	0	0	863	12	13	0	135	448	72	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	89	277	0	0	672	16	7	0	91	0	65	139
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	3	0	0	25	0	0	25
Total Hourly Volume [veh/h]	161	1201	0	0	1690	27	22	0	225	529	150	223
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	316	0	0	445	7	6	0	59	139	39	59
Total Analysis Volume [veh/h]	169	1264	0	0	1779	28	23	0	237	557	158	235
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	4	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	35	0	0	35	0	20	0	0	0	30	0
Maximum Green [s]	0	25	0	0	25	0	35	0	0	0	20	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	4.8	0.0	0.0	0.0	4.8	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	48	0	0	48	0	37	0	0	0	37	0
Vehicle Extension [s]	0.0	3.5	0.0	0.0	3.5	0.0	2.0	0.0	0.0	0.0	3.5	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	3.8	0.0	0.0	0.0	3.8	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.80	5.80	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.40	3.40	3.80	3.80	3.80	3.80
g_i, Effective Green Time [s]	43	43	43	43	31	31	31	31
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.64	0.35	0.48	0.48	0.02	0.15	0.60	0.15
s, saturation flow rate [veh/h]	264	3618	1900	1890	1007	1615	1189	1615
c, Capacity [veh/h]	91	1813	952	947	95	593	512	593
d1, Uniform Delay [s]	42.44	16.25	20.16	20.26	42.31	19.95	30.05	19.93
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.50	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	426.97	2.25	19.14	20.03	0.49	0.16	190.30	0.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.86	0.70	0.95	0.95	0.24	0.40	1.40	0.40
d, Delay for Lane Group [s/veh]	469.41	18.50	39.30	40.30	42.80	20.12	220.34	20.44
Lane Group LOS	F	B	D	D	D	C	F	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	12.60	8.76	19.60	19.88	0.49	3.38	37.55	3.34
50th-Percentile Queue Length [ft/ln]	315.07	219.12	490.05	497.05	12.24	84.41	938.63	83.50
95th-Percentile Queue Length [veh/ln]	22.68	13.62	26.86	27.19	0.88	6.08	57.58	6.01
95th-Percentile Queue Length [ft/ln]	567.12	340.51	671.57	679.87	22.03	151.95	1439.52	150.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	469.41	18.50	0.00	0.00	39.79	40.30	42.80	0.00	20.12	220.34	220.34	20.44
Movement LOS	F	B			D	D	D		C	F	F	C
d_A, Approach Delay [s/veh]	71.68			39.80			22.12			170.90		
Approach LOS	E			D			C			F		
d_I, Intersection Delay [s/veh]	77.02											
Intersection LOS	E											
Intersection V/C	1.241											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	42.6
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	32.21	0.00	10.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.256	0.000	2.297
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1002	1002	734	734
d_b, Bicycle Delay [s]	10.58	10.58	17.03	17.03
l_b,int, Bicycle LOS Score for Intersection	2.742	3.053	1.560	3.168
Bicycle LOS	B	C	A	C

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Rubidoux Blvd/SrR-60 WB On Ramp

Control Type:	Two-way stop	Delay (sec / veh):	302.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.498

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	145.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	203	843	953	494	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	366	208	555	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	240	1361	1333	1138	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	358	351	299	0	0
Total Analysis Volume [veh/h]	253	1433	1403	1198	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.50	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	302.23	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	16.32	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	408.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	45.35		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	17.84					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 24: Rubidoux Blvd/SR-60 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	105.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.972

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	145.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	484	235	61	918	0	531	46	379	19	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	63	0	134	74	0	303	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	28	0	0	0	0	0	45	0	0	0
Total Hourly Volume [veh/h]	0	634	249	206	1157	0	930	54	402	22	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	167	66	54	304	0	245	14	106	6	0	0
Total Analysis Volume [veh/h]	0	667	262	217	1218	0	979	57	423	23	0	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Permiss	Split
Signal Group	0	2	0	1	6	0	0	4	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	5	0	0
Maximum Green [s]	0	35	0	30	35	0	0	35	0	20	0	0
Amber [s]	0.0	4.4	0.0	4.1	4.4	0.0	0.0	4.8	0.0	4.4	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	43	0	12	55	0	0	53	0	12	0	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	3.0	0.0	2.0	0.0	0.0
Walk [s]	0	4	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	33	0	0	18	0	0	28	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	3.1	3.4	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.10	5.40	5.80	5.80	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.10	3.40	3.80	3.80	3.40	3.40
g_i, Effective Green Time [s]	38	38	11	53	47	47	3	3
g / C, Green / Cycle	0.31	0.31	0.09	0.45	0.39	0.39	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.24	0.27	0.12	0.34	0.57	0.26	0.01	0.00
s, saturation flow rate [veh/h]	1900	1728	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	597	543	160	1611	714	635	42	37
d1, Uniform Delay [s]	37.34	38.58	54.69	27.84	36.40	29.92	58.00	57.30
k, delay calibration	0.50	0.50	0.04	0.50	0.50	0.20	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.62	15.76	163.63	3.36	211.10	2.22	4.16	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.86	1.36	0.76	1.45	0.67	0.55	0.03
d, Delay for Lane Group [s/veh]	46.96	54.34	218.32	31.20	247.50	32.14	62.16	57.41
Lane Group LOS	D	D	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.60	14.79	12.02	14.66	61.97	10.20	0.73	0.03
50th-Percentile Queue Length [ft/ln]	340.12	369.64	300.45	366.57	1549.34	254.95	18.36	0.76
95th-Percentile Queue Length [veh/ln]	19.65	21.09	19.56	20.94	93.19	15.44	1.32	0.06
95th-Percentile Queue Length [ft/ln]	491.35	527.29	489.12	523.57	2329.77	385.88	33.05	1.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	49.20	54.34	218.32	31.20	0.00	247.50	247.50	32.14	62.16	0.00	57.41
Movement LOS		D	D	F	C		F	F	C	E		E
d_A, Approach Delay [s/veh]	50.65			59.49			185.06			61.96		
Approach LOS	D			E			F			E		
d_I, Intersection Delay [s/veh]	104.99											
Intersection LOS	F											
Intersection V/C	0.972											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	52.27
l_p,int, Pedestrian LOS Score for Intersectio	3.051	0.000	2.588	2.179
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	627	827	787	110
d_b, Bicycle Delay [s]	28.29	20.65	22.08	53.58
l_b,int, Bicycle LOS Score for Intersection	2.349	2.743	4.041	1.560
Bicycle LOS	B	B	D	A

Sequence

Ring 1	4	3	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Market St/Rivera St

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.703

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	165.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	9	729	226	89	1006	1	1	13	53	201	0	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	617	0	11	942	0	0	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	27	0	0	0	0	0	6	0	0	6
Total Hourly Volume [veh/h]	11	1477	240	116	2129	1	1	15	57	237	0	58
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	389	63	31	560	0	0	4	15	62	0	15
Total Analysis Volume [veh/h]	12	1555	253	122	2241	1	1	16	60	249	0	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	6	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	5	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	30	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	59	59	26	76	0	0	9	0	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	14	0	10	0	0	10	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	77	77	10	86	86	6	6	11	11	11
g / C, Green / Cycle	0.01	0.64	0.64	0.08	0.71	0.71	0.05	0.05	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.43	0.16	0.07	0.59	0.59	0.01	0.04	0.07	0.07	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1894	1615	1810	1810	1615
c, Capacity [veh/h]	25	2331	1041	151	1356	1356	94	80	161	161	144
d1, Uniform Delay [s]	58.73	13.32	9.00	54.06	11.99	12.00	54.67	56.27	53.45	53.45	51.72
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.21	1.53	0.55	9.78	5.89	5.89	0.90	12.80	7.56	7.56	1.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.67	0.24	0.81	0.83	0.83	0.18	0.75	0.77	0.77	0.42
d, Delay for Lane Group [s/veh]	71.93	14.85	9.56	63.83	17.88	17.89	55.57	69.06	61.01	61.01	53.69
Lane Group LOS	E	B	A	E	B	B	E	E	E	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.45	11.78	2.64	3.94	18.54	18.54	0.52	2.09	4.01	4.01	1.82
50th-Percentile Queue Length [ft/ln]	11.17	294.62	66.10	98.54	463.41	463.54	13.03	52.34	100.34	100.34	45.52
95th-Percentile Queue Length [veh/ln]	0.80	17.41	4.76	7.09	25.60	25.60	0.94	3.77	7.22	7.22	3.28
95th-Percentile Queue Length [ft/ln]	20.10	435.37	118.97	177.37	639.93	640.09	23.46	94.22	180.61	180.61	81.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.93	14.85	9.56	63.83	17.89	17.89	55.57	55.57	69.06	61.01	61.01	53.69
Movement LOS	E	B	A	E	B	B	E	E	E	E	E	D
d_A, Approach Delay [s/veh]	14.49			20.26			66.08			59.57		
Approach LOS	B			C			E			E		
d_I, Intersection Delay [s/veh]	21.40											
Intersection LOS	C											
Intersection V/C	0.703											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	51.34	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.440	0.000	2.334
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	917	1200	83	367
d_b, Bicycle Delay [s]	17.60	9.60	55.10	40.02
l_b,int, Bicycle LOS Score for Intersection	3.083	3.510	1.697	2.081
Bicycle LOS	C	D	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Market St/SR-60 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.859

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	185.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	249	341	0	0	1071	187	0	0	0	89	0	626
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	102	0	0	891	51	0	0	0	0	0	515
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	27	0	0	0	0	0	125
Total Hourly Volume [veh/h]	294	504	0	0	2155	245	0	0	0	105	0	1129
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	77	133	0	0	567	64	0	0	0	28	0	297
Total Analysis Volume [veh/h]	309	531	0	0	2268	258	0	0	0	111	0	1188
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	35	72	0	0	37	0	0	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C		L
C, Cycle Length [s]	120	120	120		120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00
g_i, Effective Green Time [s]	23	103	76		9
g / C, Green / Cycle	0.19	0.86	0.63		0.08
(v / s)_i Volume / Saturation Flow Rate	0.17	0.15	0.63		0.06
s, saturation flow rate [veh/h]	1810	3618	3618		1810
c, Capacity [veh/h]	340	3093	2292		142
d1, Uniform Delay [s]	47.69	1.48	21.60		54.29
k, delay calibration	0.20	0.50	0.50		0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00
d2, Incremental Delay [s]	15.40	0.12	16.52		9.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00
PF, progression factor	1.00	1.00	1.00		1.00

Lane Group Results

X, volume / capacity	0.91	0.17	0.99		0.78
d, Delay for Lane Group [s/veh]	63.10	1.60	38.12		63.32
Lane Group LOS	E	A	D		E
Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	10.21	0.44	31.47		3.62
50th-Percentile Queue Length [ft/ln]	255.33	10.98	786.77		90.59
95th-Percentile Queue Length [veh/ln]	15.45	0.79	40.67		6.52
95th-Percentile Queue Length [ft/ln]	386.36	19.76	1016.77		163.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.10	1.60	0.00	0.00	38.12	0.00	0.00	0.00	0.00	63.32	0.00	0.00
Movement LOS	E	A			D					E		
d_A, Approach Delay [s/veh]	24.22			34.40			0.00			5.67		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	30.75											
Intersection LOS	C											
Intersection V/C	0.859											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	1.998
Crosswalk LOS	F	F	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1133	550	0	733
d_b, Bicycle Delay [s]	11.27	31.54	60.00	24.07
l_b,int, Bicycle LOS Score for Intersection	2.253	3.431	4.132	1.560
Bicycle LOS	B	C	D	A

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Market St/SR-60 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	166.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.262

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	60.00	155.00	100.00	100.00	180.00	100.00	410.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	514	59	393	592	0	134	0	856	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	0	802	90	0	54	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	7	0	0	0	0	0	101	0	0	0
Total Hourly Volume [veh/h]	0	655	63	1266	789	0	212	0	909	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	172	17	333	208	0	56	0	239	0	0	0
Total Analysis Volume [veh/h]	0	689	66	1333	831	0	223	0	957	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	66	87	0	33	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	17	62	83	29	29	
g / C, Green / Cycle	0.14	0.52	0.69	0.24	0.24	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.74	0.23	0.12	0.33	
s, saturation flow rate [veh/h]	3618	1810	3618	1810	2859	
c, Capacity [veh/h]	512	935	2502	437	691	
d1, Uniform Delay [s]	51.50	29.00	7.41	39.35	45.50	
k, delay calibration	0.50	0.50	0.50	0.11	0.21	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	167.66	197.85	0.36	0.92	177.21	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.34	1.43	0.33	0.51	1.39	
d, Delay for Lane Group [s/veh]	219.16	226.85	7.76	40.28	222.71	
Lane Group LOS	F	F	A	D	F	
Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	19.41	75.65	3.75	5.75	27.10	
50th-Percentile Queue Length [ft/ln]	485.28	1891.23	93.63	143.75	677.48	
95th-Percentile Queue Length [veh/ln]	30.06	113.48	6.74	9.68	41.79	
95th-Percentile Queue Length [ft/ln]	751.56	2836.91	168.53	242.07	1044.83	

Movement, Approach, & Intersection Results

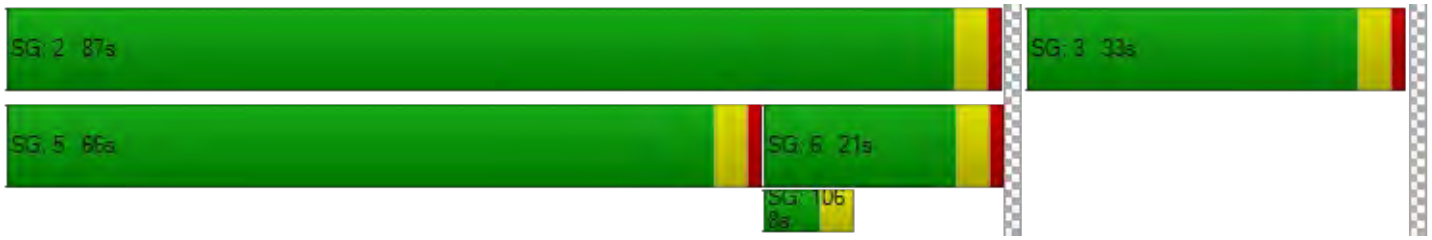
d_M, Delay for Movement [s/veh]	0.00	219.16	0.00	226.85	7.76	0.00	40.28	0.00	222.71	0.00	0.00	0.00
Movement LOS		F		F	A		D		F			
d_A, Approach Delay [s/veh]	200.80			142.72			188.23			0.00		
Approach LOS	F			F			F			A		
d_I, Intersection Delay [s/veh]	165.96											
Intersection LOS	F											
Intersection V/C	1.262											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.738
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	283	1383	483	0
d_b, Bicycle Delay [s]	44.20	5.70	34.50	60.00
l_b,int, Bicycle LOS Score for Intersection	2.128	3.345	1.560	4.132
Bicycle LOS	B	C	A	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Sierra Ave/20th St

Control Type:	Signalized	Delay (sec / veh):	33.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	1350.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	9	0	0	17	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	105	221	650	151	208	532
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	22	0	0	0	53
Total Hourly Volume [veh/h]	116	199	650	171	208	479
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	52	171	45	55	126
Total Analysis Volume [veh/h]	122	209	684	180	219	504
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	23	0	21	44	31	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	14	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	17	40	27	27
g / C, Green / Cycle	0.25	0.25	0.23	0.53	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.07	0.14	0.22	0.11	0.13	0.35
s, saturation flow rate [veh/h]	1710	1454	3163	1710	1629	1454
c, Capacity [veh/h]	433	368	717	912	586	523
d1, Uniform Delay [s]	22.51	24.42	28.62	9.13	17.75	23.51
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.35
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	6.22	8.10	0.48	0.39	25.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.57	0.95	0.20	0.37	0.96
d, Delay for Lane Group [s/veh]	24.13	30.64	36.72	9.61	18.14	48.72
Lane Group LOS	C	C	D	A	B	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.80	3.62	6.38	1.41	2.59	11.38
50th-Percentile Queue Length [ft/ln]	45.00	90.46	159.52	35.18	64.84	284.41
95th-Percentile Queue Length [veh/ln]	3.24	6.51	10.52	2.53	4.67	16.91
95th-Percentile Queue Length [ft/ln]	81.01	162.83	263.09	63.32	116.71	422.69

Movement, Approach, & Intersection Results

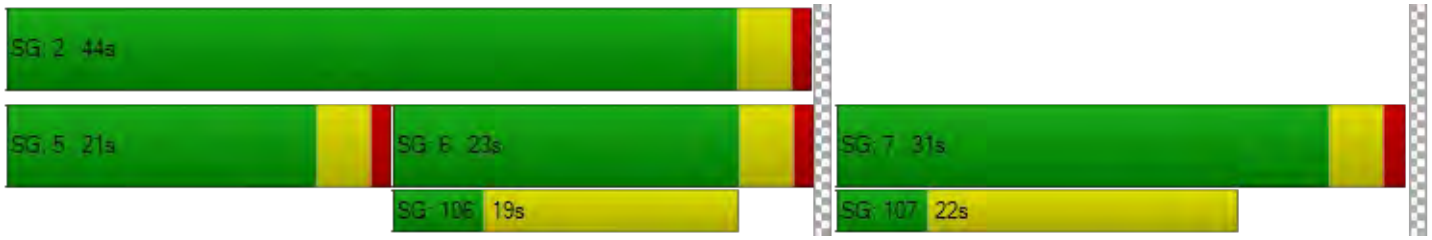
d_M, Delay for Movement [s/veh]	24.13	30.64	36.72	9.61	18.14	48.72
Movement LOS	C	C	D	A	B	D
d_A, Approach Delay [s/veh]	28.24		31.07		39.46	
Approach LOS	C		C		D	
d_I, Intersection Delay [s/veh]	33.75					
Intersection LOS	C					
Intersection V/C	0.707					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.04	29.04	29.04
l_p,int, Pedestrian LOS Score for Intersectio	2.290	2.693	2.748
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	507	1067	720
d_b, Bicycle Delay [s]	20.91	8.17	15.36
l_b,int, Bicycle LOS Score for Intersection	2.142	2.985	1.560
Bicycle LOS	B	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Armstrong Rd/Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	21.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.071

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	868	0	0	224	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	55	27	0	121	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1079	27	0	385	16	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	284	7	0	101	4	0
Total Analysis Volume [veh/h]	1136	28	0	405	17	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	10.93	0.00	21.29	20.94
Movement LOS	A	A	B	A	C	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.23	0.23
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	5.72	5.72
d_A, Approach Delay [s/veh]	0.00		0.00		21.29	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.23					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 30: Driveway 2/20th St

Control Type:	Signalized	Delay (sec / veh):	7.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.338

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.1800	1.1800	1.1800	1.1800	1.0000	1.0000	1.0000	1.0000	1.1800	1.0000	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	101	0	60	11	0	112	188	456	171	96	494	12
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	11	0	0	17	0	0	1
Total Hourly Volume [veh/h]	101	0	54	11	0	101	188	456	154	96	494	11
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	0	14	3	0	27	49	120	41	25	130	3
Total Analysis Volume [veh/h]	106	0	57	12	0	106	198	480	162	101	520	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	44	44	44	44	44	44
g / C, Green / Cycle	0.14	0.14	0.73	0.73	0.73	0.73	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.11	0.07	0.22	0.18	0.18	0.13	0.14	0.14
s, saturation flow rate [veh/h]	1429	1763	886	1900	1738	800	1900	1885
c, Capacity [veh/h]	294	306	700	1388	1270	633	1388	1377
d1, Uniform Delay [s]	25.20	24.12	4.62	2.65	2.65	4.43	2.54	2.54
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.64	0.79	1.01	0.41	0.45	0.54	0.31	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.39	0.28	0.24	0.24	0.16	0.19	0.19
d, Delay for Lane Group [s/veh]	26.84	24.91	5.63	3.06	3.10	4.97	2.85	2.85
Lane Group LOS	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.25	1.53	0.82	0.64	0.60	0.40	0.48	0.48
50th-Percentile Queue Length [ft/ln]	56.13	38.21	20.51	15.95	14.96	10.09	12.12	12.06
95th-Percentile Queue Length [veh/ln]	4.04	2.75	1.48	1.15	1.08	0.73	0.87	0.87
95th-Percentile Queue Length [ft/ln]	101.03	68.77	36.92	28.71	26.93	18.17	21.82	21.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.84	26.84	26.84	24.91	24.91	24.91	5.63	3.07	3.10	4.97	2.85	2.85
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	26.84			24.91			3.68			3.19		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	7.08											
Intersection LOS	A											
Intersection V/C	0.338											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.067	2.159	2.871	2.608
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	767	767	967	967
d_b, Bicycle Delay [s]	11.41	11.41	8.01	8.01
l_b,int, Bicycle LOS Score for Intersection	1.838	1.772	2.267	2.083
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Street A/20th St

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	527	0	46	602	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	527	0	46	602	0	28
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	139	0	12	158	0	7
Total Analysis Volume [veh/h]	555	0	48	634	0	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.05	0.01	0.00	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	8.57	0.00	14.71	10.17
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.08	0.04	0.00	0.12
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.05	1.03	0.00	3.12
d_A, Approach Delay [s/veh]	0.00		0.60		10.17	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.56					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 32: Street B/20th St

Control Type:	Signalized	Delay (sec / veh):	6.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.321

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800	1.1800
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	10	13	127	9	0	0	503	51	12	590	213
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	0	0	0	5	0	0	21
Total Hourly Volume [veh/h]	58	10	12	127	9	0	0	503	46	12	590	192
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	3	3	33	2	0	0	132	12	3	155	51
Total Analysis Volume [veh/h]	61	11	13	134	9	0	0	529	48	13	621	202
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	8	8	44	44	44	44	44	44
g / C, Green / Cycle	0.13	0.13	0.13	0.13	0.73	0.73	0.73	0.73	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.04	0.01	0.10	0.00	0.00	0.15	0.15	0.02	0.23	0.23
s, saturation flow rate [veh/h]	1428	1734	1409	1900	676	1900	1845	850	1900	1742
c, Capacity [veh/h]	297	233	288	255	498	1391	1351	627	1391	1276
d1, Uniform Delay [s]	24.04	22.79	25.72	22.59	0.00	2.54	2.54	4.95	2.78	2.78
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.19	1.17	0.06	0.00	0.34	0.36	0.06	0.58	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.10	0.47	0.04	0.00	0.21	0.21	0.02	0.31	0.31
d, Delay for Lane Group [s/veh]	24.37	22.99	26.89	22.64	0.00	2.88	2.90	5.01	3.35	3.41
Lane Group LOS	C	C	C	C	A	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.78	0.29	1.84	0.11	0.00	0.51	0.51	0.05	0.83	0.78
50th-Percentile Queue Length [ft/ln]	19.39	7.35	46.09	2.71	0.00	12.84	12.63	1.37	20.84	19.62
95th-Percentile Queue Length [veh/ln]	1.40	0.53	3.32	0.20	0.00	0.92	0.91	0.10	1.50	1.41
95th-Percentile Queue Length [ft/ln]	34.90	13.22	82.96	4.88	0.00	23.10	22.74	2.47	37.52	35.31

Movement, Approach, & Intersection Results

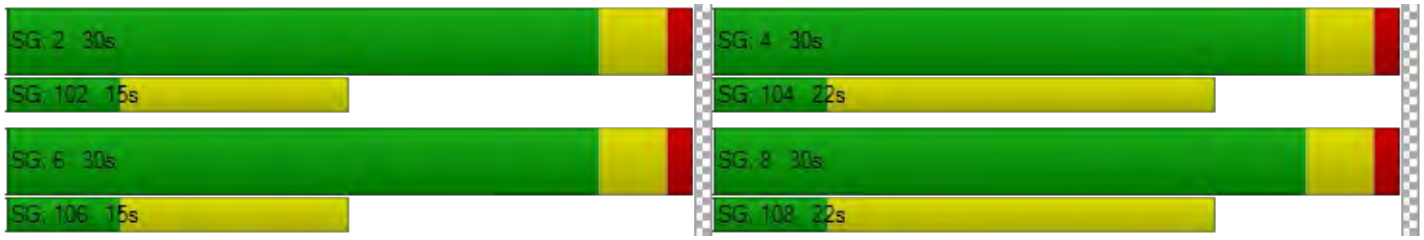
d_M, Delay for Movement [s/veh]	24.37	22.99	22.99	26.89	22.64	22.64	0.00	2.89	2.90	5.01	3.37	3.41
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	23.98			26.62			2.89			3.40		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	6.31											
Intersection LOS	A											
Intersection V/C	0.321											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	1.993	2.043	2.703	2.900
Crosswalk LOS	A	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	867	867	867	867
d_b, Bicycle Delay [s]	9.63	9.63	9.63	9.63
l_b,int, Bicycle LOS Score for Intersection	1.702	1.796	2.040	2.267
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Street M/20th Street

Control Type:	Roundabout	Delay (sec / veh):	5.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.1800	1.1800	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	24	38	604	791	43
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	24	38	604	791	43
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	6	10	159	208	11
Total Analysis Volume [veh/h]	26	25	40	636	833	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	833		26		40	
Exiting Flow Rate [veh/h]	85		858		662	
Demand Flow Rate [veh/h]	25	24	38	604	791	43
Adjusted Demand Flow Rate [veh/h]	26	25	40	636	833	45

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	1.00	1.00	1.00	1.00	1.00
Entry Flow Rate [veh/h]	51	318	359	413	466
Capacity of Entry and Bypass Lanes [veh/h]	591	1387	1387	1370	1370
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	591	1387	1387	1370	1370
X, volume / capacity	0.09	0.23	0.26	0.30	0.34

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.28	0.89	1.04	1.28	1.52
95th-Percentile Queue Length [ft]	7.07	22.14	25.92	32.01	38.10
Approach Delay [s/veh]	7.11	4.66		5.48	
Approach LOS	A	A		A	
Intersection Delay [s/veh]	5.19				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 34: Driveway 3/20th St

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.731

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.1800	1.0000	1.0000	1.1800	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	97	0	193	357	0	113	36	471	123	247	623	107
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	0	193	357	0	113	36	471	123	247	623	107
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	0	51	94	0	30	9	124	32	65	164	28
Total Analysis Volume [veh/h]	102	0	203	376	0	119	38	496	129	260	656	113
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	28	0	0	28	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	28	28	28	28	28	28
g / C, Green / Cycle	0.40	0.40	0.47	0.47	0.47	0.47	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.18	0.41	0.05	0.17	0.17	0.32	0.21	0.21
s, saturation flow rate [veh/h]	1700	1203	711	1900	1767	813	1900	1804
c, Capacity [veh/h]	760	587	331	887	825	385	887	842
d1, Uniform Delay [s]	13.15	18.77	15.68	10.28	10.29	20.01	10.77	10.77
k, delay calibration	0.11	0.32	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	9.37	0.70	1.16	1.26	9.12	1.62	1.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.84	0.11	0.36	0.37	0.67	0.44	0.44
d, Delay for Lane Group [s/veh]	13.50	28.14	16.39	11.44	11.55	29.13	12.39	12.47
Lane Group LOS	B	C	B	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.72	7.59	0.40	2.44	2.31	3.99	3.16	3.02
50th-Percentile Queue Length [ft/ln]	67.88	189.79	10.04	61.08	57.81	99.80	79.03	75.55
95th-Percentile Queue Length [veh/ln]	4.89	12.11	0.72	4.40	4.16	7.19	5.69	5.44
95th-Percentile Queue Length [ft/ln]	122.19	302.76	18.07	109.94	104.06	179.64	142.26	136.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.50	13.50	13.50	28.14	28.14	28.14	16.39	11.48	11.55	29.13	12.42	12.47
Movement LOS	B	B	B	C	C	C	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.50			28.14			11.77			16.65		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	17.25											
Intersection LOS	B											
Intersection V/C	0.731											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.404	2.065	2.826	3.362
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	800	933	933
d_b, Bicycle Delay [s]	10.80	10.80	8.53	8.53
l_b,int, Bicycle LOS Score for Intersection	2.063	2.376	2.107	2.409
Bicycle LOS	B	B	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Driveway 4/20th St

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.604

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	73	0	48	319	0	151	48	881	92	62	754	95
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	0	48	319	0	151	48	881	92	62	754	95
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	0	13	84	0	40	13	232	24	16	198	25
Total Analysis Volume [veh/h]	77	0	51	336	0	159	51	927	97	65	794	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	18	0	0	18	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	30	30	30	30	30	30
g / C, Green / Cycle	0.36	0.36	0.50	0.50	0.50	0.50	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.09	0.33	0.08	0.27	0.27	0.12	0.24	0.24
s, saturation flow rate [veh/h]	1488	1499	632	1900	1838	559	1900	1826
c, Capacity [veh/h]	637	646	311	956	925	272	956	919
d1, Uniform Delay [s]	13.20	17.86	15.95	10.24	10.24	18.01	9.78	9.78
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	1.94	1.13	2.22	2.30	2.06	1.70	1.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.77	0.16	0.54	0.54	0.24	0.48	0.48
d, Delay for Lane Group [s/veh]	13.35	19.80	17.09	12.46	12.54	20.07	11.48	11.55
Lane Group LOS	B	B	B	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.10	6.00	0.56	4.15	4.04	0.80	3.43	3.31
50th-Percentile Queue Length [ft/ln]	27.52	149.99	14.00	103.75	100.88	20.11	85.75	82.86
95th-Percentile Queue Length [veh/ln]	1.98	10.02	1.01	7.47	7.26	1.45	6.17	5.97
95th-Percentile Queue Length [ft/ln]	49.54	250.42	25.20	186.76	181.58	36.19	154.35	149.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.35	13.35	13.35	19.80	19.80	19.80	17.09	12.50	12.54	20.07	11.51	11.55
Movement LOS	B	B	B	B	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.35			19.80			12.72			12.10		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.84											
Intersection LOS	B											
Intersection V/C	0.604											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.74	21.74	21.74	21.74
l_p,int, Pedestrian LOS Score for Intersectio	1.929	2.083	2.937	3.350
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1264	1264	466	466
d_b, Bicycle Delay [s]	4.07	4.07	17.69	17.69
l_b,int, Bicycle LOS Score for Intersection	1.771	2.376	2.446	2.351
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Driveway 5/20th St

Control Type:	Two-way stop	Delay (sec / veh):	15.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.187

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	1000.00
Speed [mph]	30.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	73	1155	92	0	911
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	73	1155	92	0	911
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	19	304	24	0	240
Total Analysis Volume [veh/h]	0	77	1216	97	0	959
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.19	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	15.72	0.00	0.00	0.00	0.00
Movement LOS		C	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.68	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	16.94	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.72		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.52					
Intersection LOS	C					

Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\Interim Year PM + P.pdf

Scenario 18 OY PM + P
2/15/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound		Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Right	Left	Right	
1	Sierra Ave/I-10 Ramps	1012	1553	924	612	1140	884	1064	714	575	695	9173

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Sierra Ave/Slover Ave	196	1867	212	848	1436	176	420	826	106	264	480	1159	7990

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Sierra Ave/Santa Ana Ave	224	1859	100	188	1399	143	254	234	145	94	168	233	5041

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Sierra Ave/Jurupa Ave	381	1282	122	106	842	290	612	295	589	158	284	98	5059

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Armstrong Rd/Sierra Ave	1463	935	577	21	354	47	218	272	1011	455	247	70	5670

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
6	Armstrong/30th St	2909	66	42	1803	26	36	4882

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
7	Valley Way/SR-60 WB Off Ramp	35	1970	1671	8	274	100	347	71	725	5201

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
8	Valley Way/SR-60 WB On Ramp	198	2025	1392	715	4330

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR-60 EB Ramps/Mission Blvd	24	1	18	1983	5	127	98	578	24	14	380	180	3432

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
10	Valley Way/Mission Blvd	28	557	97	572	513	289	1184	1216	37	61	239	523	5316

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
11	Jurupa Rd/Mission Blvd	17	335	1838	55	169	786	3200

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	Pacific Ave/Mission Blvd	132	156	78	133	126	130	227	1456	262	201	688	138	3727

ID	Intersection Name	Northbound		Southbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Thru	Right	
13	Cedar Ave/I-10 WB Ramp	783	1805	1508	701	614	0	529	5940

ID	Intersection Name	Northbound		Southbound		Eastbound			Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	
14	Cedar Ave/I-10 EB Ramps	1933	950	433	1697	656	7	533	6209

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
15	Cedar Ave/Orange St	20	2234	2	100	1836	290	330	26	18	13	8	321	5198

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	Cedar Ave/Slover Ave	147	1741	31	146	1580	137	379	430	194	33	310	170	5298

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Cedar Ave/Santa Ana Ave	241	1841	63	83	1582	57	122	162	190	26	157	51	4575

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	Cedar Ave/Jurupa Ave	184	1738	90	124	1531	192	355	274	300	53	93	81	5015

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Cedar Ave/7th St	217	1869	16	55	1707	71	44	34	399	49	14	32	4507

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	Rubidoux Blvd/Market St	237	567	559	845	904	459	657	521	377	429	382	756	6693

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	Agua Mansa Rd/Market St	0	0	39	330	0	476	631	1322	4	0	1075	286	4163

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
22	Rubidoux Blvd/SR-60 WB Off Ramp	161	1201	1690	30	22	250	529	150	248	4281

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
23	Rubidoux Blvd/SrR-60 WB On Ramp	240	1361	1333	1138	4072

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	Left	Right	
24	Rubidoux Blvd/SR-60 EB Ramps	634	277	206	1157	930	54	447	22	1	3728

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Market St/Rivera St	11	1477	267	116	2129	1	1	15	63	237	0	64	4381

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
26	Market St/SR-60 WB Ramp	294	504	2155	272	105	1254	4584

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Thru	Right	Left	Thru	Left	2	
27	Market St/SR-60 EB Ramp	655	70	1266	789	212	1010	4002

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
28	Sierra Ave/20th St	116	221	650	171	208	532	1898

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
29	Armstrong Rd/Driveway 1	1079	27	0	385	16	0	1507

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
30	Driveway 2/20th St	101	0	60	11	0	112	188	456	171	96	494	12	1701

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
31	Street A/20th St	527	0	46	602	0	28	1203

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
32	Street B/20th St	58	10	13	127	9	0	0	503	51	12	590	213	1586

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
33	Street M/20th Street	25	24	38	604	791	43	1525

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
34	Driveway 3/20th St	97	0	193	357	0	113	36	471	123	247	623	107	2367

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
35	Driveway 4/20th St	73	0	48	319	0	151	48	881	92	62	754	95	2523

ID	Intersection Name	Northbound	Eastbound		Westbound	Total Volume
		Right	Thru	Right	Thru	
36	Driveway 5/20th St	73	1155	92	911	2231

Option 2: Copy of Armstrong Rd/Sierra Ave

Number	5											
Intersection	Armstrong Rd/Sierra Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	1181	737	38	8	185	40	171	59	700	54	45	44
Total Analysis Volume [veh/h]	1540	984	546	22	373	44	229	286	958	479	260	66

Intersection Settings

Cycle Length [s]	150											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups			2,3									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	50	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	4.3	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	57	62	62	11	16	0	40	38	0	39	37	0
Walk [s]	0	7	7	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	25	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.34	0.51	0.77	0.02	0.19	0.19	0.14	0.09	0.22	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.44	0.52	0.34	0.01	0.20	0.03	0.13	0.08	0.26	0.09	0.09
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3		
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1769
c, Capacity [veh/h]	1211	977	1243	71	361	306	252	343	398	333	310
X, volume / capacity	1.27	1.01	0.44	0.31	1.03	0.14	0.91	0.83	1.20	0.51	0.51
d, Delay for Lane Group [s/veh]	173.83	66.94	7.14	73.38	117.37	51.60	68.62	71.99	171.60	57.14	57.24
Lane Group LOS	F	F	A	E	F	D	E	E	F	E	E

Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	42.91	41.80	5.36	0.42	19.10	1.45	8.70	5.49	27.39	5.85	5.47
50th-Percentile Queue Length [ft/ln]	1072.82	1044.91	133.89	10.54	477.51	36.22	217.51	137.13	684.76	146.29	136.71
95th-Percentile Queue Length [veh/ln]	62.20	52.72	9.15	0.76	26.77	2.61	13.54	9.33	39.72	9.82	9.30
95th-Percentile Queue Length [ft/ln]	1555.08	1317.88	228.78	18.97	669.14	65.20	338.45	233.15	993.10	245.47	232.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	173.83	66.94	7.14	73.38	117.37	51.60	68.62	71.99	0.00	171.60	57.18	57.24
Movement LOS	F	F	A	E	F	D	E	E		F	E	E
Critical Movement	Yes	No	No	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	109.93			108.57			25.48			125.27		
Approach LOS	F			F			C			F		
d_I, Intersection Delay [s/veh]	103.35											
Intersection LOS	F											
Intersection V/C	0.978											

Option 1: Copy of Valley Way/SR-60 WB Off Ramp

Number	7											
Intersection	Valley Way/SR-60 WB Off Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	30	1155	0	0	809	4	230	0	85	294	60	572
Total Analysis Volume [veh/h]	37	2074	0	0	1759	7	288	0	95	365	75	686

Intersection Settings

Cycle Length [s]	140											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	10	62	0	0	52	0	27	0	0	0	51	0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.03	0.41	0.34	0.34	0.15	0.15	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.02	0.57	0.46	0.47	0.16	0.06	0.24	0.42
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3		3	
s, saturation flow rate [veh/h]	1810	3618	1900	1897	1810	1615	1824	1615
c, Capacity [veh/h]	52	1465	653	652	279	249	596	527
X, volume / capacity	0.71	1.42	1.35	1.35	1.03	0.38	0.74	1.30
d, Delay for Lane Group [s/veh]	83.97	232.75	214.76	215.59	109.40	53.55	46.08	196.14
Lane Group LOS	F	F	F	F	F	D	D	F

Critical Lane Group	No	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.53	62.99	52.41	52.49	13.65	3.01	14.08	39.88
50th-Percentile Queue Length [ft/ln]	38.29	1574.68	1310.24	1312.16	341.22	75.19	352.12	997.11
95th-Percentile Queue Length [veh/ln]	2.76	93.83	76.89	77.04	20.01	5.41	20.24	58.67
95th-Percentile Queue Length [ft/ln]	68.92	2345.72	1922.33	1926.11	500.30	135.34	506.00	1466.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	83.97	232.75	0.00	0.00	215.17	215.59	109.40	0.00	53.55	46.08	46.08	196.14
Movement LOS	F	F			F	F	F		D	D	D	F
Critical Movement	No	Yes			No	No	No		No	No	No	No
d_A, Approach Delay [s/veh]	230.15			215.17			95.55			137.50		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	196.30											
Intersection LOS	F											
Intersection V/C	1.157											

Option 1: Copy of Jurupa Rd/Mission Blvd

Number	11					
Intersection	Jurupa Rd/Mission Blvd					
Control Type	Two-way stop					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Base Volume Input [veh/h]	14	259	1479	47	120	649
Total Analysis Volume [veh/h]	18	371	1935	58	178	845

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Capacity Analysis

Calculated Rank	0	2	1	1	2	1
v_c, Conflicting Flow Rate	0	968	0	0	1993	0
v_c, Stage 1	0	968	0	0	1993	0
v_c, Stage 2	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	0	258	0	0	292	0
c_p,x, Stage 1 [veh/h]	0	1645	0	0	2830	0
c_p,x, Stage 2 [veh/h]	0	1091	0	0	1636	0
c_m,x, Movement Capacity [veh/h]	0	258	100000	100000	292	100000
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	0	258	100000	100000	292	100000

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	1.44	0.02	0.00	0.61	0.01
d_M, Delay for Movement [s/veh]	0.00	255.47	0.00	0.00	34.73	0.00
Movement LOS		F	A	A	D	A
Critical Movement		Yes	No	No	No	No
95th-Percentile Queue Length [veh/ln]	0.00	20.85	0.00	0.00	3.71	0.00
95th-Percentile Queue Length [ft/ln]	0.00	521.29	0.00	0.00	92.64	0.00
d_A, Approach Delay [s/veh]	255.47		0.00		6.04	
Approach LOS	F		A		A	
V/C_I, Worst Movement V/C Ratio	1.44					
d_I, Worst Movement Control Delay [s/veh]	255.47					
d_I, Intersection Delay [s/veh]	29.81					
Intersection LOS	F					

Option 1: Copy of Cedar Ave/I-10 WB Ramp

Number	13											
Intersection	Cedar Ave/I-10 WB Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	221	1349	0	0	1185	594	0	0	0	285	0	448
Total Analysis Volume [veh/h]	824	1900	0	0	1587	664	0	0	9	646	0	501

Intersection Settings

Cycle Length [s]	105											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	2	0	0	0	4	4	0
Auxiliary Signal Groups						2,4						
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	5	5	0	0	5	5	0	0	0	5	5	0
Maximum Green [s]	30	30	0	0	30	30	0	0	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0
Split [s]	26	68	0	0	42	42	0	0	0	37	37	0
Walk [s]	0	5	0	0	5	5	0	0	0	5	5	0
Pedestrian Clearance [s]	0	10	0	0	7	7	0	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No	No				No		
Maximum Recall	No	No			No	No				No		
Pedestrian Recall	No	No			No	No				No		
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.21	0.61	0.36	0.71		0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.23	0.53	0.31	0.41		0.36	0.31
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	3514	3618	5176	1615		1810	1615
c, Capacity [veh/h]	736	2205	1873	1154		569	508
X, volume / capacity	1.12	0.86	0.85	0.58		1.14	0.99
d, Delay for Lane Group [s/veh]	99.68	21.59	35.80	9.37		117.11	70.46
Lane Group LOS	F	C	D	A		F	E

Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	15.13	17.56	12.51	6.30		26.82	17.15
50th-Percentile Queue Length [ft/ln]	378.32	438.92	312.87	157.60		670.50	428.87
95th-Percentile Queue Length [veh/ln]	22.81	24.43	18.32	10.42		38.26	23.95
95th-Percentile Queue Length [ft/ln]	570.16	610.72	457.92	260.54		956.42	598.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	99.68	21.59	0.00	0.00	35.80	9.37	0.00	0.00	0.00	117.11	0.00	70.46
Movement LOS	F	C			D	A				F		E
Critical Movement	No	No			No	No				Yes		No
d_A, Approach Delay [s/veh]	45.21			28.00			0.00			96.73		
Approach LOS	D			C			A			F		
d_I, Intersection Delay [s/veh]	48.54											
Intersection LOS	D											
Intersection V/C	0.898											

Option 1: Copy of Cedar Ave/I-10 EB Ramps

Number	14											
Intersection	Cedar Ave/I-10 EB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	1015	350	367	1102	0	556	6	193	0	0	0
Total Analysis Volume [veh/h]	0	2035	900	456	1786	0	691	7	512	0	0	0

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	6	5	2	0	8	8	0	0	0	0
Auxiliary Signal Groups			6,8									
Lead / Lag	-	-	-	Lead	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	5	5	5	5	0	5	5	0	0	0	0
Maximum Green [s]	0	30	30	30	30	0	30	30	0	0	0	0
Amber [s]	0.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	38	26	64	0	36	36	0	0	0	0
Walk [s]	0	5	5	0	5	0	5	5	0	0	0	0
Pedestrian Clearance [s]	0	7	7	0	10	0	10	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No	No	No	No		No					
Maximum Recall		No	No	No	No		No					
Pedestrian Recall		No	No	No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.34	0.70	0.22	0.60	0.32	0.32	
(v / s)_i Volume / Saturation Flow Rate	0.39	0.56	0.25	0.35	0.33	0.37	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	5176	1615	1810	5176	1810	1641	
c, Capacity [veh/h]	1760	1131	398	3105	579	525	
X, volume / capacity	1.16	0.80	1.15	0.58	1.04	1.15	
d, Delay for Lane Group [s/veh]	110.29	16.01	122.96	13.00	81.17	119.93	
Lane Group LOS	F	B	F	B	F	F	

Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	25.92	11.99	18.64	7.29	21.02	24.72	
50th-Percentile Queue Length [ft/ln]	648.00	299.77	465.99	182.27	525.59	618.06	
95th-Percentile Queue Length [veh/ln]	37.57	17.67	27.65	11.72	29.27	35.77	
95th-Percentile Queue Length [ft/ln]	939.13	441.74	691.22	292.98	731.77	894.22	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	110.29	16.01	122.96	13.00	0.00	86.19	0.00	119.93	0.00	0.00	0.00
Movement LOS		F	B	F	B		F		F			
Critical Movement		No	No	Yes	No		No		No			
d_A, Approach Delay [s/veh]	81.38			35.36			100.55			0.00		
Approach LOS	F			D			F			A		
d_I, Intersection Delay [s/veh]	68.82											
Intersection LOS	E											
Intersection V/C	1.012											

Option 1: Copy of Cedar Ave/Orange St

Number	15											
Intersection	Cedar Ave/Orange St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	10	814	2	85	955	246	280	22	15	11	7	272
Total Analysis Volume [veh/h]	21	2352	2	105	1933	275	347	27	17	14	8	304

Intersection Settings

Cycle Length [s]	105											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	66	0	9	48	48	0	30	0	0	30	0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	10	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.64	0.56	0.56	0.64	0.58	1.60	1.00	0.21	1.00	0.21
(v / s)_i Volume / Saturation Flow Rate	0.12	0.62	0.62	0.68	0.53	0.17	0.19	0.02	0.01	0.19
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3	
s, saturation flow rate [veh/h]	178	1900	1899	154	3618	1615	1810	1779	1810	1621
c, Capacity [veh/h]	98	1070	1070	81	2113	2617	1809	373	1809	340
X, volume / capacity	0.21	1.10	1.10	1.30	0.91	0.11	0.19	0.12	0.01	0.92
d, Delay for Lane Group [s/veh]	22.55	82.89	83.01	227.20	27.87	0.08	0.11	35.05	0.00	60.39
Lane Group LOS	C	F	F	F	C	A	A	D	A	E

Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	41.79	41.81	5.97	21.41	0.06	0.05	0.96	0.00	9.85
50th-Percentile Queue Length [ft/ln]	9.46	1044.71	1045.34	149.18	535.18	1.47	1.35	24.10	0.02	246.34
95th-Percentile Queue Length [veh/ln]	0.68	56.62	56.67	10.74	29.00	0.11	0.10	1.74	0.00	15.00
95th-Percentile Queue Length [ft/ln]	17.02	1415.58	1416.66	268.52	724.88	2.64	2.44	43.38	0.04	375.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.55	82.95	83.01	227.20	27.87	0.08	0.11	35.05	35.05	0.00	60.39	60.39
Movement LOS	C	F	F	F	C	A	A	D	D	A	E	E
Critical Movement	No	No	No	Yes	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	82.42			33.62			4.04			57.80		
Approach LOS	F			C			A			E		
d_I, Intersection Delay [s/veh]	54.38											
Intersection LOS	D											
Intersection V/C	1.625											

Option 1: Copy of Cedar Ave/Slover Ave

Number	16											
Intersection	Cedar Ave/Slover Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	96	541	25	116	773	89	189	355	135	19	261	125
Total Analysis Volume [veh/h]	155	1833	29	154	1663	129	399	453	184	35	326	161

Intersection Settings

Cycle Length [s]	140											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	63	0	17	63	0	20	27	0	33	40	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.09	0.52	0.52	0.09	0.52	0.52	0.11	0.24	0.24	0.03	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.09	0.49	0.49	0.09	0.47	0.48	0.11	0.13	0.11	0.02	0.13	0.14
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1810	1900	1890	1810	1900	1853	3514	3618	1615	1810	1900	1693
c, Capacity [veh/h]	168	993	987	168	993	968	402	877	391	51	297	264
X, volume / capacity	0.92	0.94	0.94	0.92	0.90	0.93	0.99	0.52	0.47	0.69	0.86	0.88
d, Delay for Lane Group [s/veh]	81.12	48.29	49.25	80.34	43.16	46.62	81.34	46.40	46.22	82.94	64.74	67.30
Lane Group LOS	F	D	D	F	D	D	F	D	D	F	E	E

Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.34	33.31	33.65	6.19	29.39	30.64	8.18	6.93	5.61	1.43	9.13	8.52
50th-Percentile Queue Length [ft/ln]	158.43	832.77	841.35	154.68	734.76	766.06	204.62	173.35	140.26	35.82	228.21	212.91
95th-Percentile Queue Length [veh/ln]	10.47	42.78	43.17	10.27	38.28	39.72	12.88	11.25	9.49	2.58	14.08	13.30
95th-Percentile Queue Length [ft/ln]	261.65	1069.40	1079.20	256.67	957.03	993.02	321.91	281.31	237.37	64.47	352.08	332.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	81.12	48.77	49.25	80.34	44.76	46.62	81.34	46.40	46.22	82.94	65.30	67.30
Movement LOS	F	D	D	F	D	D	F	D	D	F	E	E
Critical Movement	No	No	No	No	No	No	No	No	No	Yes	No	No
d_A, Approach Delay [s/veh]	51.26			47.69			59.83			67.10		
Approach LOS	D			D			E			E		
d_I, Intersection Delay [s/veh]	53.11											
Intersection LOS	D											
Intersection V/C	0.829											

Option 1: Copy of Cedar Ave/Santa Ana Ave

Number	17											
Intersection	Cedar Ave/Santa Ana Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	148	631	53	70	765	48	62	135	122	22	132	43
Total Analysis Volume [veh/h]	254	1938	60	87	1665	54	128	171	180	27	165	48

Intersection Settings

Cycle Length [s]	105											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	34	0	44	58	0	0	27	0	0	27	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.15	0.60	0.60	0.06	0.51	0.51	0.22	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.14	0.53	0.53	0.05	0.45	0.46	0.11	0.20	0.03	0.12
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3	
s, saturation flow rate [veh/h]	1810	1900	1880	1810	1900	1879	1187	1742	1046	1827
c, Capacity [veh/h]	276	1144	1132	117	977	966	184	382	72	400
X, volume / capacity	0.92	0.87	0.88	0.75	0.88	0.89	0.70	0.92	0.37	0.53
d, Delay for Lane Group [s/veh]	56.13	26.82	27.75	57.35	33.90	34.74	52.61	57.25	55.66	37.34
Lane Group LOS	E	C	C	E	C	C	D	E	E	D

Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.39	21.27	21.68	2.53	20.81	21.03	3.60	10.56	0.76	4.81
50th-Percentile Queue Length [ft/ln]	184.77	531.64	541.95	63.17	520.30	525.73	90.09	264.08	19.03	120.23
95th-Percentile Queue Length [veh/ln]	11.85	28.83	29.31	4.55	28.29	28.55	6.49	15.89	1.37	8.41
95th-Percentile Queue Length [ft/ln]	296.24	720.71	732.85	113.70	707.34	713.75	162.17	397.34	34.26	210.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.13	27.27	27.75	57.35	34.31	34.74	52.61	57.25	57.25	55.66	37.34	37.34
Movement LOS	E	C	C	E	C	C	D	E	E	E	D	D
Critical Movement	No	No	No	Yes	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	30.54			35.43			56.01			39.40		
Approach LOS	C			D			E			D		
d_I, Intersection Delay [s/veh]	35.39											
Intersection LOS	D											
Intersection V/C	0.799											

Option 1: Copy of Cedar Ave/Jurupa Ave

Number	18											
Intersection	Cedar Ave/Jurupa Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	78	736	76	105	800	45	51	198	72	45	64	69
Total Analysis Volume [veh/h]	194	1829	85	131	1612	182	374	288	284	56	98	77

Intersection Settings

Cycle Length [s]	120											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	58	0	12	54	0	0	50	0	0	50	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.10	0.45	0.45	0.07	0.42	0.42	0.38	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.11	0.50	0.51	0.07	0.47	0.49	0.30	0.15	0.18	0.15	0.05
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3	
s, saturation flow rate [veh/h]	1810	1900	1871	1810	1900	1834	1229	1900	1615	1024	1615
c, Capacity [veh/h]	181	855	842	121	792	764	329	728	619	433	619
X, volume / capacity	1.07	1.12	1.14	1.09	1.13	1.17	1.14	0.40	0.46	0.36	0.12
d, Delay for Lane Group [s/veh]	106.28	102.04	108.98	119.48	110.61	126.35	131.96	27.24	28.22	29.99	24.05
Lane Group LOS	F	F	F	F	F	F	F	C	C	C	C

Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	7.94	39.36	40.37	5.78	39.10	41.09	17.43	5.92	6.02	3.56	1.41
50th-Percentile Queue Length [ft/ln]	198.57	983.89	1009.24	144.39	977.53	1027.26	435.66	147.88	150.61	88.88	35.19
95th-Percentile Queue Length [veh/ln]	12.90	53.98	55.81	9.97	54.01	57.68	26.33	9.90	10.05	6.40	2.53
95th-Percentile Queue Length [ft/ln]	322.55	1349.52	1395.18	249.23	1350.15	1441.96	658.15	247.60	251.25	159.99	63.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	106.28	105.35	108.98	119.48	117.58	126.35	131.96	27.24	28.22	29.99	29.99	24.05
Movement LOS	F	F	F	F	F	F	F	C	C	C	C	C
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	105.58			118.54			68.93			28.01		
Approach LOS	F			F			E			C		
d_I, Intersection Delay [s/veh]	100.28											
Intersection LOS	F											
Intersection V/C	0.900											

Option 2: Copy of Rubidoux Blvd/Market St

Number	20											
Intersection	Rubidoux Blvd/Market St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	25	354	433	469	604	52	47	111	29	276	60	535
Total Analysis Volume [veh/h]	249	597	529	889	952	483	692	548	397	452	402	716

Intersection Settings

Cycle Length [s]	120											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	10	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	45	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	5.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	2.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	16	22	22	27	33	0	33	51	0	20	38	0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.09	0.13	0.31	0.18	0.23	0.23	0.23	0.37	0.13	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.14	0.17	0.33	0.25	0.26	0.30	0.38	0.53	0.13	0.21	0.44
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3		
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1769	3514	1900	1615
c, Capacity [veh/h]	166	452	498	644	814	363	422	649	439	507	431
X, volume / capacity	1.50	1.32	1.06	1.38	1.17	1.33	1.64	1.46	1.03	0.79	1.66
d, Delay for Lane Group [s/veh]	291.07	211.47	99.40	222.12	135.84	212.49	344.07	252.16	80.30	44.15	352.29
Lane Group LOS	F	F	F	F	F	F	F	F	F	D	F

Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	15.74	16.54	21.88	24.73	21.67	27.09	47.45	57.25	8.29	11.45	49.54
50th-Percentile Queue Length [ft/ln]	393.42	413.52	546.92	618.30	541.86	677.23	1186.13	1431.22	207.32	286.17	1238.55
95th-Percentile Queue Length [veh/ln]	25.30	25.87	30.72	37.97	31.88	41.02	73.05	86.30	13.17	17.00	76.97
95th-Percentile Queue Length [ft/ln]	632.53	646.80	768.06	949.22	797.11	1025.52	1826.17	2157.47	329.37	424.89	1924.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	291.07	211.47	99.40	222.12	135.84	212.49	344.07	252.16	252.16	80.30	44.15	352.29
Movement LOS	F	F	F	F	F	F	F	F	F	F	D	F
Critical Movement	No	No	No	No	No	No	No	No	No	No	No	Yes
d_A, Approach Delay [s/veh]	182.77			184.78			291.01			195.08		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	211.90											
Intersection LOS	F											
Intersection V/C	1.262											

Option 2: Copy of Agua Mansa Rd/Market St

Number	21											
Intersection	Agua Mansa Rd/Market St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	0	120	0	316	491	532	0	0	534	174
Total Analysis Volume [veh/h]	0	0	37	347	0	451	664	1392	4	0	1132	271

Intersection Settings

Cycle Length [s]	120											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	29	58	0	16	45	0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.34		0.33	0.33	0.20	0.53	0.53	0.00	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.02		0.25	0.28	0.19	0.38	0.00	0.00	0.31	0.17
so, Base Saturation Flow per Lane [pc/h/ln]	1900		1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3			3		
s, saturation flow rate [veh/h]	1615		1393	1615	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	552		481	540	713	1905	850	1	1174	524
X, volume / capacity	0.07		0.72	0.84	0.93	0.73	0.00	0.00	0.96	0.52
d, Delay for Lane Group [s/veh]	26.97		44.59	51.07	49.53	22.41	13.48	0.00	46.29	33.70
Lane Group LOS	C		D	D	D	C	B	A	D	C

Critical Lane Group	No		No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.77		10.15	14.21	9.95	14.72	0.05	0.00	16.66	6.29
50th-Percentile Queue Length [ft/ln]	19.20		253.80	355.20	248.64	368.02	1.30	0.00	416.53	157.18
95th-Percentile Queue Length [veh/ln]	1.38		15.38	20.39	15.12	21.01	0.09	0.00	23.36	10.40
95th-Percentile Queue Length [ft/ln]	34.57		384.44	509.74	377.94	525.33	2.35	0.00	583.89	259.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.97	26.97	26.97	44.59	51.07	51.07	49.53	22.41	13.48	0.00	46.29	33.70
Movement LOS	C	C	C	D	D	D	D	C	B	A	D	C
Critical Movement	No	No	No	No	No	Yes	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	26.97			48.25			31.14			43.86		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	38.43											
Intersection LOS	D											
Intersection V/C	0.781											

Option 1: Copy of Rubidoux Blvd/SR-60 WB Off Ramp

Number	22											
Intersection	Rubidoux Blvd/SR-60 WB Off Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	211	875	0	0	863	12	13	0	135	448	72	92
Total Analysis Volume [veh/h]	356	1379	0	0	1779	28	23	0	237	557	158	261

Intersection Settings

Cycle Length [s]	60											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	37	0	0	37	0	23	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	14	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.69	0.69	0.69	0.69	0.18	0.18	
(v / s)_i Volume / Saturation Flow Rate	1.35	0.38	0.48	0.48	0.01	0.15	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	264	3618	1900	1890	1810	1615	
c, Capacity [veh/h]	209	2480	1302	1295	328	293	
X, volume / capacity	1.70	0.56	0.69	0.70	0.07	0.81	
d, Delay for Lane Group [s/veh]	360.20	5.70	8.72	8.82	20.46	28.89	
Lane Group LOS	F	A	A	A	C	C	

Critical Lane Group	Yes	No	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	22.25	2.42	4.36	4.40	0.26	3.43	
50th-Percentile Queue Length [ft/ln]	556.37	60.40	109.03	109.91	6.48	85.67	
95th-Percentile Queue Length [veh/ln]	40.00	4.35	7.79	7.84	0.47	6.17	
95th-Percentile Queue Length [ft/ln]	999.88	108.71	194.65	195.88	11.67	154.20	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	360.20	5.70	0.00	0.00	8.77	8.82	20.46	0.00	28.89	0.00	0.00	0.00
Movement LOS	F	A			A	A	C		C			
Critical Movement	Yes	No			No	No	No		No			
d_A, Approach Delay [s/veh]	78.44			8.77			28.15			0.00		
Approach LOS	E			A			C			A		
d_I, Intersection Delay [s/veh]	41.89											
Intersection LOS	D											
Intersection V/C	1.495											

Option 1: Rubidoux Blvd/WB Ramps Diamond Option

Number	2223											
Intersection	Rubidoux Blvd/WB Ramps											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	240	1361	0	0	1333	1138	0	0	0	529	150	398
Total Analysis Volume [veh/h]	253	1433	0	0	1403	1078	0	0	0	557	150	377

Intersection Settings

Cycle Length [s]	100											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	74	0	0	74	0	0	0	0	26	0	0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	14	0	0	7	0	0	0	0	17	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.70	0.70	0.70	0.70		0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	1.07	0.44	0.43	0.74		0.18	0.26
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	238	3256	3256	1454		3163	1454
c, Capacity [veh/h]	180	2279	2279	1017		696	320
X, volume / capacity	1.40	0.63	0.62	1.06		0.80	1.18
d, Delay for Lane Group [s/veh]	248.29	9.36	9.16	60.37		39.11	140.27
Lane Group LOS	F	A	A	F		D	F

Critical Lane Group	Yes	No	No	No		No	Yes
50th-Percentile Queue Length [veh/ln]	7.54	7.39	7.11	31.30		6.56	16.70
50th-Percentile Queue Length [ft/ln]	188.59	184.84	177.86	782.59		164.02	417.38
95th-Percentile Queue Length [veh/ln]	13.58	11.85	11.49	42.59		10.76	25.46
95th-Percentile Queue Length [ft/ln]	339.46	296.33	287.22	1064.73		269.03	636.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	248.29	9.36	0.00	0.00	9.16	60.37	0.00	0.00	0.00	39.11	0.00	140.27
Movement LOS	F	A			A	F				D		F
Critical Movement	Yes	No			No	No				No		No
d_A, Approach Delay [s/veh]	45.22			31.41			0.00			79.94		
Approach LOS	D			C			A			E		
d_I, Intersection Delay [s/veh]	44.86											
Intersection LOS	D											
Intersection V/C	1.325											

Option 1: Copy of Rubidoux Blvd/SR-60 EB Ramps

Number	24											
Intersection	Rubidoux Blvd/SR-60 EB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	484	235	61	918	0	531	46	379	19	0	1
Total Analysis Volume [veh/h]	0	667	262	217	1218	0	979	57	423	23	0	1

Intersection Settings

Cycle Length [s]	60											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	12	0	22	34	0	26	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	14	0	17	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.32	0.32	0.15	0.54	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.18	0.16	0.12	0.34	0.28	0.26	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	3618	1615	1810	3618	3514	1615	
c, Capacity [veh/h]	1155	515	276	1948	1154	530	
X, volume / capacity	0.58	0.51	0.79	0.63	0.85	0.80	
d, Delay for Lane Group [s/veh]	19.16	20.15	29.41	11.17	20.60	21.15	
Lane Group LOS	B	C	C	B	C	C	

Critical Lane Group	No	No	No	Yes	Yes	No	
50th-Percentile Queue Length [veh/ln]	3.60	3.01	3.04	4.41	5.78	5.05	
50th-Percentile Queue Length [ft/ln]	90.08	75.14	76.07	110.26	144.56	126.21	
95th-Percentile Queue Length [veh/ln]	6.49	5.41	5.48	7.85	9.73	8.73	
95th-Percentile Queue Length [ft/ln]	162.14	135.26	136.93	196.36	243.15	218.33	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	19.16	20.15	29.41	11.17	0.00	20.60	0.00	21.15	0.00	0.00	0.00
Movement LOS		B	C	C	B		C		C			
Critical Movement		No	No	Yes	No		No		No			
d_A, Approach Delay [s/veh]	19.44			13.93			20.77			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	17.83											
Intersection LOS	B											
Intersection V/C	0.615											

Option 1: Copy of Market St/SR-60 EB Ramp

Number	27											
Intersection	Market St/SR-60 EB Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Base Volume Input [veh/h]	0	514	59	393	592	0	134	0	856	0	0	0
Total Analysis Volume [veh/h]	0	689	66	1333	831	0	223	0	957	0	0	0

Intersection Settings

Cycle Length [s]	110											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	26	0	44	70	0	40	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.20	0.36	0.60	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.38	0.23	0.12	0.33	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	
Arrival type	3	3		3		3
s, saturation flow rate [veh/h]	3618	3514	3618	1810	2859	
c, Capacity [veh/h]	724	1278	2171	592	936	
X, volume / capacity	0.95	1.04	0.38	0.38	1.02	
d, Delay for Lane Group [s/veh]	67.12	60.11	11.94	28.79	56.93	
Lane Group LOS	E	F	B	C	F	

Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.26	20.40	4.82	4.50	14.72	
50th-Percentile Queue Length [ft/ln]	281.51	509.99	120.61	112.55	367.99	
95th-Percentile Queue Length [veh/ln]	16.76	28.62	8.43	7.98	21.32	
95th-Percentile Queue Length [ft/ln]	419.09	715.58	210.67	199.55	533.00	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	67.12	0.00	60.11	11.94	0.00	28.79	0.00	56.93	0.00	0.00	0.00
Movement LOS		E		F	B		C		F			
Critical Movement		Yes	No	No	No		No		No			
d_A, Approach Delay [s/veh]	67.12			41.61			51.61			0.00		
Approach LOS	E			D			D			A		
d_I, Intersection Delay [s/veh]	48.89											
Intersection LOS	D											
Intersection V/C	0.905											

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Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\2045 AM + P.pdf

Scenario 15 2045 AM + P
2/15/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Ave/I-10 Ramps	Signalized	HCM 7th Edition	SB Left	0.723	24.9	C
2	Sierra Ave/Slover Ave	Signalized	HCM 7th Edition	EB Left	0.678	40.5	D
3	Sierra Ave/Santa Ana Ave	Signalized	HCM 7th Edition	EB Left	0.527	23.9	C
4	Sierra Ave/Jurupa Ave	Signalized	HCM 7th Edition	WB Left	0.656	37.6	D
5	Armstrong Rd/Sierra Ave	Signalized	HCM 7th Edition	WB Left	1.051	141.0	F
6	Armstrong/30th St	Signalized	HCM 7th Edition	WB Left	0.799	17.6	B
7	Valley Way/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	EB Right	1.243	190.7	F
8	Valley Way/SR-60 WB On Ramp	Signalized	HCM 7th Edition	NB Left	0.801	13.3	B
9	SR-60 EB Ramps/Mission Blvd	Signalized	HCM 7th Edition	WB Left	0.537	38.1	D
10	Valley Way/Mission Blvd	Signalized	HCM 7th Edition	EB Left	0.707	59.6	E
11	Jurupa Rd/Mission Blvd	Two-way stop	HCM 7th Edition	NB Left	1.137	385.3	F
12	Pacific Ave/Mission Blvd	Signalized	HCM 7th Edition	WB Left	0.591	28.8	C
13	Cedar Ave/I-10 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.756	31.5	C
14	Cedar Ave/I-10 EB Ramps	Signalized	HCM 7th Edition	EB Right	1.087	69.3	E
15	Cedar Ave/Orange St	Signalized	HCM 7th Edition	EB Left	1.044	93.2	F
16	Cedar Ave/Slover Ave	Signalized	HCM 7th Edition	SB Right	1.174	158.1	F
17	Cedar Ave/Santa Ana Ave	Signalized	HCM 7th Edition	NB Left	0.976	58.2	E
			HCM 7th				

18	Cedar Ave/Jurupa Ave	Signalized	HCM 7th Edition	NB Left	0.994	82.8	F
19	Cedar Ave/7th St	Signalized	HCM 7th Edition	SB Left	0.781	22.0	C
20	Rubidoux Blvd/Market St	Signalized	HCM 7th Edition	WB Right	1.279	169.2	F
21	Agua Mansa Rd/Market St	Signalized	HCM 7th Edition	EB Left	0.888	183.0	F
22	Rubidoux Blvd/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	WB Left	1.227	92.9	F
23	Rubidoux Blvd/SrR-60 WB On Ramp	Two-way stop	HCM 7th Edition	NB Left	1.486	280.3	F
24	Rubidoux Blvd/SR-60 EB Ramps	Signalized	HCM 7th Edition	EB Left	1.126	153.2	F
25	Market St/Rivera St	Signalized	HCM 7th Edition	EB Right	0.682	17.9	B
26	Market St/SR-60 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.711	16.4	B
27	Market St/SR-60 EB Ramp	Signalized	HCM 7th Edition	SB Left	0.971	66.2	E
28	Sierra Ave/20th St	Signalized	HCM 7th Edition	WB Right	0.859	52.8	D
29	Armstrong Rd/Driveway 1	Two-way stop	HCM 7th Edition	WB Left	0.075	14.4	B
30	Driveway 2/20th St	Signalized	HCM 7th Edition	NB Left	0.463	10.0	B
31	Street A/20th St	Two-way stop	HCM 7th Edition	WB Left	0.126	26.6	D
32	Street B/20th St	Signalized	HCM 7th Edition	NB Left	0.529	11.6	B
33	Street M/20th Street	Roundabout	HCM 7th Edition	EB Thru		6.0	A
34	Driveway 3/20th St	Signalized	HCM 7th Edition	NB Right	0.717	8.1	A
35	Driveway 4/20th St	Signalized	HCM 7th Edition	SB Left	0.491	5.0	A
36	Driveway 5/20th St	Two-way stop	HCM 7th Edition	NB Right	0.051	11.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Ave/I-10 Ramps

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	565.00	100.00	100.00	325.00	100.00	305.00	440.00	100.00	1500.00	1205.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	390.00	0.00	0.00	665.00	0.00	0.00	1215.00	0.00	0.00	1150.00
Speed [mph]	40.00			35.00			65.00			65.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	552	981	518	635	1080	881	1016	0	690	558	0	658
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	114	0	38	0	0	0	0	0	207	13	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	56	0	0	88	0	0	90	0	0	66
Total Hourly Volume [veh/h]	666	981	500	635	1080	793	1016	0	807	571	0	592
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	175	258	132	167	284	209	267	0	212	150	0	156
Total Analysis Volume [veh/h]	701	1033	526	668	1137	835	1069	0	849	601	0	623
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna
Signal Group	1	6	0	5	2	0	3	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	0	0	5	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	30	32	0	30	32	0	48	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	5	0	0
Pedestrian Clearance [s]	0	23	0	0	23	0	39	0	0	35	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No		No	No		No			No		
Maximum Recall	No	No		No	No		No			No		
Pedestrian Recall	No	No		No	No		No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	L
C, Cycle Length [s]	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	38	23	37	37	37
g / C, Green / Cycle	0.22	0.35	0.21	0.34	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.20	0.20	0.19	0.22	0.30	0.17
s, saturation flow rate [veh/h]	3514	5176	3514	5176	3514	3514
c, Capacity [veh/h]	771	1785	744	1745	1175	1175
d1, Uniform Delay [s]	41.85	29.50	42.19	30.97	35.03	29.40
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.53	1.38	4.20	1.91	3.11	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.58	0.90	0.65	0.91	0.51
d, Delay for Lane Group [s/veh]	46.38	30.87	46.39	32.88	38.14	29.75
Lane Group LOS	D	C	D	C	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	9.47	7.39	9.09	8.62	12.70	5.81
50th-Percentile Queue Length [ft/ln]	236.73	184.83	227.21	215.62	317.56	145.28
95th-Percentile Queue Length [veh/ln]	14.52	11.85	14.03	13.44	18.55	9.76
95th-Percentile Queue Length [ft/ln]	362.90	296.31	350.82	336.03	463.69	244.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.38	30.87	0.00	46.39	32.88	0.00	38.14	0.00	0.00	29.75	0.00	0.00
Movement LOS	D	C		D	C		D			C		
d_A, Approach Delay [s/veh]	28.83			26.32			21.73			14.99		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	24.90											
Intersection LOS	C											
Intersection V/C	0.723											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	3.500	3.422	3.087	2.911
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	509	509	800	800
d_b, Bicycle Delay [s]	30.56	30.56	19.80	19.80
l_b,int, Bicycle LOS Score for Intersection	2.513	2.552	1.560	1.560
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	40.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.678

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	265.00	100.00	675.00	675.00	100.00	100.00	345.00	100.00	320.00	275.00	100.00	465.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	600.00	0.00	0.00	0.00
Speed [mph]	50.00			40.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	123	1289	133	778	1203	377	217	334	68	80	327	562
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	153	0	0	221	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	13	0	0	38	0	0	7	0	0	56
Total Hourly Volume [veh/h]	123	1442	120	778	1424	339	217	334	61	80	327	506
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	379	32	205	375	89	57	88	16	21	86	133
Total Analysis Volume [veh/h]	129	1518	126	819	1499	357	228	352	64	84	344	533
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	137.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	40	0	29	57	0	11	41	0	10	40	40
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	31	0	0	27	0	0	31	0	0	31	31
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	6	57	57	25	75	75	7	18	18	5	15	44
g / C, Green / Cycle	0.05	0.47	0.47	0.21	0.63	0.63	0.06	0.15	0.15	0.04	0.13	0.37
(v / s)_i Volume / Saturation Flow Rate	0.04	0.24	0.24	0.23	0.34	0.36	0.06	0.10	0.04	0.02	0.10	0.19
s, saturation flow rate [veh/h]	3514	5176	1806	3514	3618	1726	3514	3618	1615	3514	3618	2859
c, Capacity [veh/h]	185	2446	853	732	2274	1085	205	530	236	138	461	1055
d1, Uniform Delay [s]	55.92	21.82	21.83	47.50	12.54	13.00	56.50	48.43	45.52	56.74	50.50	29.37
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.73	0.73	2.08	58.02	0.93	2.24	65.10	1.44	0.61	4.30	2.44	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.50	0.50	1.12	0.54	0.58	1.11	0.66	0.27	0.61	0.75	0.51
d, Delay for Lane Group [s/veh]	60.65	22.55	23.90	105.52	13.47	15.24	121.60	49.87	46.13	61.04	52.93	29.74
Lane Group LOS	E	C	C	F	B	B	F	D	D	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.98	7.48	8.16	16.56	8.71	9.56	4.88	4.96	1.70	1.30	4.97	5.71
50th-Percentile Queue Length [ft/ln]	49.55	187.08	203.88	413.95	217.63	238.91	122.05	124.00	42.48	32.43	124.16	142.67
95th-Percentile Queue Length [veh/ln]	3.57	11.97	12.84	24.64	13.54	14.63	8.77	8.61	3.06	2.33	8.62	9.62
95th-Percentile Queue Length [ft/ln]	89.20	299.23	320.97	616.01	338.59	365.66	219.13	215.32	76.46	58.37	215.53	240.61

Movement, Approach, & Intersection Results

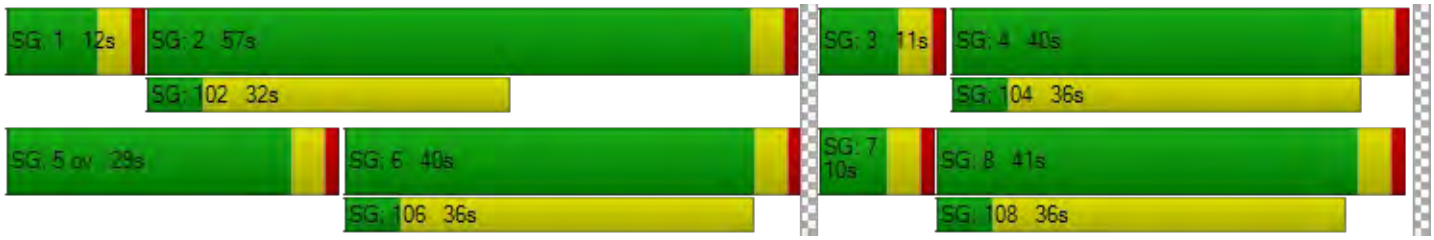
d_M, Delay for Movement [s/veh]	60.65	22.82	23.90	105.52	13.79	15.24	121.60	49.87	46.13	61.04	52.93	29.74
Movement LOS	E	C	C	F	B	B	F	D	D	E	D	C
d_A, Approach Delay [s/veh]	25.65			42.07			74.89			40.78		
Approach LOS	C			D			E			D		
d_I, Intersection Delay [s/veh]	40.55											
Intersection LOS	D											
Intersection V/C	0.678											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.504	3.648	3.028	3.364
Crosswalk LOS	D	D	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	600	883	617	600
d_b, Bicycle Delay [s]	29.40	18.70	28.70	29.40
l_b,int, Bicycle LOS Score for Intersection	2.296	3.052	2.097	2.399
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 3: Sierra Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	23.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.527

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	285.00	100.00	210.00	375.00	100.00	100.00	240.00	100.00	100.00	300.00	100.00	350.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	535.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	227	1230	61	227	866	138	162	93	96	61	162	141
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	153	0	0	221	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	14	0	0	10	0	0	14
Total Hourly Volume [veh/h]	227	1383	55	227	1087	124	162	93	86	61	162	127
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	364	14	60	286	33	43	24	23	16	43	33
Total Analysis Volume [veh/h]	239	1456	58	239	1144	131	171	98	91	64	171	134
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	30	0	11	30	0	13	40	0	9	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	48	48	7	48	48	9	15	15	4	10	10
g / C, Green / Cycle	0.08	0.53	0.53	0.08	0.53	0.53	0.10	0.16	0.16	0.05	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.07	0.28	0.04	0.07	0.24	0.24	0.09	0.03	0.06	0.04	0.05	0.08
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1802	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	273	2762	862	273	1930	961	181	597	267	83	401	179
d1, Uniform Delay [s]	41.07	13.62	10.15	41.07	12.80	12.80	40.25	32.24	33.24	42.48	37.34	38.80
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.60	0.72	0.15	8.60	0.73	1.47	20.29	0.13	0.75	14.10	0.72	6.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.53	0.07	0.87	0.44	0.44	0.95	0.16	0.34	0.77	0.43	0.75
d, Delay for Lane Group [s/veh]	49.67	14.34	10.30	49.67	13.53	14.27	60.55	32.37	33.99	56.58	38.06	44.94
Lane Group LOS	D	B	B	D	B	B	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.80	5.49	0.51	2.80	4.57	4.75	4.64	0.89	1.75	1.69	1.74	3.07
50th-Percentile Queue Length [ft/ln]	69.91	137.22	12.71	69.91	114.16	118.64	115.97	22.36	43.70	42.14	43.42	76.69
95th-Percentile Queue Length [veh/ln]	5.03	9.33	0.92	5.03	8.07	8.32	8.17	1.61	3.15	3.03	3.13	5.52
95th-Percentile Queue Length [ft/ln]	125.84	233.27	22.88	125.84	201.78	207.95	204.27	40.25	78.66	75.85	78.15	138.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.67	14.34	10.30	49.67	13.72	14.27	60.55	32.37	33.99	56.58	38.06	44.94
Movement LOS	D	B	B	D	B	B	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	19.03			19.44			46.16			43.77		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	23.91											
Intersection LOS	C											
Intersection V/C	0.527											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.413	3.418	2.669	2.644
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	578	800	711
d_b, Bicycle Delay [s]	22.76	22.76	16.20	18.69
l_b,int, Bicycle LOS Score for Intersection	2.527	2.400	1.865	1.876
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	37.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	0	2	0	1
Entry Pocket Length [ft]	685.00	100.00	675.00	385.00	100.00	260.00	375.00	100.00	100.00	280.00	100.00	270.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	520	910	88	39	494	287	306	255	314	328	690	164
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	153	0	0	221	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	9	0	0	29	0	0	31	0	0	16
Total Hourly Volume [veh/h]	520	1063	79	39	715	258	306	255	283	328	690	148
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	137	280	21	10	188	68	81	67	74	86	182	39
Total Analysis Volume [veh/h]	547	1119	83	41	753	272	322	268	298	345	726	156
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	22	49	0	9	36	36	16	36	0	16	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	27	27	0	27	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	18	53	53	4	39	55	12	25	25	12	25	25
g / C, Green / Cycle	0.16	0.48	0.48	0.03	0.35	0.50	0.11	0.23	0.23	0.11	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.16	0.31	0.05	0.01	0.21	0.17	0.09	0.07	0.18	0.10	0.20	0.10
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	575	1752	782	116	1279	806	383	825	369	383	825	369
d1, Uniform Delay [s]	45.57	21.17	15.41	52.05	29.02	16.60	48.06	35.38	40.18	48.41	40.99	36.27
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.18	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.28	1.80	0.27	1.84	1.99	1.13	4.98	0.23	7.02	7.78	3.24	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.64	0.11	0.35	0.59	0.34	0.84	0.32	0.81	0.90	0.88	0.42
d, Delay for Lane Group [s/veh]	54.84	22.97	15.69	53.89	31.01	17.73	53.04	35.61	47.20	56.19	44.23	37.04
Lane Group LOS	D	C	B	D	C	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.72	9.93	1.08	0.56	7.94	4.02	4.46	2.92	8.04	4.98	9.57	3.58
50th-Percentile Queue Length [ft/ln]	192.91	248.22	27.11	14.10	198.41	100.40	111.45	73.11	200.95	124.57	239.27	89.42
95th-Percentile Queue Length [veh/ln]	12.27	15.10	1.95	1.02	12.56	7.23	7.92	5.26	12.69	8.64	14.64	6.44
95th-Percentile Queue Length [ft/ln]	306.80	377.42	48.81	25.38	313.91	180.73	198.02	131.60	317.19	216.09	366.11	160.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.84	22.97	15.69	53.89	31.01	17.73	53.04	35.61	47.20	56.19	44.23	37.04
Movement LOS	D	C	B	D	C	B	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	32.59			28.50			45.82			46.68		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	37.60											
Intersection LOS	D											
Intersection V/C	0.656											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	3.461	3.328	3.236	2.933
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	818	582	582	582
d_b, Bicycle Delay [s]	19.20	27.65	27.65	27.65
l_b,int, Bicycle LOS Score for Intersection	3.010	2.463	2.318	2.585
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Armstrong Rd/Sierra Ave

Control Type:	Signalized	Delay (sec / veh):	141.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.051

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	490.00	100.00	200.00	310.00	100.00	270.00	135.00	100.00	75.00	195.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			55.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1292	328	243	165	443	162	121	197	824	217	304	152
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	8	508	58	23	0	0	239	0	263	168	65
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	75	0	0	16	0	0	82	0	0	22
Total Hourly Volume [veh/h]	1292	336	676	223	466	146	121	436	742	480	472	195
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	340	88	178	59	123	38	32	115	195	126	124	51
Total Analysis Volume [veh/h]	1360	354	712	235	491	154	127	459	781	505	497	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	0	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	0.0	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	37	40	0	13	16	0	15	38	0	29	52	0
Vehicle Extension [s]	3.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	3.3	0.0	3.3	3.3	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	5.30	5.30	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.30	3.30	3.30	3.30	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	32	49	49	8	25	25	9	18	23	32	32
g / C, Green / Cycle	0.26	0.41	0.41	0.06	0.21	0.21	0.08	0.15	0.19	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.39	0.19	0.44	0.07	0.26	0.10	0.07	0.13	0.28	0.19	0.19
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1714
c, Capacity [veh/h]	928	774	658	225	394	335	136	537	347	504	454
d1, Uniform Delay [s]	44.15	25.90	35.56	56.15	47.56	41.67	55.21	49.83	48.50	40.19	40.24
k, delay calibration	0.11	0.50	0.50	0.04	0.50	0.50	0.04	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	210.58	1.94	59.40	29.25	130.35	4.49	11.18	4.02	220.64	2.06	2.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.47	0.46	1.08	1.04	1.25	0.46	0.94	0.85	1.46	0.73	0.73
d, Delay for Lane Group [s/veh]	254.73	27.84	94.95	85.40	177.91	46.16	66.39	53.85	269.14	42.25	42.57
Lane Group LOS	F	C	F	F	F	D	E	D	F	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	40.37	7.45	28.81	4.24	25.62	4.31	4.08	6.71	31.39	9.95	9.08
50th-Percentile Queue Length [ft/ln]	1009.32	186.37	720.34	106.12	640.61	107.65	102.09	167.69	784.64	248.82	226.88
95th-Percentile Queue Length [veh/ln]	61.44	11.93	39.81	7.64	37.93	7.71	7.35	10.95	47.93	15.13	14.02
95th-Percentile Queue Length [ft/ln]	1535.94	298.31	995.26	191.01	948.30	192.73	183.77	273.87	1198.22	378.17	350.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	254.73	27.84	94.95	85.40	177.91	46.16	66.39	53.85	0.00	269.14	42.33	42.57
Movement LOS	F	C	F	F	F	D	E	D		F	D	D
d_A, Approach Delay [s/veh]	174.73			130.15			24.96			137.27		
Approach LOS	F			F			C			F		
d_I, Intersection Delay [s/veh]	140.95											
Intersection LOS	F											
Intersection V/C	1.051											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	0.00	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.426	2.806	0.000	3.050
Crosswalk LOS	C	C	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	178	533	767
d_b, Bicycle Delay [s]	30.32	49.78	32.27	22.82
l_b,int, Bicycle LOS Score for Intersection	5.686	3.038	2.043	2.574
Bicycle LOS	F	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Armstrong/30th St

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.799

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	135.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1712	96	27	1478	186	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	497	0	16	270	0	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	10	0	0	0	8
Total Hourly Volume [veh/h]	2209	86	43	1748	186	74
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	581	23	11	460	49	19
Total Analysis Volume [veh/h]	2325	91	45	1840	196	78
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	5	5	0
Maximum Green [s]	45	0	30	5	30	0
Amber [s]	4.3	0.0	4.3	4.3	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	32	0	11	21	88	0
Vehicle Extension [s]	3.0	0.0	2.0	3.0	2.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	19	0	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.3	3.3	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	0.00	3.30	2.00
g_i, Effective Green Time [s]	90	90	90	79	21
g / C, Green / Cycle	0.75	0.75	0.75	0.66	0.17
(v / s)_i Volume / Saturation Flow Rate	0.64	0.06	0.31	0.51	0.16
s, saturation flow rate [veh/h]	3618	1615	145	3618	1750
c, Capacity [veh/h]	2709	1209	149	2377	304
d1, Uniform Delay [s]	10.60	4.01	25.93	14.35	48.57
k, delay calibration	0.50	0.50	0.50	0.50	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.80	0.12	5.15	2.53	4.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.08	0.30	0.77	0.90
d, Delay for Lane Group [s/veh]	14.39	4.13	31.08	16.88	52.57
Lane Group LOS	B	A	C	B	D
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	17.01	0.50	1.22	15.52	8.43
50th-Percentile Queue Length [ft/ln]	425.24	12.56	30.61	388.06	210.71
95th-Percentile Queue Length [veh/ln]	23.77	0.90	2.20	21.98	13.19
95th-Percentile Queue Length [ft/ln]	594.33	22.61	55.11	549.60	329.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	14.39	4.13	31.08	16.88	52.57	52.57
Movement LOS	B	A	C	B	D	D
d_A, Approach Delay [s/veh]	14.01		17.22		52.57	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	17.64					
Intersection LOS	B					
Intersection V/C	0.799					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.633	0.000	1.978
Crosswalk LOS	D	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	445	262	1400
d_b, Bicycle Delay [s]	36.27	45.33	5.40
l_b,int, Bicycle LOS Score for Intersection	3.561	3.115	2.025
Bicycle LOS	D	C	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Valley Way/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	190.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.243

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	280.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	160	1112	0	0	1503	27	76	0	201	228	171	659
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	471	0	0	248	12	15	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	4	0	0	20	0	0	66
Total Hourly Volume [veh/h]	160	1583	0	0	1751	35	91	0	181	228	171	593
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	417	0	0	461	9	24	0	48	60	45	156
Total Analysis Volume [veh/h]	168	1666	0	0	1843	37	96	0	191	240	180	624
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	14	67	0	0	53	0	22	0	0	0	51	0
Vehicle Extension [s]	3.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	0.0	0.0	3.3	0.0	3.4	0.0	0.0	0.0	3.3	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	5.40	5.30	5.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	3.40	3.30	3.30
g_i, Effective Green Time [s]	9	62	48	48	17	46	46
g / C, Green / Cycle	0.07	0.44	0.34	0.34	0.12	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.46	0.49	0.50	0.17	0.13	0.48
s, saturation flow rate [veh/h]	1810	3618	1900	1887	1675	1810	1671
c, Capacity [veh/h]	121	1594	647	643	199	591	546
d1, Uniform Delay [s]	65.30	39.15	46.15	46.15	61.70	36.62	47.15
k, delay calibration	0.11	0.50	0.50	0.50	0.36	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	183.12	35.28	212.00	216.47	219.36	0.45	223.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.38	1.04	1.45	1.46	1.44	0.41	1.47
d, Delay for Lane Group [s/veh]	248.42	74.43	258.15	262.62	281.06	37.07	270.20
Lane Group LOS	F	F	F	F	F	D	F
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	10.44	33.73	59.80	60.18	19.08	6.46	52.49
50th-Percentile Queue Length [ft/ln]	261.01	843.28	1494.90	1504.58	476.91	161.53	1312.34
95th-Percentile Queue Length [veh/ln]	17.29	44.75	89.33	90.10	30.00	10.63	79.39
95th-Percentile Queue Length [ft/ln]	432.18	1118.79	2233.25	2252.45	749.92	265.74	1984.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	248.42	74.43	0.00	0.00	260.34	262.62	281.06	0.00	281.06	37.07	270.20	270.20
Movement LOS	F	F			F	F	F		F	D	F	F
d_A, Approach Delay [s/veh]	90.37			260.39			281.06			216.61		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	190.70											
Intersection LOS	F											
Intersection V/C	1.243											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	59.43	59.43	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.743	2.291	2.476
Crosswalk LOS	F	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	881	681	237	653
d_b, Bicycle Delay [s]	21.90	30.43	54.38	31.76
l_b,int, Bicycle LOS Score for Intersection	3.073	3.114	2.066	3.391
Bicycle LOS	C	C	B	C

Sequence

Ring 1	8	7	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Valley Way/SR-60 WB On Ramp

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No			
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	257	1219	1329	602	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	471	57	191	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	79	0	0
Total Hourly Volume [veh/h]	257	1690	1386	714	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	445	365	188	0	0
Total Analysis Volume [veh/h]	271	1779	1459	752	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	68.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	5	0	0	0
Maximum Green [s]	30	40	40	0	0	0
Amber [s]	4.1	4.8	4.8	0.0	0.0	0.0
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0
Split [s]	29	140	111	0	0	0
Vehicle Extension [s]	3.0	2.0	2.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	3.3	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	140	140	140	140	
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	
g_i, Effective Green Time [s]	23	135	107	107	
g / C, Green / Cycle	0.16	0.96	0.77	0.77	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.49	0.58	0.65	
s, saturation flow rate [veh/h]	1810	3618	1900	1696	
c, Capacity [veh/h]	296	3481	1455	1299	
d1, Uniform Delay [s]	57.61	0.20	9.18	11.02	
k, delay calibration	0.22	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	19.34	0.54	3.78	7.15	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.92	0.51	0.76	0.85	
d, Delay for Lane Group [s/veh]	76.96	0.74	12.96	18.17	
Lane Group LOS	E	A	B	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.83	0.26	16.13	20.11	
50th-Percentile Queue Length [ft/ln]	270.71	6.52	403.27	502.78	
95th-Percentile Queue Length [veh/ln]	16.22	0.47	22.72	27.47	
95th-Percentile Queue Length [ft/ln]	405.62	11.73	567.94	686.65	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	76.96	0.74	14.23	18.17	0.00	0.00
Movement LOS	E	A	B	B		
d_A, Approach Delay [s/veh]	10.81		15.57		0.00	
Approach LOS	B		B		A	
d_I, Intersection Delay [s/veh]	13.28					
Intersection LOS	B					
Intersection V/C	0.801					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.519
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1924	1510	0
d_b, Bicycle Delay [s]	0.10	4.20	70.00
l_b,int, Bicycle LOS Score for Intersection	3.251	3.449	4.132
Bicycle LOS	C	C	D

Sequence

Ring 1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: SR-60 EB Ramps/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	38.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	1120.00	100.00	100.00	200.00	100.00	100.00	260.00	100.00	340.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	490.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	14	2	5	661	5	73	128	405	7	6	436	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	367	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	7	0	0	1	0	0	34
Total Hourly Volume [veh/h]	14	2	4	1028	5	66	128	405	6	6	436	301
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	1	1	271	1	17	34	107	2	2	115	79
Total Analysis Volume [veh/h]	15	2	4	1082	5	69	135	426	6	6	459	317
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	0	3	0	0	4	0	5	2	0	1	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	5
Maximum Green [s]	0	15	0	0	35	0	25	35	0	15	35	35
Amber [s]	0.0	4.1	0.0	0.0	4.8	0.0	4.1	5.2	0.0	4.1	5.2	5.2
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.5	0.0	1.0	0.5	0.5
Split [s]	0	11	0	0	51	0	13	30	0	28	45	45
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	3.0	2.0	2.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	25	0	0	17	0	0	32	32
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	3.8	0.0	3.1	3.7	0.0	3.1	3.7	3.7
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		No			No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.10	5.80	5.80	5.10	5.70	5.70	5.10	5.70	5.80
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.80	3.80	3.10	3.70	3.70	3.10	3.70	0.00
g_i, Effective Green Time [s]	3	42	42	11	53	53	1	43	91
g / C, Green / Cycle	0.02	0.35	0.35	0.09	0.44	0.44	0.01	0.36	0.76
(v / s)_i Volume / Saturation Flow Rate	0.01	0.32	0.32	0.07	0.11	0.11	0.00	0.13	0.20
s, saturation flow rate [veh/h]	1777	1810	1785	1810	1900	1891	1810	3618	1615
c, Capacity [veh/h]	38	631	623	162	836	832	16	1301	1221
d1, Uniform Delay [s]	58.17	37.38	37.63	53.77	21.22	21.23	59.12	28.17	4.44
k, delay calibration	0.04	0.33	0.34	0.11	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.72	14.70	16.70	10.63	0.75	0.75	13.36	0.75	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.92	0.93	0.83	0.26	0.26	0.37	0.35	0.26
d, Delay for Lane Group [s/veh]	62.89	52.08	54.32	64.40	21.97	21.98	72.49	28.92	4.55
Lane Group LOS	E	D	D	E	C	C	E	C	A
Critical Lane Group	Yes	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.69	18.37	18.78	4.38	3.85	3.84	0.24	4.81	1.84
50th-Percentile Queue Length [ft/ln]	17.16	459.24	469.59	109.62	96.37	96.02	5.95	120.23	45.99
95th-Percentile Queue Length [veh/ln]	1.24	25.40	25.89	7.82	6.94	6.91	0.43	8.41	3.31
95th-Percentile Queue Length [ft/ln]	30.89	634.96	647.29	195.47	173.47	172.83	10.71	210.14	82.78

Movement, Approach, & Intersection Results

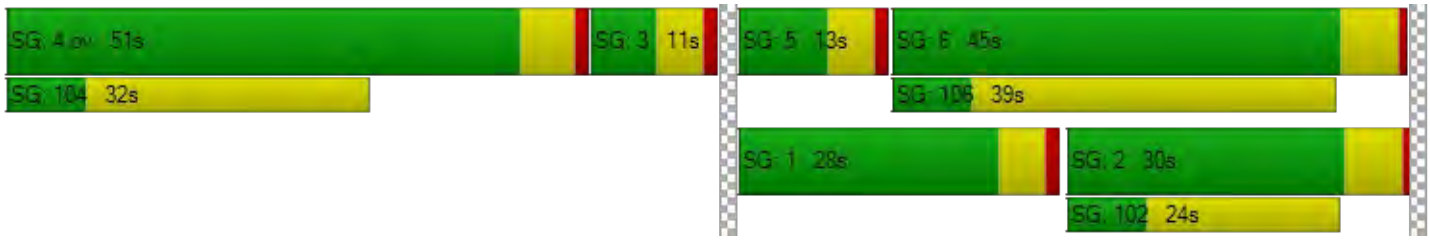
d_M, Delay for Movement [s/veh]	62.89	62.89	62.89	53.13	54.32	54.32	64.40	21.98	21.98	72.49	28.92	4.55
Movement LOS	E	E	E	D	D	D	E	C	C	E	C	A
d_A, Approach Delay [s/veh]	62.89			53.20			32.08			19.38		
Approach LOS	E			D			C			B		
d_I, Intersection Delay [s/veh]	38.07											
Intersection LOS	D											
Intersection V/C	0.537											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.746	2.624	2.642	0.000
Crosswalk LOS	A	B	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	98	753	405	655
d_b, Bicycle Delay [s]	54.25	23.31	38.16	27.14
l_b,int, Bicycle LOS Score for Intersection	1.596	3.479	2.028	2.233
Bicycle LOS	A	C	B	B

Sequence

Ring 1	4	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Valley Way/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	59.6
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	3	1	0	1	1	0	1
Entry Pocket Length [ft]	145.00	100.00	510.00	170.00	100.00	150.00	410.00	100.00	180.00	260.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	19	442	53	489	419	473	585	355	32	73	215	743
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	104	0	0	57	0	367	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	47	0	0	3	0	0	74
Total Hourly Volume [veh/h]	19	546	48	489	476	426	952	355	29	73	215	669
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	144	13	129	125	112	251	93	8	19	57	176
Total Analysis Volume [veh/h]	20	575	51	515	501	448	1002	374	31	77	226	704
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	76.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	4	6	0	4	6	6	4	6	0	4	6	6
Maximum Green [s]	25	30	0	35	30	30	35	45	0	25	45	45
Amber [s]	3.6	4.8	0.0	3.6	4.8	4.8	3.6	4.8	0.0	3.6	4.8	4.8
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	9	32	0	33	56	56	40	48	0	27	35	35
Vehicle Extension [s]	2.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	2.0	3.0	3.0
Walk [s]	0	5	0	5	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	23	39	39	0	34	0	0	24	24
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	3.5	0.0	2.0	3.5	3.5
I2, Clearance Lost Time [s]	2.6	3.8	0.0	2.6	3.8	3.8	2.6	3.8	0.0	2.6	3.8	3.8
Minimum Recall	No	No		No	No	No	No	Yes		No	Yes	Yes
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.80	5.80	4.60	5.80	4.60	4.60	7.30	7.30	4.60	7.30	6.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.80	3.80	2.60	3.80	0.00	2.60	3.80	3.80	2.60	3.80	0.00
g_i, Effective Green Time [s]	2	24	24	28	51	92	35	57	57	8	30	64
g / C, Green / Cycle	0.02	0.17	0.17	0.20	0.36	0.66	0.25	0.41	0.41	0.05	0.21	0.46
(v / s)_i Volume / Saturation Flow Rate	0.01	0.16	0.03	0.15	0.14	0.16	0.29	0.10	0.02	0.04	0.06	0.44
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	2859	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	28	629	281	713	1306	1873	889	1480	661	100	764	753
d1, Uniform Delay [s]	68.58	56.82	49.34	52.12	33.18	9.87	52.30	27.27	24.93	65.28	46.45	35.36
k, delay calibration	0.04	0.11	0.11	0.11	0.11	0.11	0.13	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.17	5.77	0.31	1.40	0.19	0.07	61.71	0.41	0.13	4.70	0.99	20.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.91	0.18	0.72	0.38	0.24	1.13	0.25	0.05	0.77	0.30	0.93
d, Delay for Lane Group [s/veh]	79.75	62.58	49.65	53.52	33.37	9.93	114.01	27.68	25.06	69.97	47.44	55.65
Lane Group LOS	E	E	D	D	C	A	F	C	C	E	D	E
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.79	10.27	1.53	8.42	6.22	2.63	22.77	4.13	0.64	2.82	3.40	25.98
50th-Percentile Queue Length [ft/ln]	19.76	256.72	38.21	210.42	155.56	65.77	569.33	103.22	15.94	70.47	84.98	649.59
95th-Percentile Queue Length [veh/ln]	1.42	15.52	2.75	13.17	10.31	4.74	32.80	7.43	1.15	5.07	6.12	34.34
95th-Percentile Queue Length [ft/ln]	35.56	388.11	68.78	329.36	257.83	118.38	820.04	185.79	28.69	126.85	152.97	858.58

Movement, Approach, & Intersection Results

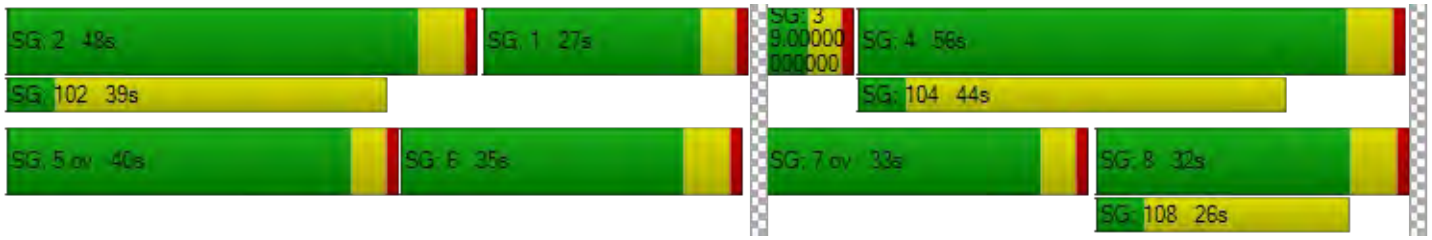
d_M, Delay for Movement [s/veh]	79.75	62.58	49.65	53.52	33.37	9.93	114.01	27.68	25.06	69.97	47.44	55.65
Movement LOS	E	E	D	D	C	A	F	C	C	E	D	E
d_A, Approach Delay [s/veh]	62.09			33.29			89.10			54.90		
Approach LOS	E			C			F			D		
d_I, Intersection Delay [s/veh]	59.57											
Intersection LOS	E											
Intersection V/C	0.707											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	0.00	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersectio	2.790	0.000	3.070	3.098
Crosswalk LOS	C	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	374	717	603	417
d_b, Bicycle Delay [s]	46.25	28.80	34.16	43.85
l_b,int, Bicycle LOS Score for Intersection	2.097	2.806	2.723	2.451
Bicycle LOS	B	C	B	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Jurupa Rd/Mission Blvd

Control Type:	Two-way stop	Delay (sec / veh):	385.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.137

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	280.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	56	239	830	37	165	951
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	0	0	38	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	252	830	37	203	951
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	66	218	10	53	250
Total Analysis Volume [veh/h]	59	265	874	39	214	1001
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.14	0.46	0.01	0.00	0.28	0.01
d_M, Delay for Movement [s/veh]	385.28	322.19	0.00	0.00	11.65	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	20.97	20.97	0.00	0.00	1.17	0.00
95th-Percentile Queue Length [ft/ln]	524.31	524.31	0.00	0.00	29.17	0.00
d_A, Approach Delay [s/veh]	333.68		0.00		2.05	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	45.11					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 12: Pacific Ave/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	130.00	100.00	130.00	130.00	100.00	115.00	275.00	100.00	50.00	265.00	100.00	230.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	180	101	255	35	130	121	117	715	90	348	708	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	104	0	57	57	38	13	0	0	0	0	104
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	26	0	0	16	0	0	9	0	0	15
Total Hourly Volume [veh/h]	180	205	229	92	187	143	130	715	81	348	708	138
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	54	60	24	49	38	34	188	21	92	186	36
Total Analysis Volume [veh/h]	189	216	241	97	197	151	137	753	85	366	745	145
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	4	6	0	4	5	0
Maximum Green [s]	0	30	0	0	30	0	25	45	0	25	45	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.5	0.0	4.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	36	0	0	36	0	14	27	0	22	35	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	2.5	3.5	0.0	2.5	3.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	25	25	25	25	25	25	8	27	27	18	37	37
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.32	0.32	0.21	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.18	0.11	0.15	0.10	0.10	0.09	0.08	0.21	0.05	0.20	0.21	0.09
s, saturation flow rate [veh/h]	1049	1900	1615	949	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	306	565	480	277	565	480	174	1159	518	373	1557	695
d1, Uniform Delay [s]	32.28	23.68	24.67	30.11	23.42	23.16	37.58	24.79	20.72	33.60	17.37	15.15
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.21	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.03	0.43	0.81	0.76	0.37	0.37	7.75	2.83	0.68	25.98	1.06	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.38	0.50	0.35	0.35	0.31	0.79	0.65	0.16	0.98	0.48	0.21
d, Delay for Lane Group [s/veh]	34.31	24.11	25.49	30.87	23.79	23.53	45.33	27.61	21.40	59.58	18.42	15.83
Lane Group LOS	C	C	C	C	C	C	D	C	C	E	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.80	3.41	3.99	1.78	3.07	2.33	3.05	6.50	1.24	9.76	4.96	1.74
50th-Percentile Queue Length [ft/ln]	95.04	85.17	99.77	44.51	76.75	58.31	76.15	162.48	30.97	244.00	124.09	43.49
95th-Percentile Queue Length [veh/ln]	6.84	6.13	7.18	3.20	5.53	4.20	5.48	10.68	2.23	14.88	8.62	3.13
95th-Percentile Queue Length [ft/ln]	171.07	153.31	179.59	80.12	138.15	104.96	137.08	267.01	55.74	372.09	215.43	78.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.31	24.11	25.49	30.87	23.79	23.53	45.33	27.61	21.40	59.58	18.42	15.83
Movement LOS	C	C	C	C	C	C	D	C	C	E	B	B
d_A, Approach Delay [s/veh]	27.61			25.24			29.56			30.12		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.81											
Intersection LOS	C											
Intersection V/C	0.591											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersectio	2.489	2.388	3.183	3.126
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	729	729	506	694
d_b, Bicycle Delay [s]	17.15	17.15	23.72	18.12
l_b,int, Bicycle LOS Score for Intersection	2.668	2.320	2.371	2.608
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Cedar Ave/I-10 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	31.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.756

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	230.00	100.00	230.00	100.00	100.00	100.00	485.00	100.00	485.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	411	1593	0	0	1768	847	0	0	0	767	4	484
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	102	18	0	0	91	0	0	0	0	337	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	85	0	0	0	0	0	48
Total Hourly Volume [veh/h]	513	1611	0	0	1859	762	0	0	0	1104	4	436
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	135	424	0	0	489	201	0	0	0	291	1	115
Total Analysis Volume [veh/h]	540	1696	0	0	1957	802	0	0	0	1162	4	459
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	23	39	0	0	16	0	0	0	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	12	35	19	19		17	17	17
g / C, Green / Cycle	0.20	0.58	0.32	0.32		0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.15	0.33	0.23	0.28		0.32	0.32	0.16
s, saturation flow rate [veh/h]	3514	5176	8626	2859		1810	1810	2859
c, Capacity [veh/h]	700	3019	2739	908		513	513	810
d1, Uniform Delay [s]	22.73	7.75	18.07	19.42		21.50	21.50	18.36
k, delay calibration	0.11	0.50	0.50	0.50		0.19	0.19	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.84	0.76	1.62	12.21		71.27	71.11	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.56	0.71	0.88		1.14	1.14	0.57
d, Delay for Lane Group [s/veh]	24.58	8.51	19.70	31.63		92.77	92.61	18.98
Lane Group LOS	C	A	B	C		F	F	B
Critical Lane Group	Yes	No	No	Yes		Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.38	3.25	4.31	6.01		16.47	16.45	2.49
50th-Percentile Queue Length [ft/ln]	84.43	81.14	107.72	150.27		411.72	411.29	62.14
95th-Percentile Queue Length [veh/ln]	6.08	5.84	7.71	10.03		24.88	24.86	4.47
95th-Percentile Queue Length [ft/ln]	151.98	146.05	192.82	250.78		622.12	621.44	111.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.58	8.51	0.00	0.00	19.70	31.63	0.00	0.00	0.00	92.69	92.61	18.98
Movement LOS	C	A			B	C				F	F	B
d_A, Approach Delay [s/veh]	12.39			23.17			0.00			71.87		
Approach LOS	B			C			A			E		
d_I, Intersection Delay [s/veh]	31.48											
Intersection LOS	C											
Intersection V/C	0.756											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.393	2.729
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	400	0	567
d_b, Bicycle Delay [s]	5.21	19.20	30.00	15.41
l_b,int, Bicycle LOS Score for Intersection	2.789	2.498	4.132	4.320
Bicycle LOS	C	B	D	E

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Cedar Ave/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	69.3
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.087

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	2	0	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	600.00	100.00	600.00	100.00	100.00	100.00	100.00	100.00	380.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1090.00
Speed [mph]	40.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1357	561	496	1959	0	633	4	687	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	120	102	0	428	0	0	0	250	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	66	0	0	0	0	0	94	0	0	0
Total Hourly Volume [veh/h]	0	1477	597	496	2387	0	633	4	843	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	389	157	131	628	0	167	1	222	0	0	0
Total Analysis Volume [veh/h]	0	1555	628	522	2513	0	666	4	887	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	34	0	16	50	0	0	45	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	95	95	95	95	95	95	95	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	30	30	12	46	41	41	41	
g / C, Green / Cycle	0.32	0.32	0.13	0.48	0.43	0.43	0.43	
(v / s)_i Volume / Saturation Flow Rate	0.18	0.39	0.15	0.49	0.19	0.19	0.55	
s, saturation flow rate [veh/h]	8626	1615	3514	5176	1810	1811	1615	
c, Capacity [veh/h]	2724	510	444	2506	781	781	697	
d1, Uniform Delay [s]	27.13	32.50	41.50	24.50	18.83	18.83	27.00	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.88	120.37	84.67	18.63	0.37	0.37	133.73	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.57	1.23	1.18	1.00	0.43	0.43	1.27	
d, Delay for Lane Group [s/veh]	28.00	152.87	126.17	43.13	19.21	19.20	160.73	
Lane Group LOS	C	F	F	F	B	B	F	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.72	28.02	10.23	20.96	4.97	4.97	40.47	
50th-Percentile Queue Length [ft/ln]	142.91	700.56	255.72	524.07	124.22	124.20	1011.75	
95th-Percentile Queue Length [veh/ln]	9.64	41.50	16.51	28.53	8.62	8.62	59.61	
95th-Percentile Queue Length [ft/ln]	240.93	1037.46	412.74	713.32	215.61	215.59	1490.28	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	28.00	152.87	126.17	43.13	0.00	19.21	19.20	160.73	0.00	0.00	0.00
Movement LOS		C	F	F	F		B	B	F			
d_A, Approach Delay [s/veh]	63.92			57.42			99.83			0.00		
Approach LOS	E			E			F			A		
d_I, Intersection Delay [s/veh]	69.26											
Intersection LOS	E											
Intersection V/C	1.087											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	38.93	38.93
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.738	2.314
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	632	968	863	0
d_b, Bicycle Delay [s]	22.24	12.64	15.35	47.50
l_b,int, Bicycle LOS Score for Intersection	2.302	3.229	4.284	4.132
Bicycle LOS	B	C	E	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Cedar Ave/Orange St

Control Type:	Signalized	Delay (sec / veh):	93.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.044

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	160.00	100.00	100.00	140.00	100.00	100.00	400.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	1685	4	126	1975	538	321	6	15	0	1	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	222	0	0	678	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	54	0	0	2	0	0	16
Total Hourly Volume [veh/h]	10	1907	4	126	2653	484	321	6	13	0	1	144
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	502	1	33	698	127	84	2	3	0	0	38
Total Analysis Volume [veh/h]	11	2007	4	133	2793	509	338	6	14	0	1	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	63	0	10	64	0	0	32	0	0	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	69	60	60	69	64	64	28	28	28	28
g / C, Green / Cycle	0.66	0.57	0.57	0.66	0.61	0.61	0.27	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.07	0.53	0.53	0.35	0.77	0.32	0.27	0.01	0.00	0.09
s, saturation flow rate [veh/h]	148	1900	1899	376	3618	1615	1254	1691	1414	1617
c, Capacity [veh/h]	164	1087	1086	246	2188	977	283	451	406	431
d1, Uniform Delay [s]	26.52	20.42	20.44	24.03	20.74	11.97	45.69	28.57	0.00	31.18
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.41	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	14.34	14.42	8.32	128.04	1.99	112.13	0.04	0.00	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.93	0.93	0.54	1.28	0.52	1.19	0.04	0.00	0.35
d, Delay for Lane Group [s/veh]	26.69	34.76	34.86	32.36	148.79	13.95	157.82	28.61	0.00	31.68
Lane Group LOS	C	C	C	C	F	B	F	C	A	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.08	23.85	23.89	1.52	61.54	6.61	16.26	0.38	0.00	3.19
50th-Percentile Queue Length [ft/ln]	2.04	596.19	597.13	38.10	1538.55	165.29	406.53	9.49	0.00	79.66
95th-Percentile Queue Length [veh/ln]	0.15	31.86	31.90	2.74	89.37	10.83	25.16	0.68	0.00	5.74
95th-Percentile Queue Length [ft/ln]	3.67	796.41	797.51	68.59	2234.21	270.71	628.90	17.08	0.00	143.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.69	34.81	34.86	32.36	148.79	13.95	157.82	28.61	28.61	0.00	31.68	31.68
Movement LOS	C	C	C	C	F	B	F	C	C	A	C	C
d_A, Approach Delay [s/veh]	34.77			124.30			150.60			31.68		
Approach LOS	C			F			F			C		
d_I, Intersection Delay [s/veh]	93.17											
Intersection LOS	F											
Intersection V/C	1.044											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	0.00	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.565	0.000	2.266	2.185
Crosswalk LOS	D	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1124	1143	533	533
d_b, Bicycle Delay [s]	10.08	9.64	28.23	28.23
l_b,int, Bicycle LOS Score for Intersection	3.228	4.438	2.154	1.838
Bicycle LOS	C	E	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Cedar Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	158.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.174

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	115.00	100.00	100.00	250.00	100.00	80.00	190.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	258	1036	20	142	1510	292	334	226	127	28	311	125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	222	0	0	678	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	29	0	0	13	0	0	13
Total Hourly Volume [veh/h]	258	1258	18	142	2188	263	334	226	114	28	311	112
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	331	5	37	576	69	88	59	30	7	82	29
Total Analysis Volume [veh/h]	272	1324	19	149	2303	277	352	238	120	29	327	118
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	54	0	15	52	0	21	26	0	25	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	59	59	11	57	57	17	31	31	3	17	17
g / C, Green / Cycle	0.11	0.49	0.49	0.09	0.47	0.47	0.14	0.26	0.26	0.03	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.15	0.35	0.35	0.08	0.68	0.70	0.19	0.07	0.07	0.02	0.12	0.12
s, saturation flow rate [veh/h]	1810	1900	1891	1810	1900	1831	1810	3618	1615	1810	1900	1732
c, Capacity [veh/h]	196	929	924	166	897	865	256	937	418	49	274	250
d1, Uniform Delay [s]	53.50	24.25	24.28	53.95	31.66	31.66	51.50	35.26	35.58	57.73	49.98	50.14
k, delay calibration	0.16	0.50	0.50	0.11	0.50	0.50	0.29	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	184.22	4.89	4.95	15.47	203.29	227.56	181.66	0.14	0.37	10.99	6.76	8.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.39	0.72	0.73	0.90	1.44	1.49	1.37	0.25	0.29	0.59	0.84	0.86
d, Delay for Lane Group [s/veh]	237.72	29.14	29.23	69.42	234.95	259.23	233.16	35.40	35.96	68.72	56.74	58.52
Lane Group LOS	F	C	C	E	F	F	F	D	D	E	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	15.83	15.51	15.50	5.09	74.90	78.00	20.35	2.68	2.75	0.99	6.99	6.65
50th-Percentile Queue Length [ft/ln]	395.80	387.83	387.47	127.18	1872.56	1949.93	508.70	66.98	68.78	24.84	174.81	166.17
95th-Percentile Queue Length [veh/ln]	25.13	21.97	21.96	8.79	112.14	118.25	31.54	4.82	4.95	1.79	11.33	10.88
95th-Percentile Queue Length [ft/ln]	628.20	549.31	548.88	219.66	2803.48	2956.17	788.48	120.57	123.81	44.72	283.23	271.88

Movement, Approach, & Intersection Results

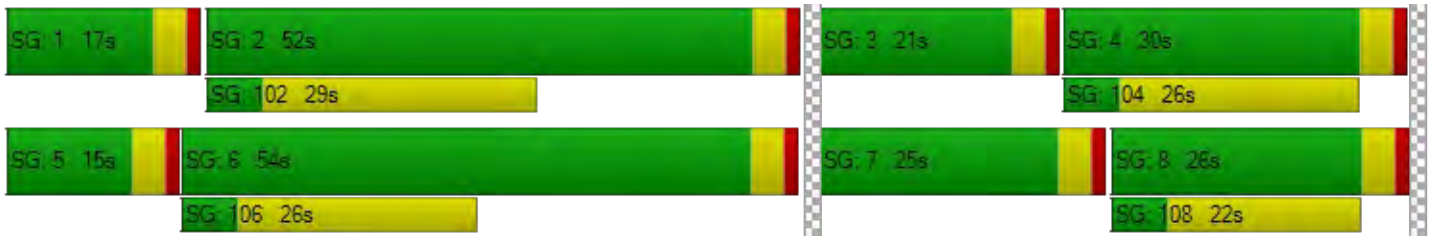
d_M, Delay for Movement [s/veh]	237.72	29.18	29.23	69.42	245.63	259.23	233.16	35.40	35.96	68.72	57.27	58.52
Movement LOS	F	C	C	E	F	F	F	D	D	E	E	E
d_A, Approach Delay [s/veh]	64.31			237.39			133.54			58.28		
Approach LOS	E			F			F			E		
d_I, Intersection Delay [s/veh]	158.13											
Intersection LOS	F											
Intersection V/C	1.174											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.379	3.498	3.006	2.729
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	800	367	433
d_b, Bicycle Delay [s]	20.42	21.60	40.02	36.82
l_b,int, Bicycle LOS Score for Intersection	2.894	3.835	2.156	1.961
Bicycle LOS	C	D	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Cedar Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	58.2
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.976

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	290.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	139	1076	24	63	1563	65	90	98	157	55	107	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	222	0	0	678	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	7	0	0	16	0	0	11
Total Hourly Volume [veh/h]	139	1298	22	63	2241	58	90	98	141	55	107	96
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	342	6	17	590	15	24	26	37	14	28	25
Total Analysis Volume [veh/h]	146	1366	23	66	2359	61	95	103	148	58	113	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	65	0	9	62	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	61	61	5	58	58	22	22
g / C, Green / Cycle	0.08	0.61	0.61	0.05	0.58	0.58	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.08	0.37	0.37	0.04	0.64	0.64	0.25	0.18
s, saturation flow rate [veh/h]	1810	1900	1889	1810	1900	1883	1368	1491
c, Capacity [veh/h]	145	1163	1156	86	1102	1092	347	372
d1, Uniform Delay [s]	46.00	11.86	11.88	47.05	21.00	21.00	40.41	36.71
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.34	0.16
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	36.90	2.28	2.30	12.93	58.01	61.79	38.95	4.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.01	0.60	0.60	0.76	1.10	1.11	1.00	0.73
d, Delay for Lane Group [s/veh]	82.90	14.14	14.18	59.99	79.01	82.79	79.36	40.87
Lane Group LOS	F	B	B	E	F	F	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.94	8.64	8.62	1.88	39.02	39.82	12.21	6.50
50th-Percentile Queue Length [ft/ln]	123.60	215.93	215.47	46.97	975.39	995.45	305.24	162.46
95th-Percentile Queue Length [veh/ln]	8.61	13.46	13.43	3.38	53.18	54.52	17.94	10.68
95th-Percentile Queue Length [ft/ln]	215.37	336.43	335.84	84.55	1329.48	1363.12	448.51	266.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	82.90	14.16	14.18	59.99	80.85	82.79	79.36	79.36	79.36	40.87	40.87	40.87
Movement LOS	F	B	B	E	F	F	E	E	E	D	D	D
d_A, Approach Delay [s/veh]	20.70			80.35			79.36			40.87		
Approach LOS	C			F			E			D		
d_I, Intersection Delay [s/veh]	58.22											
Intersection LOS	E											
Intersection V/C	0.976											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	3.596	3.641	2.192	2.047
Crosswalk LOS	D	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1220	1160	440	440
d_b, Bicycle Delay [s]	7.61	8.82	30.42	30.42
l_b,int, Bicycle LOS Score for Intersection	2.828	3.616	2.157	2.027
Bicycle LOS	C	D	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Cedar Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	82.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.994

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	190.00	100.00	100.00	345.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	180.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	225	951	51	103	1373	313	129	95	112	50	118	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	222	0	0	678	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	31	0	0	11	0	0	16
Total Hourly Volume [veh/h]	225	1173	46	103	2051	282	129	95	101	50	118	144
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	309	12	27	540	74	34	25	27	13	31	38
Total Analysis Volume [veh/h]	237	1235	48	108	2159	297	136	100	106	53	124	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	26	0	11	26	0	0	48	0	0	48	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	48	48	6	47	47	19	19	19	19
g / C, Green / Cycle	0.08	0.56	0.56	0.08	0.56	0.56	0.22	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.13	0.34	0.34	0.06	0.65	0.67	0.19	0.07	0.13	0.09
s, saturation flow rate [veh/h]	1810	1900	1875	1810	1900	1822	1248	1615	1382	1615
c, Capacity [veh/h]	149	1070	1056	138	1059	1016	340	354	358	354
d1, Uniform Delay [s]	39.00	12.26	12.29	38.55	18.81	18.81	32.63	27.74	29.76	28.61
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	272.53	2.51	2.57	9.15	82.52	103.36	2.55	0.47	1.06	0.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.59	0.60	0.60	0.78	1.16	1.21	0.69	0.30	0.49	0.43
d, Delay for Lane Group [s/veh]	311.53	14.77	14.86	47.70	101.33	122.17	35.18	28.21	30.82	29.44
Lane Group LOS	F	B	B	D	F	F	D	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	14.22	7.32	7.28	2.45	40.75	44.97	4.67	1.76	3.26	2.61
50th-Percentile Queue Length [ft/ln]	355.52	182.93	181.99	61.19	1018.87	1124.23	116.83	43.98	81.38	65.37
95th-Percentile Queue Length [veh/ln]	23.33	11.75	11.70	4.41	57.42	64.52	8.22	3.17	5.86	4.71
95th-Percentile Queue Length [ft/ln]	583.16	293.84	292.61	110.14	1435.62	1613.12	205.46	79.16	146.48	117.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	311.53	14.81	14.86	47.70	110.32	122.17	35.18	35.18	28.21	30.82	30.82	29.44
Movement LOS	F	B	B	D	F	F	D	D	C	C	C	C
d_A, Approach Delay [s/veh]	61.08			109.05			33.02			30.18		
Approach LOS	E			F			C			C		
d_I, Intersection Delay [s/veh]	82.79											
Intersection LOS	F											
Intersection V/C	0.994											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	3.508	3.745	2.406	2.224
Crosswalk LOS	D	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	518	518	1035	1035
d_b, Bicycle Delay [s]	23.35	23.35	9.89	9.89
l_b,int, Bicycle LOS Score for Intersection	2.818	3.700	2.142	2.129
Bicycle LOS	C	D	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Cedar Ave/7th St

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.781

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	295.00	100.00	100.00	190.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	100	1093	9	23	1347	52	52	11	183	52	17	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	222	0	0	678	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	5	0	0	18	0	0	2
Total Hourly Volume [veh/h]	100	1315	8	23	2025	47	52	11	165	52	17	14
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	346	2	6	533	12	14	3	43	14	4	4
Total Analysis Volume [veh/h]	105	1384	8	24	2132	49	55	12	174	55	18	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	24	0	55	67	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	73	73	3	68	68	17	17
g / C, Green / Cycle	0.07	0.70	0.70	0.02	0.65	0.65	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.06	0.37	0.37	0.01	0.57	0.58	0.14	0.09
s, saturation flow rate [veh/h]	1810	1900	1896	1810	1900	1885	1669	940
c, Capacity [veh/h]	131	1327	1324	47	1238	1228	312	208
d1, Uniform Delay [s]	47.93	7.54	7.55	50.50	14.97	15.13	42.95	40.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.54	1.49	1.49	8.51	9.19	9.74	4.08	1.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.52	0.53	0.51	0.88	0.89	0.77	0.42
d, Delay for Lane Group [s/veh]	58.47	9.03	9.04	59.01	24.16	24.87	47.03	41.37
Lane Group LOS	E	A	A	E	C	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.98	6.02	6.02	0.71	19.47	19.80	6.47	2.18
50th-Percentile Queue Length [ft/ln]	74.42	150.56	150.43	17.74	486.63	495.09	161.85	54.46
95th-Percentile Queue Length [veh/ln]	5.36	10.05	10.04	1.28	26.70	27.10	10.65	3.92
95th-Percentile Queue Length [ft/ln]	133.96	251.18	251.00	31.94	667.52	677.54	266.18	98.03

Movement, Approach, & Intersection Results

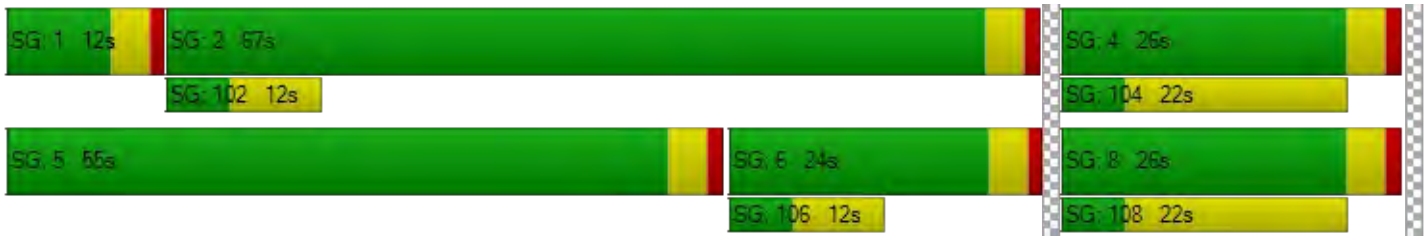
d_M, Delay for Movement [s/veh]	58.47	9.04	9.04	59.01	24.50	24.87	47.03	47.03	47.03	41.37	41.37	41.37
Movement LOS	E	A	A	E	C	C	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	12.50			24.89			47.03			41.37		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	21.97											
Intersection LOS	C											
Intersection V/C	0.781											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.648	3.586	1.927	1.782
Crosswalk LOS	D	D	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	381	1200	419	419
d_b, Bicycle Delay [s]	34.40	8.40	32.80	32.80
l_b,int, Bicycle LOS Score for Intersection	2.795	3.383	1.987	1.708
Bicycle LOS	C	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Rubidoux Blvd/Market St

Control Type:	Signalized	Delay (sec / veh):	169.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.279

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	2	0	0
Entry Pocket Length [ft]	245.00	100.00	330.00	270.00	100.00	370.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	59	452	469	849	731	158	89	95	85	368	90	707
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	222	0	0	0	0	696	238	200	203	0	478	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	47	0	0	0	0	0	0	0	0	71
Total Hourly Volume [veh/h]	281	452	422	849	731	854	327	295	288	368	568	636
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	1.0000	1.0000	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	119	111	223	192	214	82	74	72	97	142	167
Total Analysis Volume [veh/h]	281	476	444	894	769	854	327	295	288	387	568	669
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	0	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	0.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	21	37	0	42	58	0	24	50	0	21	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	1.5	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	5.0	0.0	3.0	4.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.00	7.00	7.00	5.00	6.00	6.00	5.00	7.00	5.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	5.00	5.00	3.00	4.00	4.00	3.00	5.00	3.00	4.00	4.00
g_i, Effective Green Time [s]	16	30	30	37	52	52	19	43	16	41	41
g / C, Green / Cycle	0.11	0.20	0.20	0.25	0.35	0.35	0.13	0.29	0.11	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.16	0.13	0.27	0.25	0.21	0.53	0.18	0.33	0.11	0.30	0.41
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1748	3514	1900	1615
c, Capacity [veh/h]	193	724	323	867	1254	560	229	501	375	519	441
d1, Uniform Delay [s]	67.00	55.27	60.00	56.50	40.66	49.00	65.50	53.50	67.00	54.50	54.50
k, delay calibration	0.37	0.50	0.50	0.11	0.50	0.50	0.47	0.50	0.11	0.43	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	225.11	4.64	187.01	23.12	2.25	245.41	214.34	93.73	30.44	64.94	243.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.46	0.66	1.37	1.03	0.61	1.53	1.43	1.16	1.03	1.09	1.52
d, Delay for Lane Group [s/veh]	292.11	59.92	247.01	79.62	42.90	294.41	279.84	147.23	97.44	119.44	297.91
Lane Group LOS	F	E	F	F	D	F	F	F	F	F	F
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	19.29	8.56	28.71	18.66	11.83	58.24	22.32	31.57	8.65	28.46	46.07
50th-Percentile Queue Length [ft/ln]	482.31	214.06	717.65	466.50	295.80	1456.07	558.03	789.37	216.15	711.49	1151.85
95th-Percentile Queue Length [veh/ln]	30.22	13.36	43.51	26.23	17.47	88.80	34.45	44.73	13.64	39.35	70.26
95th-Percentile Queue Length [ft/ln]	755.53	334.04	1087.63	655.69	436.82	2219.98	861.17	1118.35	341.09	983.76	1756.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	292.11	59.92	247.01	79.62	42.90	294.41	279.84	147.23	147.23	97.44	119.44	297.91
Movement LOS	F	E	F	F	D	F	F	F	F	F	F	F
d_A, Approach Delay [s/veh]	183.41			141.28			194.89			187.72		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	169.24											
Intersection LOS	F											
Intersection V/C	1.279											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	64.40	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	3.005	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	693	573	547
d_b, Bicycle Delay [s]	48.00	32.01	38.16	39.60
l_b,int, Bicycle LOS Score for Intersection	2.589	3.636	3.061	4.356
Bicycle LOS	B	D	C	E

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Agua Mansa Rd/Market St

Control Type:	Signalized	Delay (sec / veh):	183.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.888

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	2	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	200.00	85.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	0	4	3	206	0	398	443	993	44	0	886	445
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	200	0	0	478	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	40	0	0	4	0	0	45
Total Hourly Volume [veh/h]	0	4	3	206	0	358	443	1193	40	0	1364	400
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	54	0	94	117	314	11	0	359	105
Total Analysis Volume [veh/h]	0	4	3	217	0	377	466	1256	42	0	1436	421
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	14	35	0	9	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	1.5	3.0	0.0	1.5	3.0	0.0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.2	0.0	0.0	3.9	0.0	2.2	4.5	0.0	2.2	4.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.20	5.90	5.90	4.20	6.50	6.50	4.20	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.90	3.90	2.20	4.50	4.50	2.20	4.50	4.50
g_i, Effective Green Time [s]	41	40	40	10	33	33	0	24	24
g / C, Green / Cycle	0.45	0.45	0.45	0.11	0.37	0.37	0.00	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.00	0.15	0.23	0.26	0.35	0.03	0.00	0.40	0.26
s, saturation flow rate [veh/h]	1766	1431	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	802	683	720	197	1332	595	3	945	422
d1, Uniform Delay [s]	13.50	16.37	18.05	40.10	27.50	18.43	0.00	33.25	33.23
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	1.22	2.72	629.71	4.13	0.05	0.00	235.30	19.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.32	0.52	2.37	0.94	0.07	0.00	1.52	1.00
d, Delay for Lane Group [s/veh]	13.52	17.59	20.76	669.81	31.64	18.48	0.00	268.55	53.22
Lane Group LOS	B	B	C	F	C	B	A	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.08	2.99	5.83	38.60	12.51	0.53	0.00	40.40	10.83
50th-Percentile Queue Length [ft/ln]	2.04	74.73	145.76	965.08	312.66	13.36	0.00	1009.96	270.75
95th-Percentile Queue Length [veh/ln]	0.15	5.38	9.79	60.52	18.31	0.96	0.00	62.16	16.23
95th-Percentile Queue Length [ft/ln]	3.68	134.52	244.76	1513.03	457.66	24.05	0.00	1553.88	405.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.52	13.52	13.52	17.59	20.76	20.76	669.81	31.64	18.48	0.00	268.55	53.22
Movement LOS	B	B	B	B	C	C	F	C	B	A	F	D
d_A, Approach Delay [s/veh]	13.52			19.60			199.91			219.73		
Approach LOS	B			B			F			F		
d_I, Intersection Delay [s/veh]	182.95											
Intersection LOS	F											
Intersection V/C	0.888											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	13.0	15.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	32.94	32.94	31.25	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.734	2.590	3.346	0.000
Crosswalk LOS	A	B	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	907	891	633	522
d_b, Bicycle Delay [s]	13.45	13.83	21.01	24.57
l_b,int, Bicycle LOS Score for Intersection	1.571	2.606	3.018	3.129
Bicycle LOS	A	B	C	C

Sequence

Ring 1	-	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	3	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Rubidoux Blvd/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	92.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.227

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	85.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	71	994	0	0	1190	26	35	0	328	769	98	135
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	200	0	0	184	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	3	0	0	33	0	0	14
Total Hourly Volume [veh/h]	71	1194	0	0	1374	23	35	0	295	769	98	121
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	314	0	0	362	6	9	0	78	202	26	32
Total Analysis Volume [veh/h]	75	1257	0	0	1446	24	37	0	311	809	103	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	4	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	35	0	0	35	0	20	0	0	0	30	0
Maximum Green [s]	0	25	0	0	25	0	35	0	0	0	20	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	4.8	0.0	0.0	0.0	4.8	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	41	0	0	41	0	49	0	0	0	49	0
Vehicle Extension [s]	0.0	3.5	0.0	0.0	3.5	0.0	2.0	0.0	0.0	0.0	3.5	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	3.8	0.0	0.0	0.0	3.8	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.80	5.80	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.40	3.40	3.80	3.80	3.80	3.80
g_i, Effective Green Time [s]	36	36	36	36	43	43	43	43
g / C, Green / Cycle	0.40	0.40	0.40	0.40	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.20	0.35	0.39	0.39	0.03	0.19	0.84	0.08
s, saturation flow rate [veh/h]	366	3618	1900	1889	1169	1615	1088	1615
c, Capacity [veh/h]	80	1431	752	747	91	775	598	775
d1, Uniform Delay [s]	45.00	25.20	26.81	26.91	44.88	15.07	27.00	13.21
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.50	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	84.05	7.94	27.89	29.17	1.10	0.12	245.15	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.88	0.98	0.98	0.41	0.40	1.53	0.16
d, Delay for Lane Group [s/veh]	129.05	33.13	54.70	56.08	45.98	15.19	272.15	13.33
Lane Group LOS	F	C	D	E	D	B	F	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.49	12.92	19.93	20.22	0.85	3.92	53.78	1.39
50th-Percentile Queue Length [ft/ln]	87.37	322.93	498.36	505.49	21.15	98.08	1344.46	34.72
95th-Percentile Queue Length [veh/ln]	6.29	18.81	27.26	27.59	1.52	7.06	84.36	2.50
95th-Percentile Queue Length [ft/ln]	157.26	470.29	681.42	689.85	38.07	176.54	2109.11	62.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	129.05	33.13	0.00	0.00	55.38	56.08	45.98	0.00	15.19	272.15	272.15	13.33
Movement LOS	F	C			E	E	D		B	F	F	B
d_A, Approach Delay [s/veh]	38.53			55.39			18.47			240.51		
Approach LOS	D			E			B			F		
d_I, Intersection Delay [s/veh]	92.88											
Intersection LOS	F											
Intersection V/C	1.227											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	35.6
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	34.67	0.00	16.44
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.133	0.000	2.329
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	791	791	960	960
d_b, Bicycle Delay [s]	16.44	16.44	12.17	12.17
l_b,int, Bicycle LOS Score for Intersection	2.659	2.775	1.560	3.297
Bicycle LOS	B	C	A	C

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Rubidoux Blvd/SrR-60 WB On Ramp

Control Type:	Two-way stop	Delay (sec / veh):	280.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.486

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	145.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	320	1064	1066	912	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	200	77	107	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	320	1264	1143	1019	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	333	301	268	0	0
Total Analysis Volume [veh/h]	337	1331	1203	1073	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.49	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	280.32	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	20.07	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	501.70	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	56.63		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	23.95					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 24: Rubidoux Blvd/SR-60 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	153.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.126

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	145.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	652	570	273	775	0	722	14	215	9	0	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	77	0	0	200	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	57	0	0	0	0	0	22	0	0	0
Total Hourly Volume [veh/h]	0	652	513	350	775	0	922	14	193	9	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	172	135	92	204	0	243	4	51	2	0	1
Total Analysis Volume [veh/h]	0	686	540	368	816	0	971	15	203	9	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Permiss	Split
Signal Group	0	2	0	1	6	0	0	4	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	5	0	0
Maximum Green [s]	0	35	0	30	35	0	0	35	0	20	0	0
Amber [s]	0.0	4.4	0.0	4.1	4.4	0.0	0.0	4.8	0.0	4.4	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	43	0	18	61	0	0	48	0	11	0	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	3.0	0.0	2.0	0.0	0.0
Walk [s]	0	4	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	33	0	0	18	0	0	28	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	3.1	3.4	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.10	5.40	5.80	5.80	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.10	3.40	3.80	3.80	3.40	3.40
g_i, Effective Green Time [s]	38	38	17	59	42	42	2	2
g / C, Green / Cycle	0.31	0.31	0.14	0.50	0.35	0.35	0.01	0.01
(v / s)_i Volume / Saturation Flow Rate	0.32	0.37	0.20	0.23	0.54	0.13	0.00	0.00
s, saturation flow rate [veh/h]	1900	1644	1810	3618	1811	1615	1810	1615
c, Capacity [veh/h]	597	517	250	1792	637	568	27	24
d1, Uniform Delay [s]	41.14	41.14	51.70	19.74	38.90	28.85	58.53	58.38
k, delay calibration	0.50	0.50	0.26	0.50	0.50	0.11	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	43.72	101.92	222.34	0.84	254.49	0.38	2.72	1.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.03	1.19	1.47	0.46	1.55	0.36	0.34	0.17
d, Delay for Lane Group [s/veh]	84.86	143.06	274.04	20.58	293.39	29.23	61.25	59.60
Lane Group LOS	F	F	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	24.27	29.36	22.84	7.31	63.19	4.36	0.29	0.13
50th-Percentile Queue Length [ft/ln]	606.66	733.93	570.96	182.83	1579.73	108.89	7.23	3.18
95th-Percentile Queue Length [veh/ln]	32.92	42.45	35.57	11.75	96.37	7.78	0.52	0.23
95th-Percentile Queue Length [ft/ln]	823.01	1061.15	889.37	293.71	2409.16	194.45	13.01	5.73

Movement, Approach, & Intersection Results

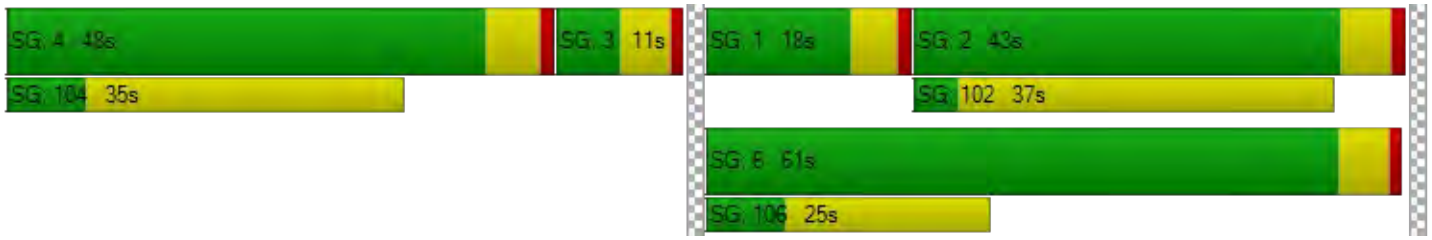
d_M, Delay for Movement [s/veh]	0.00	91.05	143.06	274.04	20.58	0.00	293.39	293.39	29.23	61.25	0.00	59.60
Movement LOS		F	F	F	C		F	F	C	E		E
d_A, Approach Delay [s/veh]	113.96			99.36			248.29			60.74		
Approach LOS	F			F			F			E		
d_I, Intersection Delay [s/veh]	153.20											
Intersection LOS	F											
Intersection V/C	1.126											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	52.27
l_p,int, Pedestrian LOS Score for Intersectio	2.984	0.000	2.444	2.333
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	627	927	703	93
d_b, Bicycle Delay [s]	28.29	17.28	25.22	54.53
l_b,int, Bicycle LOS Score for Intersection	2.618	2.536	3.558	1.560
Bicycle LOS	B	B	D	A

Sequence

Ring 1	4	3	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Market St/Rivera St

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	165.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1398	306	45	1165	4	0	0	34	306	4	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	478	0	0	200	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	31	0	0	0	0	0	3	0	0	7
Total Hourly Volume [veh/h]	20	1876	275	45	1365	4	0	0	31	306	4	65
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	494	72	12	359	1	0	0	8	81	1	17
Total Analysis Volume [veh/h]	21	1975	289	47	1437	4	0	0	33	322	4	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	6	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	5	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	30	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	23	23	9	23	0	0	42	0	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	14	0	10	0	0	10	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	66	66	4	67	67	3	3	12	12	12
g / C, Green / Cycle	0.02	0.66	0.66	0.04	0.67	0.67	0.03	0.03	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.01	0.55	0.18	0.03	0.38	0.38	0.00	0.02	0.09	0.09	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1898	1900	1615	1810	1812	1615
c, Capacity [veh/h]	40	2376	1061	66	1275	1274	60	51	208	209	186
d1, Uniform Delay [s]	48.37	12.96	7.17	47.65	8.71	8.71	0.00	47.89	43.02	43.02	40.86
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.12	3.56	0.63	13.19	1.82	1.82	0.00	13.22	6.27	6.26	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.83	0.27	0.71	0.57	0.57	0.00	0.65	0.78	0.78	0.37
d, Delay for Lane Group [s/veh]	58.48	16.52	7.80	60.84	10.53	10.53	0.00	61.11	49.29	49.28	42.06
Lane Group LOS	E	B	A	E	B	B	A	E	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	14.10	2.28	1.36	7.08	7.08	0.00	1.00	4.25	4.25	1.60
50th-Percentile Queue Length [ft/ln]	15.36	352.46	56.96	34.03	177.07	176.99	0.00	25.09	106.18	106.29	40.05
95th-Percentile Queue Length [veh/ln]	1.11	20.26	4.10	2.45	11.45	11.44	0.00	1.81	7.63	7.63	2.88
95th-Percentile Queue Length [ft/ln]	27.64	506.41	102.53	61.26	286.18	286.08	0.00	45.16	190.68	190.83	72.10

Movement, Approach, & Intersection Results

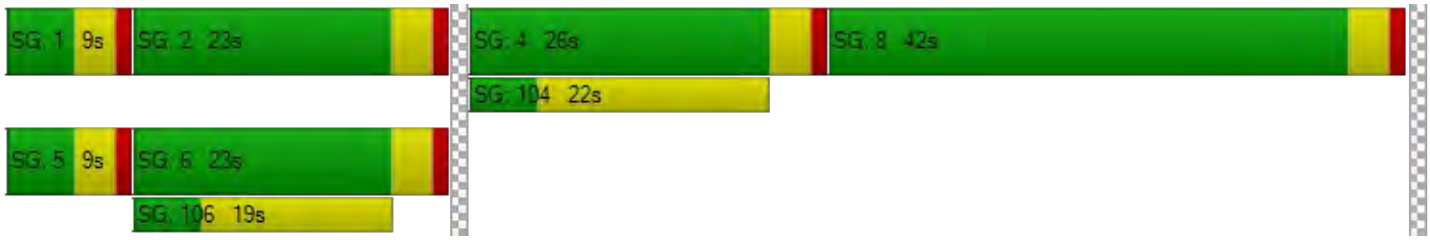
d_M, Delay for Movement [s/veh]	58.48	16.52	7.80	60.84	10.53	10.53	0.00	0.00	61.11	49.28	49.28	42.06
Movement LOS	E	B	A	E	B	B	A	A	E	D	D	D
d_A, Approach Delay [s/veh]	15.80			12.12			61.11			48.04		
Approach LOS	B			B			E			D		
d_I, Intersection Delay [s/veh]	17.88											
Intersection LOS	B											
Intersection V/C	0.682											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	41.41	0.00	41.41
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.341	0.000	2.335
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	380	380	760	440
d_b, Bicycle Delay [s]	32.81	32.81	19.22	30.42
l_b,int, Bicycle LOS Score for Intersection	3.470	2.787	1.619	2.221
Bicycle LOS	C	C	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Market St/SR-60 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	185.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	286	529	0	0	1286	219	0	0	0	194	0	1194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	200	0	0	0	0	0	0	478
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	22	0	0	0	0	0	167
Total Hourly Volume [veh/h]	286	529	0	0	1486	197	0	0	0	194	0	1505
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	75	139	0	0	391	52	0	0	0	51	0	396
Total Analysis Volume [veh/h]	301	557	0	0	1564	207	0	0	0	204	0	1584
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	20	37	0	0	17	0	0	0	0	38	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C		L
C, Cycle Length [s]	75	75	75		75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00
g_i, Effective Green Time [s]	14	56	38		11
g / C, Green / Cycle	0.19	0.75	0.51		0.14
(v / s)_i Volume / Saturation Flow Rate	0.17	0.15	0.43		0.11
s, saturation flow rate [veh/h]	1810	3618	3618		1810
c, Capacity [veh/h]	344	2718	1838		257
d1, Uniform Delay [s]	29.51	2.74	15.99		31.12
k, delay calibration	0.11	0.50	0.50		0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00
d2, Incremental Delay [s]	7.05	0.17	5.19		5.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00
PF, progression factor	1.00	1.00	1.00		1.00

Lane Group Results

X, volume / capacity	0.88	0.20	0.85		0.79
d, Delay for Lane Group [s/veh]	36.56	2.91	21.18		36.64
Lane Group LOS	D	A	C		D
Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	5.48	0.59	10.50		3.79
50th-Percentile Queue Length [ft/ln]	136.98	14.68	262.40		94.87
95th-Percentile Queue Length [veh/ln]	9.32	1.06	15.81		6.83
95th-Percentile Queue Length [ft/ln]	232.95	26.42	395.23		170.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.56	2.91	0.00	0.00	21.18	0.00	0.00	0.00	0.00	36.64	0.00	0.00
Movement LOS	D	A			C					D		
d_A, Approach Delay [s/veh]	14.71			18.81			0.00			4.37		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	16.35											
Intersection LOS	B											
Intersection V/C	0.711											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	29.04
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.010
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	880	347	0	907
d_b, Bicycle Delay [s]	11.76	25.63	37.50	11.21
l_b,int, Bicycle LOS Score for Intersection	2.267	2.850	4.132	1.560
Bicycle LOS	B	C	D	A

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Market St/SR-60 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	66.2
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.971

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	60.00	155.00	100.00	100.00	180.00	100.00	410.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	565	202	843	524	0	189	0	603	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	200	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	20	0	0	0	0	0	60	0	0	0
Total Hourly Volume [veh/h]	0	565	182	1043	524	0	189	0	543	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	149	48	274	138	0	50	0	143	0	0	0
Total Analysis Volume [veh/h]	0	595	192	1098	552	0	199	0	572	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	24	0	69	93	0	27	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	20	65	89	23	23	
g / C, Green / Cycle	0.17	0.54	0.74	0.19	0.19	
(v / s)_i Volume / Saturation Flow Rate	0.16	0.61	0.15	0.11	0.20	
s, saturation flow rate [veh/h]	3618	1810	3618	1810	2859	
c, Capacity [veh/h]	603	980	2683	347	548	
d1, Uniform Delay [s]	49.87	27.50	4.73	44.05	48.50	
k, delay calibration	0.50	0.50	0.50	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	33.57	67.76	0.17	1.50	30.67	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.99	1.12	0.21	0.57	1.04	
d, Delay for Lane Group [s/veh]	83.44	95.26	4.90	45.55	79.17	
Lane Group LOS	F	F	A	D	F	
Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.43	43.50	1.71	5.47	10.41	
50th-Percentile Queue Length [ft/ln]	285.81	1087.44	42.71	136.83	260.29	
95th-Percentile Queue Length [veh/ln]	16.98	59.44	3.07	9.31	16.05	
95th-Percentile Queue Length [ft/ln]	424.44	1486.11	76.87	232.75	401.17	

Movement, Approach, & Intersection Results

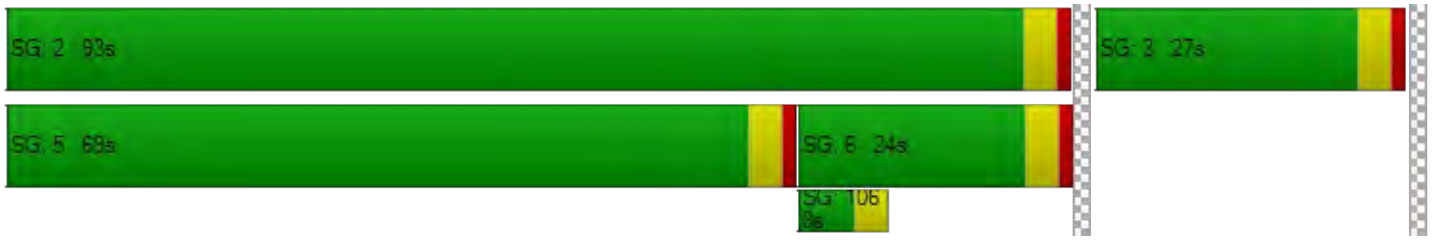
d_M, Delay for Movement [s/veh]	0.00	83.44	0.00	95.26	4.90	0.00	45.55	0.00	79.17	0.00	0.00	0.00
Movement LOS		F		F	A		D		F			
d_A, Approach Delay [s/veh]	63.89			65.03			70.50			0.00		
Approach LOS	E			E			E			A		
d_I, Intersection Delay [s/veh]	66.20											
Intersection LOS	E											
Intersection V/C	0.971											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.509
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	1483	383	0
d_b, Bicycle Delay [s]	41.67	4.00	39.20	60.00
l_b,int, Bicycle LOS Score for Intersection	2.050	2.921	1.560	4.132
Bicycle LOS	B	C	A	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Sierra Ave/20th St

Control Type:	Signalized	Delay (sec / veh):	52.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.859

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	249	0	25	66	0	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	258	804	0	183	496
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	26	0	0	0	55
Total Hourly Volume [veh/h]	249	232	829	66	183	493
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	61	218	17	48	130
Total Analysis Volume [veh/h]	262	244	873	69	193	519
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	29	0	25	54	31	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	14	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R
C, Cycle Length [s]	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	25	21	50	27	27
g / C, Green / Cycle	0.29	0.25	0.59	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.29	0.25	0.04	0.11	0.32
s, saturation flow rate [veh/h]	1751	3514	1900	1810	1615
c, Capacity [veh/h]	515	868	1118	575	513
d1, Uniform Delay [s]	29.78	32.00	7.48	22.15	29.00
k, delay calibration	0.50	0.11	0.50	0.11	0.39
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	35.58	15.54	0.11	0.34	37.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.98	1.01	0.06	0.34	1.01
d, Delay for Lane Group [s/veh]	65.36	47.54	7.58	22.49	66.81
Lane Group LOS	E	F	A	C	F
Critical Lane Group	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	14.57	10.20	0.49	2.81	14.99
50th-Percentile Queue Length [ft/ln]	364.37	254.97	12.25	70.35	374.79
95th-Percentile Queue Length [veh/ln]	20.84	15.48	0.88	5.07	21.50
95th-Percentile Queue Length [ft/ln]	520.90	387.10	22.05	126.64	537.54

Movement, Approach, & Intersection Results

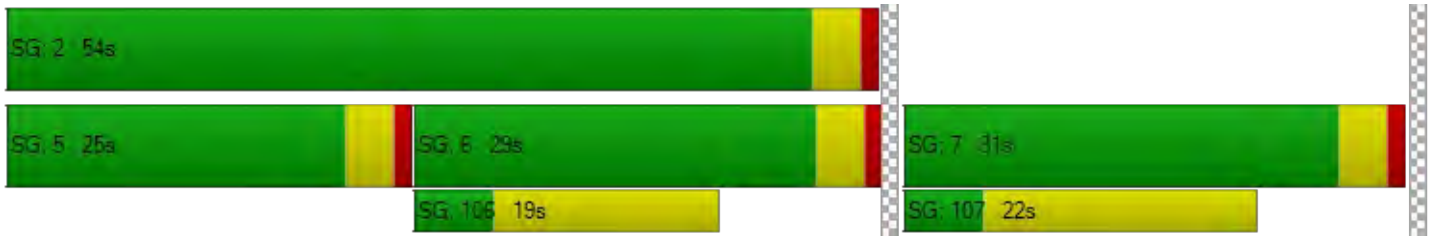
d_M, Delay for Movement [s/veh]	65.36	65.36	47.54	7.58	22.49	66.81
Movement LOS	E	E	F	A	C	F
d_A, Approach Delay [s/veh]	65.36		44.61		54.80	
Approach LOS	E		D		D	
d_I, Intersection Delay [s/veh]	52.83					
Intersection LOS	D					
Intersection V/C	0.859					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	2.320	2.761	2.829
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	588	1176	635
d_b, Bicycle Delay [s]	21.18	7.21	19.79
l_b,int, Bicycle LOS Score for Intersection	2.437	3.114	1.560
Bicycle LOS	B	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Armstrong Rd/Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	14.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.075

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	370	0	0	505	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	13	0	8	29	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	393	13	0	513	29	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	3	0	135	8	0
Total Analysis Volume [veh/h]	414	14	0	540	31	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.07	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.15	0.00	14.37	11.35
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.24	0.24
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	6.02	6.02
d_A, Approach Delay [s/veh]	0.00		0.00		14.37	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.45					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 30: Driveway 2/20th St

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.463

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	8	0	0	2	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	153	0	123	94	0	131	45	964	53	66	396	60
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	12	0	0	13	0	0	5	0	0	6
Total Hourly Volume [veh/h]	153	0	111	94	0	118	45	972	48	66	398	54
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	1.0000	1.0000	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	0	29	25	0	30	11	243	12	17	100	14
Total Analysis Volume [veh/h]	153	0	117	99	0	118	45	972	48	69	398	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	31	0	0	31	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	39	39	39	39	39	39
g / C, Green / Cycle	0.22	0.22	0.64	0.64	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.19	0.14	0.05	0.27	0.27	0.12	0.12	0.12
s, saturation flow rate [veh/h]	1402	1518	951	1900	1869	562	1900	1818
c, Capacity [veh/h]	406	425	655	1223	1203	390	1223	1171
d1, Uniform Delay [s]	22.37	20.96	6.02	5.21	5.21	9.20	4.33	4.34
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.87	0.95	0.20	1.06	1.08	0.99	0.34	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.51	0.07	0.42	0.42	0.18	0.19	0.19
d, Delay for Lane Group [s/veh]	24.25	21.91	6.22	6.28	6.30	10.19	4.67	4.70
Lane Group LOS	C	C	A	A	A	B	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	3.57	2.64	0.22	2.21	2.18	0.53	0.81	0.79
50th-Percentile Queue Length [ft/ln]	89.31	66.05	5.61	55.16	54.41	13.15	20.16	19.63
95th-Percentile Queue Length [veh/ln]	6.43	4.76	0.40	3.97	3.92	0.95	1.45	1.41
95th-Percentile Queue Length [ft/ln]	160.76	118.89	10.10	99.30	97.95	23.68	36.29	35.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.25	24.25	24.25	21.91	21.91	21.91	6.22	6.29	6.30	10.19	4.68	4.70
Movement LOS	C	C	C	C	C	C	A	A	A	B	A	A
d_A, Approach Delay [s/veh]	24.25			21.91			6.28			5.41		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	10.03											
Intersection LOS	B											
Intersection V/C	0.463											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.008	1.943	2.961	2.880
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	833	833	900	900
d_b, Bicycle Delay [s]	10.21	10.21	9.08	9.08
l_b,int, Bicycle LOS Score for Intersection	2.025	1.939	2.442	1.997
Bicycle LOS	B	A	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Street A/20th St

Control Type:	Two-way stop	Delay (sec / veh):	26.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.126

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	8	0	0	2	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1173	8	32	498	23	74
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1181	8	32	500	23	74
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	311	2	8	132	6	19
Total Analysis Volume [veh/h]	1243	8	34	526	24	78
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.06	0.01	0.13	0.18
d_M, Delay for Movement [s/veh]	0.00	0.00	11.43	0.00	26.57	15.15
Movement LOS	A	A	B	A	D	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.06	0.03	0.42	0.65
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.44	0.72	10.58	16.28
d_A, Approach Delay [s/veh]	0.00		0.69		17.84	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.15					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 32: Street B/20th St

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	8	0	0	2	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	224	39	50	115	46	77	26	958	263	59	230	39
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	5	0	0	8	0	0	26	0	0	4
Total Hourly Volume [veh/h]	224	39	45	115	46	69	26	966	237	59	232	35
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	10	12	30	12	18	7	254	62	16	61	9
Total Analysis Volume [veh/h]	236	41	47	121	48	73	27	1017	249	62	244	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	36	0	0	24	0	0	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15	15	15	15	37	37	37	37	37	37
g / C, Green / Cycle	0.24	0.24	0.24	0.24	0.62	0.62	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.18	0.05	0.09	0.07	0.02	0.34	0.35	0.14	0.07	0.08
s, saturation flow rate [veh/h]	1291	1736	1330	1717	1116	1900	1773	445	1900	1815
c, Capacity [veh/h]	403	424	422	419	662	1183	1104	242	1183	1130
d1, Uniform Delay [s]	22.40	18.06	19.72	18.45	8.12	6.50	6.53	18.38	4.62	4.62
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.36	0.24	0.37	0.38	0.12	1.85	2.02	2.55	0.21	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.21	0.29	0.29	0.04	0.55	0.56	0.26	0.12	0.12
d, Delay for Lane Group [s/veh]	23.76	18.30	20.09	18.82	8.24	8.36	8.55	20.93	4.82	4.85
Lane Group LOS	C	B	C	B	A	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	3.08	0.93	1.37	1.31	0.17	3.55	3.39	0.80	0.52	0.51
50th-Percentile Queue Length [ft/ln]	76.92	23.21	34.34	32.69	4.15	88.73	84.82	20.08	13.09	12.84
95th-Percentile Queue Length [veh/ln]	5.54	1.67	2.47	2.35	0.30	6.39	6.11	1.45	0.94	0.92
95th-Percentile Queue Length [ft/ln]	138.45	41.78	61.81	58.85	7.48	159.72	152.67	36.14	23.56	23.12

Movement, Approach, & Intersection Results

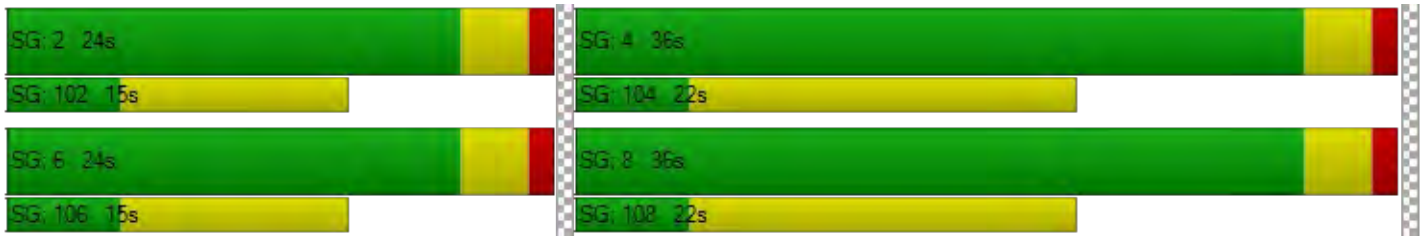
d_M, Delay for Movement [s/veh]	23.76	18.30	18.30	20.09	18.82	18.82	8.24	8.43	8.55	20.93	4.83	4.85
Movement LOS	C	B	B	C	B	B	A	A	A	C	A	A
d_A, Approach Delay [s/veh]	22.28			19.46			8.45			7.74		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	11.58											
Intersection LOS	B											
Intersection V/C	0.529											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.248	2.087	3.142	2.858
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1067	1067	667	667
d_b, Bicycle Delay [s]	6.53	6.53	13.33	13.33
l_b,int, Bicycle LOS Score for Intersection	2.102	1.972	2.648	1.846
Bicycle LOS	B	A	B	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Street M/20th Street

Control Type:	Roundabout	Delay (sec / veh):	6.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	8	2	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	31	57	29	1094	271	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	57	29	1102	273	10
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	15	8	290	72	3
Total Analysis Volume [veh/h]	33	60	31	1160	287	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	287		33		31	
Exiting Flow Rate [veh/h]	42		347		1193	
Demand Flow Rate [veh/h]	31	57	29	1102	273	10
Adjusted Demand Flow Rate [veh/h]	33	60	31	1160	287	11

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	1.00	1.00	1.00	1.00	1.00
Entry Flow Rate [veh/h]	93	560	632	141	158
Capacity of Entry and Bypass Lanes [veh/h]	1030	1378	1378	1381	1381
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	1030	1378	1378	1381	1381
X, volume / capacity	0.09	0.41	0.46	0.10	0.11

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.30	2.01	2.47	0.34	0.39
95th-Percentile Queue Length [ft]	7.43	50.32	61.76	8.45	9.66
Approach Delay [s/veh]	4.29	6.78		3.47	
Approach LOS	A	A		A	
Intersection Delay [s/veh]	6.01				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 34: Driveway 3/20th St

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	8	0	0	2	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	42	0	84	78	0	25	138	808	179	357	215	423
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	0	84	78	0	25	138	816	179	357	217	423
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9500	1.0000	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	0	21	20	0	6	35	215	45	89	57	106
Total Analysis Volume [veh/h]	42	0	84	78	0	25	138	859	179	357	228	423
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	46	46	46	46	46	46
g / C, Green / Cycle	0.09	0.09	0.77	0.77	0.77	0.77	0.77	0.77
(v / s)_i Volume / Saturation Flow Rate	0.07	0.07	0.17	0.28	0.28	0.65	0.12	0.26
s, saturation flow rate [veh/h]	1801	1506	793	1900	1788	552	1900	1615
c, Capacity [veh/h]	249	247	632	1469	1382	471	1469	1248
d1, Uniform Delay [s]	26.49	26.43	4.57	2.15	2.15	11.23	1.76	2.10
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.59	1.13	0.79	0.70	0.75	10.86	0.23	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.42	0.22	0.36	0.36	0.76	0.16	0.34
d, Delay for Lane Group [s/veh]	28.09	27.56	5.37	2.85	2.90	22.09	1.98	2.83
Lane Group LOS	C	C	A	A	A	C	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.77	1.43	0.57	0.60	0.59	4.16	0.20	0.50
50th-Percentile Queue Length [ft/ln]	44.18	35.75	14.16	15.05	14.64	103.91	5.06	12.50
95th-Percentile Queue Length [veh/ln]	3.18	2.57	1.02	1.08	1.05	7.48	0.36	0.90
95th-Percentile Queue Length [ft/ln]	79.52	64.34	25.49	27.09	26.35	187.05	9.11	22.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.09	28.09	28.09	27.56	27.56	27.56	5.37	2.87	2.90	22.09	1.98	2.83
Movement LOS	C	C	C	C	C	C	A	A	A	C	A	A
d_A, Approach Delay [s/veh]	28.09			27.56			3.17			9.46		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	8.14											
Intersection LOS	A											
Intersection V/C	0.717											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.526	2.216	2.723	2.919
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	767	767	967	967
d_b, Bicycle Delay [s]	11.41	11.41	8.01	8.01
l_b,int, Bicycle LOS Score for Intersection	1.768	1.730	2.530	2.391
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Driveway 4/20th St

Control Type:	Signalized	Delay (sec / veh):	5.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.491

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	8	0	0	2	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	31	0	21	70	0	33	184	652	134	89	931	377
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	0	21	70	0	33	184	660	134	89	933	377
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	0	5	18	0	8	46	165	34	22	233	94
Total Analysis Volume [veh/h]	31	0	21	70	0	33	184	660	134	89	933	377
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	32	0	0	32	0	0	28	0	0	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	47	47	47	47	47	47
g / C, Green / Cycle	0.08	0.08	0.79	0.79	0.79	0.79	0.79	0.79
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.43	0.22	0.22	0.13	0.36	0.37
s, saturation flow rate [veh/h]	1819	1727	426	1900	1790	694	1900	1718
c, Capacity [veh/h]	237	235	384	1499	1412	597	1499	1355
d1, Uniform Delay [s]	26.27	27.03	7.64	1.70	1.70	3.37	2.09	2.11
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	1.28	4.23	0.45	0.48	0.53	1.00	1.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.44	0.48	0.27	0.27	0.15	0.45	0.46
d, Delay for Lane Group [s/veh]	26.73	28.31	11.87	2.15	2.18	3.90	3.08	3.25
Lane Group LOS	C	C	B	A	A	A	A	A
Critical Lane Group	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.70	1.45	1.42	0.27	0.26	0.28	0.58	0.58
50th-Percentile Queue Length [ft/ln]	17.50	36.23	35.38	6.69	6.57	6.91	14.49	14.56
95th-Percentile Queue Length [veh/ln]	1.26	2.61	2.55	0.48	0.47	0.50	1.04	1.05
95th-Percentile Queue Length [ft/ln]	31.51	65.21	63.69	12.04	11.83	12.43	26.08	26.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.73	26.73	26.73	28.31	28.31	28.31	11.87	2.16	2.18	3.90	3.13	3.25
Movement LOS	C	C	C	C	C	C	B	A	A	A	A	A
d_A, Approach Delay [s/veh]	26.73			28.31			3.99			3.21		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	5.02											
Intersection LOS	A											
Intersection V/C	0.491											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	1.956	2.281	2.838	2.939
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	933	933	800	800
d_b, Bicycle Delay [s]	8.53	8.53	10.80	10.80
l_b,int, Bicycle LOS Score for Intersection	1.645	1.730	2.366	2.714
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Driveway 5/20th St

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.051

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	1000.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	8	0	0	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	32	609	134	0	1397
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	32	617	134	0	1399
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	8	154	34	0	350
Total Analysis Volume [veh/h]	0	32	617	134	0	1399
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	11.04	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.16	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.02	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.04		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.16					
Intersection LOS	B					

Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\2045 AM + P.pdf

Scenario 15 2045 AM + P
2/15/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound		Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Right	Left	Right	
1	Sierra Ave/I-10 Ramps	666	981	556	635	1080	881	1016	897	571	658	7941

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Sierra Ave/Slover Ave	123	1442	133	778	1424	377	217	334	68	80	327	562	5865

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Sierra Ave/Santa Ana Ave	227	1383	61	227	1087	138	162	93	96	61	162	141	3838

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Sierra Ave/Jurupa Ave	520	1063	88	39	715	287	306	255	314	328	690	164	4769

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Armstrong Rd/Sierra Ave	1292	336	751	223	466	162	121	436	824	480	472	217	5780

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
6	Armstrong/30th St	2209	96	43	1748	186	82	4364

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
7	Valley Way/SR-60 WB Off Ramp	160	1583	1751	39	91	201	228	171	659	4883

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
8	Valley Way/SR-60 WB On Ramp	257	1690	1386	793	4126

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR-60 EB Ramps/Mission Blvd	14	2	5	1028	5	73	128	405	7	6	436	335	2444

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
10	Valley Way/Mission Blvd	19	546	53	489	476	473	952	355	32	73	215	743	4426

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
11	Jurupa Rd/Mission Blvd	56	252	830	37	203	951	2329

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	Pacific Ave/Mission Blvd	180	205	255	92	187	159	130	715	90	348	708	153	3222

ID	Intersection Name	Northbound		Southbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Thru	Right	
13	Cedar Ave/I-10 WB Ramp	513	1611	1859	847	1104	4	484	6422

ID	Intersection Name	Northbound		Southbound		Eastbound			Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	
14	Cedar Ave/I-10 EB Ramps	1477	663	496	2387	633	4	937	6597

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
15	Cedar Ave/Orange St	10	1907	4	126	2653	538	321	6	15	0	1	160	5741

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	Cedar Ave/Slover Ave	258	1258	20	142	2188	292	334	226	127	28	311	125	5309

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Cedar Ave/Santa Ana Ave	139	1298	24	63	2241	65	90	98	157	55	107	107	4444

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	Cedar Ave/Jurupa Ave	225	1173	51	103	2051	313	129	95	112	50	118	160	4580

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Cedar Ave/7th St	100	1315	9	23	2025	52	52	11	183	52	17	16	3855

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	Rubidoux Blvd/Market St	281	452	469	849	731	854	327	295	288	368	568	707	6189

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	Agua Mansa Rd/Market St	0	4	3	206	0	398	443	1193	44	0	1364	445	4100

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
22	Rubidoux Blvd/SR-60 WB Off Ramp	71	1194	1374	26	35	328	769	98	135	4030

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
23	Rubidoux Blvd/SrR-60 WB On Ramp	320	1264	1143	1019	3746

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	Left	Right	
24	Rubidoux Blvd/SR-60 EB Ramps	652	570	350	775	922	14	215	9	4	3511

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Market St/Rivera St	20	1876	306	45	1365	4	0	0	34	306	4	72	4032

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
26	Market St/SR-60 WB Ramp	286	529	1486	219	194	1672	4386

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Thru	Right	Left	Thru	Left	2	
27	Market St/SR-60 EB Ramp	565	202	1043	524	189	603	3126

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
28	Sierra Ave/20th St	249	258	829	66	183	548	2133

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
29	Armstrong Rd/Driveway 1	393	13	0	513	29	0	948

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
30	Driveway 2/20th St	153	0	123	94	0	131	45	972	53	66	398	60	2095

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
31	Street A/20th St	1181	8	32	500	23	74	1818

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
32	Street B/20th St	224	39	50	115	46	77	26	966	263	59	232	39	2136

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
33	Street M/20th Street	31	57	29	1102	273	10	1502

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
34	Driveway 3/20th St	42	0	84	78	0	25	138	816	179	357	217	423	2359

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
35	Driveway 4/20th St	31	0	21	70	0	33	184	660	134	89	933	377	2532

ID	Intersection Name	Northbound	Eastbound		Westbound	Total Volume
		Right	Thru	Right	Thru	
36	Driveway 5/20th St	32	617	134	1399	2182

Option 2: Copy of Armstrong Rd/Sierra Ave

Number	5											
Intersection	Armstrong Rd/Sierra Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	1292	328	243	165	443	162	121	197	824	217	304	152
Total Analysis Volume [veh/h]	1360	354	712	235	491	154	127	459	781	505	497	205

Intersection Settings

Cycle Length [s]	175											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups			2,3									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	50	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	4.3	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	58	69	69	23	34	0	19	38	0	45	64	0
Walk [s]	0	7	7	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	25	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.30	0.43	0.68	0.08	0.21	0.21	0.07	0.14	0.22	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.39	0.19	0.44	0.07	0.26	0.10	0.07	0.13	0.28	0.19	0.19
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3		
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1714
c, Capacity [veh/h]	1058	815	1102	276	392	333	134	508	403	549	496
X, volume / capacity	1.29	0.43	0.65	0.85	1.25	0.46	0.94	0.90	1.25	0.67	0.67
d, Delay for Lane Group [s/veh]	192.32	36.74	18.74	82.53	202.55	65.49	92.94	80.24	200.51	56.74	57.09
Lane Group LOS	F	D	B	F	F	E	F	F	F	E	E

Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	42.30	10.90	16.02	5.30	31.78	6.38	6.06	10.37	32.71	14.54	13.25
50th-Percentile Queue Length [ft/ln]	1057.52	272.51	400.39	132.60	794.60	159.54	151.41	259.15	817.86	363.59	331.27
95th-Percentile Queue Length [veh/ln]	61.33	16.31	22.58	9.08	46.09	10.52	10.09	15.65	47.43	20.80	19.22
95th-Percentile Queue Length [ft/ln]	1533.17	407.87	564.47	227.02	1152.24	263.11	252.31	391.15	1185.78	519.95	480.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	192.32	36.74	18.74	82.53	202.55	65.49	92.94	80.24	0.00	200.51	56.83	57.09
Movement LOS	F	D	B	F	F	E	F	F		F	E	E
Critical Movement	No	No	No	No	Yes	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	118.67			146.51			36.62			116.99		
Approach LOS	F			F			D			F		
d_I, Intersection Delay [s/veh]	113.65											
Intersection LOS	F											
Intersection V/C	1.051											

Option 1: Copy of Valley Way/SR-60 WB Off Ramp

Number	7											
Intersection	Valley Way/SR-60 WB Off Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	160	1112	0	0	1503	27	76	0	201	228	171	659
Total Analysis Volume [veh/h]	168	1666	0	0	1843	37	96	0	191	240	180	624

Intersection Settings

Cycle Length [s]	140											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	14	67	0	0	53	0	22	0	0	0	51	0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.07	0.44	0.34	0.34	0.12	0.12	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.46	0.49	0.50	0.05	0.12	0.23	0.39
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3		3	
s, saturation flow rate [veh/h]	1810	3618	1900	1887	1810	1615	1847	1615
c, Capacity [veh/h]	121	1594	647	643	215	191	603	527
X, volume / capacity	1.38	1.04	1.45	1.46	0.45	1.00	0.70	1.18
d, Delay for Lane Group [s/veh]	248.42	74.43	258.15	262.62	57.97	92.45	44.13	147.85
Lane Group LOS	F	F	F	F	E	F	D	F

Critical Lane Group	Yes	No	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	10.44	33.73	59.80	60.18	3.17	8.34	13.05	32.81
50th-Percentile Queue Length [ft/ln]	261.01	843.28	1494.90	1504.58	79.23	208.48	326.36	820.34
95th-Percentile Queue Length [veh/ln]	17.29	44.75	89.33	90.10	5.70	13.08	18.98	46.92
95th-Percentile Queue Length [ft/ln]	432.18	1118.79	2233.25	2252.45	142.61	326.88	474.49	1172.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	248.42	74.43	0.00	0.00	260.34	262.62	57.97	0.00	92.45	44.13	44.13	147.85
Movement LOS	F	F			F	F	E		F	D	D	F
Critical Movement	No	No			No	Yes	No		No	No	No	No
d_A, Approach Delay [s/veh]	90.37			260.39			80.92			106.12		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	156.45											
Intersection LOS	F											
Intersection V/C	1.096											

Option 1: Copy of Jurupa Rd/Mission Blvd

Number	11					
Intersection	Jurupa Rd/Mission Blvd					
Control Type	Two-way stop					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Base Volume Input [veh/h]	56	295	830	37	165	1007
Total Analysis Volume [veh/h]	59	324	874	39	214	1060

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Capacity Analysis

Calculated Rank	0	2	1	1	2	1
v_c, Conflicting Flow Rate	0	437	0	0	913	0
v_c, Stage 1	0	437	0	0	913	0
v_c, Stage 2	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	0	573	0	0	755	0
c_p,x, Stage 1 [veh/h]	0	1324	0	0	2135	0
c_p,x, Stage 2 [veh/h]	0	1091	0	0	1636	0
c_m,x, Movement Capacity [veh/h]	0	573	100000	100000	755	100000
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	0	573	100000	100000	755	100000

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.57	0.01	0.00	0.28	0.01
d_M, Delay for Movement [s/veh]	0.00	19.14	0.00	0.00	11.65	0.00
Movement LOS		C	A	A	B	A
Critical Movement		Yes	No	No	No	No
95th-Percentile Queue Length [veh/ln]	0.00	3.51	0.00	0.00	1.17	0.00
95th-Percentile Queue Length [ft/ln]	0.00	87.72	0.00	0.00	29.17	0.00
d_A, Approach Delay [s/veh]	19.14		0.00		1.96	
Approach LOS	C		A		A	
V/C_I, Worst Movement V/C Ratio	0.57					
d_I, Worst Movement Control Delay [s/veh]	19.14					
d_I, Intersection Delay [s/veh]	3.46					
Intersection LOS	C					

Option 2: Copy of Pacific Ave/Mission Blvd

Number	12											
Intersection	Pacific Ave/Mission Blvd											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	180	101	255	35	130	121	117	715	90	348	708	49
Total Analysis Volume [veh/h]	189	216	241	97	197	151	137	753	85	366	745	145

Intersection Settings

Cycle Length [s]	85											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	9	30	0	23	23	0	23	23	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.29	0.18	0.18	0.29	0.18	0.18	0.10	0.35	0.35	0.22	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.15	0.11	0.15	0.08	0.10	0.09	0.08	0.21	0.05	0.20	0.21	0.09
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1267	1900	1615	1190	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	398	349	297	376	346	294	176	1265	565	400	1715	765
X, volume / capacity	0.47	0.62	0.81	0.26	0.57	0.51	0.78	0.60	0.15	0.91	0.43	0.19
d, Delay for Lane Group [s/veh]	25.42	33.75	38.65	23.60	33.21	32.77	44.80	24.76	19.53	42.67	15.61	13.47
Lane Group LOS	C	C	D	C	C	C	D	C	B	D	B	B

Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.04	4.17	5.09	1.47	3.75	2.85	3.02	6.07	1.17	8.06	4.44	1.56
50th-Percentile Queue Length [ft/ln]	75.97	104.27	127.17	36.65	93.87	71.29	75.61	151.83	29.15	201.43	111.05	39.00
95th-Percentile Queue Length [veh/ln]	5.47	7.51	8.79	2.64	6.76	5.13	5.44	10.11	2.10	12.71	7.90	2.81
95th-Percentile Queue Length [ft/ln]	136.74	187.68	219.64	65.97	168.97	128.32	136.09	252.87	52.47	317.81	197.47	70.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.42	33.75	38.65	23.60	33.21	32.77	44.80	24.76	19.53	42.67	15.61	13.47
Movement LOS	C	C	D	C	C	C	D	C	B	D	B	B
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	33.14			30.97			27.12			23.25		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.34											
Intersection LOS	C											
Intersection V/C	0.602											

Option 1: Copy of Cedar Ave/I-10 WB Ramp

Number	13											
Intersection	Cedar Ave/I-10 WB Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	411	1593	0	0	1768	851	0	0	0	767	4	488
Total Analysis Volume [veh/h]	540	1696	0	0	1957	806	0	0	0	1162	4	462

Intersection Settings

Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	2	0	0	0	4	4	0
Auxiliary Signal Groups						2,4						
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	5	5	0	0	5	5	0	0	0	5	5	0
Maximum Green [s]	30	30	0	0	30	30	0	0	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0
Split [s]	26	66	0	0	40	40	0	0	0	49	49	0
Walk [s]	0	5	0	0	5	5	0	0	0	5	5	0
Pedestrian Clearance [s]	0	10	0	0	7	7	0	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No	No				No		
Maximum Recall	No	No			No	No				No		
Pedestrian Recall	No	No			No	No				No		
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.17	0.54	0.33	0.76		0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.15	0.47	0.38	0.50		0.64	0.29
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	3514	3618	5176	1615		1810	1615
c, Capacity [veh/h]	610	1950	1711	1222		708	632
X, volume / capacity	0.88	0.87	1.14	0.66		1.64	0.73
d, Delay for Lane Group [s/veh]	50.90	28.61	110.55	9.59		329.85	33.81
Lane Group LOS	D	C	F	A		F	C

Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	7.75	19.70	26.78	8.04		76.99	11.27
50th-Percentile Queue Length [ft/ln]	193.67	492.40	669.40	200.98		1924.84	281.67
95th-Percentile Queue Length [veh/ln]	12.31	26.97	38.40	12.69		118.96	16.77
95th-Percentile Queue Length [ft/ln]	307.79	674.36	959.91	317.23		2974.05	419.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.90	28.61	0.00	0.00	110.55	9.59	0.00	0.00	0.00	329.85	0.00	33.81
Movement LOS	D	C			F	A				F		C
Critical Movement	No	No			No	No				Yes		No
d_A, Approach Delay [s/veh]	33.99			81.10			0.00			245.63		
Approach LOS	C			F			A			F		
d_I, Intersection Delay [s/veh]	105.54											
Intersection LOS	F											
Intersection V/C	1.174											

Option 1: Copy of Cedar Ave/I-10 EB Ramps

Number	14											
Intersection	Cedar Ave/I-10 EB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	1357	561	496	1959	0	633	4	691	0	0	0
Total Analysis Volume [veh/h]	0	1555	628	522	2513	0	666	4	892	0	0	0

Intersection Settings

Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	6	5	2	0	8	8	0	0	0	0
Auxiliary Signal Groups			6,8									
Lead / Lag	-	-	-	Lead	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	5	5	5	5	0	5	5	0	0	0	0
Maximum Green [s]	0	30	30	30	30	0	30	30	0	0	0	0
Amber [s]	0.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	38	28	66	0	49	49	0	0	0	0
Walk [s]	0	5	5	0	5	0	5	5	0	0	0	0
Pedestrian Clearance [s]	0	7	7	0	10	0	10	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No	No	No	No		No					
Maximum Recall		No	No	No	No		No					
Pedestrian Recall		No	No	No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.30	0.72	0.21	0.54	0.39	0.39	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.39	0.29	0.49	0.37	0.55	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	5176	1615	1810	5176	1810	1615	
c, Capacity [veh/h]	1530	1166	378	2790	708	632	
X, volume / capacity	1.02	0.54	1.38	0.90	0.94	1.41	
d, Delay for Lane Group [s/veh]	67.63	9.07	233.31	28.97	53.31	229.47	
Lane Group LOS	F	A	F	C	D	F	

Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	17.72	6.28	30.17	19.89	21.07	51.10	
50th-Percentile Queue Length [ft/ln]	443.01	157.08	754.29	497.23	526.72	1277.41	
95th-Percentile Queue Length [veh/ln]	24.88	10.39	45.68	27.20	28.60	77.03	
95th-Percentile Queue Length [ft/ln]	621.99	259.86	1141.90	680.08	714.91	1925.66	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	67.63	9.07	233.31	28.97	0.00	53.31	0.00	229.47	0.00	0.00	0.00
Movement LOS		F	A	F	C		D		F			
Critical Movement		No	No	Yes	No		No		No			
d_A, Approach Delay [s/veh]	50.78			64.12			154.17			0.00		
Approach LOS	D			E			F			A		
d_I, Intersection Delay [s/veh]	80.53											
Intersection LOS	F											
Intersection V/C	1.141											

Option 1: Copy of Cedar Ave/Slover Ave

Number	16											
Intersection	Cedar Ave/Slover Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	258	1036	20	142	1510	292	334	226	127	28	311	125
Total Analysis Volume [veh/h]	272	1324	19	149	2303	277	352	238	120	29	327	118

Intersection Settings

Cycle Length [s]	145											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	22	81	0	18	77	0	16	26	0	20	30	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.12	0.57	0.57	0.09	0.54	0.54	0.08	0.20	0.20	0.02	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.15	0.35	0.35	0.08	0.68	0.70	0.10	0.07	0.07	0.02	0.12	0.12
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1810	1900	1891	1810	1900	1831	3514	3618	1615	1810	1900	1732
c, Capacity [veh/h]	225	1087	1081	172	1031	993	291	715	319	45	266	243
X, volume / capacity	1.21	0.62	0.62	0.87	1.25	1.30	1.21	0.33	0.38	0.64	0.86	0.89
d, Delay for Lane Group [s/veh]	177.54	23.21	23.26	77.08	154.28	174.97	168.32	50.22	51.14	83.93	71.76	75.29
Lane Group LOS	F	C	C	E	F	F	F	D	D	F	E	E

Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	15.31	15.26	15.24	5.97	68.68	71.88	9.37	3.66	3.76	1.22	8.87	8.52
50th-Percentile Queue Length [ft/ln]	382.68	381.57	381.09	149.17	1717.04	1797.05	234.20	91.43	93.98	30.55	221.87	212.88
95th-Percentile Queue Length [veh/ln]	23.51	21.67	21.65	9.97	97.25	103.63	15.34	6.58	6.77	2.20	13.76	13.30
95th-Percentile Queue Length [ft/ln]	587.79	541.74	541.16	249.32	2431.23	2590.86	383.57	164.57	169.17	54.98	344.01	332.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	177.54	23.23	23.26	77.08	163.38	174.97	168.32	50.22	51.14	83.93	72.80	75.29
Movement LOS	F	C	C	E	F	F	F	D	D	F	E	E
Critical Movement	Yes	No	No	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	49.22			159.84			108.92			74.10		
Approach LOS	D			F			F			E		
d_I, Intersection Delay [s/veh]	113.63											
Intersection LOS	F											
Intersection V/C	1.079											

Option 1: Copy of Cedar Ave/Santa Ana Ave

Number	17											
Intersection	Cedar Ave/Santa Ana Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	139	1076	24	63	1563	65	90	98	157	55	107	107
Total Analysis Volume [veh/h]	146	1366	23	66	2359	61	95	103	148	58	113	101

Intersection Settings

Cycle Length [s]	140											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	102	0	11	97	0	0	27	0	0	27	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.09	0.70	0.70	0.05	0.66	0.66	0.16	0.16	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.37	0.37	0.04	0.64	0.64	0.08	0.15	0.05	0.12
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3	
s, saturation flow rate [veh/h]	1810	1900	1889	1810	1900	1883	1186	1721	1147	1754
c, Capacity [veh/h]	155	1335	1327	86	1262	1251	101	283	70	288
X, volume / capacity	0.94	0.52	0.52	0.77	0.96	0.97	0.94	0.89	0.83	0.74
d, Delay for Lane Group [s/veh]	85.61	11.22	11.25	79.44	38.92	40.78	97.69	73.68	90.54	60.35
Lane Group LOS	F	B	B	E	D	D	F	E	F	E

Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.03	9.30	9.28	2.62	37.65	38.63	4.20	9.86	2.47	7.48
50th-Percentile Queue Length [ft/ln]	150.67	232.59	232.04	65.40	941.23	965.63	104.92	246.52	61.73	187.03
95th-Percentile Queue Length [veh/ln]	10.05	14.31	14.28	4.71	47.71	48.82	7.55	15.01	4.44	11.97
95th-Percentile Queue Length [ft/ln]	251.32	357.65	356.95	117.71	1192.80	1220.44	188.85	375.26	111.11	299.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	85.61	11.23	11.25	79.44	39.83	40.78	97.69	73.68	73.68	90.54	60.35	60.35
Movement LOS	F	B	B	E	D	D	F	E	E	F	E	E
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	18.31			40.90			80.27			66.78		
Approach LOS	B			D			F			E		
d_I, Intersection Delay [s/veh]	37.88											
Intersection LOS	D											
Intersection V/C	0.869											

Option 1: Copy of Cedar Ave/Jurupa Ave

Number	18											
Intersection	Cedar Ave/Jurupa Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	225	951	51	103	1373	313	129	95	112	50	118	160
Total Analysis Volume [veh/h]	237	1235	48	108	2159	297	136	100	106	53	124	152

Intersection Settings

Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	76	0	13	71	0	0	26	0	0	26	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.12	0.63	0.63	0.07	0.58	0.58	0.19	0.19	0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.13	0.34	0.34	0.06	0.65	0.67	0.12	0.05	0.07	0.12	0.09
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3	
s, saturation flow rate [veh/h]	1810	1900	1875	1810	1900	1822	1121	1900	1615	1485	1615
c, Capacity [veh/h]	220	1196	1181	135	1107	1062	137	363	309	325	309
X, volume / capacity	1.08	0.54	0.54	0.80	1.11	1.16	0.99	0.28	0.34	0.55	0.49
d, Delay for Lane Group [s/veh]	101.42	13.68	13.75	62.56	86.25	105.36	88.62	40.10	40.90	44.35	42.72
Lane Group LOS	F	B	B	E	F	F	F	D	D	D	D
Critical Lane Group	Y	N	N	N	N	Y	Y	N	N	N	N

Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	9.26	8.63	8.58	3.37	45.05	48.84	5.16	2.42	2.61	4.70	3.88
50th-Percentile Queue Length [ft/ln]	231.47	215.63	214.38	84.27	1126.16	1220.97	128.98	60.39	65.21	117.46	96.97
95th-Percentile Queue Length [veh/ln]	14.69	13.44	13.38	6.07	61.06	67.73	8.88	4.35	4.70	8.25	6.98
95th-Percentile Queue Length [ft/ln]	367.21	336.04	334.44	151.69	1526.40	1693.20	222.11	108.70	117.38	206.33	174.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	101.42	13.71	13.75	62.56	94.49	105.36	88.62	40.10	40.90	44.35	44.35	42.72
Movement LOS	F	B	B	E	F	F	F	D	D	D	D	D
Critical Movement	No	No	No	No	No	Yes	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	27.39			94.40			59.64			43.60		
Approach LOS	C			F			E			D		
d_I, Intersection Delay [s/veh]	66.97											
Intersection LOS	E											
Intersection V/C	0.926											

Option 2: Copy of Rubidoux Blvd/Market St

Number	20											
Intersection	Rubidoux Blvd/Market St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	59	452	469	849	731	158	89	95	85	368	90	707
Total Analysis Volume [veh/h]	281	476	444	894	769	854	327	295	288	387	568	669

Intersection Settings

Cycle Length [s]	155											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	10	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	45	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	5.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	2.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	22	21	21	61	60	0	24	51	0	22	49	0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.11	0.18	0.33	0.28	0.35	0.35	0.12	0.28	0.11	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.16	0.13	0.27	0.25	0.21	0.53	0.18	0.33	0.11	0.30	0.41
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3		
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1748	3514	1900	1615
c, Capacity [veh/h]	198	632	532	973	1260	563	222	496	385	527	448
X, volume / capacity	1.42	0.75	0.83	0.92	0.61	1.52	1.47	1.18	1.00	1.08	1.49
d, Delay for Lane Group [s/veh]	277.74	68.85	62.30	58.44	44.00	292.55	304.19	153.83	91.30	116.12	289.50
Lane Group LOS	F	E	E	E	D	F	F	F	F	F	F

Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	19.21	9.40	17.46	16.95	12.23	58.78	23.26	32.60	8.72	28.90	46.14
50th-Percentile Queue Length [ft/ln]	480.17	235.12	436.38	423.77	305.85	1469.51	581.48	814.96	217.98	722.40	1153.49
95th-Percentile Queue Length [veh/ln]	29.93	14.43	24.31	23.70	17.97	89.44	35.98	46.26	13.58	39.55	70.08
95th-Percentile Queue Length [ft/ln]	748.20	360.85	607.68	592.57	449.25	2236.05	899.62	1156.45	339.62	988.76	1752.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	277.74	68.85	62.30	58.44	44.00	292.55	304.19	153.83	153.83	91.30	116.12	289.50
Movement LOS	F	E	E	E	D	F	F	F	F	F	F	F
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	115.30			133.46			207.86			181.63		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	153.31											
Intersection LOS	F											
Intersection V/C	1.279											

Option 2: Copy of Agua Mansa Rd/Market St

Number	21											
Intersection	Agua Mansa Rd/Market St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	4	3	206	0	398	443	993	44	0	886	445
Total Analysis Volume [veh/h]	0	4	3	217	0	377	466	1256	42	0	1436	421

Intersection Settings

Cycle Length [s]	130											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	54	56	0	28	30	0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.32			0.31	0.31	0.15	0.56	0.56	0.00	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.00			0.15	0.23	0.13	0.35	0.03	0.00	0.40	0.26
so, Base Saturation Flow per Lane [pc/h/ln]	1900			1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3		3			3		
s, saturation flow rate [veh/h]	1766			1431	1615	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	562			483	505	521	2024	904	0	1488	664
X, volume / capacity	0.01			0.45	0.75	0.89	0.62	0.05	0.00	0.97	0.63
d, Delay for Lane Group [s/veh]	30.39			39.26	49.73	56.57	19.63	12.97	0.00	42.76	32.06
Lane Group LOS	C			D	D	E	B	B	A	D	C

Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.16	5.97	12.04	7.46	11.94	0.54	0.00	22.16	10.36
50th-Percentile Queue Length [ft/ln]	4.02	149.17	301.09	186.60	298.49	13.41	0.00	554.01	258.93
95th-Percentile Queue Length [veh/ln]	0.29	9.97	17.74	11.94	17.61	0.97	0.00	29.88	15.64
95th-Percentile Queue Length [ft/ln]	7.24	249.32	443.38	298.62	440.16	24.14	0.00	747.02	390.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.39	30.39	30.39	39.26	49.73	49.73	56.57	19.63	12.97	0.00	42.76	32.06
Movement LOS	C	C	C	D	D	D	E	B	B	A	D	C
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	30.39			45.91			29.23			40.34		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	36.46											
Intersection LOS	D											
Intersection V/C	0.763											

Option 1: Copy of Rubidoux Blvd/SR-60 WB Off Ramp

Number	22											
Intersection	Rubidoux Blvd/SR-60 WB Off Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	169	1129	0	0	1190	26	35	0	328	769	98	135
Total Analysis Volume [veh/h]	178	1399	0	0	1446	24	37	0	311	809	103	142

Intersection Settings

Cycle Length [s]	60											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	37	0	0	37	0	23	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	14	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.64	0.64	0.64	0.64	0.23	0.23	
(v / s)_i Volume / Saturation Flow Rate	0.49	0.39	0.39	0.39	0.02	0.19	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	366	3618	1900	1889	1810	1615	
c, Capacity [veh/h]	249	2311	1213	1207	413	368	
X, volume / capacity	0.71	0.61	0.61	0.61	0.09	0.84	
d, Delay for Lane Group [s/veh]	38.37	7.57	8.64	8.71	18.35	27.48	
Lane Group LOS	D	A	A	A	B	C	

Critical Lane Group	Yes	No	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.48	3.42	3.95	3.97	0.39	4.40	
50th-Percentile Queue Length [ft/ln]	87.10	85.47	98.77	99.34	9.71	109.97	
95th-Percentile Queue Length [veh/ln]	6.27	6.15	7.11	7.15	0.70	7.84	
95th-Percentile Queue Length [ft/ln]	156.77	153.85	177.79	178.81	17.48	195.96	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.37	7.57	0.00	0.00	8.67	8.71	18.35	0.00	27.48	0.00	0.00	0.00
Movement LOS	D	A			A	A	B		C			
Critical Movement	Yes	No			No	No	No		No			
d_A, Approach Delay [s/veh]	11.05			8.67			26.51			0.00		
Approach LOS	B			A			C			A		
d_I, Intersection Delay [s/veh]	11.60											
Intersection LOS	B											
Intersection V/C	0.679											

Option 1: Rubidoux Blvd/WB Ramps tight diamond alternative

Number	2223											
Intersection	Rubidoux Blvd/WB Ramps											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	320	1064	0	0	1066	912	0	0	0	769	98	233
Total Analysis Volume [veh/h]	337	1120	0	0	1122	864	0	0	0	809	98	221

Intersection Settings

Cycle Length [s]	85											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	59	0	0	59	0	0	0	0	26	0	0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	14	0	0	7	0	0	0	0	17	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.65	0.65	0.65	0.65		0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.87	0.34	0.34	0.59		0.26	0.15
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	388	3256	3256	1454		3163	1454
c, Capacity [veh/h]	255	2107	2107	941		819	376
X, volume / capacity	1.32	0.53	0.53	0.92		0.99	0.59
d, Delay for Lane Group [s/veh]	199.35	9.04	9.05	28.31		43.51	28.99
Lane Group LOS	F	A	A	C		D	C

Critical Lane Group	Yes	No	No	No		Yes	No
50th-Percentile Queue Length [veh/ln]	8.64	4.93	4.95	15.59		9.32	3.96
50th-Percentile Queue Length [ft/ln]	216.05	123.35	123.70	389.85		233.11	99.05
95th-Percentile Queue Length [veh/ln]	15.56	8.58	8.60	22.07		14.33	7.13
95th-Percentile Queue Length [ft/ln]	388.89	214.43	214.90	551.76		358.31	178.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	199.35	9.04	0.00	0.00	9.05	28.31	0.00	0.00	0.00	43.51	0.00	28.99
Movement LOS	F	A			A	C				D		C
Critical Movement	Yes	No			No	No				No		No
d_A, Approach Delay [s/veh]	53.05			17.43			0.00			40.40		
Approach LOS	D			B			A			D		
d_I, Intersection Delay [s/veh]	34.32											
Intersection LOS	C											
Intersection V/C	1.125											

Option 1: Copy of Rubidoux Blvd/SR-60 EB Ramps

Number	24											
Intersection	Rubidoux Blvd/SR-60 EB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	652	570	273	775	0	722	14	215	9	0	4
Total Analysis Volume [veh/h]	0	686	540	368	816	0	971	15	203	9	0	4

Intersection Settings

Cycle Length [s]	120											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	32	0	51	83	0	37	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	14	0	14	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.40	0.40	0.22	0.66	0.28	0.28	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.33	0.20	0.23	0.28	0.13	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	3618	1615	1810	3618	3514	1615	
c, Capacity [veh/h]	1453	649	404	2382	966	444	
X, volume / capacity	0.47	0.83	0.91	0.34	1.00	0.46	
d, Delay for Lane Group [s/veh]	27.62	44.20	53.54	9.44	58.11	36.81	
Lane Group LOS	C	D	D	A	F	D	

Critical Lane Group	No	Yes	Yes	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	7.24	15.60	11.34	4.37	15.99	4.98	
50th-Percentile Queue Length [ft/ln]	181.05	390.04	283.50	109.29	399.85	124.49	
95th-Percentile Queue Length [veh/ln]	11.66	22.08	16.86	7.80	22.62	8.64	
95th-Percentile Queue Length [ft/ln]	291.39	551.98	421.56	195.02	565.50	215.98	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	27.62	44.20	53.54	9.44	0.00	58.11	0.00	36.81	0.00	0.00	0.00
Movement LOS		C	D	D	A		F		D			
Critical Movement		No	No	No	No		Yes		No			
d_A, Approach Delay [s/veh]	34.92			23.15			54.43			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	37.42											
Intersection LOS	D											
Intersection V/C	0.814											

Option 1: Copy of Market St/SR-60 WB Ramp

Number	26											
Intersection	Market St/SR-60 WB Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	286	529	0	0	1286	219	0	0	0	194	0	1194
Total Analysis Volume [veh/h]	301	557	0	0	1564	207	0	0	0	204	0	1584

Intersection Settings

Cycle Length [s]	65											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	28	37	0	0	9	0	0	0	0	28	0	0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.20	0.78	0.52		0.09
(v / s)_i Volume / Saturation Flow Rate	0.17	0.15	0.43		0.06
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900		1900
Arrival type	3		3	3	3
s, saturation flow rate [veh/h]	1810	3618	3618		3514
c, Capacity [veh/h]	359	2835	1894		328
X, volume / capacity	0.84	0.20	0.83		0.62
d, Delay for Lane Group [s/veh]	30.27	1.95	17.27		30.29
Lane Group LOS	C	A	B		C
Critical Headway					

Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	4.46	0.17	8.04		1.53
50th-Percentile Queue Length [ft/ln]	111.51	4.23	200.99		38.13
95th-Percentile Queue Length [veh/ln]	7.92	0.30	12.69		2.75
95th-Percentile Queue Length [ft/ln]	198.10	7.62	317.25		68.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.27	1.95	0.00	0.00	17.27	0.00	0.00	0.00	0.00	30.29	0.00	0.00
Movement LOS	C	A			B					C		
Critical Movement	No	No			No	No				Yes		No
d_A, Approach Delay [s/veh]	11.89			17.27			0.00			30.29		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	16.52											
Intersection LOS	B											
Intersection V/C	0.657											

Option 1: Copy of Market St/SR-60 EB Ramp

Number	27											
Intersection	Market St/SR-60 EB Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Base Volume Input [veh/h]	0	565	202	843	524	0	189	0	603	0	0	0
Total Analysis Volume [veh/h]	0	595	192	1098	552	0	199	0	572	0	0	0

Intersection Settings

Cycle Length [s]	60											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	18	0	24	42	0	18	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.24	0.33	0.64	0.23	0.23	
(v / s)_i Volume / Saturation Flow Rate	0.16	0.31	0.15	0.11	0.20	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	
Arrival type	3	3		3		3
s, saturation flow rate [veh/h]	3618	3514	3618	1810	2859	
c, Capacity [veh/h]	858	1171	2305	415	656	
X, volume / capacity	0.69	0.94	0.24	0.48	0.87	
d, Delay for Lane Group [s/veh]	25.48	23.70	4.90	20.87	26.07	
Lane Group LOS	C	C	A	C	C	

Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.80	6.73	0.88	2.28	3.83	
50th-Percentile Queue Length [ft/ln]	95.02	168.17	22.10	56.92	95.71	
95th-Percentile Queue Length [veh/ln]	6.84	10.98	1.59	4.10	6.89	
95th-Percentile Queue Length [ft/ln]	171.04	274.50	39.78	102.46	172.28	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.48	0.00	23.70	4.90	0.00	20.87	0.00	26.07	0.00	0.00	0.00
Movement LOS		C		C	A		C		C			
Critical Movement		No	No	No	No		No		Yes			
d_A, Approach Delay [s/veh]	25.48			17.41			24.73			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	20.87											
Intersection LOS	C											
Intersection V/C	0.677											

Option 1: Copy of Sierra Ave/20th St

Number	28					
Intersection	Sierra Ave/20th St					
Control Type	Signalized					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Base Volume Input [veh/h]	249	0	25	66	0	52
Total Analysis Volume [veh/h]	262	244	873	69	193	519

Intersection Settings

Cycle Length [s]	75					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Semi-actuated					
Lost time [s]	0.00					
Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	25	0	23	48	27	0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	14	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.34	0.25	0.64	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.29	0.25	0.04	0.21	0.22
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900
Arrival type	3	3		3	
s, saturation flow rate [veh/h]	1751	3514	1900	1712	1615
c, Capacity [veh/h]	591	890	1224	427	403
X, volume / capacity	0.86	0.98	0.06	0.85	0.86
d, Delay for Lane Group [s/veh]	37.94	38.01	5.02	31.80	32.70
Lane Group LOS	D	D	A	C	C

Critical Lane Group	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.86	8.36	0.32	6.29	6.10
50th-Percentile Queue Length [ft/ln]	246.60	208.91	8.02	157.23	152.52
95th-Percentile Queue Length [veh/ln]	15.01	13.10	0.58	10.40	10.15
95th-Percentile Queue Length [ft/ln]	375.37	327.43	14.43	260.05	253.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.94	37.94	38.01	5.02	31.80	32.41
Movement LOS	D	D	D	A	C	C
Critical Movement	No	No	Yes	No	No	No
d_A, Approach Delay [s/veh]	37.94		35.60		32.24	
Approach LOS	D		D		C	
d_I, Intersection Delay [s/veh]	35.04					
Intersection LOS	D					
Intersection V/C	0.753					

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Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\2045 PM + P.pdf

Scenario 16 2045 PM + P
2/15/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Ave/I-10 Ramps	Signalized	HCM 7th Edition	NB Left	0.864	34.4	C
2	Sierra Ave/Slover Ave	Signalized	HCM 7th Edition	WB Left	0.963	65.4	E
3	Sierra Ave/Santa Ana Ave	Signalized	HCM 7th Edition	EB Left	0.748	34.5	C
4	Sierra Ave/Jurupa Ave	Signalized	HCM 7th Edition	NB Thru	0.829	51.8	D
5	Armstrong Rd/Sierra Ave	Signalized	HCM 7th Edition	WB Left	1.077	161.5	F
6	Armstrong/30th St	Signalized	HCM 7th Edition	WB Left	0.327	27.9	C
7	Valley Way/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	EB Left	1.271	224.4	F
8	Valley Way/SR-60 WB On Ramp	Signalized	HCM 7th Edition	NB Left	0.748	9.0	A
9	SR-60 EB Ramps/Mission Blvd	Signalized	HCM 7th Edition	SB Right	0.833	203.8	F
10	Valley Way/Mission Blvd	Signalized	HCM 7th Edition	EB Left	0.930	89.5	F
11	Jurupa Rd/Mission Blvd	Two-way stop	HCM 7th Edition	NB Left	2.681	1,968.6	F
12	Pacific Ave/Mission Blvd	Signalized	HCM 7th Edition	EB Thru	0.860	63.6	E
13	Cedar Ave/I-10 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.641	17.4	B
14	Cedar Ave/I-10 EB Ramps	Signalized	HCM 7th Edition	NB Right	0.985	41.4	D
15	Cedar Ave/Orange St	Signalized	HCM 7th Edition	EB Left	0.964	108.0	F
16	Cedar Ave/Slover Ave	Signalized	HCM 7th Edition	SB Left	0.944	94.4	F
17	Cedar Ave/Santa Ana Ave	Signalized	HCM 7th Edition	NB Left	0.919	61.3	E
			HCM 7th				

18	Cedar Ave/Jurupa Ave	Signalized	HCM 7th Edition	EB Left	2.669	260.3	F
19	Cedar Ave/7th St	Signalized	HCM 7th Edition	EB Right	0.893	46.3	D
20	Rubidoux Blvd/Market St	Signalized	HCM 7th Edition	EB Left	1.407	225.5	F
21	Agua Mansa Rd/Market St	Signalized	HCM 7th Edition	EB Left	1.029	122.6	F
22	Rubidoux Blvd/SR-60 WB Off Ramp	Signalized	HCM 7th Edition	NB Left	1.551	149.2	F
23	Rubidoux Blvd/SrR-60 WB On Ramp	Two-way stop	HCM 7th Edition	NB Left	1.498	302.2	F
24	Rubidoux Blvd/SR-60 EB Ramps	Signalized	HCM 7th Edition	EB Left	0.972	104.8	F
25	Market St/Rivera St	Signalized	HCM 7th Edition	NB Left	0.703	21.5	C
26	Market St/SR-60 WB Ramp	Signalized	HCM 7th Edition	WB Left	0.946	55.3	E
27	Market St/SR-60 EB Ramp	Signalized	HCM 7th Edition	SB Left	1.262	165.5	F
28	Sierra Ave/20th St	Signalized	HCM 7th Edition	WB Right	0.922	64.7	E
29	Armstrong Rd/Driveway 1	Two-way stop	HCM 7th Edition	WB Left	0.109	31.0	D
30	Driveway 2/20th St	Signalized	HCM 7th Edition	NB Left	0.299	6.6	A
31	Street A/20th St	Two-way stop	HCM 7th Edition	WB Left	0.055	18.0	C
32	Street B/20th St	Signalized	HCM 7th Edition	NB Left	0.278	5.8	A
33	Street M/20th Street	Roundabout	HCM 7th Edition	SB Right		5.1	A
34	Driveway 3/20th St	Signalized	HCM 7th Edition	WB Left	0.682	16.0	B
35	Driveway 4/20th St	Signalized	HCM 7th Edition	SB Left	0.567	12.9	B
36	Driveway 5/20th St	Two-way stop	HCM 7th Edition	NB Right	0.167	14.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Ave/I-10 Ramps

Control Type:	Signalized	Delay (sec / veh):	34.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.864

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	565.00	100.00	100.00	325.00	100.00	305.00	440.00	100.00	1500.00	1205.00	100.00	560.00
No. of Lanes in Exit Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Exit Pocket Length [ft]	0.00	0.00	390.00	0.00	0.00	665.00	0.00	0.00	1215.00	0.00	0.00	1150.00
Speed [mph]	40.00			35.00			65.00			65.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	870	1554	900	612	1142	884	1064	0	598	536	0	695
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	175	0	25	0	0	0	0	0	171	43	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	93	0	0	88	0	0	77	0	0	70
Total Hourly Volume [veh/h]	1045	1554	832	612	1142	796	1064	0	692	579	0	625
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	275	409	219	161	301	209	280	0	182	152	0	164
Total Analysis Volume [veh/h]	1100	1636	876	644	1202	838	1120	0	728	609	0	658
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Unsigna	Protecte	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna
Signal Group	1	6	0	5	2	0	3	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	0	0	5	0	0
Maximum Green [s]	30	30	0	30	30	0	30	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0
Split [s]	40	45	0	27	32	0	48	0	0	48	0	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	5	0	0
Pedestrian Clearance [s]	0	23	0	0	23	0	39	0	0	35	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No		No	No		No			No		
Maximum Recall	No	No		No	No		No			No		
Pedestrian Recall	No	No		No	No		No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	L
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	36	44	23	31	41	41
g / C, Green / Cycle	0.30	0.37	0.19	0.26	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.31	0.32	0.18	0.23	0.32	0.17
s, saturation flow rate [veh/h]	3514	5176	3514	5176	3514	3514
c, Capacity [veh/h]	1054	1898	674	1338	1200	1200
d1, Uniform Delay [s]	42.00	35.18	48.00	42.98	38.18	31.46
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	26.16	5.44	8.73	9.82	3.99	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.04	0.86	0.96	0.90	0.93	0.51
d, Delay for Lane Group [s/veh]	68.16	40.62	56.73	52.80	42.17	31.80
Lane Group LOS	F	D	E	D	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	18.89	15.11	10.21	12.48	15.04	6.50
50th-Percentile Queue Length [ft/ln]	472.18	377.75	255.33	312.07	376.04	162.44
95th-Percentile Queue Length [veh/ln]	26.73	21.49	15.45	18.28	21.40	10.68
95th-Percentile Queue Length [ft/ln]	668.20	537.13	386.35	456.92	535.05	266.95

Movement, Approach, & Intersection Results

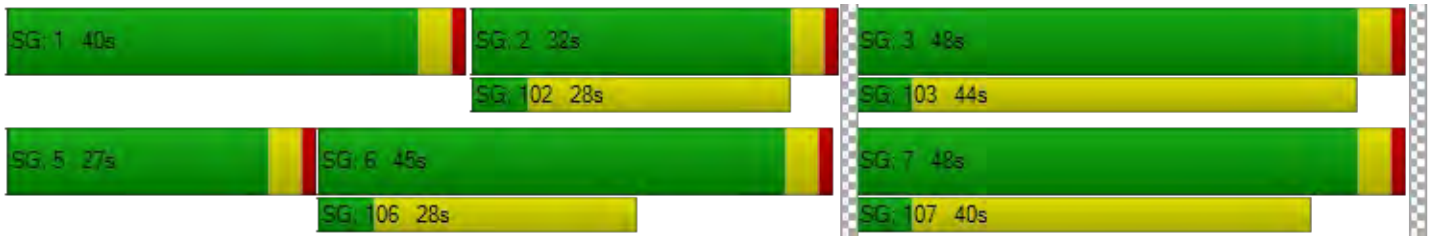
d_M, Delay for Movement [s/veh]	68.16	40.62	0.00	56.73	52.80	0.00	42.17	0.00	0.00	31.80	0.00	0.00
Movement LOS	F	D		E	D		D			C		
d_A, Approach Delay [s/veh]	39.64			37.85			26.06			15.69		
Approach LOS	D			D			C			B		
d_I, Intersection Delay [s/veh]	34.40											
Intersection LOS	C											
Intersection V/C	0.864											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.631	3.505	3.250	2.909
Crosswalk LOS	D	D	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	683	467	733	733
d_b, Bicycle Delay [s]	26.00	35.27	24.07	24.07
l_b,int, Bicycle LOS Score for Intersection	3.064	2.575	1.560	1.560
Bicycle LOS	C	B	A	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	65.4
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.963

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	1	0	0	2	0	1	2	0	1
Entry Pocket Length [ft]	265.00	100.00	675.00	675.00	100.00	100.00	345.00	100.00	320.00	275.00	100.00	465.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	600.00	0.00	0.00	0.00
Speed [mph]	50.00			40.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	196	1819	212	848	1354	176	420	826	106	264	480	1159
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	200	0	0	213	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	21	0	0	18	0	0	11	0	0	116
Total Hourly Volume [veh/h]	196	2019	191	848	1567	158	420	826	95	264	480	1043
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	531	50	223	412	42	111	217	25	69	126	274
Total Analysis Volume [veh/h]	206	2125	201	893	1649	166	442	869	100	278	505	1098
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	135
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	0	3	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	5
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	33	40	0	35	42	0	20	46	0	14	40	40
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	5
Pedestrian Clearance [s]	0	31	0	0	27	0	0	31	0	0	31	31
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	No
Maximum Recall	No	No		No	No		No	No		No	No	No
Pedestrian Recall	No	No		No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	135	135	135	135	135	135	135	135	135	135	135	135
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	10	43	43	31	63	63	16	35	35	10	29	64
g / C, Green / Cycle	0.08	0.32	0.32	0.23	0.47	0.47	0.12	0.26	0.26	0.07	0.22	0.48
(v / s)_i Volume / Saturation Flow Rate	0.06	0.33	0.33	0.25	0.33	0.34	0.13	0.24	0.06	0.08	0.14	0.38
s, saturation flow rate [veh/h]	3514	5176	1794	3514	3618	1814	3514	3618	1615	3514	3618	2859
c, Capacity [veh/h]	269	1631	565	807	1694	849	416	950	424	260	789	1365
d1, Uniform Delay [s]	61.13	46.22	46.22	52.00	28.51	29.00	59.50	48.31	39.13	62.50	47.96	29.93
k, delay calibration	0.11	0.50	0.50	0.12	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.25
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.50	39.22	55.62	53.16	2.50	5.48	39.00	3.98	0.28	46.15	0.87	2.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	1.06	1.06	1.11	0.71	0.73	1.06	0.91	0.24	1.07	0.64	0.80
d, Delay for Lane Group [s/veh]	65.63	85.45	101.85	105.16	31.01	34.48	98.50	52.29	39.41	108.65	48.83	32.58
Lane Group LOS	E	F	F	F	C	C	F	D	D	F	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.54	23.30	26.81	19.34	15.39	16.91	9.22	14.30	2.60	6.02	7.59	14.59
50th-Percentile Queue Length [ft/ln]	88.59	582.60	670.27	483.49	384.85	422.82	230.57	357.53	65.03	150.40	189.68	364.77
95th-Percentile Queue Length [veh/ln]	6.38	32.39	36.76	28.10	21.83	23.66	14.56	20.50	4.68	10.26	12.10	20.86
95th-Percentile Queue Length [ft/ln]	159.46	809.69	919.08	702.40	545.72	591.44	363.97	512.58	117.05	256.44	302.61	521.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.63	88.53	101.85	105.16	31.96	34.48	98.50	52.29	39.41	108.65	48.83	32.58
Movement LOS	E	F	F	F	C	C	F	D	D	F	D	C
d_A, Approach Delay [s/veh]	87.73			56.25			65.86			48.18		
Approach LOS	F			E			E			D		
d_I, Intersection Delay [s/veh]	65.40											
Intersection LOS	E											
Intersection V/C	0.963											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	58.80	58.80	58.80	58.80
l_p,int, Pedestrian LOS Score for Intersectio	3.729	3.835	3.185	3.754
Crosswalk LOS	D	D	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	563	622	533
d_b, Bicycle Delay [s]	36.30	34.85	32.03	36.30
l_b,int, Bicycle LOS Score for Intersection	2.613	3.059	2.733	3.207
Bicycle LOS	B	C	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	34.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	285.00	100.00	210.00	375.00	100.00	100.00	240.00	100.00	100.00	300.00	100.00	350.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	535.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	224	1695	100	188	1245	143	292	258	187	94	168	233
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	200	0	0	213	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	10	0	0	14	0	0	19	0	0	23
Total Hourly Volume [veh/h]	224	1895	90	188	1458	129	292	258	168	94	168	210
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	499	24	49	384	34	77	68	44	25	44	55
Total Analysis Volume [veh/h]	236	1995	95	198	1535	136	307	272	177	99	177	221
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	33	0	10	31	0	21	40	0	17	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	45	45	6	43	43	17	26	26	7	16	16
g / C, Green / Cycle	0.08	0.45	0.45	0.06	0.43	0.43	0.17	0.26	0.26	0.07	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.07	0.39	0.06	0.06	0.31	0.31	0.17	0.08	0.11	0.05	0.05	0.14
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1822	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	281	2317	723	211	1547	779	308	947	423	128	587	262
d1, Uniform Delay [s]	45.37	24.82	16.21	46.82	23.63	23.66	41.48	29.46	30.60	45.70	36.89	40.65
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.13	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.63	4.49	0.38	17.39	2.89	5.68	25.86	0.17	0.66	9.66	0.29	7.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.86	0.13	0.94	0.72	0.72	1.00	0.29	0.42	0.78	0.30	0.84
d, Delay for Lane Group [s/veh]	51.99	29.31	16.58	64.21	26.52	29.34	67.34	29.62	31.26	55.36	37.18	47.88
Lane Group LOS	D	C	B	E	C	C	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.01	13.45	1.24	2.85	10.30	11.03	9.50	2.55	3.49	2.70	1.88	5.63
50th-Percentile Queue Length [ft/ln]	75.29	336.14	31.00	71.27	257.56	275.69	237.50	63.67	87.27	67.45	46.98	140.83
95th-Percentile Queue Length [veh/ln]	5.42	19.46	2.23	5.13	15.57	16.47	14.55	4.58	6.28	4.86	3.38	9.53
95th-Percentile Queue Length [ft/ln]	135.52	486.48	55.79	128.29	389.16	411.84	363.87	114.61	157.09	121.40	84.57	238.14

Movement, Approach, & Intersection Results

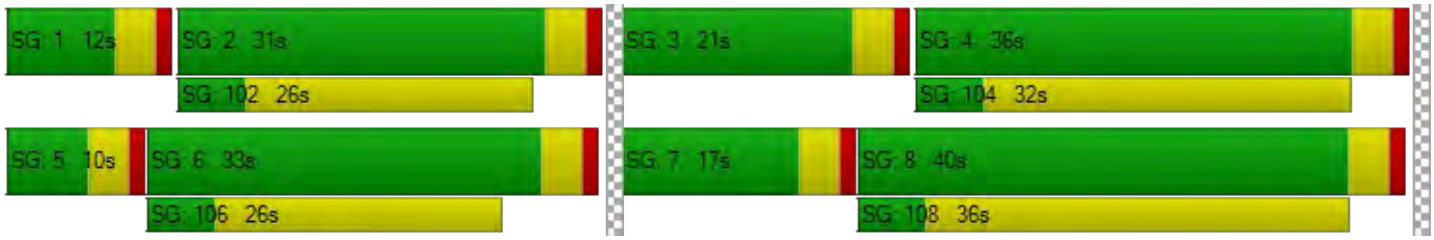
d_M, Delay for Movement [s/veh]	51.99	29.31	16.58	64.21	27.30	29.34	67.34	29.62	31.26	55.36	37.18	47.88
Movement LOS	D	C	B	E	C	C	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	31.09			31.36			45.32			45.56		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.48											
Intersection LOS	C											
Intersection V/C	0.748											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	3.622	3.652	2.776	2.729
Crosswalk LOS	D	D	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	580	540	720	640
d_b, Bicycle Delay [s]	25.21	26.65	20.48	23.12
l_b,int, Bicycle LOS Score for Intersection	2.844	2.595	2.199	1.989
Bicycle LOS	C	B	B	A

Sequence

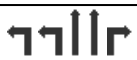
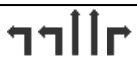
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	51.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.829

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	1	2	0	0	2	0	1
Entry Pocket Length [ft]	685.00	100.00	675.00	385.00	100.00	260.00	375.00	100.00	100.00	280.00	100.00	270.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	560.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	381	1117	213	131	689	290	612	542	589	202	316	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	200	0	0	213	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	21	0	0	29	0	0	59	0	0	10
Total Hourly Volume [veh/h]	381	1317	192	131	902	261	612	542	530	202	316	88
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	100	347	51	34	237	69	161	143	139	53	83	23
Total Analysis Volume [veh/h]	401	1386	202	138	949	275	644	571	558	213	333	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	44	0	10	36	36	25	49	0	12	36	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	27	27	0	27	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No	No	No	No		No	No	
Maximum Recall	No	No		No	No	No	No	No		No	No	
Pedestrian Recall	No	No		No	No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	43	43	6	35	60	21	42	42	8	29	29
g / C, Green / Cycle	0.12	0.37	0.37	0.05	0.30	0.52	0.18	0.37	0.37	0.07	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.11	0.38	0.13	0.04	0.26	0.17	0.18	0.16	0.35	0.06	0.09	0.06
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	428	1348	602	183	1097	841	642	1326	592	244	917	409
d1, Uniform Delay [s]	50.07	36.07	25.86	53.77	37.86	15.93	47.00	27.41	35.26	52.99	35.30	34.01
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.38	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.03	31.95	1.50	6.12	9.17	1.04	17.37	0.22	20.95	9.28	0.24	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	1.03	0.34	0.75	0.87	0.33	1.00	0.43	0.94	0.87	0.36	0.23
d, Delay for Lane Group [s/veh]	60.10	68.02	27.37	59.89	47.02	16.97	64.37	27.63	56.21	62.27	35.54	34.29
Lane Group LOS	E	F	C	E	D	B	F	C	E	E	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.04	23.18	3.95	2.06	13.27	4.06	10.40	5.70	17.67	3.31	3.79	2.06
50th-Percentile Queue Length [ft/ln]	150.89	579.48	98.66	51.45	331.67	101.42	259.95	142.46	441.80	82.66	94.87	51.43
95th-Percentile Queue Length [veh/ln]	10.06	31.69	7.10	3.70	19.24	7.30	15.71	9.61	24.57	5.95	6.83	3.70
95th-Percentile Queue Length [ft/ln]	251.62	792.29	177.58	92.61	481.00	182.56	392.87	240.33	614.16	148.79	170.77	92.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.10	68.02	27.37	59.89	47.02	16.97	64.37	27.63	56.21	62.27	35.54	34.29
Movement LOS	E	F	C	E	D	B	F	C	E	E	D	C
d_A, Approach Delay [s/veh]	62.29			42.26			49.97			44.27		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	51.77											
Intersection LOS	D											
Intersection V/C	0.829											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.85	48.85	48.85	48.85
l_p,int, Pedestrian LOS Score for Intersectio	3.615	3.496	3.347	2.915
Crosswalk LOS	D	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	696	557	783	557
d_b, Bicycle Delay [s]	24.46	29.95	21.30	29.95
l_b,int, Bicycle LOS Score for Intersection	3.218	2.707	3.071	2.095
Bicycle LOS	C	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Intersection Level Of Service Report
Intersection 5: Armstrong Rd/Sierra Ave

Control Type:	Signalized	Delay (sec / veh):	161.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.077

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	2	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	490.00	100.00	200.00	310.00	100.00	270.00	135.00	100.00	75.00	195.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			55.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	1463	909	191	62	339	120	388	307	1011	167	254	278
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	26	417	35	15	0	0	217	0	307	204	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	61	0	0	12	0	0	101	0	0	30
Total Hourly Volume [veh/h]	1463	935	547	97	354	108	388	524	910	474	458	274
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	385	246	144	26	93	28	102	138	239	125	121	72
Total Analysis Volume [veh/h]	1540	984	576	102	373	114	408	552	958	499	482	288
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	0	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	0.0	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	50	65	0	12	27	0	30	38	0	35	43	0
Vehicle Extension [s]	3.0	4.0	0.0	2.0	4.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	3.3	0.0	3.3	3.3	0.0	4.0	4.0	0.0	4.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	5.30	5.30	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	3.30	3.30	3.30	3.30	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	45	62	62	6	24	24	24	30	29	35	35
g / C, Green / Cycle	0.30	0.42	0.42	0.04	0.16	0.16	0.16	0.20	0.19	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.44	0.52	0.36	0.03	0.20	0.07	0.23	0.15	0.28	0.21	0.22
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1666
c, Capacity [veh/h]	1047	790	671	146	303	257	290	719	350	441	386
d1, Uniform Delay [s]	52.65	43.82	39.79	70.95	63.05	57.02	63.00	56.84	60.50	56.34	56.52
k, delay calibration	0.20	0.50	0.50	0.04	0.50	0.50	0.50	0.11	0.50	0.29	0.30
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	213.89	121.06	13.37	2.24	129.67	5.44	203.52	1.76	207.76	18.90	22.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.47	1.25	0.86	0.70	1.23	0.44	1.41	0.77	1.43	0.93	0.94
d, Delay for Lane Group [s/veh]	266.54	164.87	53.16	73.19	192.72	62.46	266.52	58.60	268.26	75.24	79.25
Lane Group LOS	F	F	D	E	F	E	F	E	F	E	E
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	50.27	54.64	21.09	1.96	22.24	4.25	27.05	9.74	33.32	17.21	15.70
50th-Percentile Queue Length [ft/ln]	1256.65	1366.10	527.13	48.90	555.96	106.17	676.13	243.62	832.97	430.36	392.45
95th-Percentile Queue Length [veh/ln]	75.78	77.49	28.62	3.52	33.01	7.63	41.15	14.86	50.29	24.02	22.20
95th-Percentile Queue Length [ft/ln]	1894.58	1937.36	715.40	88.02	825.34	190.66	1028.80	371.61	1257.37	600.47	554.89

Movement, Approach, & Intersection Results

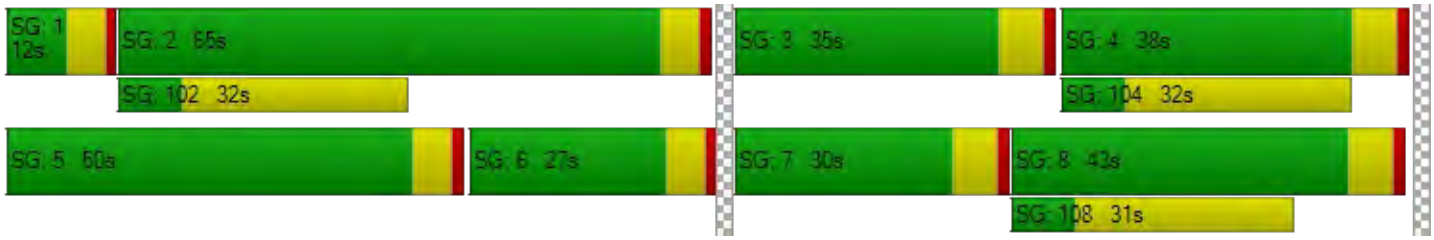
d_M, Delay for Movement [s/veh]	266.54	164.87	53.16	73.19	192.72	62.46	266.52	58.60	0.00	268.26	75.86	79.25
Movement LOS	F	F	D	E	F	E	F	E		F	E	E
d_A, Approach Delay [s/veh]	194.62			146.81			75.45			152.28		
Approach LOS	F			F			E			F		
d_I, Intersection Delay [s/veh]	161.45											
Intersection LOS	F											
Intersection V/C	1.077											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	64.40	64.40	0.00	64.40
l_p,int, Pedestrian LOS Score for Intersectio	3.547	3.017	0.000	3.040
Crosswalk LOS	D	C	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	796	289	427	493
d_b, Bicycle Delay [s]	27.18	54.87	46.41	42.56
l_b,int, Bicycle LOS Score for Intersection	6.775	2.551	2.352	2.631
Bicycle LOS	F	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Armstrong/30th St

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.327

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	135.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	2501	171	54	1503	80	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	439	0	4	319	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	17	0	0	0	6
Total Hourly Volume [veh/h]	2940	154	58	1822	80	53
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	774	41	15	479	21	14
Total Analysis Volume [veh/h]	3095	162	61	1918	84	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	ProtPerm	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	10	0	5	5	5	0
Maximum Green [s]	45	0	30	5	30	0
Amber [s]	4.3	0.0	4.3	4.3	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	60	0	11	49	60	0
Vehicle Extension [s]	3.0	0.0	2.0	3.0	2.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	19	0	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.3	0.0	3.3	3.3	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.30	5.30	5.30	5.30	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.30	3.30	0.00	3.30	2.00
g_i, Effective Green Time [s]	99	99	99	88	12
g / C, Green / Cycle	0.83	0.83	0.83	0.73	0.10
(v / s)_i Volume / Saturation Flow Rate	0.86	0.10	0.98	0.53	0.08
s, saturation flow rate [veh/h]	3618	1615	62	3618	1726
c, Capacity [veh/h]	2982	1331	120	2650	170
d1, Uniform Delay [s]	10.54	2.06	37.46	9.13	53.10
k, delay calibration	0.50	0.50	0.50	0.50	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	27.37	0.19	14.53	1.75	3.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.04	0.12	0.51	0.72	0.83
d, Delay for Lane Group [s/veh]	37.91	2.25	51.98	10.89	56.94
Lane Group LOS	F	A	D	B	E
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	30.55	0.48	2.01	11.51	4.36
50th-Percentile Queue Length [ft/ln]	763.79	11.93	50.24	287.65	109.00
95th-Percentile Queue Length [veh/ln]	41.03	0.86	3.62	17.07	7.78
95th-Percentile Queue Length [ft/ln]	1025.80	21.47	90.44	426.72	194.61

Movement, Approach, & Intersection Results

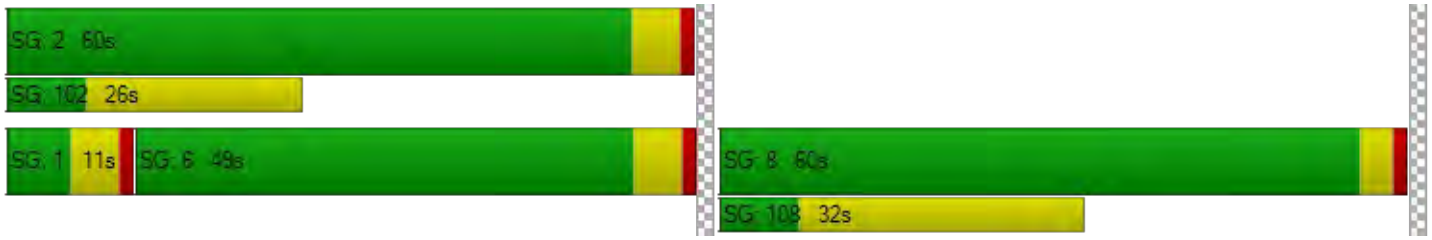
d_M, Delay for Movement [s/veh]	37.91	2.25	51.98	10.89	56.94	56.94
Movement LOS	F	A	D	B	E	E
d_A, Approach Delay [s/veh]	36.14		12.15		56.94	
Approach LOS	D		B		E	
d_I, Intersection Delay [s/veh]	27.85					
Intersection LOS	C					
Intersection V/C	0.327					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.881	0.000	1.981
Crosswalk LOS	D	F	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	912	728	933
d_b, Bicycle Delay [s]	17.77	24.26	17.07
l_b,int, Bicycle LOS Score for Intersection	4.261	3.192	1.801
Bicycle LOS	E	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	1	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Valley Way/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	224.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.271

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	280.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	38	1554	0	0	1376	5	271	0	100	347	75	738
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	434	0	0	313	3	3	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	1	0	0	10	0	0	74
Total Hourly Volume [veh/h]	38	1988	0	0	1689	7	274	0	90	347	75	664
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	523	0	0	444	2	72	0	24	91	20	175
Total Analysis Volume [veh/h]	40	2093	0	0	1778	7	288	0	95	365	79	699
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	10	62	0	0	52	0	27	0	0	0	51	0
Vehicle Extension [s]	3.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	0.0	0.0	3.3	0.0	3.4	0.0	0.0	0.0	3.3	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	C	L	C
C, Cycle Length [s]	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	5.40	5.30	5.30
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	3.40	3.30	3.30
g_i, Effective Green Time [s]	4	57	48	48	22	46	46
g / C, Green / Cycle	0.03	0.41	0.34	0.34	0.15	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.02	0.58	0.47	0.47	0.22	0.20	0.47
s, saturation flow rate [veh/h]	1810	3618	1900	1897	1757	1810	1640
c, Capacity [veh/h]	54	1465	650	650	271	591	535
d1, Uniform Delay [s]	67.38	41.65	46.03	46.03	59.20	39.78	47.15
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.17	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.99	196.86	177.07	177.91	206.25	1.64	214.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	1.43	1.37	1.37	1.41	0.62	1.45
d, Delay for Lane Group [s/veh]	85.37	238.51	223.11	223.94	265.45	41.42	261.40
Lane Group LOS	F	F	F	F	F	D	F
Critical Lane Group	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.67	64.16	53.74	53.82	25.00	10.82	50.21
50th-Percentile Queue Length [ft/ln]	41.70	1603.94	1343.56	1345.47	625.08	270.59	1255.14
95th-Percentile Queue Length [veh/ln]	3.00	95.81	79.15	79.30	38.33	16.22	75.80
95th-Percentile Queue Length [ft/ln]	75.05	2395.24	1978.80	1982.56	958.20	405.47	1895.01

Movement, Approach, & Intersection Results

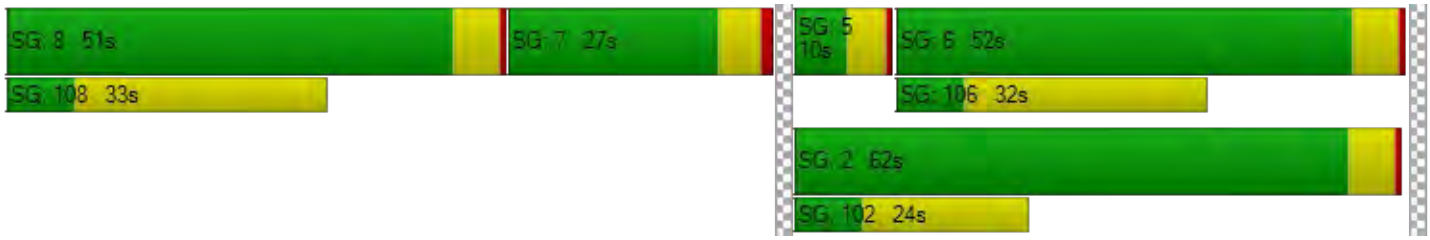
d_M, Delay for Movement [s/veh]	85.37	238.51	0.00	0.00	223.52	223.94	265.45	0.00	265.45	41.42	261.40	261.40
Movement LOS	F	F			F	F	F		F	D	F	F
d_A, Approach Delay [s/veh]	235.64			223.52			265.45			191.15		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	224.42											
Intersection LOS	F											
Intersection V/C	1.271											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	59.43	59.43	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.960	2.201	2.528
Crosswalk LOS	F	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	810	667	309	653
d_b, Bicycle Delay [s]	24.78	31.09	50.07	31.76
l_b,int, Bicycle LOS Score for Intersection	3.319	3.033	2.208	3.568
Bicycle LOS	C	C	B	D

Sequence

Ring 1	8	7	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: Valley Way/SR-60 WB On Ramp

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	115.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No			
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	198	1609	1316	497	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	434	87	226	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	72	0	0
Total Hourly Volume [veh/h]	198	2043	1403	651	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	538	369	171	0	0
Total Analysis Volume [veh/h]	208	2151	1477	685	0	0
Presence of On-Street Parking	No	No	No	No		
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	63.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	0	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	5	5	0	0	0
Maximum Green [s]	30	40	40	0	0	0
Amber [s]	4.1	4.8	4.8	0.0	0.0	0.0
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0
Split [s]	25	140	115	0	0	0
Vehicle Extension [s]	3.0	2.0	2.0	0.0	0.0	0.0
Walk [s]	0	7	7	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No			
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.6	3.3	3.3	0.0	0.0	0.0
Minimum Recall	No	No	No			
Maximum Recall	No	No	No			
Pedestrian Recall	No	No	No			
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	
C, Cycle Length [s]	140	140	140	140	
L, Total Lost Time per Cycle [s]	4.60	5.30	5.30	5.30	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.60	3.30	3.30	3.30	
g_i, Effective Green Time [s]	18	135	112	112	
g / C, Green / Cycle	0.13	0.96	0.80	0.80	
(v / s)_i Volume / Saturation Flow Rate	0.11	0.59	0.57	0.63	
s, saturation flow rate [veh/h]	1810	3618	1900	1709	
c, Capacity [veh/h]	233	3481	1521	1368	
d1, Uniform Delay [s]	60.01	0.25	6.47	7.59	
k, delay calibration	0.11	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	11.16	0.83	2.85	4.72	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.89	0.62	0.71	0.79	
d, Delay for Lane Group [s/veh]	71.18	1.08	9.32	12.32	
Lane Group LOS	E	A	A	B	
Critical Lane Group	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	7.85	0.40	11.70	14.11	
50th-Percentile Queue Length [ft/ln]	196.25	10.06	292.41	352.63	
95th-Percentile Queue Length [veh/ln]	12.45	0.72	17.30	20.26	
95th-Percentile Queue Length [ft/ln]	311.13	18.11	432.62	506.61	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.18	1.08	10.12	12.32	0.00	0.00
Movement LOS	E	A	B	B		
d_A, Approach Delay [s/veh]	7.26		10.82		0.00	
Approach LOS	A		B		A	
d_I, Intersection Delay [s/veh]	8.96					
Intersection LOS	A					
Intersection V/C	0.748					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	59.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.385
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1924	1567	0
d_b, Bicycle Delay [s]	0.10	3.28	70.00
l_b,int, Bicycle LOS Score for Intersection	3.506	3.403	4.132
Bicycle LOS	D	C	D

Sequence

Ring 1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: SR-60 EB Ramps/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	203.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.833

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	1120.00	100.00	100.00	200.00	100.00	100.00	260.00	100.00	340.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	490.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	24	1	18	1648	5	151	98	583	24	14	384	189
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	348	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	15	0	0	2	0	0	19
Total Hourly Volume [veh/h]	24	1	16	1996	5	136	98	583	22	14	384	170
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	4	525	1	36	26	153	6	4	101	45
Total Analysis Volume [veh/h]	25	1	17	2101	5	143	103	614	23	15	404	179
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	0	3	0	0	4	0	5	2	0	1	6	6
Auxiliary Signal Groups												4,6
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	5
Maximum Green [s]	0	15	0	0	35	0	25	35	0	15	35	35
Amber [s]	0.0	4.1	0.0	0.0	4.8	0.0	4.1	5.2	0.0	4.1	5.2	5.2
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.5	0.0	1.0	0.5	0.5
Split [s]	0	11	0	0	53	0	11	45	0	11	45	45
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	3.0	2.0	0.0	3.0	2.0	2.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	0	25	0	0	17	0	0	32	32
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	3.1	0.0	0.0	3.8	0.0	3.1	3.7	0.0	3.1	3.7	3.7
Minimum Recall		No			No		No	No		No	No	No
Maximum Recall		No			No		No	No		No	No	No
Pedestrian Recall		No			No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.10	5.80	5.80	5.10	5.70	5.70	5.10	5.70	5.80
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.10	3.80	3.80	3.10	3.70	3.70	3.10	3.70	0.00
g_i, Effective Green Time [s]	4	47	47	8	45	45	2	39	92
g / C, Green / Cycle	0.03	0.39	0.39	0.07	0.38	0.38	0.02	0.33	0.77
(v / s)_i Volume / Saturation Flow Rate	0.02	0.62	0.63	0.06	0.17	0.17	0.01	0.11	0.11
s, saturation flow rate [veh/h]	1729	1810	1783	1810	1900	1876	1810	3618	1615
c, Capacity [veh/h]	55	712	701	117	716	707	31	1191	1243
d1, Uniform Delay [s]	57.66	36.40	36.40	55.66	28.02	28.02	58.47	30.40	3.57
k, delay calibration	0.04	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.40	267.68	278.36	18.20	2.02	2.05	11.64	0.77	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	1.58	1.60	0.88	0.45	0.45	0.49	0.34	0.14
d, Delay for Lane Group [s/veh]	66.05	304.08	314.76	73.85	30.04	30.07	70.11	31.17	3.62
Lane Group LOS	E	F	F	E	C	C	E	C	A
Critical Lane Group	Yes	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.43	73.00	73.99	3.60	7.03	6.95	0.54	4.41	0.85
50th-Percentile Queue Length [ft/ln]	35.87	1824.94	1849.78	90.11	175.68	173.74	13.52	110.19	21.22
95th-Percentile Queue Length [veh/ln]	2.58	111.89	113.86	6.49	11.37	11.27	0.97	7.85	1.53
95th-Percentile Queue Length [ft/ln]	64.57	2797.32	2846.43	162.20	284.36	281.82	24.33	196.27	38.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.05	66.05	66.05	309.04	314.76	314.76	73.85	30.05	30.07	70.11	31.17	3.62
Movement LOS	E	E	E	F	F	F	E	C	C	E	C	A
d_A, Approach Delay [s/veh]	66.05			309.42			36.15			23.90		
Approach LOS	E			F			D			C		
d_I, Intersection Delay [s/veh]	203.79											
Intersection LOS	F											
Intersection V/C	0.833											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.768	2.896	2.705	0.000
Crosswalk LOS	A	C	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	98	787	655	655
d_b, Bicycle Delay [s]	54.25	22.08	27.14	27.14
l_b,int, Bicycle LOS Score for Intersection	1.634	5.295	2.172	2.069
Bicycle LOS	A	F	B	B

Sequence

Ring 1	4	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 10: Valley Way/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	89.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.930

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	3	1	0	1	1	0	1
Entry Pocket Length [ft]	145.00	100.00	510.00	170.00	100.00	150.00	410.00	100.00	180.00	260.00	100.00	250.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	476	97	572	428	298	849	1221	45	61	243	523
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	85	0	0	87	0	348	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	10	0	0	30	0	0	5	0	0	52
Total Hourly Volume [veh/h]	34	561	87	572	515	268	1197	1221	40	61	243	471
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	148	23	151	136	71	315	321	11	16	64	124
Total Analysis Volume [veh/h]	36	591	92	602	542	282	1260	1285	42	64	256	496
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	3 - Valley Way and 60 Ramps
Cycle Length [s]	140
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	71.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	3	8	0	7	4	4	5	2	0	1	6	6
Auxiliary Signal Groups						4,5						6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	4	6	0	4	6	6	4	6	0	4	6	6
Maximum Green [s]	25	30	0	35	30	30	35	45	0	25	45	45
Amber [s]	3.6	4.8	0.0	3.6	4.8	4.8	3.6	4.8	0.0	3.6	4.8	4.8
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	10	32	0	33	55	55	40	65	0	10	35	35
Vehicle Extension [s]	2.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	2.0	3.0	3.0
Walk [s]	0	5	0	5	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	21	0	23	39	39	0	34	0	0	24	24
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	3.5	0.0	2.0	3.5	3.5
I2, Clearance Lost Time [s]	2.6	3.8	0.0	2.6	3.8	3.8	2.6	3.8	0.0	2.6	3.8	3.8
Minimum Recall	No	No		No	No	No	No	Yes		No	Yes	Yes
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	140	140	140	140	140	140	140	140	140	140	140	140
L, Total Lost Time per Cycle [s]	4.60	5.80	5.80	4.60	5.80	4.60	4.60	7.30	7.30	4.60	7.30	6.10
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	3.80	3.80	2.60	3.80	0.00	2.60	3.80	3.80	2.60	3.80	0.00
g_i, Effective Green Time [s]	4	25	25	28	50	91	35	59	59	5	29	63
g / C, Green / Cycle	0.03	0.18	0.18	0.20	0.35	0.65	0.25	0.42	0.42	0.04	0.21	0.45
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.06	0.17	0.15	0.10	0.36	0.36	0.03	0.04	0.07	0.31
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	2859	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	48	644	287	713	1282	1854	889	1524	680	70	749	746
d1, Uniform Delay [s]	67.70	56.54	50.16	53.68	34.32	9.59	52.30	36.35	24.07	67.08	47.37	29.24
k, delay calibration	0.04	0.11	0.11	0.11	0.11	0.11	0.23	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.54	5.84	0.64	2.85	0.22	0.04	191.27	5.86	0.17	16.00	1.24	4.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.92	0.32	0.84	0.42	0.15	1.42	0.84	0.06	0.92	0.34	0.66
d, Delay for Lane Group [s/veh]	76.24	62.37	50.79	56.52	34.54	9.62	243.57	42.21	24.24	83.08	48.61	33.88
Lane Group LOS	E	E	D	E	C	A	F	D	C	F	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.37	10.56	2.82	10.25	6.90	1.59	38.76	20.11	0.85	2.57	3.92	13.54
50th-Percentile Queue Length [ft/ln]	34.34	263.90	70.56	256.17	172.59	39.70	969.06	502.64	21.23	64.23	97.91	338.60
95th-Percentile Queue Length [veh/ln]	2.47	15.88	5.08	15.50	11.21	2.86	58.40	27.46	1.53	4.62	7.05	19.58
95th-Percentile Queue Length [ft/ln]	61.82	397.11	127.00	387.42	280.31	71.46	1459.98	686.48	38.22	115.62	176.24	489.49

Movement, Approach, & Intersection Results

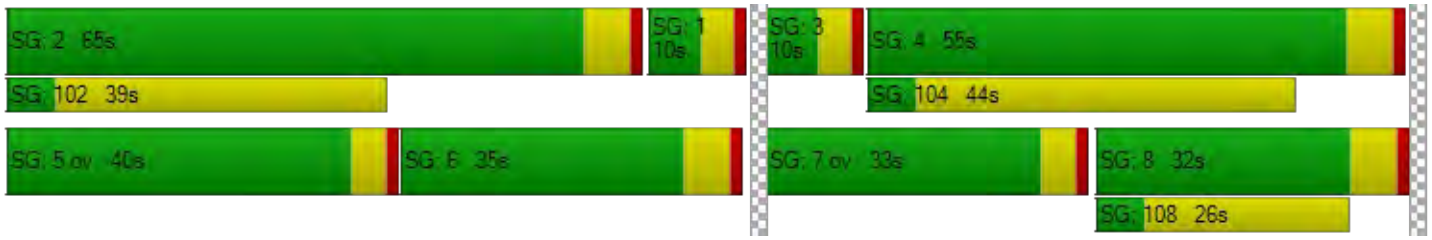
d_M, Delay for Movement [s/veh]	76.24	62.37	50.79	56.52	34.54	9.62	243.57	42.21	24.24	83.08	48.61	33.88
Movement LOS	E	E	D	E	C	A	F	D	C	F	D	C
d_A, Approach Delay [s/veh]	61.59			38.89			139.99			42.36		
Approach LOS	E			D			F			D		
d_I, Intersection Delay [s/veh]	89.49											
Intersection LOS	F											
Intersection V/C	0.930											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	61.29	0.00	61.29	61.29
l_p,int, Pedestrian LOS Score for Intersectio	2.826	0.000	3.291	3.221
Crosswalk LOS	C	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	374	703	846	417
d_b, Bicycle Delay [s]	46.25	29.45	23.32	43.85
l_b,int, Bicycle LOS Score for Intersection	2.161	2.761	3.698	2.276
Bicycle LOS	B	C	D	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: Jurupa Rd/Mission Blvd

Control Type:	Two-way stop	Delay (sec / veh):	1,968.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.681

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	280.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	17	293	1843	61	144	789
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	43	0	0	25	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	336	1843	61	169	789
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	88	485	16	44	208
Total Analysis Volume [veh/h]	18	354	1940	64	178	831
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	2.68	1.38	0.02	0.00	0.61	0.01
d_M, Delay for Movement [s/veh]	1968.61	1446.50	0.00	0.00	35.40	0.00
Movement LOS	F	F	A	A	E	A
95th-Percentile Queue Length [veh/ln]	38.66	38.66	0.00	0.00	3.77	0.00
95th-Percentile Queue Length [ft/ln]	966.41	966.41	0.00	0.00	94.19	0.00
d_A, Approach Delay [s/veh]	1471.76		0.00		6.24	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	163.60					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 12: Pacific Ave/Mission Blvd

Control Type:	Signalized	Delay (sec / veh):	63.6
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.860

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	130.00	100.00	130.00	130.00	100.00	115.00	275.00	100.00	50.00	265.00	100.00	230.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	132	103	222	81	82	109	190	1456	262	443	688	58
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	85	0	87	87	25	43	0	0	0	0	85
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	22	0	0	13	0	0	26	0	0	14
Total Hourly Volume [veh/h]	132	188	200	168	169	121	233	1456	236	443	688	129
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	49	53	44	44	32	61	383	62	117	181	34
Total Analysis Volume [veh/h]	139	198	211	177	178	127	245	1533	248	466	724	136
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	4	6	0	4	5	0
Maximum Green [s]	0	30	0	0	30	0	25	45	0	25	45	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	4.0	4.5	0.0	4.0	4.5	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	36	0	0	36	0	67	56	0	38	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	24	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	2.5	3.5	0.0	2.5	3.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.50	5.50	5.50	4.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.50	3.50	3.50	2.50	3.50	3.50
g_i, Effective Green Time [s]	31	31	31	31	31	31	20	51	51	34	64	64
g / C, Green / Cycle	0.24	0.24	0.24	0.24	0.24	0.24	0.15	0.39	0.39	0.26	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.13	0.10	0.13	0.18	0.09	0.08	0.14	0.42	0.15	0.26	0.20	0.08
s, saturation flow rate [veh/h]	1091	1900	1615	992	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	213	453	385	189	453	385	277	1405	627	466	1783	796
d1, Uniform Delay [s]	54.53	42.08	43.36	58.41	41.59	40.91	53.91	39.75	28.72	48.24	20.89	18.25
k, delay calibration	0.11	0.11	0.11	0.25	0.11	0.11	0.11	0.50	0.50	0.45	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.36	0.66	1.22	33.00	0.55	0.50	9.10	52.80	1.86	39.17	0.69	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.44	0.55	0.94	0.39	0.33	0.88	1.09	0.40	1.00	0.41	0.17
d, Delay for Lane Group [s/veh]	57.90	42.75	44.58	91.41	42.15	41.41	63.01	92.55	30.58	87.41	21.58	18.71
Lane Group LOS	E	D	D	F	D	D	E	F	C	F	C	B
Critical Lane Group	No	No	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.66	5.52	6.10	7.61	4.90	3.45	8.42	31.84	5.82	19.80	6.94	2.32
50th-Percentile Queue Length [ft/ln]	116.53	138.11	152.62	190.30	122.61	86.15	210.61	796.10	145.42	495.06	173.47	58.10
95th-Percentile Queue Length [veh/ln]	8.20	9.38	10.16	12.14	8.54	6.20	13.18	43.72	9.77	27.10	11.26	4.18
95th-Percentile Queue Length [ft/ln]	205.05	234.48	253.92	303.42	213.40	155.07	329.61	1092.89	244.31	677.50	281.47	104.57

Movement, Approach, & Intersection Results

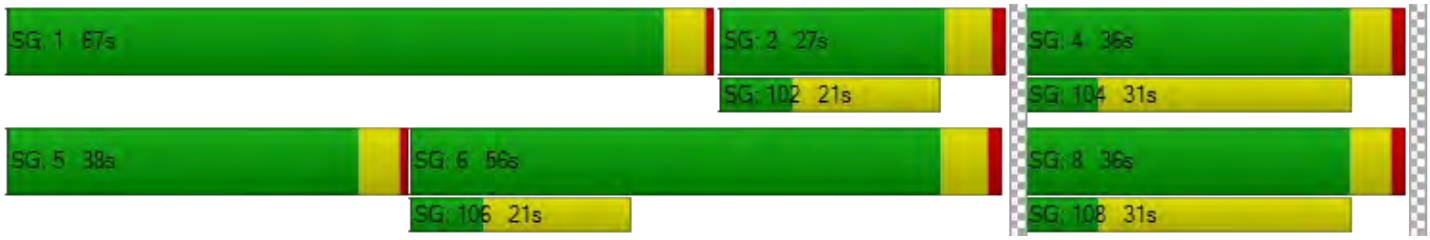
d_M, Delay for Movement [s/veh]	57.90	42.75	44.58	91.41	42.15	41.41	63.01	92.55	30.58	87.41	21.58	18.71
Movement LOS	E	D	D	F	D	D	E	F	C	F	C	B
d_A, Approach Delay [s/veh]	47.29			60.04			81.39			44.42		
Approach LOS	D			E			F			D		
d_I, Intersection Delay [s/veh]	63.59											
Intersection LOS	E											
Intersection V/C	0.860											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	54.47	54.47	54.47	54.47
l_p,int, Pedestrian LOS Score for Intersectio	2.543	2.432	3.367	3.453
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	477	477	777	331
d_b, Bicycle Delay [s]	37.70	37.70	24.31	45.28
l_b,int, Bicycle LOS Score for Intersection	2.500	2.376	3.253	2.665
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 13: Cedar Ave/I-10 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.641

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	230.00	100.00	100.00	100.00	100.00	100.00	485.00	100.00	485.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	560.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	563	1743	0	0	1465	701	0	0	0	451	0	529
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	206	62	0	0	43	0	0	0	0	164	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	70	0	0	0	0	0	53
Total Hourly Volume [veh/h]	769	1805	0	0	1508	631	0	0	0	615	0	476
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	202	475	0	0	397	166	0	0	0	162	0	125
Total Analysis Volume [veh/h]	809	1900	0	0	1587	664	0	0	0	647	0	501
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	0	5	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	20	39	0	0	19	0	0	0	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	16	38	19	19		14	14	14
g / C, Green / Cycle	0.26	0.64	0.31	0.31		0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.23	0.37	0.18	0.23		0.18	0.18	0.18
s, saturation flow rate [veh/h]	3514	5176	8626	2859		1810	1810	2859
c, Capacity [veh/h]	911	3291	2673	886		418	418	660
d1, Uniform Delay [s]	21.38	6.28	17.51	18.61		21.61	21.61	21.52
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	3.18	0.74	0.98	5.78		3.11	3.11	1.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	0.58	0.59	0.75		0.77	0.77	0.76
d, Delay for Lane Group [s/veh]	24.56	7.03	18.49	24.39		24.72	24.72	23.35
Lane Group LOS	C	A	B	C		C	C	C
Critical Lane Group	Yes	No	No	Yes		No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.14	2.94	3.31	4.23		4.19	4.19	3.12
50th-Percentile Queue Length [ft/ln]	128.41	73.60	82.85	105.86		104.78	104.78	78.04
95th-Percentile Queue Length [veh/ln]	8.85	5.30	5.96	7.61		7.54	7.54	5.62
95th-Percentile Queue Length [ft/ln]	221.33	132.48	149.12	190.23		188.60	188.60	140.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	24.56	7.03	0.00	0.00	18.49	24.39	0.00	0.00	0.00	24.72	24.72	23.35
Movement LOS	C	A			B	C				C	C	C
d_A, Approach Delay [s/veh]	12.26			20.23			0.00			24.12		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	17.43											
Intersection LOS	B											
Intersection V/C	0.641											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.448	2.629
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	500	0	567
d_b, Bicycle Delay [s]	5.21	16.88	30.00	15.41
l_b,int, Bicycle LOS Score for Intersection	3.050	2.326	4.132	3.541
Bicycle LOS	C	B	D	D

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 14: Cedar Ave/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	41.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.985

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	600.00	100.00	600.00	100.00	100.00	100.00	380.00	100.00	380.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1090.00
Speed [mph]	40.00			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	1650	680	433	1490	0	722	7	350	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	268	271	0	207	0	0	0	157	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	95	0	0	0	0	0	51	0	0	0
Total Hourly Volume [veh/h]	0	1918	856	433	1697	0	722	7	456	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	505	225	114	447	0	190	2	120	0	0	0
Total Analysis Volume [veh/h]	0	2019	901	456	1786	0	760	7	480	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	47	0	15	62	0	0	28	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	43	43	11	58	24	24	24	
g / C, Green / Cycle	0.48	0.48	0.12	0.64	0.27	0.27	0.27	
(v / s)_i Volume / Saturation Flow Rate	0.23	0.56	0.13	0.35	0.21	0.21	0.30	
s, saturation flow rate [veh/h]	8626	1615	3514	5176	1810	1811	1615	
c, Capacity [veh/h]	4121	772	430	3335	483	483	431	
d1, Uniform Delay [s]	16.02	23.50	39.50	8.69	30.71	30.70	33.00	
k, delay calibration	0.50	0.50	0.11	0.50	0.18	0.18	0.37	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.42	89.20	38.89	0.62	5.02	4.99	72.90	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.49	1.17	1.06	0.54	0.79	0.79	1.11	
d, Delay for Lane Group [s/veh]	16.44	112.70	78.39	9.31	35.73	35.69	105.90	
Lane Group LOS	B	F	F	A	D	D	F	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.22	33.48	6.87	5.24	8.08	8.08	17.66	
50th-Percentile Queue Length [ft/ln]	130.48	836.94	171.80	130.94	202.03	201.89	441.53	
95th-Percentile Queue Length [veh/ln]	8.97	48.02	11.44	8.99	12.74	12.74	26.13	
95th-Percentile Queue Length [ft/ln]	224.14	1200.43	286.01	224.77	318.58	318.40	653.33	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	16.44	112.70	78.39	9.31	0.00	35.71	35.69	105.90	0.00	0.00	0.00
Movement LOS		B	F	F	A		D	D	F			
d_A, Approach Delay [s/veh]	46.14			23.36			62.73			0.00		
Approach LOS	D			C			E			A		
d_I, Intersection Delay [s/veh]	41.40											
Intersection LOS	D											
Intersection V/C	0.985											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.574	2.428
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	956	1289	533	0
d_b, Bicycle Delay [s]	12.27	5.69	24.20	45.00
l_b,int, Bicycle LOS Score for Intersection	2.555	2.793	3.701	4.132
Bicycle LOS	B	C	D	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 15: Cedar Ave/Orange St

Control Type:	Signalized	Delay (sec / veh):	108.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.964

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	160.00	100.00	100.00	140.00	100.00	100.00	400.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	20	1680	2	100	1446	290	330	26	18	13	8	321
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	538	0	0	364	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	29	0	0	2	0	0	32
Total Hourly Volume [veh/h]	20	2218	2	100	1810	261	330	26	16	13	8	289
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	584	1	26	476	69	87	7	4	3	2	76
Total Analysis Volume [veh/h]	21	2335	2	105	1905	275	347	27	17	14	8	304
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	62	0	9	58	0	0	49	0	0	49	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	67	58	58	67	60	60	45	45	45	45
g / C, Green / Cycle	0.56	0.48	0.48	0.56	0.50	0.50	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.07	0.62	0.62	0.32	0.53	0.17	0.32	0.02	0.01	0.19
s, saturation flow rate [veh/h]	295	1900	1899	330	3618	1615	1084	1779	1384	1621
c, Capacity [veh/h]	163	918	918	198	1820	813	287	667	534	608
d1, Uniform Delay [s]	27.87	31.00	31.00	27.40	29.81	17.85	50.05	24.03	26.20	29.02
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.36	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	131.14	131.31	9.77	34.45	1.13	114.65	0.04	0.02	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	1.27	1.27	0.53	1.05	0.34	1.21	0.07	0.03	0.51
d, Delay for Lane Group [s/veh]	28.22	162.14	162.31	37.17	64.26	18.98	164.70	24.07	26.22	29.70
Lane Group LOS	C	F	F	D	F	B	F	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.26	58.13	58.16	1.81	32.91	4.63	17.90	0.82	0.27	7.05
50th-Percentile Queue Length [ft/ln]	6.45	1453.31	1453.94	45.17	822.72	115.82	447.48	20.44	6.80	176.21
95th-Percentile Queue Length [veh/ln]	0.46	83.62	83.66	3.25	43.89	8.16	27.81	1.47	0.49	11.40
95th-Percentile Queue Length [ft/ln]	11.60	2090.39	2091.57	81.31	1097.31	204.06	695.30	36.78	12.24	285.05

Movement, Approach, & Intersection Results

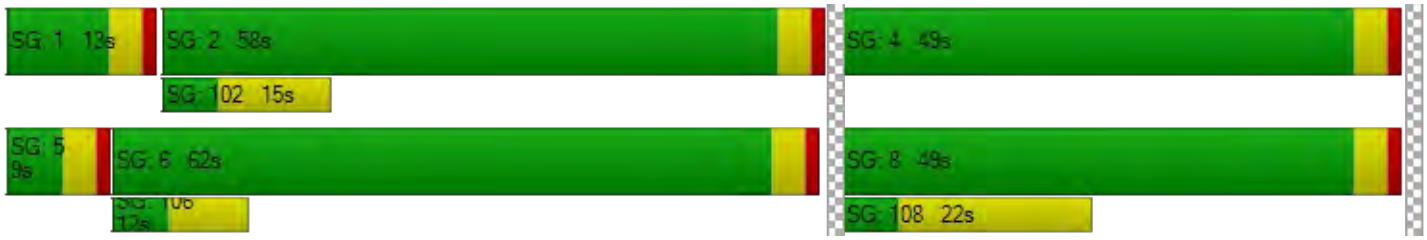
d_M, Delay for Movement [s/veh]	28.22	162.23	162.31	37.17	64.26	18.98	164.70	24.07	24.07	26.22	29.70	29.70
Movement LOS	C	F	F	D	F	B	F	C	C	C	C	C
d_A, Approach Delay [s/veh]	161.03			57.57			148.88			29.55		
Approach LOS	F			E			F			C		
d_I, Intersection Delay [s/veh]	108.04											
Intersection LOS	F											
Intersection V/C	0.964											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	0.00	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	3.452	0.000	2.210	2.236
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	967	900	750	750
d_b, Bicycle Delay [s]	16.02	18.15	23.44	23.44
l_b,int, Bicycle LOS Score for Intersection	3.505	3.469	2.208	2.150
Bicycle LOS	D	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 16: Cedar Ave/Slover Ave

Control Type:	Signalized	Delay (sec / veh):	94.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.944

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	115.00	100.00	100.00	250.00	100.00	80.00	190.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	160	1187	31	146	1190	137	379	491	217	33	358	170
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	538	0	0	364	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	14	0	0	22	0	0	17
Total Hourly Volume [veh/h]	160	1725	28	146	1554	123	379	491	195	33	358	153
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	454	7	38	409	32	100	129	51	9	94	40
Total Analysis Volume [veh/h]	168	1816	29	154	1636	129	399	517	205	35	377	161
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	42	0	11	41	0	22	43	0	9	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	46	46	7	45	45	18	33	33	3	18	18
g / C, Green / Cycle	0.08	0.44	0.44	0.07	0.43	0.43	0.17	0.32	0.32	0.03	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.09	0.49	0.49	0.09	0.46	0.48	0.22	0.14	0.13	0.02	0.15	0.15
s, saturation flow rate [veh/h]	1810	1900	1890	1810	1900	1852	1810	3618	1615	1810	1900	1711
c, Capacity [veh/h]	138	826	821	121	808	787	310	1141	509	56	332	299
d1, Uniform Delay [s]	48.50	29.68	29.68	49.00	30.18	30.18	43.50	28.71	28.19	50.27	41.94	42.06
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.28	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	112.14	68.67	71.09	137.89	60.24	70.40	142.19	0.28	0.51	10.81	5.88	7.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.22	1.12	1.12	1.28	1.09	1.12	1.29	0.45	0.40	0.62	0.84	0.86
d, Delay for Lane Group [s/veh]	160.64	98.36	100.77	186.89	90.43	100.58	185.69	29.00	28.70	61.08	47.82	49.20
Lane Group LOS	F	F	F	F	F	F	F	C	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.82	34.94	35.30	7.71	32.36	33.77	19.88	4.93	3.87	1.04	7.23	6.73
50th-Percentile Queue Length [ft/ln]	195.44	873.49	882.45	192.70	809.04	844.21	497.00	123.15	96.82	26.05	180.70	168.36
95th-Percentile Queue Length [veh/ln]	13.20	48.38	49.00	13.17	44.50	46.97	30.46	8.57	6.97	1.88	11.64	10.99
95th-Percentile Queue Length [ft/ln]	330.07	1209.50	1225.09	329.16	1112.55	1174.32	761.60	214.14	174.27	46.89	290.92	274.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	160.64	99.55	100.77	186.89	95.10	100.58	185.69	29.00	28.70	61.08	48.17	49.20
Movement LOS	F	F	F	F	F	F	F	C	C	E	D	D
d_A, Approach Delay [s/veh]	104.66			102.83			84.72			49.25		
Approach LOS	F			F			F			D		
d_I, Intersection Delay [s/veh]	94.42											
Intersection LOS	F											
Intersection V/C	0.944											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.89	43.89	43.89	43.89
l_p,int, Pedestrian LOS Score for Intersectio	3.331	3.419	3.059	2.836
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	724	705	743	495
d_b, Bicycle Delay [s]	21.38	22.02	20.74	29.72
l_b,int, Bicycle LOS Score for Intersection	3.223	3.154	2.503	2.046
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 17: Cedar Ave/Santa Ana Ave

Control Type:	Signalized	Delay (sec / veh):	61.3
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.919

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	290.00	100.00	100.00	240.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	241	1288	63	83	1193	57	122	162	190	28	157	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	538	0	0	364	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	6	0	0	19	0	0	10
Total Hourly Volume [veh/h]	241	1826	57	83	1557	51	122	162	171	28	157	85
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	481	15	22	410	13	32	43	45	7	41	22
Total Analysis Volume [veh/h]	254	1922	60	87	1639	54	128	171	180	29	165	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	17	53	0	9	45	0	0	33	0	0	33	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	49	49	5	41	41	29	29
g / C, Green / Cycle	0.14	0.52	0.52	0.05	0.43	0.43	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.14	0.52	0.53	0.05	0.45	0.45	0.33	0.17
s, saturation flow rate [veh/h]	1810	1900	1880	1810	1900	1879	1458	1700
c, Capacity [veh/h]	248	980	970	95	820	811	493	561
d1, Uniform Delay [s]	41.00	23.00	23.00	44.78	27.00	27.00	34.21	27.20
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.48	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	33.34	31.55	34.59	25.90	40.55	43.11	33.24	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.03	1.01	1.02	0.91	1.03	1.04	0.97	0.50
d, Delay for Lane Group [s/veh]	74.34	54.55	57.59	70.68	67.55	70.11	67.45	27.91
Lane Group LOS	F	F	F	E	F	F	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	7.80	27.23	27.77	2.64	25.73	26.02	15.27	5.15
50th-Percentile Queue Length [ft/ln]	195.12	680.83	694.15	66.10	643.31	650.53	381.83	128.63
95th-Percentile Queue Length [veh/ln]	12.52	36.12	37.06	4.76	34.92	35.46	21.68	8.87
95th-Percentile Queue Length [ft/ln]	313.10	903.00	926.44	118.99	873.02	886.59	542.06	221.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	74.34	56.02	57.59	70.68	68.78	70.11	67.45	67.45	67.45	27.91	27.91	27.91
Movement LOS	F	E	E	E	F	E	E	E	E	C	C	C
d_A, Approach Delay [s/veh]	58.15			68.92			67.45			27.91		
Approach LOS	E			E			E			C		
d_I, Intersection Delay [s/veh]	61.30											
Intersection LOS	E											
Intersection V/C	0.919											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	38.93	38.93	38.93	38.93
l_p,int, Pedestrian LOS Score for Intersectio	3.556	3.646	2.381	2.134
Crosswalk LOS	D	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1032	863	611	611
d_b, Bicycle Delay [s]	11.14	15.35	22.93	22.93
l_b,int, Bicycle LOS Score for Intersection	3.409	3.033	2.381	2.043
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 18: Cedar Ave/Jurupa Ave

Control Type:	Signalized	Delay (sec / veh):	260.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.669

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	190.00	100.00	100.00	345.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	180.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	184	1185	90	124	1142	192	355	274	300	53	93	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	538	0	0	364	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	9	0	0	19	0	0	30	0	0	8
Total Hourly Volume [veh/h]	184	1723	81	124	1506	173	355	274	270	53	93	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	453	21	33	396	46	93	72	71	14	24	19
Total Analysis Volume [veh/h]	194	1814	85	131	1585	182	374	288	284	56	98	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	10	39	0	9	38	0	0	37	0	0	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	35	35	5	34	34	33	33	33	33
g / C, Green / Cycle	0.07	0.41	0.41	0.06	0.40	0.40	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.11	0.50	0.51	0.07	0.47	0.48	2.08	0.18	0.53	0.05
s, saturation flow rate [veh/h]	1810	1900	1870	1810	1900	1833	318	1615	292	1615
c, Capacity [veh/h]	128	782	770	106	760	733	190	627	171	627
d1, Uniform Delay [s]	39.50	25.00	25.00	40.00	25.50	25.50	40.15	19.30	26.37	16.70
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	242.06	107.80	115.95	120.60	88.12	104.00	1132.85	0.51	46.41	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.52	1.21	1.23	1.23	1.16	1.20	3.49	0.45	0.90	0.12
d, Delay for Lane Group [s/veh]	281.56	132.80	140.95	160.60	113.62	129.50	1172.99	19.81	72.78	16.79
Lane Group LOS	F	F	F	F	F	F	F	B	E	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	11.11	37.16	38.32	5.68	32.03	34.14	63.57	3.92	5.33	0.91
50th-Percentile Queue Length [ft/ln]	277.86	928.93	958.09	141.90	800.81	853.53	1589.19	97.92	133.24	22.83
95th-Percentile Queue Length [veh/ln]	18.60	53.67	55.67	10.14	45.80	49.41	107.86	7.05	9.12	1.64
95th-Percentile Queue Length [ft/ln]	465.09	1341.70	1391.71	253.49	1144.99	1235.16	2696.43	176.25	227.89	41.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	281.56	136.68	140.95	160.60	120.64	129.50	1172.99	1172.99	19.81	72.78	72.78	16.79
Movement LOS	F	F	F	F	F	F	F	F	B	E	E	B
d_A, Approach Delay [s/veh]	150.29			124.24			826.80			54.12		
Approach LOS	F			F			F			D		
d_I, Intersection Delay [s/veh]	260.26											
Intersection LOS	F											
Intersection V/C	2.669											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	33.98	33.98	33.98	33.98
l_p,int, Pedestrian LOS Score for Intersectio	3.578	4.083	2.618	2.276
Crosswalk LOS	D	D	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	824	800	776	776
d_b, Bicycle Delay [s]	14.71	15.30	15.91	15.91
l_b,int, Bicycle LOS Score for Intersection	3.294	3.141	3.170	1.954
Bicycle LOS	C	C	C	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 19: Cedar Ave/7th St

Control Type:	Signalized	Delay (sec / veh):	46.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.893

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	295.00	100.00	100.00	190.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	217	1316	16	55	1317	71	44	34	399	49	14	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	538	0	0	364	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	2	0	0	7	0	0	40	0	0	3
Total Hourly Volume [veh/h]	217	1854	14	55	1681	64	44	34	359	49	14	29
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	488	4	14	442	17	12	9	94	13	4	8
Total Analysis Volume [veh/h]	228	1952	15	58	1769	67	46	36	378	52	15	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	53	0	10	47	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	51	51	4	43	43	23	23
g / C, Green / Cycle	0.13	0.57	0.57	0.04	0.48	0.48	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.13	0.52	0.52	0.03	0.48	0.49	0.28	0.13
s, saturation flow rate [veh/h]	1810	1900	1895	1810	1900	1876	1658	743
c, Capacity [veh/h]	241	1077	1075	80	908	896	468	251
d1, Uniform Delay [s]	38.67	17.48	17.54	42.49	23.50	23.50	34.28	27.25
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.33	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.58	13.11	13.39	11.90	32.85	36.19	29.96	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.91	0.92	0.73	1.01	1.02	0.98	0.39
d, Delay for Lane Group [s/veh]	55.26	30.59	30.93	54.39	56.35	59.69	64.24	28.23
Lane Group LOS	E	C	C	D	F	F	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	5.77	18.22	18.33	1.47	24.39	24.91	14.04	1.81
50th-Percentile Queue Length [ft/ln]	144.35	455.47	458.35	36.73	609.65	622.64	351.07	45.23
95th-Percentile Queue Length [veh/ln]	9.72	25.22	25.36	2.64	32.79	33.70	20.19	3.26
95th-Percentile Queue Length [ft/ln]	242.88	630.48	633.90	66.12	819.74	842.46	504.71	81.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.26	30.76	30.93	54.39	57.96	59.69	64.24	64.24	64.24	28.23	28.23	28.23
Movement LOS	E	C	C	D	E	E	E	E	E	C	C	C
d_A, Approach Delay [s/veh]	33.30			57.91			64.24			28.23		
Approach LOS	C			E			E			C		
d_I, Intersection Delay [s/veh]	46.29											
Intersection LOS	D											
Intersection V/C	0.893											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	3.820	3.655	2.105	1.807
Crosswalk LOS	D	D	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1089	956	511	511
d_b, Bicycle Delay [s]	9.34	12.27	24.94	24.94
l_b,int, Bicycle LOS Score for Intersection	3.372	3.128	2.385	1.726
Bicycle LOS	C	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 20: Rubidoux Blvd/Market St

Control Type:	Signalized	Delay (sec / veh):	225.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.407

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	245.00	100.00	330.00	270.00	100.00	370.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	43	567	559	926	904	75	107	172	83	450	82	756
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	114	0	0	0	0	368	542	370	299	0	396	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	56	0	0	0	0	0	0	0	0	76
Total Hourly Volume [veh/h]	157	567	503	926	904	443	649	542	382	450	478	680
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	1.0000	1.0000	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	149	132	244	238	111	162	136	96	118	120	179
Total Analysis Volume [veh/h]	157	597	529	975	952	443	649	542	382	474	478	716
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	0	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	0.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	17	37	0	30	50	0	37	60	0	23	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	1.5	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	5.0	0.0	3.0	4.0	0.0	3.0	5.0	0.0	3.0	4.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.00	7.00	7.00	5.00	6.00	6.00	5.00	7.00	5.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	5.00	5.00	3.00	4.00	4.00	3.00	5.00	3.00	4.00	4.00
g_i, Effective Green Time [s]	12	30	30	25	44	44	32	53	18	40	40
g / C, Green / Cycle	0.08	0.20	0.20	0.17	0.29	0.29	0.21	0.35	0.12	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.09	0.17	0.33	0.28	0.26	0.27	0.36	0.52	0.13	0.25	0.44
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1771	3514	1900	1615
c, Capacity [veh/h]	145	724	323	586	1061	474	386	626	422	507	431
d1, Uniform Delay [s]	69.00	57.49	60.00	62.50	50.83	51.61	59.00	48.50	66.00	53.89	55.00
k, delay calibration	0.11	0.50	0.50	0.21	0.50	0.50	0.50	0.50	0.11	0.32	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	59.92	10.37	300.66	302.33	11.79	27.97	317.65	223.12	63.20	20.84	308.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.08	0.83	1.64	1.66	0.90	0.94	1.68	1.48	1.12	0.94	1.66
d, Delay for Lane Group [s/veh]	128.92	67.86	360.66	364.83	62.62	79.58	376.65	271.62	129.20	74.73	363.29
Lane Group LOS	F	E	F	F	E	E	F	F	F	E	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.84	11.60	38.90	35.46	18.31	19.34	48.51	61.62	11.63	20.17	52.73
50th-Percentile Queue Length [ft/ln]	196.11	290.07	972.57	886.55	457.72	483.49	1212.72	1540.48	290.82	504.27	1318.27
95th-Percentile Queue Length [veh/ln]	12.80	17.19	60.27	54.98	25.33	26.55	74.58	92.65	18.08	27.54	81.55
95th-Percentile Queue Length [ft/ln]	319.90	429.73	1506.74	1374.56	633.15	663.80	1864.38	2316.15	452.10	688.41	2038.77

Movement, Approach, & Intersection Results

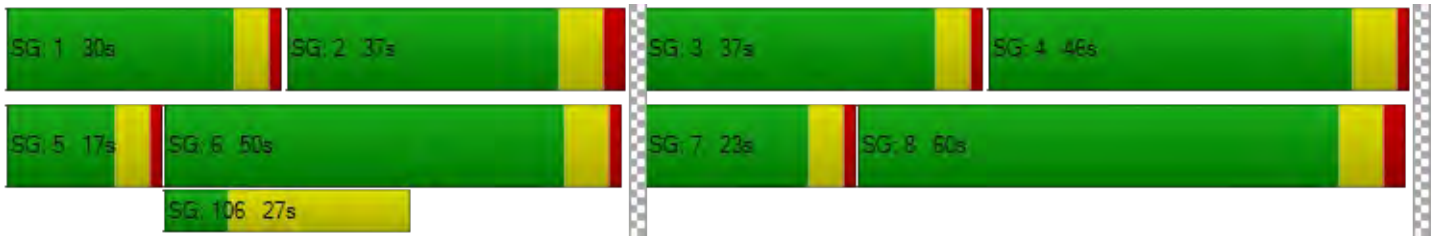
d_M, Delay for Movement [s/veh]	128.92	67.86	360.66	364.83	62.62	79.58	376.65	271.62	271.62	129.20	74.73	363.29
Movement LOS	F	E	F	F	E	E	F	F	F	F	E	F
d_A, Approach Delay [s/veh]	196.06			190.12			314.95			214.07		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	225.50											
Intersection LOS	F											
Intersection V/C	1.407											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	64.40	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	3.017	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	587	707	533
d_b, Bicycle Delay [s]	48.00	37.45	31.36	40.33
l_b,int, Bicycle LOS Score for Intersection	2.664	3.515	4.155	4.437
Bicycle LOS	B	D	D	E

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 21: Agua Mansa Rd/Market St

Control Type:	Signalized	Delay (sec / veh):	122.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.029

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	2	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	200.00	85.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	39	330	0	476	631	1058	4	0	919	286
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	370	0	0	396	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	4	0	0	48	0	0	0	0	0	29
Total Hourly Volume [veh/h]	0	0	35	330	0	428	631	1428	4	0	1315	257
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	9	87	0	113	166	376	1	0	346	68
Total Analysis Volume [veh/h]	0	0	37	347	0	451	664	1503	4	0	1384	271
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	46	0	0	46	0	35	44	0	30	39	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	1.5	3.0	0.0	1.5	3.0	0.0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.2	0.0	0.0	3.9	0.0	2.2	4.5	0.0	2.2	4.5	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.20	5.90	5.90	4.20	6.50	6.50	4.20	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.90	3.90	2.20	4.50	4.50	2.20	4.50	4.50
g_i, Effective Green Time [s]	41	40	40	31	63	63	0	33	33
g / C, Green / Cycle	0.34	0.33	0.33	0.26	0.53	0.53	0.00	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.28	0.37	0.42	0.00	0.00	0.38	0.17
s, saturation flow rate [veh/h]	1615	1393	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	552	481	540	464	1905	851	2	980	437
d1, Uniform Delay [s]	26.75	35.58	36.91	44.60	23.00	13.48	0.00	43.75	38.33
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	9.07	14.23	205.48	0.76	0.00	0.00	187.01	1.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.72	0.84	1.43	0.79	0.00	0.00	1.41	0.62
d, Delay for Lane Group [s/veh]	26.98	44.65	51.13	250.08	23.75	13.48	0.00	230.76	39.77
Lane Group LOS	C	D	D	F	C	B	A	F	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.77	10.05	14.07	39.76	15.88	0.05	0.00	39.38	6.93
50th-Percentile Queue Length [ft/ln]	19.21	251.35	351.85	994.10	397.09	1.24	0.00	984.56	173.21
95th-Percentile Queue Length [veh/ln]	1.38	15.25	20.23	59.99	22.42	0.09	0.00	59.39	11.25
95th-Percentile Queue Length [ft/ln]	34.57	381.35	505.67	1499.85	560.50	2.22	0.00	1484.72	281.13

Movement, Approach, & Intersection Results

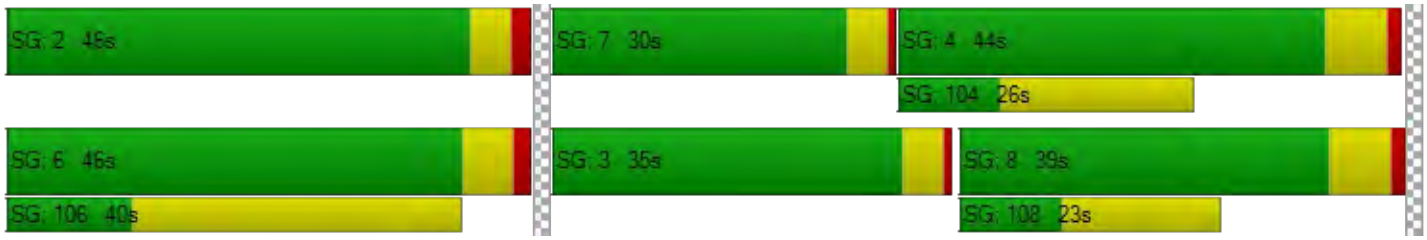
d_M, Delay for Movement [s/veh]	26.98	26.98	26.98	44.65	51.13	51.13	250.08	23.75	13.48	0.00	230.76	39.77
Movement LOS	C	C	C	D	D	D	F	C	B	A	F	D
d_A, Approach Delay [s/veh]	26.98			48.31			92.96			199.49		
Approach LOS	C			D			F			F		
d_I, Intersection Delay [s/veh]	122.62											
Intersection LOS	F											
Intersection V/C	1.029											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	13.0	15.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.70	47.70	45.94	0.00
l_p,int, Pedestrian LOS Score for Intersectio	1.751	2.707	3.503	0.000
Crosswalk LOS	A	B	D	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	680	668	625	542
d_b, Bicycle Delay [s]	26.14	26.60	28.36	31.90
l_b,int, Bicycle LOS Score for Intersection	1.627	2.956	3.351	2.949
Bicycle LOS	A	C	C	C

Sequence

Ring 1	-	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	3	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 22: Rubidoux Blvd/SR-60 WB Off Ramp

Control Type:	Signalized	Delay (sec / veh):	149.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.551

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00	85.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	161	1092	0	0	1396	30	22	0	250	851	150	163
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	109	0	0	294	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	3	0	0	25	0	0	16
Total Hourly Volume [veh/h]	161	1201	0	0	1690	27	22	0	225	851	150	147
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	316	0	0	445	7	6	0	59	224	39	39
Total Analysis Volume [veh/h]	169	1264	0	0	1779	28	23	0	237	896	158	155
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	4	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	35	0	0	35	0	20	0	0	0	30	0
Maximum Green [s]	0	25	0	0	25	0	35	0	0	0	20	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	4.8	0.0	0.0	0.0	4.8	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	38	0	0	0	38	0
Vehicle Extension [s]	0.0	3.5	0.0	0.0	3.5	0.0	2.0	0.0	0.0	0.0	3.5	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No				No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	0.0	3.4	0.0	3.8	0.0	0.0	0.0	3.8	0.0
Minimum Recall		No			No		No				No	
Maximum Recall		No			No		No				No	
Pedestrian Recall		No			No		No				No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	C	L	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	5.40	5.40	5.40	5.40	5.80	5.80	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.40	3.40	3.80	3.80	3.80	3.80
g_i, Effective Green Time [s]	37	37	37	37	32	32	32	32
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.64	0.35	0.48	0.48	0.02	0.15	0.91	0.10
s, saturation flow rate [veh/h]	264	3618	1900	1890	1083	1615	1157	1615
c, Capacity [veh/h]	90	1655	869	865	90	650	549	650
d1, Uniform Delay [s]	40.00	18.09	21.70	21.70	40.00	16.74	27.19	15.80
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.50	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	433.95	3.41	41.23	43.04	0.55	0.13	421.01	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.88	0.76	1.04	1.05	0.26	0.36	1.92	0.24
d, Delay for Lane Group [s/veh]	473.95	21.50	62.93	64.74	40.55	16.86	448.20	16.02
Lane Group LOS	F	C	F	F	D	B	F	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	12.55	9.25	23.92	24.23	0.46	2.91	74.67	1.78
50th-Percentile Queue Length [ft/ln]	313.71	231.29	598.07	605.71	11.46	72.75	1866.66	44.60
95th-Percentile Queue Length [veh/ln]	22.59	14.24	32.89	33.39	0.83	5.24	120.27	3.21
95th-Percentile Queue Length [ft/ln]	564.67	356.00	822.26	834.78	20.63	130.95	3006.80	80.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	473.95	21.50	0.00	0.00	63.82	64.74	40.55	0.00	16.86	448.20	448.20	16.02
Movement LOS	F	C			F	E	D		B	F	F	B
d_A, Approach Delay [s/veh]	74.86			63.83			18.96			392.79		
Approach LOS	E			E			B			F		
d_I, Intersection Delay [s/veh]	149.17											
Intersection LOS	F											
Intersection V/C	1.551											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	36.6
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	29.76	0.00	11.77
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.224	0.000	2.384
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	915	915	805	805
d_b, Bicycle Delay [s]	11.77	11.77	14.28	14.28
l_b,int, Bicycle LOS Score for Intersection	2.742	3.053	1.560	3.581
Bicycle LOS	B	C	A	D

Sequence

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 23: Rubidoux Blvd/SrR-60 WB On Ramp

Control Type:	Two-way stop	Delay (sec / veh):	302.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.498

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	145.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	240	1252	1282	894	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	109	51	244	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	240	1361	1333	1138	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	358	351	299	0	0
Total Analysis Volume [veh/h]	253	1433	1403	1198	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.50	0.01	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	302.23	0.00	0.00	0.00	0.00	0.00
Movement LOS	F	A	A	A		
95th-Percentile Queue Length [veh/ln]	16.32	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	408.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	45.35		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	17.84					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 24: Rubidoux Blvd/SR-60 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	104.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.972

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	145.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	65.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	634	277	155	1157	0	820	54	447	22	0	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	51	0	0	109	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	28	0	0	0	0	0	45	0	0	0
Total Hourly Volume [veh/h]	0	634	249	206	1157	0	929	54	402	22	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	167	66	54	304	0	244	14	106	6	0	0
Total Analysis Volume [veh/h]	0	667	262	217	1218	0	978	57	423	23	0	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Permiss	Split
Signal Group	0	2	0	1	6	0	0	4	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	5	5	0	0	5	0	5	0	0
Maximum Green [s]	0	35	0	30	35	0	0	35	0	20	0	0
Amber [s]	0.0	4.4	0.0	4.1	4.4	0.0	0.0	4.8	0.0	4.4	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Split [s]	0	43	0	12	55	0	0	53	0	12	0	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	3.0	0.0	2.0	0.0	0.0
Walk [s]	0	4	0	0	7	0	0	7	0	0	0	0
Pedestrian Clearance [s]	0	33	0	0	18	0	0	28	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No		No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.4	0.0	3.1	3.4	0.0	0.0	3.8	0.0	3.4	0.0	0.0
Minimum Recall		No		No	No			No		No		
Maximum Recall		No		No	No			No		No		
Pedestrian Recall		No		No	No			No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	R	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.40	5.40	5.10	5.40	5.80	5.80	5.40	5.40
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.40	3.40	3.10	3.40	3.80	3.80	3.40	3.40
g_i, Effective Green Time [s]	38	38	11	53	47	47	3	3
g / C, Green / Cycle	0.31	0.31	0.09	0.45	0.39	0.39	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.24	0.27	0.12	0.34	0.57	0.26	0.01	0.00
s, saturation flow rate [veh/h]	1900	1728	1810	3618	1814	1615	1810	1615
c, Capacity [veh/h]	597	543	160	1611	714	635	42	37
d1, Uniform Delay [s]	37.34	38.58	54.69	27.84	36.40	29.92	58.00	57.30
k, delay calibration	0.50	0.50	0.04	0.50	0.50	0.20	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.62	15.76	163.63	3.36	210.48	2.22	4.16	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.86	1.36	0.76	1.45	0.67	0.55	0.03
d, Delay for Lane Group [s/veh]	46.96	54.34	218.32	31.20	246.88	32.14	62.16	57.41
Lane Group LOS	D	D	F	C	F	C	E	E
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.60	14.79	12.02	14.66	61.85	10.20	0.73	0.03
50th-Percentile Queue Length [ft/ln]	340.12	369.64	300.45	366.57	1546.28	254.95	18.36	0.76
95th-Percentile Queue Length [veh/ln]	19.65	21.09	19.56	20.94	92.98	15.44	1.32	0.06
95th-Percentile Queue Length [ft/ln]	491.35	527.29	489.12	523.57	2324.62	385.88	33.05	1.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	49.20	54.34	218.32	31.20	0.00	246.88	246.88	32.14	62.16	0.00	57.41
Movement LOS		D	D	F	C		F	F	C	E		E
d_A, Approach Delay [s/veh]	50.65			59.49			184.58			61.96		
Approach LOS	D			E			F			E		
d_I, Intersection Delay [s/veh]	104.79											
Intersection LOS	F											
Intersection V/C	0.972											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	52.27
l_p,int, Pedestrian LOS Score for Intersectio	3.051	0.000	2.588	2.179
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	627	827	787	110
d_b, Bicycle Delay [s]	28.29	20.65	22.08	53.58
l_b,int, Bicycle LOS Score for Intersection	2.349	2.743	4.040	1.560
Bicycle LOS	B	B	D	A

Sequence

Ring 1	4	3	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 25: Market St/Rivera St

Control Type:	Signalized	Delay (sec / veh):	21.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.703

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	165.00	100.00	100.00	155.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	11	1166	267	116	1759	1	1	15	63	237	0	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	396	0	0	370	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	27	0	0	0	0	0	6	0	0	6
Total Hourly Volume [veh/h]	11	1562	240	116	2129	1	1	15	57	237	0	58
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	411	63	31	560	0	0	4	15	62	0	15
Total Analysis Volume [veh/h]	12	1644	253	122	2241	1	1	16	60	249	0	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	6	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	5	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	30	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	57	57	23	71	0	0	9	0	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	14	0	10	0	0	10	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No	No	No	No			No			No	
Maximum Recall	No	No	No	No	No			No			No	
Pedestrian Recall	No	No	No	No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	73	73	10	81	81	6	6	10	10	10
g / C, Green / Cycle	0.01	0.64	0.64	0.08	0.71	0.71	0.05	0.05	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.01	0.45	0.16	0.07	0.59	0.59	0.01	0.04	0.07	0.07	0.04
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1900	1894	1615	1810	1810	1615
c, Capacity [veh/h]	25	2305	1029	151	1342	1342	95	81	163	163	146
d1, Uniform Delay [s]	56.27	13.88	8.98	51.78	12.07	12.08	52.36	53.89	51.11	51.11	49.47
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.90	1.91	0.57	9.66	6.26	6.26	0.89	12.52	7.19	7.19	1.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.71	0.25	0.81	0.84	0.84	0.18	0.74	0.76	0.76	0.42
d, Delay for Lane Group [s/veh]	69.17	15.80	9.55	61.44	18.33	18.34	53.25	66.41	58.30	58.30	51.38
Lane Group LOS	E	B	A	E	B	B	D	E	E	E	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.43	12.69	2.57	3.77	18.19	18.19	0.50	2.01	3.83	3.83	1.74
50th-Percentile Queue Length [ft/ln]	10.72	317.25	64.18	94.25	454.67	454.80	12.46	50.16	95.68	95.68	43.44
95th-Percentile Queue Length [veh/ln]	0.77	18.53	4.62	6.79	25.18	25.19	0.90	3.61	6.89	6.89	3.13
95th-Percentile Queue Length [ft/ln]	19.29	463.30	115.53	169.65	629.52	629.68	22.43	90.28	172.22	172.22	78.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.17	15.80	9.55	61.44	18.34	18.34	53.25	53.25	66.41	58.30	58.30	51.38
Movement LOS	E	B	A	E	B	B	D	D	E	E	E	D
d_A, Approach Delay [s/veh]	15.30			20.56			63.51			56.94		
Approach LOS	B			C			E			E		
d_I, Intersection Delay [s/veh]	21.54											
Intersection LOS	C											
Intersection V/C	0.703											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	48.85	0.00	48.85
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.505	0.000	2.332
Crosswalk LOS	F	D	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	922	1165	87	383
d_b, Bicycle Delay [s]	16.71	10.02	52.61	37.60
l_b,int, Bicycle LOS Score for Intersection	3.157	3.510	1.697	2.081
Bicycle LOS	C	D	A	B

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 26: Market St/SR-60 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	55.3
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.946

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	1
Entry Pocket Length [ft]	185.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	325.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	366	504	0	0	1786	272	0	0	0	182	0	943
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	370	0	0	0	0	0	0	396
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	27	0	0	0	0	0	134
Total Hourly Volume [veh/h]	366	504	0	0	2156	245	0	0	0	182	0	1205
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	96	133	0	0	567	64	0	0	0	48	0	317
Total Analysis Volume [veh/h]	385	531	0	0	2269	258	0	0	0	192	0	1268
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	26	90	0	0	64	0	0	0	0	15	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C		L
C, Cycle Length [s]	105	105	105		105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00
g_i, Effective Green Time [s]	22	86	60		11
g / C, Green / Cycle	0.21	0.82	0.57		0.10
(v / s)_i Volume / Saturation Flow Rate	0.21	0.15	0.63		0.11
s, saturation flow rate [veh/h]	1810	3618	3618		1810
c, Capacity [veh/h]	379	2963	2067		190
d1, Uniform Delay [s]	41.50	2.01	22.50		47.00
k, delay calibration	0.26	0.50	0.50		0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00
d2, Incremental Delay [s]	37.46	0.13	52.17		33.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00
PF, progression factor	1.00	1.00	1.00		1.00

Lane Group Results

X, volume / capacity	1.02	0.18	1.10		1.01
d, Delay for Lane Group [s/veh]	78.96	2.15	74.67		80.60
Lane Group LOS	F	A	F		F
Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	13.29	0.59	36.53		6.64
50th-Percentile Queue Length [ft/ln]	332.34	14.69	913.20		165.99
95th-Percentile Queue Length [veh/ln]	19.44	1.06	50.08		10.92
95th-Percentile Queue Length [ft/ln]	485.90	26.44	1251.97		272.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	78.96	2.15	0.00	0.00	74.67	0.00	0.00	0.00	0.00	80.60	0.00	0.00
Movement LOS	F	A			F					F		
d_A, Approach Delay [s/veh]	34.43			67.40			0.00			11.08		
Approach LOS	C			E			A			B		
d_I, Intersection Delay [s/veh]	55.25											
Intersection LOS	E											
Intersection V/C	0.946											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	43.89
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.022
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1638	1143	0	210
d_b, Bicycle Delay [s]	1.72	9.64	52.50	42.08
l_b,int, Bicycle LOS Score for Intersection	2.315	3.432	4.132	1.560
Bicycle LOS	B	C	D	A

Sequence

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 27: Market St/SR-60 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	165.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.262

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	60.00	155.00	100.00	100.00	180.00	100.00	410.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	655	81	896	789	0	212	0	1010	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	370	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	0	0	0	101	0	0	0
Total Hourly Volume [veh/h]	0	655	73	1266	789	0	212	0	909	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	172	19	333	208	0	56	0	239	0	0	0
Total Analysis Volume [veh/h]	0	689	77	1333	831	0	223	0	957	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	21	0	66	87	0	33	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R	
C, Cycle Length [s]	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	17	62	83	29	29	
g / C, Green / Cycle	0.14	0.52	0.69	0.24	0.24	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.74	0.23	0.12	0.33	
s, saturation flow rate [veh/h]	3618	1810	3618	1810	2859	
c, Capacity [veh/h]	512	935	2502	437	691	
d1, Uniform Delay [s]	51.50	29.00	7.41	39.35	45.50	
k, delay calibration	0.50	0.50	0.50	0.11	0.21	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	167.66	197.85	0.36	0.92	177.21	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.34	1.43	0.33	0.51	1.39	
d, Delay for Lane Group [s/veh]	219.16	226.85	7.76	40.28	222.71	
Lane Group LOS	F	F	A	D	F	
Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	19.41	75.65	3.75	5.75	27.10	
50th-Percentile Queue Length [ft/ln]	485.28	1891.23	93.63	143.75	677.48	
95th-Percentile Queue Length [veh/ln]	30.06	113.48	6.74	9.68	41.79	
95th-Percentile Queue Length [ft/ln]	751.56	2836.91	168.53	242.07	1044.83	

Movement, Approach, & Intersection Results

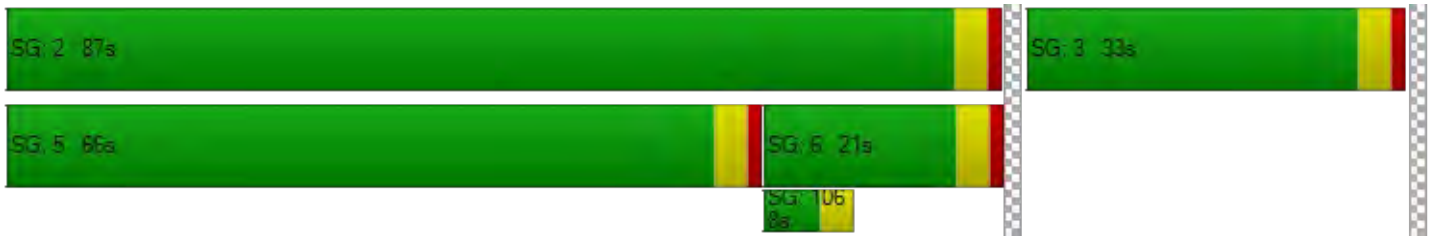
d_M, Delay for Movement [s/veh]	0.00	219.16	0.00	226.85	7.76	0.00	40.28	0.00	222.71	0.00	0.00	0.00
Movement LOS		F		F	A		D		F			
d_A, Approach Delay [s/veh]	198.16			142.72			188.23			0.00		
Approach LOS	F			F			F			A		
d_I, Intersection Delay [s/veh]	165.51											
Intersection LOS	F											
Intersection V/C	1.262											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.738
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	283	1383	483	0
d_b, Bicycle Delay [s]	44.20	5.70	34.50	60.00
l_b,int, Bicycle LOS Score for Intersection	2.128	3.345	1.560	4.132
Bicycle LOS	B	C	A	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 28: Sierra Ave/20th St

Control Type:	Signalized	Delay (sec / veh):	64.7
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.922

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	426	0	58	283	0	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	221	669	0	208	537
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	22	0	0	0	58
Total Hourly Volume [veh/h]	426	199	727	283	208	520
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	112	52	191	74	55	137
Total Analysis Volume [veh/h]	448	209	765	298	219	547
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	39	0	25	64	36	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	14	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	R
C, Cycle Length [s]	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	35	21	60	32	32
g / C, Green / Cycle	0.35	0.21	0.60	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.37	0.22	0.16	0.12	0.34
s, saturation flow rate [veh/h]	1799	3514	1900	1810	1615
c, Capacity [veh/h]	630	738	1140	579	517
d1, Uniform Delay [s]	32.50	39.50	9.49	26.30	34.00
k, delay calibration	0.50	0.11	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	47.69	25.96	0.56	0.41	55.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.04	1.04	0.26	0.38	1.06
d, Delay for Lane Group [s/veh]	80.19	65.46	10.05	26.71	89.83
Lane Group LOS	F	F	B	C	F
Critical Lane Group	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	22.60	11.35	2.92	3.94	19.83
50th-Percentile Queue Length [ft/ln]	564.96	283.78	73.10	98.51	495.85
95th-Percentile Queue Length [veh/ln]	31.29	17.20	5.26	7.09	28.15
95th-Percentile Queue Length [ft/ln]	782.32	430.01	131.58	177.31	703.81

Movement, Approach, & Intersection Results

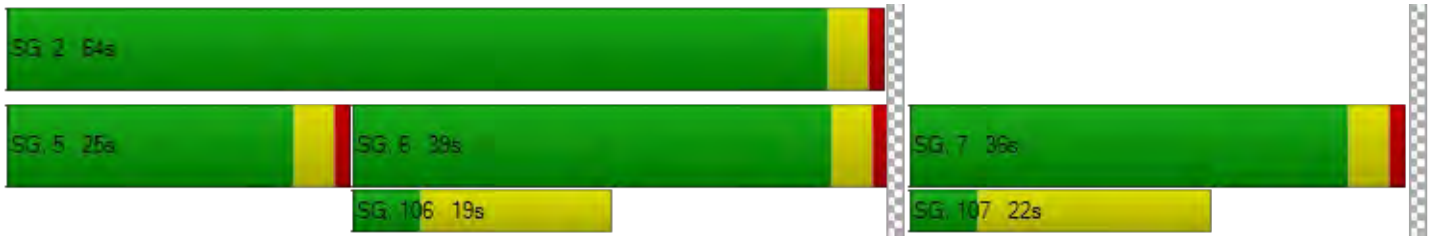
d_M, Delay for Movement [s/veh]	80.19	80.19	65.46	10.05	26.71	89.83
Movement LOS	F	F	F	B	C	F
d_A, Approach Delay [s/veh]	80.19		49.92		71.79	
Approach LOS	F		D		E	
d_I, Intersection Delay [s/veh]	64.66					
Intersection LOS	E					
Intersection V/C	0.922					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.496	2.857	2.812
Crosswalk LOS	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	1200	640
d_b, Bicycle Delay [s]	21.13	8.00	23.12
l_b,int, Bicycle LOS Score for Intersection	2.680	3.314	1.560
Bicycle LOS	B	C	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 29: Armstrong Rd/Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	31.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.109

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1455	0	0	385	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	27	0	26	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1470	27	0	411	16	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	387	7	0	108	4	0
Total Analysis Volume [veh/h]	1547	28	0	433	17	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.11	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	13.49	0.00	30.96	33.63
Movement LOS	A	A	B	A	D	D
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.36	0.36
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	9.01	9.01
d_A, Approach Delay [s/veh]	0.00		0.00		30.96	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.26					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 30: Driveway 2/20th St

Control Type:	Signalized	Delay (sec / veh):	6.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.299

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	2	0	0	8	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	101	0	60	36	0	87	145	574	171	96	558	55
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	9	0	0	17	0	0	6
Total Hourly Volume [veh/h]	101	0	54	36	0	78	145	576	154	96	566	49
Peak Hour Factor	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	1.0000	1.0000	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	0	14	9	0	20	36	144	39	25	142	13
Total Analysis Volume [veh/h]	101	0	57	38	0	78	145	576	154	101	566	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	27	0	0	27	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	45	45	45	45	45	45
g / C, Green / Cycle	0.12	0.12	0.74	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.10	0.07	0.18	0.20	0.20	0.14	0.16	0.17
s, saturation flow rate [veh/h]	1587	1752	818	1900	1764	737	1900	1844
c, Capacity [veh/h]	291	293	647	1416	1314	584	1416	1374
d1, Uniform Delay [s]	25.58	24.82	4.62	2.43	2.43	4.76	2.33	2.33
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.57	0.87	0.80	0.46	0.50	0.64	0.36	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.40	0.22	0.27	0.27	0.17	0.22	0.22
d, Delay for Lane Group [s/veh]	27.15	25.69	5.43	2.90	2.93	5.41	2.69	2.71
Lane Group LOS	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.18	1.53	0.60	0.62	0.58	0.44	0.49	0.48
50th-Percentile Queue Length [ft/ln]	54.46	38.28	15.07	15.38	14.61	10.91	12.14	11.92
95th-Percentile Queue Length [veh/ln]	3.92	2.76	1.09	1.11	1.05	0.79	0.87	0.86
95th-Percentile Queue Length [ft/ln]	98.02	68.90	27.13	27.68	26.30	19.64	21.85	21.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.15	27.15	27.15	25.69	25.69	25.69	5.43	2.91	2.93	5.41	2.70	2.71
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	27.15			25.69			3.33			3.08		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	6.64											
Intersection LOS	A											
Intersection V/C	0.299											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.060	2.074	2.876	2.708
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	767	767	967	967
d_b, Bicycle Delay [s]	11.41	11.41	8.01	8.01
l_b,int, Bicycle LOS Score for Intersection	1.830	1.766	2.296	2.158
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 31: Street A/20th St

Control Type:	Two-way stop	Delay (sec / veh):	18.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	2	0	0	8	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	644	26	71	693	15	43
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	646	26	71	701	15	43
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	170	7	19	184	4	11
Total Analysis Volume [veh/h]	680	27	75	738	16	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.08	0.01	0.05	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	9.08	0.00	17.98	10.96
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.13	0.07	0.17	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	3.26	1.63	4.31	5.57
d_A, Approach Delay [s/veh]	0.00		0.84		12.80	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.92					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 32: Street B/20th St

Control Type:	Signalized	Delay (sec / veh):	5.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.278

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	2	0	0	8	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	58	10	13	76	9	51	85	550	51	12	656	128
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	1	0	0	5	0	0	5	0	0	13
Total Hourly Volume [veh/h]	58	10	12	76	9	46	85	552	46	12	664	115
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	3	3	20	2	12	22	145	12	3	175	30
Total Analysis Volume [veh/h]	61	11	13	80	9	48	89	581	48	13	699	121
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	41	0	0	41	0	0	19	0	0	19	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	6	6	46	46	46	46	46	46
g / C, Green / Cycle	0.10	0.10	0.10	0.10	0.77	0.77	0.77	0.77	0.77	0.77
(v / s)_i Volume / Saturation Flow Rate	0.04	0.01	0.06	0.03	0.13	0.17	0.17	0.02	0.22	0.22
s, saturation flow rate [veh/h]	1368	1734	1409	1654	678	1900	1850	810	1900	1804
c, Capacity [veh/h]	211	175	234	167	529	1455	1417	630	1455	1381
d1, Uniform Delay [s]	27.36	24.60	26.87	25.12	5.41	1.98	1.98	4.18	2.11	2.11
k, delay calibration	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	0.35	0.86	1.21	0.69	0.35	0.36	0.06	0.50	0.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.14	0.34	0.34	0.17	0.22	0.22	0.02	0.29	0.29
d, Delay for Lane Group [s/veh]	28.10	24.95	27.73	26.33	6.10	2.32	2.33	4.24	2.61	2.64
Lane Group LOS	C	C	C	C	A	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.85	0.31	1.11	0.77	0.44	0.36	0.35	0.05	0.51	0.50
50th-Percentile Queue Length [ft/ln]	21.31	7.79	27.75	19.25	10.90	8.99	8.86	1.20	12.82	12.44
95th-Percentile Queue Length [veh/ln]	1.53	0.56	2.00	1.39	0.78	0.65	0.64	0.09	0.92	0.90
95th-Percentile Queue Length [ft/ln]	38.35	14.02	49.94	34.64	19.61	16.18	15.95	2.17	23.08	22.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.10	24.95	24.95	27.73	26.33	26.33	6.10	2.33	2.33	4.24	2.62	2.64
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	27.21			27.15			2.79			2.65		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	5.78											
Intersection LOS	A											
Intersection V/C	0.278											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	1.993	2.177	2.774	2.808
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1233	1233	500	500
d_b, Bicycle Delay [s]	4.41	4.41	16.88	16.88
l_b,int, Bicycle LOS Score for Intersection	1.702	1.794	2.156	2.258
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 33: Street M/20th Street

Control Type:	Roundabout	Delay (sec / veh):	5.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	2	8	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	29	47	592	766	34
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	29	47	594	774	34
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	8	12	156	204	9
Total Analysis Volume [veh/h]	21	31	49	625	815	36
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Number of Conflicting Circulating Lanes	1		1		1	
Circulating Flow Rate [veh/h]	815		21		49	
Exiting Flow Rate [veh/h]	85		846		646	
Demand Flow Rate [veh/h]	20	29	47	594	774	34
Adjusted Demand Flow Rate [veh/h]	21	31	49	625	815	36

Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1420.00	1420.00	1420.00	1420.00
B (coefficient)	0.00102	0.00091	0.00091	0.00091	0.00091
HV Adjustment Factor	1.00	1.00	1.00	1.00	1.00
Entry Flow Rate [veh/h]	52	317	358	400	452
Capacity of Entry and Bypass Lanes [veh/h]	601	1394	1394	1359	1359
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	601	1394	1394	1359	1359
X, volume / capacity	0.09	0.23	0.26	0.29	0.33

Movement, Approach, & Intersection Results

Lane LOS	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.28	0.88	1.03	1.24	1.47
95th-Percentile Queue Length [ft]	7.08	21.93	25.66	30.99	36.82
Approach Delay [s/veh]	6.99	4.63		5.44	
Approach LOS	A	A		A	
Intersection Delay [s/veh]	5.14				
Intersection LOS	A				

Intersection Level Of Service Report
Intersection 34: Driveway 3/20th St

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	2	0	0	8	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	97	0	193	357	0	113	36	454	123	247	590	107
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	0	193	357	0	113	36	456	123	247	598	107
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9500	1.0000	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	0	48	89	0	28	9	120	31	62	157	27
Total Analysis Volume [veh/h]	97	0	193	357	0	113	36	480	123	247	629	107
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	28	0	0	28	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	28	28	28	28	28	28
g / C, Green / Cycle	0.40	0.40	0.47	0.47	0.47	0.47	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.17	0.38	0.05	0.16	0.17	0.30	0.20	0.20
s, saturation flow rate [veh/h]	1698	1222	733	1900	1769	829	1900	1805
c, Capacity [veh/h]	759	594	343	887	826	395	887	843
d1, Uniform Delay [s]	13.02	17.96	15.28	10.20	10.21	19.11	10.64	10.64
k, delay calibration	0.11	0.28	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	6.06	0.61	1.09	1.19	7.31	1.49	1.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.79	0.10	0.35	0.35	0.63	0.43	0.43
d, Delay for Lane Group [s/veh]	13.34	24.02	15.89	11.29	11.40	26.43	12.14	12.22
Lane Group LOS	B	C	B	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.55	6.52	0.37	2.33	2.21	3.55	2.98	2.85
50th-Percentile Queue Length [ft/ln]	63.84	162.95	9.28	58.34	55.32	88.73	74.56	71.29
95th-Percentile Queue Length [veh/ln]	4.60	10.71	0.67	4.20	3.98	6.39	5.37	5.13
95th-Percentile Queue Length [ft/ln]	114.92	267.63	16.71	105.01	99.58	159.72	134.20	128.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.34	13.34	13.34	24.02	24.02	24.02	15.89	11.33	11.40	26.43	12.17	12.22
Movement LOS	B	B	B	C	C	C	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.34			24.02			11.60			15.76		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	15.98											
Intersection LOS	B											
Intersection V/C	0.682											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.369	2.046	2.803	3.312
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	800	933	933
d_b, Bicycle Delay [s]	10.80	10.80	8.53	8.53
l_b,int, Bicycle LOS Score for Intersection	2.038	2.335	2.087	2.371
Bicycle LOS	B	B	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 35: Driveway 4/20th St

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	2	0	0	8	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	73	0	48	319	0	151	48	864	92	62	721	95
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	0	48	319	0	151	48	866	92	62	729	95
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	12	80	0	38	12	217	23	16	182	24
Total Analysis Volume [veh/h]	73	0	48	319	0	151	48	866	92	62	729	95
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	40	0	0	40	0	0	20	0	0	20	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	21	21	31	31	31	31	31	31
g / C, Green / Cycle	0.34	0.34	0.52	0.52	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.08	0.31	0.07	0.26	0.26	0.10	0.22	0.22
s, saturation flow rate [veh/h]	1488	1515	675	1900	1837	595	1900	1824
c, Capacity [veh/h]	609	623	343	992	959	298	992	952
d1, Uniform Delay [s]	13.88	18.28	14.51	9.22	9.22	16.44	8.80	8.80
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	1.89	0.85	1.74	1.80	1.58	1.33	1.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.75	0.14	0.49	0.49	0.21	0.42	0.42
d, Delay for Lane Group [s/veh]	14.04	20.16	15.36	10.96	11.02	18.01	10.13	10.19
Lane Group LOS	B	C	B	B	B	B	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.08	5.75	0.48	3.50	3.40	0.71	2.85	2.75
50th-Percentile Queue Length [ft/ln]	26.98	143.73	12.12	87.41	84.90	17.65	71.30	68.85
95th-Percentile Queue Length [veh/ln]	1.94	9.68	0.87	6.29	6.11	1.27	5.13	4.96
95th-Percentile Queue Length [ft/ln]	48.57	242.04	21.82	157.34	152.81	31.78	128.34	123.93

Movement, Approach, & Intersection Results

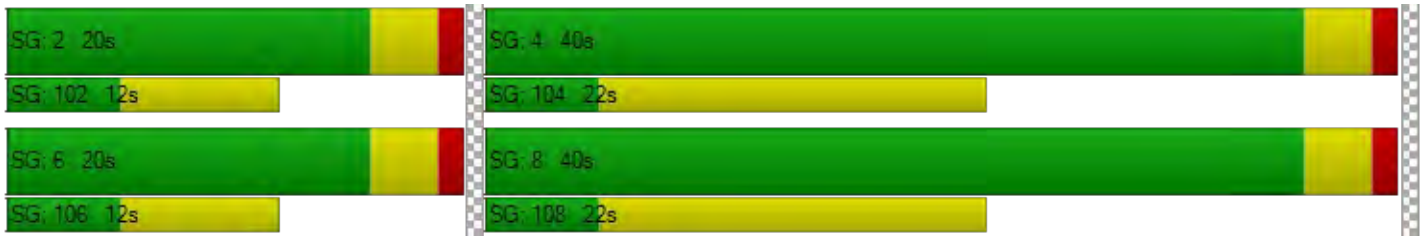
d_M, Delay for Movement [s/veh]	14.04	14.04	14.04	20.16	20.16	20.16	15.36	10.98	11.02	18.01	10.16	10.19
Movement LOS	B	B	B	C	C	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	14.04			20.16			11.20			10.71		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	12.86											
Intersection LOS	B											
Intersection V/C	0.567											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	1.918	2.063	2.894	3.285
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	1200	533	533
d_b, Bicycle Delay [s]	4.80	4.80	16.13	16.13
l_b,int, Bicycle LOS Score for Intersection	1.759	2.335	2.390	2.291
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 36: Driveway 5/20th St

Control Type:	Two-way stop	Delay (sec / veh):	14.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.167

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	1000.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	2	0	0	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	73	1138	92	0	878
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	73	1140	92	0	886
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	18	285	23	0	222
Total Analysis Volume [veh/h]	0	73	1140	92	0	886
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.17	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	14.84	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.59	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	14.79	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.84		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.49					
Intersection LOS	B					

Rio Vista Specific Plan

Vistro File: C:\...\Rio Vista.vistro
Report File: C:\...\2045 PM + P.pdf

Scenario 16 2045 PM + P
2/15/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound		Westbound		Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Right	Left	Right	
1	Sierra Ave/I-10 Ramps	1045	1554	925	612	1142	884	1064	769	579	695	9269

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Sierra Ave/Slover Ave	196	2019	212	848	1567	176	420	826	106	264	480	1159	8273

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	Sierra Ave/Santa Ana Ave	224	1895	100	188	1458	143	292	258	187	94	168	233	5240

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	Sierra Ave/Jurupa Ave	381	1317	213	131	902	290	612	542	589	202	316	98	5593

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Armstrong Rd/Sierra Ave	1463	935	608	97	354	120	388	524	1011	474	458	304	6736

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
6	Armstrong/30th St	2940	171	58	1822	80	59	5130

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
7	Valley Way/SR-60 WB Off Ramp	38	1988	1689	8	274	100	347	75	738	5257

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
8	Valley Way/SR-60 WB On Ramp	198	2043	1403	723	4367

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
9	SR-60 EB Ramps/Mission Blvd	24	1	18	1996	5	151	98	583	24	14	384	189	3487

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
10	Valley Way/Mission Blvd	34	561	97	572	515	298	1197	1221	45	61	243	523	5367

ID	Intersection Name	Northbound		Eastbound		Westbound		Total Volume
		Left	Right	Thru	Right	Left	Thru	
11	Jurupa Rd/Mission Blvd	17	336	1843	61	169	789	3215

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
12	Pacific Ave/Mission Blvd	132	188	222	168	169	134	233	1456	262	443	688	143	4238

ID	Intersection Name	Northbound		Southbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Thru	Right	
13	Cedar Ave/I-10 WB Ramp	769	1805	1508	701	615	0	529	5927

ID	Intersection Name	Northbound		Southbound		Eastbound			Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	
14	Cedar Ave/I-10 EB Ramps	1918	951	433	1697	722	7	507	6235

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
15	Cedar Ave/Orange St	20	2218	2	100	1810	290	330	26	18	13	8	321	5156

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	Cedar Ave/Slover Ave	160	1725	31	146	1554	137	379	491	217	33	358	170	5401

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	Cedar Ave/Santa Ana Ave	241	1826	63	83	1557	57	122	162	190	28	157	95	4581

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
18	Cedar Ave/Jurupa Ave	184	1723	90	124	1506	192	355	274	300	53	93	81	4975

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
19	Cedar Ave/7th St	217	1854	16	55	1681	71	44	34	399	49	14	32	4466

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
20	Rubidoux Blvd/Market St	157	567	559	926	904	443	649	542	382	450	478	756	6813

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	Agua Mansa Rd/Market St	0	0	39	330	0	476	631	1428	4	0	1315	286	4509

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound			Total Volume
		Left	Thru	Thru	Right	Left	Right	Left	Thru	Right	
22	Rubidoux Blvd/SR-60 WB Off Ramp	161	1201	1690	30	22	250	851	150	163	4518

ID	Intersection Name	Northbound		Southbound		Total Volume
		Left	Thru	Thru	Right	
23	Rubidoux Blvd/SrR-60 WB On Ramp	240	1361	1333	1138	4072

ID	Intersection Name	Northbound		Southbound		Eastbound			Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Thru	Right	Left	Right	
24	Rubidoux Blvd/SR-60 EB Ramps	634	277	206	1157	929	54	447	22	1	3727

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
25	Market St/Rivera St	11	1562	267	116	2129	1	1	15	63	237	0	64	4466

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
26	Market St/SR-60 WB Ramp	366	504	2156	272	182	1339	4819

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Thru	Right	Left	Thru	Left	2	
27	Market St/SR-60 EB Ramp	655	81	1266	789	212	1010	4013

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
28	Sierra Ave/20th St	426	221	727	283	208	578	2443

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
29	Armstrong Rd/Driveway 1	1470	27	0	411	16	0	1924

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
30	Driveway 2/20th St	101	0	60	36	0	87	145	576	171	96	566	55	1893

ID	Intersection Name	Northbound		Southbound		Westbound		Total Volume
		Thru	Right	Left	Thru	Left	Right	
31	Street A/20th St	646	26	71	701	15	43	1502

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
32	Street B/20th St	58	10	13	76	9	51	85	552	51	12	664	128	1709

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
33	Street M/20th Street	20	29	47	594	774	34	1498

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
34	Driveway 3/20th St	97	0	193	357	0	113	36	456	123	247	598	107	2327

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
35	Driveway 4/20th St	73	0	48	319	0	151	48	866	92	62	729	95	2483

ID	Intersection Name	Northbound	Eastbound		Westbound	Total Volume
		Right	Thru	Right	Thru	
36	Driveway 5/20th St	73	1140	92	886	2191

Option 2: Copy of Armstrong Rd/Sierra Ave

Number	5											
Intersection	Armstrong Rd/Sierra Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	1463	909	191	62	339	120	388	307	1011	167	254	278
Total Analysis Volume [veh/h]	1540	984	576	102	373	114	408	552	958	499	482	288

Intersection Settings

Cycle Length [s]	150											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Unsigna	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups			2,3									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	0	5	5	0	5	5	0
Maximum Green [s]	50	50	50	25	50	0	25	40	0	25	40	0
Amber [s]	4.3	4.3	4.3	4.3	4.3	0.0	5.0	5.0	0.0	5.0	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	51	66	66	11	26	0	30	38	0	35	43	0
Walk [s]	0	7	7	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	25	0	0	0	0	25	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.30	0.42	0.65	0.04	0.15	0.15	0.16	0.20	0.19	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.44	0.52	0.36	0.03	0.20	0.07	0.23	0.15	0.28	0.21	0.22
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3		
s, saturation flow rate [veh/h]	3514	1900	1615	3514	1900	1615	1810	3618	1810	1900	1666
c, Capacity [veh/h]	1071	796	1046	134	289	246	290	720	350	442	387
X, volume / capacity	1.44	1.24	0.55	0.76	1.29	0.46	1.41	0.77	1.43	0.92	0.93
d, Delay for Lane Group [s/veh]	251.61	160.74	16.57	74.87	217.55	64.18	266.52	58.50	268.26	74.85	78.80
Lane Group LOS	F	F	B	E	F	E	F	E	F	E	E

Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	49.22	54.14	10.54	1.98	23.19	4.31	27.05	9.74	33.32	17.18	15.66
50th-Percentile Queue Length [ft/ln]	1230.49	1353.60	263.61	49.52	579.77	107.87	676.13	243.50	832.97	429.41	391.50
95th-Percentile Queue Length [veh/ln]	73.84	76.56	15.87	3.57	34.80	7.72	41.15	14.86	50.29	23.97	22.15
95th-Percentile Queue Length [ft/ln]	1846.07	1914.00	396.74	89.14	869.94	193.03	1028.80	371.46	1257.37	599.33	553.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	251.61	160.74	16.57	74.87	217.55	64.18	266.52	58.50	0.00	268.26	75.46	78.80
Movement LOS	F	F	B	E	F	E	F	E		F	E	E
Critical Movement	No	No	No	No	No	No	No	No	No	Yes	No	No
d_A, Approach Delay [s/veh]	179.09			163.16			75.42			152.03		
Approach LOS	F			F			E			F		
d_I, Intersection Delay [s/veh]	154.89											
Intersection LOS	F											
Intersection V/C	1.077											

Option 1: Copy of Valley Way/SR-60 WB Off Ramp

Number	7											
Intersection	Valley Way/SR-60 WB Off Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	38	1554	0	0	1376	5	271	0	100	347	75	738
Total Analysis Volume [veh/h]	40	2093	0	0	1778	7	288	0	95	365	79	699

Intersection Settings

Cycle Length [s]	140											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Permiss	Split	Split	Split	Split
Signal Group	5	2	0	0	6	0	7	0	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	5	0	0	0	5	0
Maximum Green [s]	30	40	0	0	40	0	25	0	0	0	40	0
Amber [s]	4.1	4.8	0.0	0.0	4.8	0.0	4.4	0.0	0.0	0.0	4.8	0.0
All red [s]	0.5	0.5	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Split [s]	10	62	0	0	52	0	27	0	0	0	51	0
Walk [s]	0	7	0	0	7	0	7	0	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	25	0	0	0	0	0	26	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No		No				No	
Maximum Recall	No	No			No		No				No	
Pedestrian Recall	No	No			No		No				No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.03	0.41	0.34	0.34	0.15	0.15	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.02	0.58	0.47	0.47	0.16	0.06	0.24	0.43
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3		3	
s, saturation flow rate [veh/h]	1810	3618	1900	1897	1810	1615	1825	1615
c, Capacity [veh/h]	54	1465	650	650	279	249	596	527
X, volume / capacity	0.74	1.43	1.37	1.37	1.03	0.38	0.75	1.33
d, Delay for Lane Group [s/veh]	85.37	238.51	223.11	223.94	109.40	53.55	46.41	206.59
Lane Group LOS	F	F	F	F	F	D	D	F

Critical Lane Group	No	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.67	64.16	53.74	53.82	13.65	3.01	14.28	41.42
50th-Percentile Queue Length [ft/ln]	41.70	1603.94	1343.56	1345.47	341.22	75.19	356.99	1035.38
95th-Percentile Queue Length [veh/ln]	3.00	95.81	79.15	79.30	20.01	5.41	20.48	61.23
95th-Percentile Queue Length [ft/ln]	75.05	2395.24	1978.80	1982.56	500.30	135.34	511.92	1530.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	85.37	238.51	0.00	0.00	223.52	223.94	109.40	0.00	53.55	46.41	46.41	206.59
Movement LOS	F	F			F	F	F		D	D	D	F
Critical Movement	No	Yes			No	No	No		No	No	No	No
d_A, Approach Delay [s/veh]	235.64			223.52			95.55			144.37		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	202.65											
Intersection LOS	F											
Intersection V/C	1.171											

Option 1: Copy of Jurupa Rd/Mission Blvd

Number	11					
Intersection	Jurupa Rd/Mission Blvd					
Control Type	Two-way stop					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Base Volume Input [veh/h]	17	310	1843	61	144	806
Total Analysis Volume [veh/h]	18	372	1940	64	178	848

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Capacity Analysis

Calculated Rank	0	2	1	1	2	1
v_c, Conflicting Flow Rate	0	970	0	0	2004	0
v_c, Stage 1	0	970	0	0	2004	0
v_c, Stage 2	0	0	0	0	0	0
c_p,x, Potential Capacity [veh/h]	0	257	0	0	290	0
c_p,x, Stage 1 [veh/h]	0	1647	0	0	2838	0
c_p,x, Stage 2 [veh/h]	0	1091	0	0	1636	0
c_m,x, Movement Capacity [veh/h]	0	257	100000	100000	290	100000
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	0	257	100000	100000	290	100000

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	1.45	0.02	0.00	0.61	0.01
d_M, Delay for Movement [s/veh]	0.00	259.51	0.00	0.00	35.40	0.00
Movement LOS		F	A	A	E	A
Critical Movement		Yes	No	No	No	No
95th-Percentile Queue Length [veh/ln]	0.00	21.05	0.00	0.00	3.77	0.00
95th-Percentile Queue Length [ft/ln]	0.00	526.33	0.00	0.00	94.19	0.00
d_A, Approach Delay [s/veh]	259.51		0.00		6.14	
Approach LOS	F		A		A	
V/C_I, Worst Movement V/C Ratio	1.45					
d_I, Worst Movement Control Delay [s/veh]	259.51					
d_I, Intersection Delay [s/veh]	30.23					
Intersection LOS	F					

Option 2: Copy of Pacific Ave/Mission Blvd

Number	12											
Intersection	Pacific Ave/Mission Blvd											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	132	103	222	81	82	109	190	1456	262	443	688	58
Total Analysis Volume [veh/h]	139	198	211	177	178	127	245	1533	248	466	724	136

Intersection Settings

Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	30	0	9	30	0	22	44	0	32	54	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	21	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.24	0.16	0.16	0.24	0.16	0.16	0.15	0.41	0.41	0.24	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.11	0.10	0.13	0.15	0.09	0.08	0.14	0.42	0.15	0.26	0.20	0.08
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1272	1900	1615	1198	1900	1615	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	326	311	265	305	311	265	274	1484	662	441	1818	811
X, volume / capacity	0.43	0.64	0.80	0.58	0.57	0.48	0.90	1.03	0.37	1.06	0.40	0.17
d, Delay for Lane Group [s/veh]	37.23	47.04	51.72	41.66	46.02	44.99	57.97	66.30	25.25	99.91	18.45	15.99
Lane Group LOS	D	D	D	D	D	D	E	F	C	F	B	B

Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.29	5.45	6.18	4.36	4.82	3.38	7.50	26.19	4.84	19.03	5.85	1.97
50th-Percentile Queue Length [ft/ln]	82.24	136.27	154.56	109.10	120.52	84.55	187.60	654.68	121.10	475.84	146.23	49.14
95th-Percentile Queue Length [veh/ln]	5.92	9.28	10.26	7.79	8.42	6.09	12.00	35.43	8.45	27.07	9.82	3.54
95th-Percentile Queue Length [ft/ln]	148.03	231.99	256.50	194.75	210.54	152.19	299.91	885.70	211.33	676.70	245.39	88.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.23	47.04	51.72	41.66	46.02	44.99	57.97	66.30	25.25	99.91	18.45	15.99
Movement LOS	D	D	D	D	D	D	E	F	C	F	B	B
Critical Movement	No	No	No	No	No	No	No	No	No	Yes	No	No
d_A, Approach Delay [s/veh]	46.35			44.15			60.27			46.83		
Approach LOS	D			D			E			D		
d_I, Intersection Delay [s/veh]	52.69											
Intersection LOS	D											
Intersection V/C	0.890											

Option 1: Copy of Cedar Ave/I-10 WB Ramp

Number	13											
Intersection	Cedar Ave/I-10 WB Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	563	1743	0	0	1465	701	0	0	0	451	0	529
Total Analysis Volume [veh/h]	809	1900	0	0	1587	664	0	0	0	647	0	501

Intersection Settings

Cycle Length [s]	85											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	2	0	0	0	4	4	0
Auxiliary Signal Groups						2,4						
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	5	5	0	0	5	5	0	0	0	5	5	0
Maximum Green [s]	30	30	0	0	30	30	0	0	0	30	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0
Split [s]	23	52	0	0	29	29	0	0	0	33	33	0
Walk [s]	0	5	0	0	5	5	0	0	0	5	5	0
Pedestrian Clearance [s]	0	10	0	0	7	7	0	0	0	10	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No			No	No				No		
Maximum Recall	No	No			No	No				No		
Pedestrian Recall	No	No			No	No				No		
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.22	0.56	0.29	0.68		0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.23	0.53	0.31	0.41		0.36	0.31
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	3514	3618	5176	1615		1810	1615
c, Capacity [veh/h]	786	2043	1522	1102		617	551
X, volume / capacity	1.03	0.93	1.04	0.60		1.05	0.91
d, Delay for Lane Group [s/veh]	56.31	26.05	65.00	9.73		75.99	43.54
Lane Group LOS	F	C	F	A		F	D

Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	10.13	16.47	14.51	5.44		19.89	11.61
50th-Percentile Queue Length [ft/ln]	253.19	411.64	362.85	136.03		497.30	290.23
95th-Percentile Queue Length [veh/ln]	15.59	23.12	21.30	9.27		28.07	17.20
95th-Percentile Queue Length [ft/ln]	389.73	578.01	532.40	231.67		701.73	429.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.31	26.05	0.00	0.00	65.00	9.73	0.00	0.00	0.00	75.99	0.00	43.54
Movement LOS	F	C			F	A				F		D
Critical Movement	No	No			No	No				Yes		No
d_A, Approach Delay [s/veh]	35.09			48.69			0.00			61.83		
Approach LOS	D			D			A			E		
d_I, Intersection Delay [s/veh]	45.13											
Intersection LOS	D											
Intersection V/C	0.894											

Option 1: Copy of Cedar Ave/I-10 EB Ramps

Number	14											
Intersection	Cedar Ave/I-10 EB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	1650	680	433	1490	0	722	7	357	0	0	0
Total Analysis Volume [veh/h]	0	2019	901	456	1786	0	760	7	487	0	0	0

Intersection Settings

Cycle Length [s]	115											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	6	5	2	0	8	8	0	0	0	0
Auxiliary Signal Groups			6,8									
Lead / Lag	-	-	-	Lead	-	-	Lag	-	-	-	-	-
Minimum Green [s]	0	5	5	5	5	0	5	5	0	0	0	0
Maximum Green [s]	0	30	30	30	30	0	30	30	0	0	0	0
Amber [s]	0.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	52	52	26	78	0	37	37	0	0	0	0
Walk [s]	0	5	5	0	5	0	5	5	0	0	0	0
Pedestrian Clearance [s]	0	7	7	0	10	0	10	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No	No	No	No		No					
Maximum Recall		No	No	No	No		No					
Pedestrian Recall		No	No	No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.42	0.74	0.19	0.64	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.39	0.56	0.25	0.35	0.34	0.38	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	5176	1615	1810	5176	1810	1654	
c, Capacity [veh/h]	2160	1194	346	3330	519	475	
X, volume / capacity	0.93	0.75	1.32	0.54	1.20	1.31	
d, Delay for Lane Group [s/veh]	41.10	13.31	205.76	11.78	148.73	196.59	
Lane Group LOS	D	B	F	B	F	F	

Critical Lane Group	Yes	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	18.67	11.66	24.94	7.51	29.86	33.60	
50th-Percentile Queue Length [ft/ln]	466.83	291.51	623.60	187.77	746.51	840.06	
95th-Percentile Queue Length [veh/ln]	25.76	17.26	37.72	12.01	43.24	50.12	
95th-Percentile Queue Length [ft/ln]	644.00	431.51	943.06	300.13	1081.03	1252.92	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	41.10	13.31	205.76	11.78	0.00	157.32	0.00	196.59	0.00	0.00	0.00
Movement LOS		D	B	F	B		F		F			
Critical Movement		No	No	Yes	No		No		No			
d_A, Approach Delay [s/veh]	32.52			51.24			172.66			0.00		
Approach LOS	C			D			F			A		
d_I, Intersection Delay [s/veh]	66.34											
Intersection LOS	E											
Intersection V/C	1.019											

Option 1: Copy of Cedar Ave/Slover Ave

Number	16											
Intersection	Cedar Ave/Slover Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	160	1187	31	146	1190	137	379	491	217	33	358	170
Total Analysis Volume [veh/h]	168	1816	29	154	1636	129	399	517	205	35	377	161

Intersection Settings

Cycle Length [s]	135											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	69	0	16	68	0	20	41	0	9	30	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	17	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.10	0.51	0.51	0.09	0.50	0.50	0.12	0.26	0.26	0.03	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.09	0.49	0.49	0.09	0.46	0.48	0.11	0.14	0.13	0.02	0.15	0.15
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1810	1900	1890	1810	1900	1852	3514	3618	1615	1810	1900	1711
c, Capacity [veh/h]	174	963	957	161	949	925	416	934	417	50	318	286
X, volume / capacity	0.96	0.96	0.96	0.96	0.93	0.95	0.96	0.55	0.49	0.70	0.88	0.90
d, Delay for Lane Group [s/veh]	84.84	52.47	53.63	85.34	48.30	52.62	71.90	43.84	43.43	81.15	68.72	72.20
Lane Group LOS	F	D	D	F	D	D	E	D	D	F	E	E

Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.82	32.65	33.03	6.27	29.84	31.18	7.32	7.31	5.75	1.39	10.26	9.67
50th-Percentile Queue Length [ft/ln]	170.58	816.20	825.63	156.64	746.06	779.53	183.05	182.84	143.65	34.75	256.61	241.79
95th-Percentile Queue Length [veh/ln]	11.11	42.02	42.45	10.37	38.80	40.34	11.76	11.75	9.68	2.50	15.52	14.77
95th-Percentile Queue Length [ft/ln]	277.68	1050.47	1061.25	259.27	970.03	1008.48	293.99	293.72	241.93	62.56	387.97	369.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	84.84	53.04	53.63	85.34	50.29	52.62	71.90	43.84	43.43	81.15	69.61	72.20
Movement LOS	F	D	D	F	D	D	E	D	D	F	E	E
Critical Movement	No	No	No	Yes	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	55.70			53.26			53.75			71.04		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	56.04											
Intersection LOS	E											
Intersection V/C	0.837											

Option 1: Copy of Cedar Ave/Santa Ana Ave

Number	17											
Intersection	Cedar Ave/Santa Ana Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	241	1288	63	83	1193	57	122	162	190	28	157	95
Total Analysis Volume [veh/h]	254	1922	60	87	1639	54	128	171	180	29	165	89

Intersection Settings

Cycle Length [s]	95											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	17	53	0	9	45	0	0	33	0	0	33	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.14	0.54	0.54	0.05	0.46	0.46	0.28	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.14	0.52	0.53	0.05	0.45	0.45	0.11	0.20	0.03	0.14
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3	
s, saturation flow rate [veh/h]	1810	1900	1880	1810	1900	1879	1143	1742	1046	1789
c, Capacity [veh/h]	248	1029	1018	95	869	859	231	487	152	500
X, volume / capacity	1.03	0.96	0.97	0.91	0.98	0.98	0.55	0.72	0.19	0.51
d, Delay for Lane Group [s/veh]	74.34	41.28	43.54	70.68	50.41	52.30	42.01	34.33	42.59	29.55
Lane Group LOS	F	D	D	E	D	D	D	C	D	C
Critical Lane Group	Y	N	N	N	N	Y	N	Y	N	N

Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.80	23.48	24.19	2.64	22.52	22.91	2.94	7.36	0.66	4.76
50th-Percentile Queue Length [ft/ln]	195.12	586.94	604.87	66.10	563.02	572.75	73.51	184.07	16.40	118.91
95th-Percentile Queue Length [veh/ln]	12.52	31.42	32.26	4.76	30.30	30.76	5.29	11.81	1.18	8.33
95th-Percentile Queue Length [ft/ln]	313.10	785.61	806.54	118.99	757.59	768.99	132.32	295.32	29.52	208.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	74.34	42.37	43.54	70.68	51.32	52.30	42.01	34.33	34.33	42.59	29.55	29.55
Movement LOS	F	D	D	E	D	D	D	C	C	D	C	C
Critical Movement	Yes	No	No	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	46.04			52.30			36.38			30.88		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	46.50											
Intersection LOS	D											
Intersection V/C	0.792											

Option 1: Copy of Cedar Ave/Jurupa Ave

Number	18											
Intersection	Cedar Ave/Jurupa Ave											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	184	1185	90	124	1142	192	355	274	300	53	93	81
Total Analysis Volume [veh/h]	194	1814	85	131	1585	182	374	288	284	56	98	77

Intersection Settings

Cycle Length [s]	95											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	46	0	10	43	0	0	39	0	0	39	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.09	0.44	0.44	0.06	0.41	0.41	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.11	0.50	0.51	0.07	0.47	0.48	0.30	0.15	0.18	0.15	0.05
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3	
s, saturation flow rate [veh/h]	1810	1900	1870	1810	1900	1833	1229	1900	1615	1027	1615
c, Capacity [veh/h]	171	840	827	114	780	753	323	700	595	430	595
X, volume / capacity	1.13	1.13	1.15	1.15	1.13	1.17	1.16	0.41	0.48	0.36	0.13
d, Delay for Lane Group [s/veh]	117.71	99.99	107.14	130.68	104.09	119.18	131.97	22.72	23.59	23.96	19.99
Lane Group LOS	F	F	F	F	F	F	F	C	C	C	B

Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	7.41	33.95	35.06	5.32	32.35	34.37	15.68	4.60	4.69	2.76	1.09
50th-Percentile Queue Length [ft/ln]	185.16	848.68	876.54	132.92	808.79	859.26	392.07	115.00	117.29	68.91	27.34
95th-Percentile Queue Length [veh/ln]	12.40	47.52	49.41	9.46	45.53	49.02	24.24	8.12	8.24	4.96	1.97
95th-Percentile Queue Length [ft/ln]	310.05	1188.08	1235.37	236.61	1138.18	1225.53	605.99	202.93	206.09	124.05	49.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	117.71	103.40	107.14	130.68	110.75	119.18	131.97	22.72	23.59	23.96	23.96	19.99
Movement LOS	F	F	F	F	F	F	F	C	C	C	C	B
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	104.88			112.94			66.17			22.64		
Approach LOS	F			F			E			C		
d_I, Intersection Delay [s/veh]	97.08											
Intersection LOS	F											
Intersection V/C	0.893											

Option 2: Copy of Rubidoux Blvd/Market St

Number	20											
Intersection	Rubidoux Blvd/Market St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	43	567	559	926	904	75	107	172	83	450	82	756
Total Analysis Volume [veh/h]	157	597	529	975	952	443	649	542	382	474	478	716

Intersection Settings

Cycle Length [s]	145											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	2	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups			2,7									
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	10	10	10	0	10	10	0	10	10	0
Maximum Green [s]	25	45	45	30	45	0	25	45	0	30	45	0
Amber [s]	4.0	5.0	5.0	4.0	5.0	0.0	4.0	5.0	0.0	4.0	5.0	0.0
All red [s]	1.0	2.0	2.0	1.0	1.0	0.0	1.0	2.0	0.0	1.0	1.0	0.0
Split [s]	15	24	24	32	41	0	40	64	0	25	49	0
Walk [s]	0	0	0	0	7	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	20	0	0	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.07	0.12	0.30	0.19	0.24	0.24	0.24	0.39	0.14	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.09	0.17	0.33	0.28	0.26	0.27	0.36	0.52	0.13	0.25	0.44
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3		3		
s, saturation flow rate [veh/h]	1810	3618	1615	3514	3618	1615	1810	1771	3514	1900	1615
c, Capacity [veh/h]	125	424	490	654	873	390	437	696	485	563	479
X, volume / capacity	1.26	1.41	1.08	1.49	1.09	1.14	1.49	1.33	0.98	0.85	1.49
d, Delay for Lane Group [s/veh]	197.23	261.05	114.24	282.71	113.03	143.16	285.59	201.15	76.75	57.35	284.57
Lane Group LOS	F	F	F	F	F	F	F	F	E	E	F

Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.02	19.24	25.75	31.98	22.44	23.30	43.65	54.60	9.51	17.29	47.94
50th-Percentile Queue Length [ft/ln]	225.38	480.96	643.68	799.61	561.01	582.48	1091.20	1364.90	237.74	432.30	1198.42
95th-Percentile Queue Length [veh/ln]	14.96	30.00	35.79	49.01	31.78	33.57	65.95	79.74	14.57	24.11	72.92
95th-Percentile Queue Length [ft/ln]	373.88	750.08	894.82	1225.29	794.38	839.16	1648.76	1993.41	364.17	602.80	1822.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	197.23	261.05	114.24	282.71	113.03	143.16	285.59	201.15	201.15	76.75	57.35	284.57
Movement LOS	F	F	F	F	F	F	F	F	F	E	E	F
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	192.71			188.47			235.99			160.40		
Approach LOS	F			F			F			F		
d_I, Intersection Delay [s/veh]	193.31											
Intersection LOS	F											
Intersection V/C	1.245											

Option 2: Copy of Agua Mansa Rd/Market St

Number	21											
Intersection	Agua Mansa Rd/Market St											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	0	39	330	0	476	631	1058	4	0	919	286
Total Analysis Volume [veh/h]	0	0	37	347	0	451	664	1503	4	0	1384	271

Intersection Settings

Cycle Length [s]	135											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	2	0	0	6	0	3	4	0	7	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	4	6	0	4	6	0
Maximum Green [s]	0	20	0	0	35	0	20	45	0	40	45	0
Amber [s]	0.0	3.7	0.0	0.0	4.4	0.0	3.7	5.5	0.0	3.7	5.5	0.0
All red [s]	0.0	1.5	0.0	0.0	1.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0
Split [s]	0	48	0	0	48	0	30	57	0	30	57	0
Walk [s]	0	0	0	0	11	0	0	9	0	0	9	0
Pedestrian Clearance [s]	0	0	0	0	29	0	0	17	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.32		0.31	0.31	0.19	0.56	0.56	0.00	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.02		0.25	0.28	0.19	0.42	0.00	0.00	0.38	0.17
so, Base Saturation Flow per Lane [pc/h/ln]	1900		1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3		3		3			3		
s, saturation flow rate [veh/h]	1615		1393	1615	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	515		445	504	672	2042	912	1	1353	604
X, volume / capacity	0.07		0.78	0.90	0.99	0.74	0.00	0.00	1.02	0.45
d, Delay for Lane Group [s/veh]	32.49		55.48	65.48	62.01	22.44	12.84	0.00	59.95	32.30
Lane Group LOS	C		E	E	E	C	B	A	F	C

Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.91	12.09	17.16	11.66	16.55	0.05	0.00	24.85	6.57
50th-Percentile Queue Length [ft/ln]	22.70	302.17	428.93	291.55	413.69	1.29	0.00	621.15	164.26
95th-Percentile Queue Length [veh/ln]	1.63	17.79	23.95	17.26	23.22	0.09	0.00	33.56	10.77
95th-Percentile Queue Length [ft/ln]	40.85	444.72	598.75	431.56	580.48	2.32	0.00	839.00	269.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.49	32.49	32.49	55.48	65.48	65.48	62.01	22.44	12.84	0.00	59.95	32.30
Movement LOS	C	C	C	E	E	E	E	C	B	A	F	C
Critical Movement	No	No	No	No	No	Yes	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	32.49			61.13			34.52			55.42		
Approach LOS	C			E			C			E		
d_I, Intersection Delay [s/veh]	46.48											
Intersection LOS	D											
Intersection V/C	0.851											

Option 1: Copy of Rubidoux Blvd/SR-60 WB Off Ramp

Number	22											
Intersection	Rubidoux Blvd/SR-60 WB Off Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	311	1255	0	0	1396	30	22	0	250	851	150	163
Total Analysis Volume [veh/h]	327	1436	0	0	1779	28	23	0	237	896	158	172

Intersection Settings

Cycle Length [s]	60											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	37	0	0	37	0	23	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	14	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.69	0.69	0.69	0.69	0.18	0.18	
(v / s)_i Volume / Saturation Flow Rate	1.24	0.40	0.48	0.48	0.01	0.15	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	264	3618	1900	1890	1810	1615	
c, Capacity [veh/h]	209	2480	1302	1295	328	293	
X, volume / capacity	1.56	0.58	0.69	0.70	0.07	0.81	
d, Delay for Lane Group [s/veh]	300.24	5.92	8.72	8.82	20.46	28.89	
Lane Group LOS	F	A	A	A	C	C	

Critical Lane Group	Yes	No	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	18.77	2.59	4.36	4.40	0.26	3.43	
50th-Percentile Queue Length [ft/ln]	469.15	64.76	109.03	109.91	6.48	85.67	
95th-Percentile Queue Length [veh/ln]	33.42	4.66	7.79	7.84	0.47	6.17	
95th-Percentile Queue Length [ft/ln]	835.61	116.57	194.65	195.88	11.67	154.20	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	300.24	5.92	0.00	0.00	8.77	8.82	20.46	0.00	28.89	0.00	0.00	0.00
Movement LOS	F	A			A	A	C		C			
Critical Movement	Yes	No			No	No	No		No			
d_A, Approach Delay [s/veh]	60.51			8.77			28.15			0.00		
Approach LOS	E			A			C			A		
d_I, Intersection Delay [s/veh]	33.90											
Intersection LOS	C											
Intersection V/C	1.385											

Option 1: Copy of Rubidoux Blvd/WB Ramps

Number	2223											
Intersection	Rubidoux Blvd/WB Ramps											
Control Type	Signalized											
Analysis Method	HCM 6th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	240	1361	0	0	1333	1138	0	0	0	851	150	313
Total Analysis Volume [veh/h]	253	1433	0	0	1403	1078	0	0	0	896	150	297

Intersection Settings

Cycle Length [s]	80											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	54	0	0	54	0	0	0	0	26	0	0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	14	0	0	7	0	0	0	0	17	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.63	0.63	0.63	0.63		0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	1.07	0.44	0.43	0.74		0.28	0.20
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	238	3256	3256	1454		3163	1454
c, Capacity [veh/h]	166	2035	2035	908		870	400
X, volume / capacity	1.53	0.70	0.69	1.19		1.03	0.74
d, Delay for Lane Group [s/veh]	299.20	12.12	11.82	110.12		51.71	29.38
Lane Group LOS	F	B	B	F		F	C

Critical Lane Group	Yes	No	No	No		Yes	No
50th-Percentile Queue Length [veh/ln]	7.70	7.56	7.26	37.20		10.68	5.27
50th-Percentile Queue Length [ft/ln]	192.59	188.99	181.61	930.07		266.94	131.64
95th-Percentile Queue Length [veh/ln]	13.87	12.07	11.68	53.91		16.31	9.03
95th-Percentile Queue Length [ft/ln]	346.67	301.72	292.12	1347.79		407.81	225.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	299.20	12.12	0.00	0.00	11.82	110.12	0.00	0.00	0.00	51.71	0.00	29.38
Movement LOS	F	B			B	F				F		C
Critical Movement	Yes	No			No	No				No		No
d_A, Approach Delay [s/veh]	55.20			54.53			0.00			46.15		
Approach LOS	E			D			A			D		
d_I, Intersection Delay [s/veh]	52.88											
Intersection LOS	D											
Intersection V/C	1.349											

Option 1: Copy of Rubidoux Blvd/SR-60 EB Ramps

Number	24											
Intersection	Rubidoux Blvd/SR-60 EB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	634	277	155	1157	0	820	54	447	22	0	1
Total Analysis Volume [veh/h]	0	667	262	217	1218	0	978	57	423	23	0	1

Intersection Settings

Cycle Length [s]	60											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Split
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	12	0	25	37	0	23	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	14	0	14	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.34	0.34	0.15	0.56	0.31	0.31	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.27	0.12	0.34	0.28	0.26	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	1900	1728	1810	3618	3514	1615	
c, Capacity [veh/h]	643	584	276	2015	1088	500	
X, volume / capacity	0.72	0.79	0.79	0.60	0.90	0.85	
d, Delay for Lane Group [s/veh]	24.32	28.67	29.47	10.22	22.81	23.42	
Lane Group LOS	C	C	C	B	C	C	

Critical Lane Group	No	Yes	Yes	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	5.96	6.62	3.04	4.09	6.14	5.37	
50th-Percentile Queue Length [ft/ln]	148.94	165.38	76.11	102.28	153.53	134.34	
95th-Percentile Queue Length [veh/ln]	9.96	10.83	5.48	7.36	10.21	9.18	
95th-Percentile Queue Length [ft/ln]	249.02	270.84	136.99	184.10	255.13	229.39	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.64	28.67	29.47	10.22	0.00	22.81	0.00	23.42	0.00	0.00	0.00
Movement LOS		C	C	C	B		C		C			
Critical Movement		No	No	Yes	No		No		No			
d_A, Approach Delay [s/veh]	26.49			13.13			22.99			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	20.10											
Intersection LOS	C											
Intersection V/C	0.667											

Option 1: Copy of Market St/SR-60 WB Ramp

Number	26											
Intersection	Market St/SR-60 WB Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	366	504	0	0	1786	272	0	0	0	182	0	943
Total Analysis Volume [veh/h]	385	531	0	0	2269	258	0	0	0	192	0	1268

Intersection Settings

Cycle Length [s]	110											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Unsigna
Signal Group	1	6	0	0	2	0	0	0	0	7	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	34	99	0	0	65	0	0	0	0	11	0	0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	10	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall	No	No			No					No		
Maximum Recall	No	No			No					No		
Pedestrian Recall	No	No			No					No		
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.23	0.86	0.60		0.06
(v / s)_i Volume / Saturation Flow Rate	0.21	0.15	0.63		0.05
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900		1900
Arrival type	3		3	3	3
s, saturation flow rate [veh/h]	1810	3618	3618		3514
c, Capacity [veh/h]	419	3124	2156		224
X, volume / capacity	0.92	0.17	1.05		0.86
d, Delay for Lane Group [s/veh]	60.08	1.32	57.12		60.23
Lane Group LOS	E	A	F		E
Critical Headway					

Critical Lane Group	Yes	No	Yes		Yes
50th-Percentile Queue Length [veh/ln]	11.94	0.24	33.84		2.88
50th-Percentile Queue Length [ft/ln]	298.42	5.96	845.89		71.90
95th-Percentile Queue Length [veh/ln]	17.60	0.43	45.29		5.18
95th-Percentile Queue Length [ft/ln]	440.07	10.73	1132.31		129.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.08	1.32	0.00	0.00	57.12	0.00	0.00	0.00	0.00	60.23	0.00	0.00
Movement LOS	E	A			F					E		
Critical Movement	No	No			No	No				Yes		No
d_A, Approach Delay [s/veh]	26.02			57.12			0.00			60.23		
Approach LOS	C			E			A			E		
d_I, Intersection Delay [s/veh]	48.86											
Intersection LOS	D											
Intersection V/C	0.895											

Option 1: Copy of Market St/SR-60 EB Ramp

Number	27											
Intersection	Market St/SR-60 EB Ramp											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Right	Right2	Left	Left	Right
Base Volume Input [veh/h]	0	655	81	896	789	0	212	0	1010	0	0	0
Total Analysis Volume [veh/h]	0	689	77	1333	831	0	223	0	957	0	0	0

Intersection Settings

Cycle Length [s]	110											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Unsigna	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	5	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	26	0	44	70	0	40	0	0	0	0	0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	10	0	10	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No		No					
Maximum Recall		No		No	No		No					
Pedestrian Recall		No		No	No		No					
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.20	0.36	0.60	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.38	0.23	0.12	0.33	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	
Arrival type	3	3		3		3
s, saturation flow rate [veh/h]	3618	3514	3618	1810	2859	
c, Capacity [veh/h]	724	1278	2171	592	936	
X, volume / capacity	0.95	1.04	0.38	0.38	1.02	
d, Delay for Lane Group [s/veh]	67.12	60.11	11.94	28.79	56.93	
Lane Group LOS	E	F	B	C	F	

Critical Lane Group	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	11.26	20.40	4.82	4.50	14.72	
50th-Percentile Queue Length [ft/ln]	281.51	509.99	120.61	112.55	367.99	
95th-Percentile Queue Length [veh/ln]	16.76	28.62	8.43	7.98	21.32	
95th-Percentile Queue Length [ft/ln]	419.09	715.58	210.67	199.55	533.00	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	67.12	0.00	60.11	11.94	0.00	28.79	0.00	56.93	0.00	0.00	0.00
Movement LOS		E		F	B		C		F			
Critical Movement		Yes	No	No	No		No		No			
d_A, Approach Delay [s/veh]	67.12			41.61			51.61			0.00		
Approach LOS	E			D			D			A		
d_I, Intersection Delay [s/veh]	48.89											
Intersection LOS	D											
Intersection V/C	0.905											

Option 1: Copy of Sierra Ave/20th St

Number	28					
Intersection	Sierra Ave/20th St					
Control Type	Signalized					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Base Volume Input [veh/h]	426	0	58	283	0	41
Total Analysis Volume [veh/h]	448	209	765	298	219	547

Intersection Settings

Cycle Length [s]	85					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Semi-actuated					
Lost time [s]	0.00					
Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	6	0	5	2	7	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	36	0	23	59	26	0
Walk [s]	5	0	0	5	5	0
Pedestrian Clearance [s]	14	0	0	10	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.38	0.22	0.65	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.37	0.22	0.16	0.23	0.23
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900
Arrival type	3	3		3	
s, saturation flow rate [veh/h]	1799	3514	1900	1718	1615
c, Capacity [veh/h]	687	786	1240	435	409
X, volume / capacity	0.96	0.97	0.24	0.90	0.92
d, Delay for Lane Group [s/veh]	50.70	42.74	6.54	41.89	44.79
Lane Group LOS	D	D	A	D	D

Critical Lane Group	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	16.43	8.42	1.87	8.60	8.56
50th-Percentile Queue Length [ft/ln]	410.74	210.53	46.82	215.11	214.10
95th-Percentile Queue Length [veh/ln]	23.08	13.18	3.37	13.42	13.36
95th-Percentile Queue Length [ft/ln]	576.92	329.51	84.28	335.38	334.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.70	50.70	42.74	6.54	41.89	43.90
Movement LOS	D	D	D	A	D	D
Critical Movement	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	50.70		32.59		43.31	
Approach LOS	D		C		D	
d_I, Intersection Delay [s/veh]	40.68					
Intersection LOS	D					
Intersection V/C	0.815					

APPENDIX D – ADDITIONAL FIGURES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	Riv	60	9.33/9.87		

REGISTERED CIVIL ENGINEER DATE

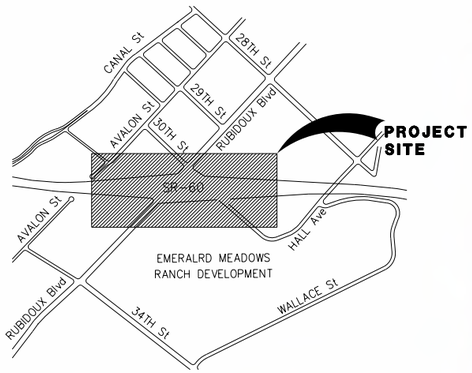
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRANDON REYES
No. 79226
Exp. 03-31-18
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

MICHAEL BAKER INTL
3536 CONCOURS ST
SUITE 100
ONTARIO, CA 91764

COUNTY OF RIVERSIDE
4080 LEMON STREET
RIVERSIDE, CA
92501



VICINITY MAP
NOT TO SCALE

SR-60/RUBIDOUX BOULEVARD
INTERCHANGE PROJECT

ALTERNATIVE 2
TIGHT DIAMOND ALTERNATIVE

SCALE = 1:300

K-4429

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

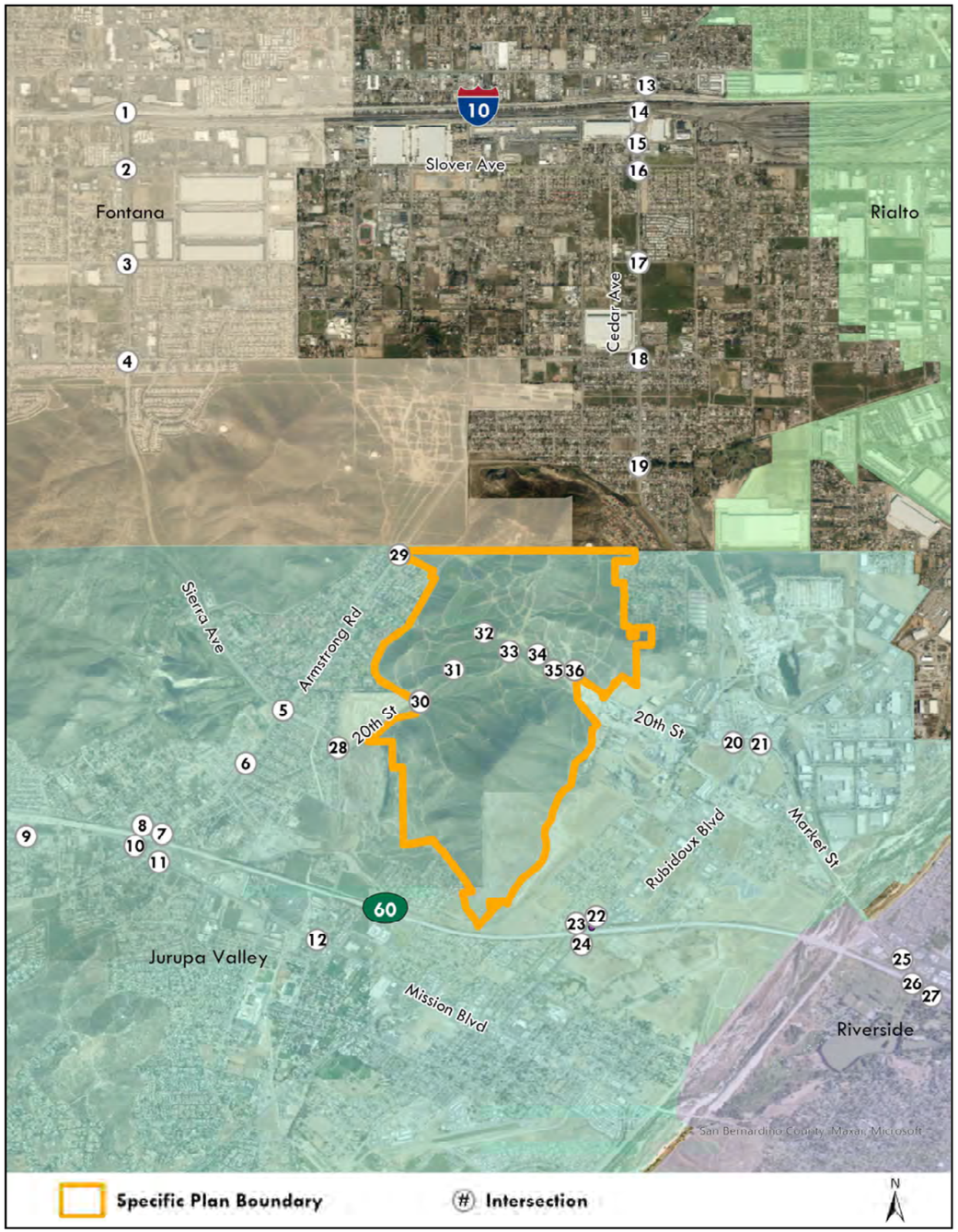
CONSULTANT FUNCTIONAL SUPERVISOR

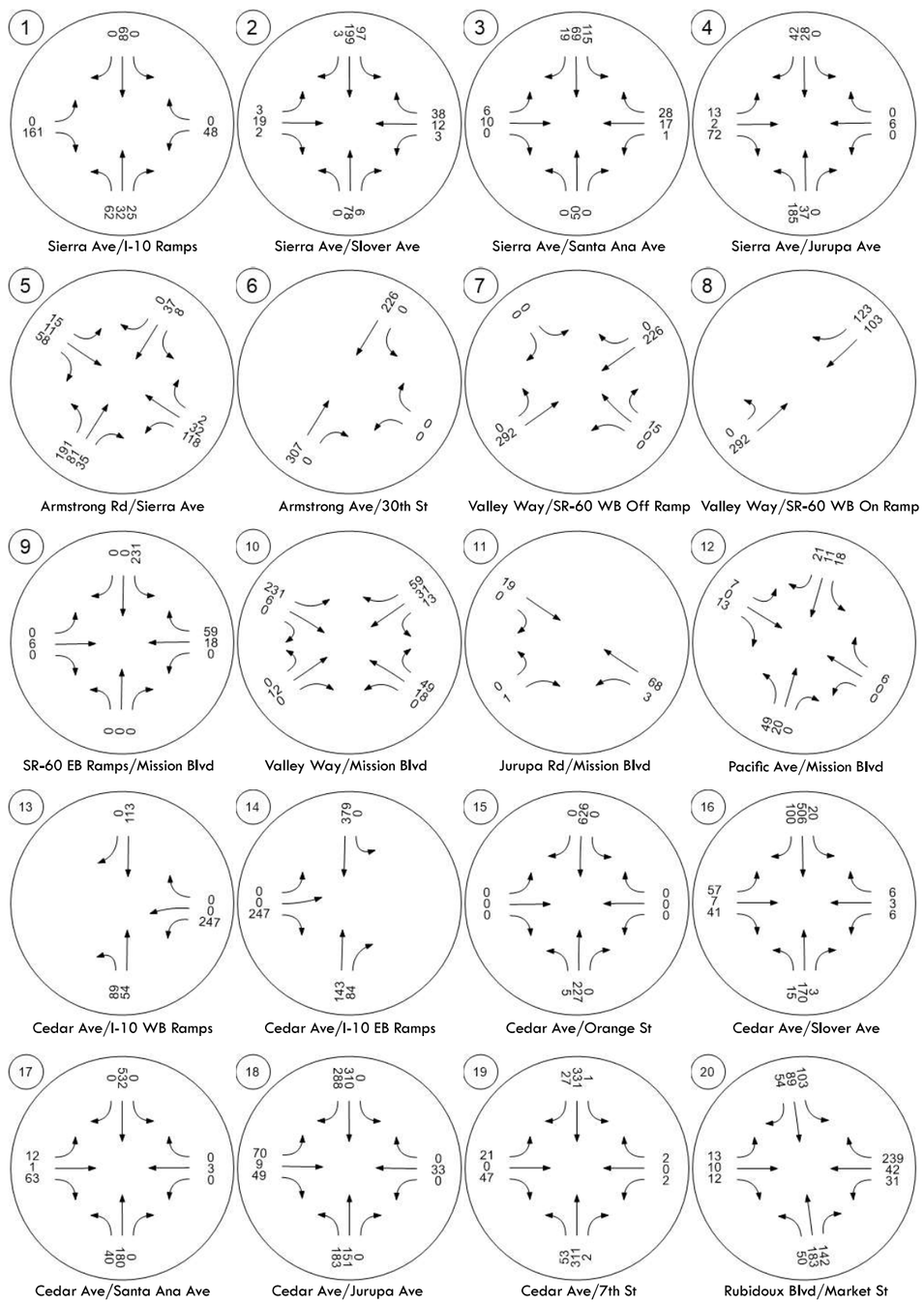
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

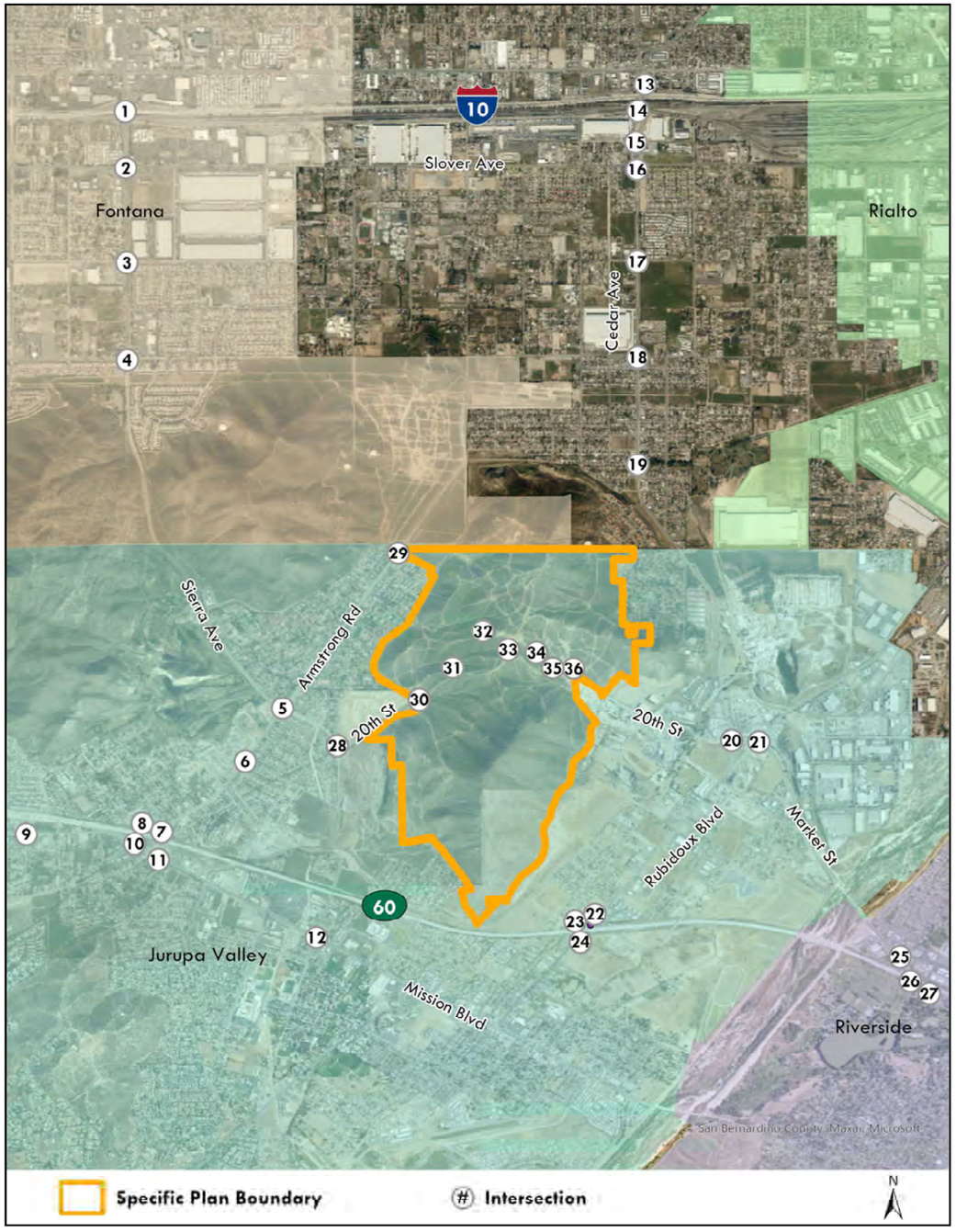
BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 0815000228

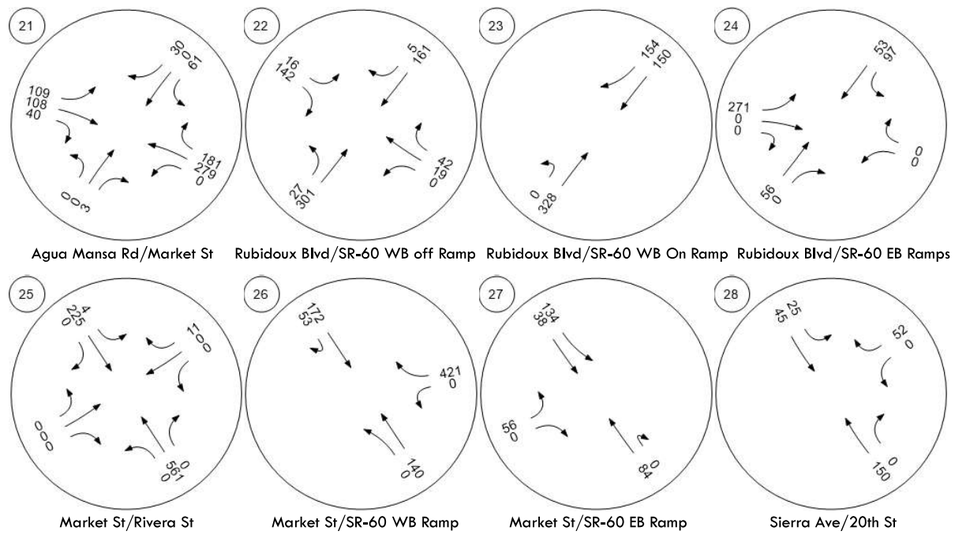
Cumulative AM Assignment



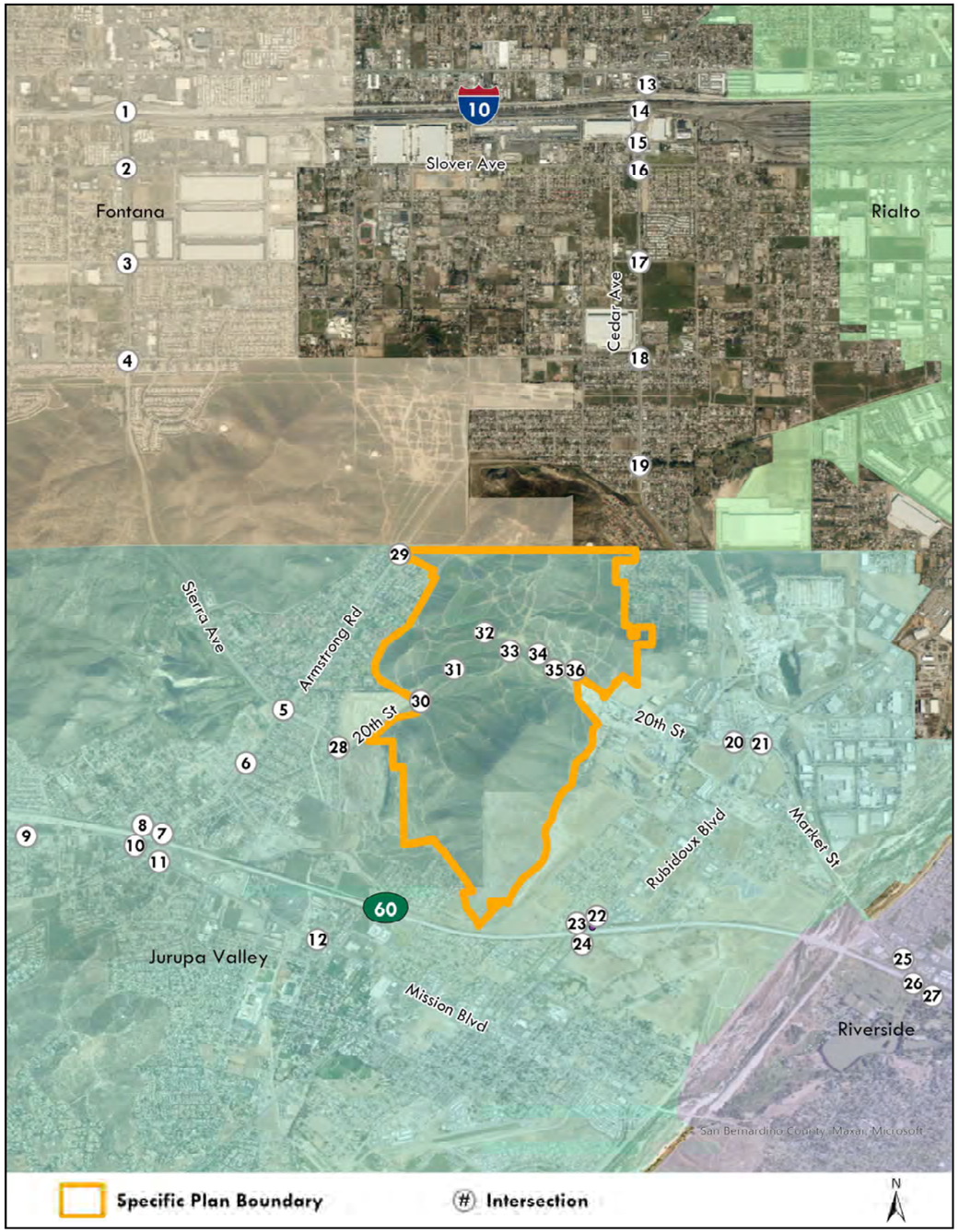


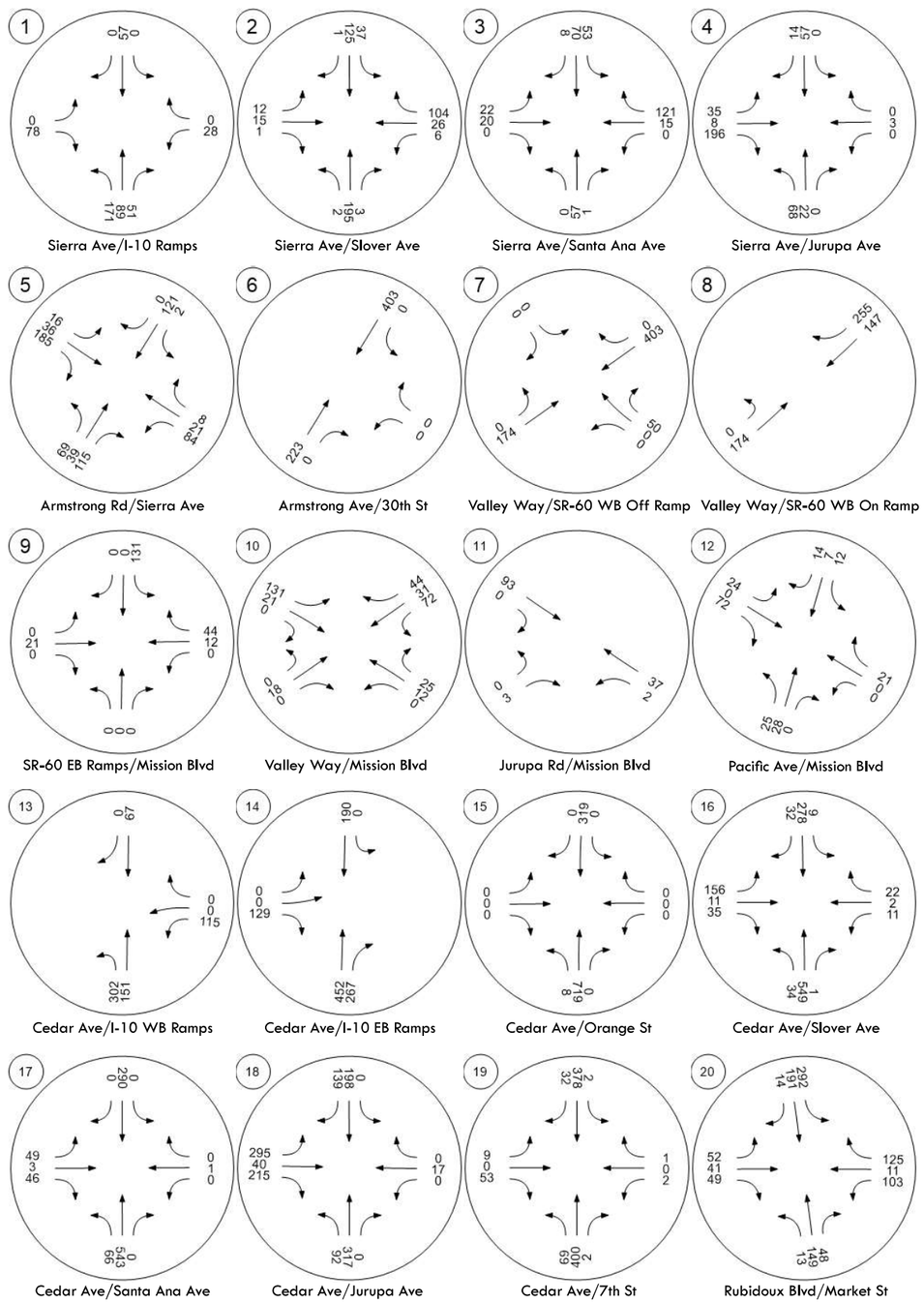
Cumulative AM Assignment (B)



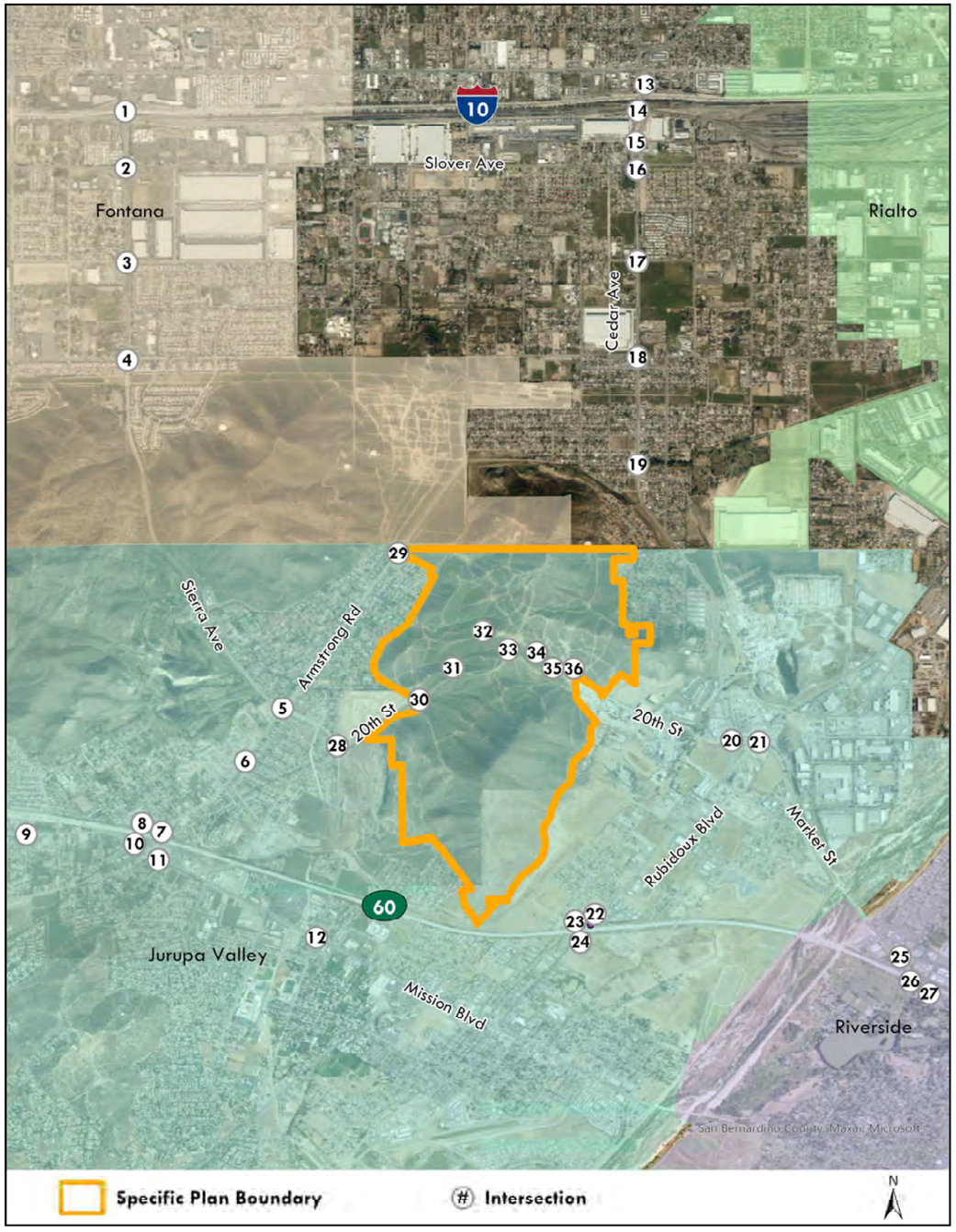


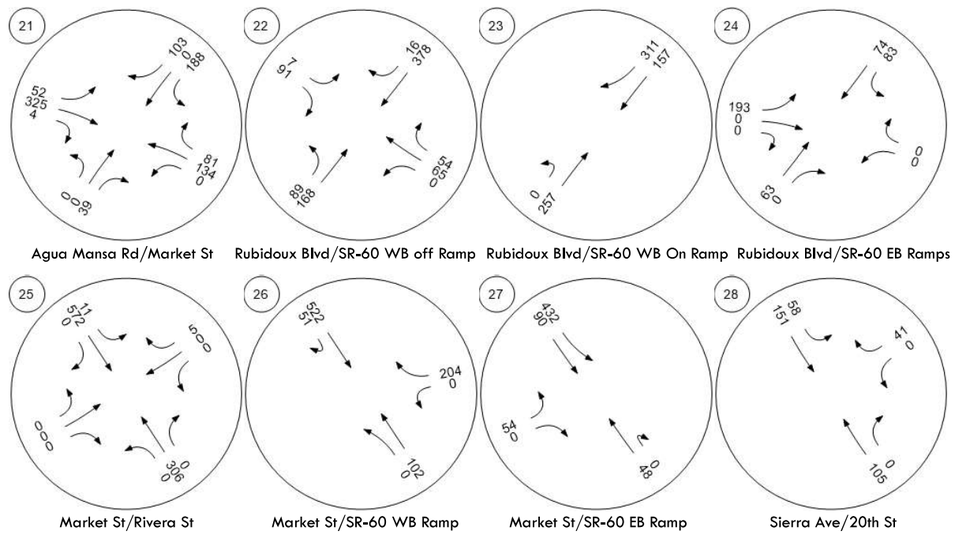
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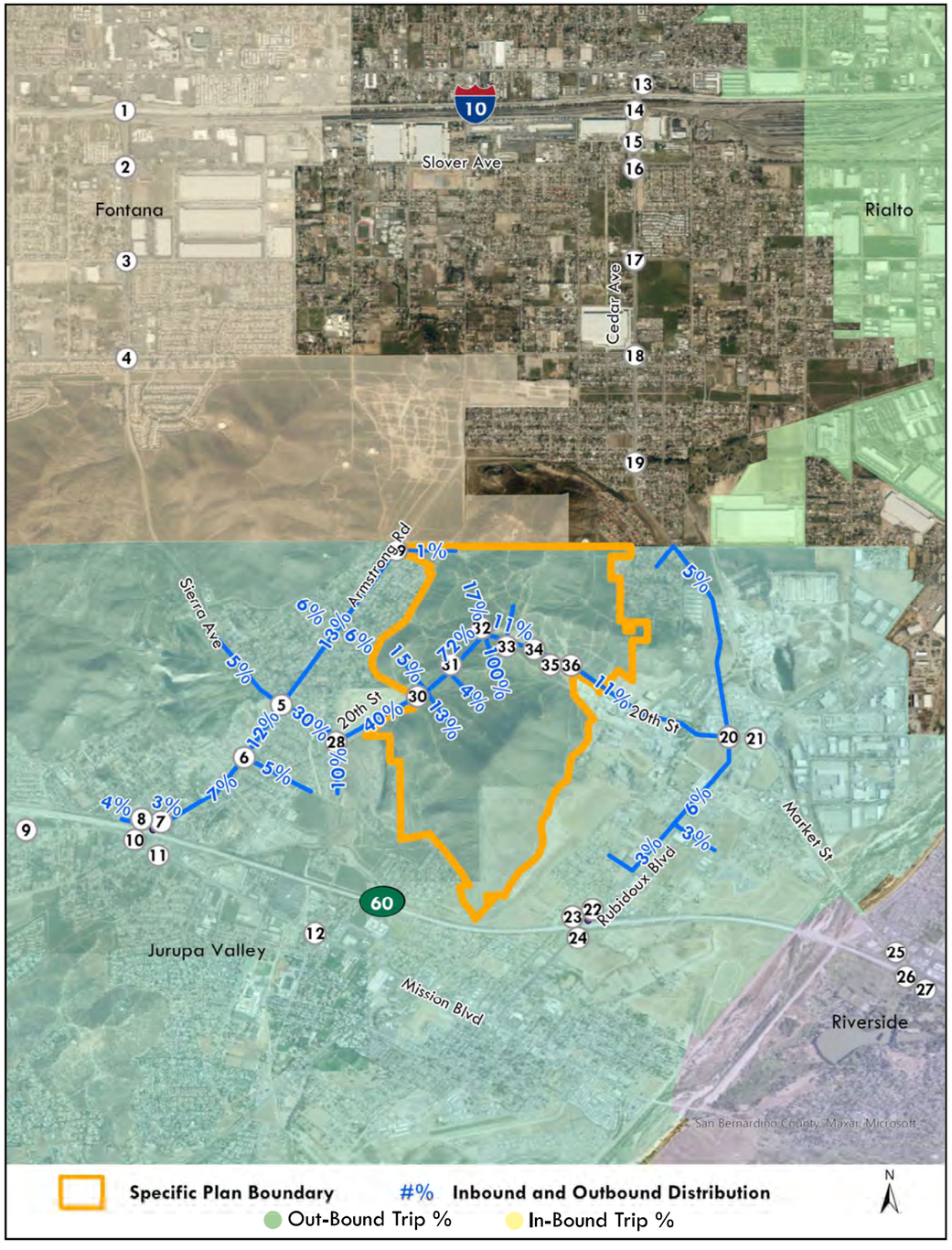


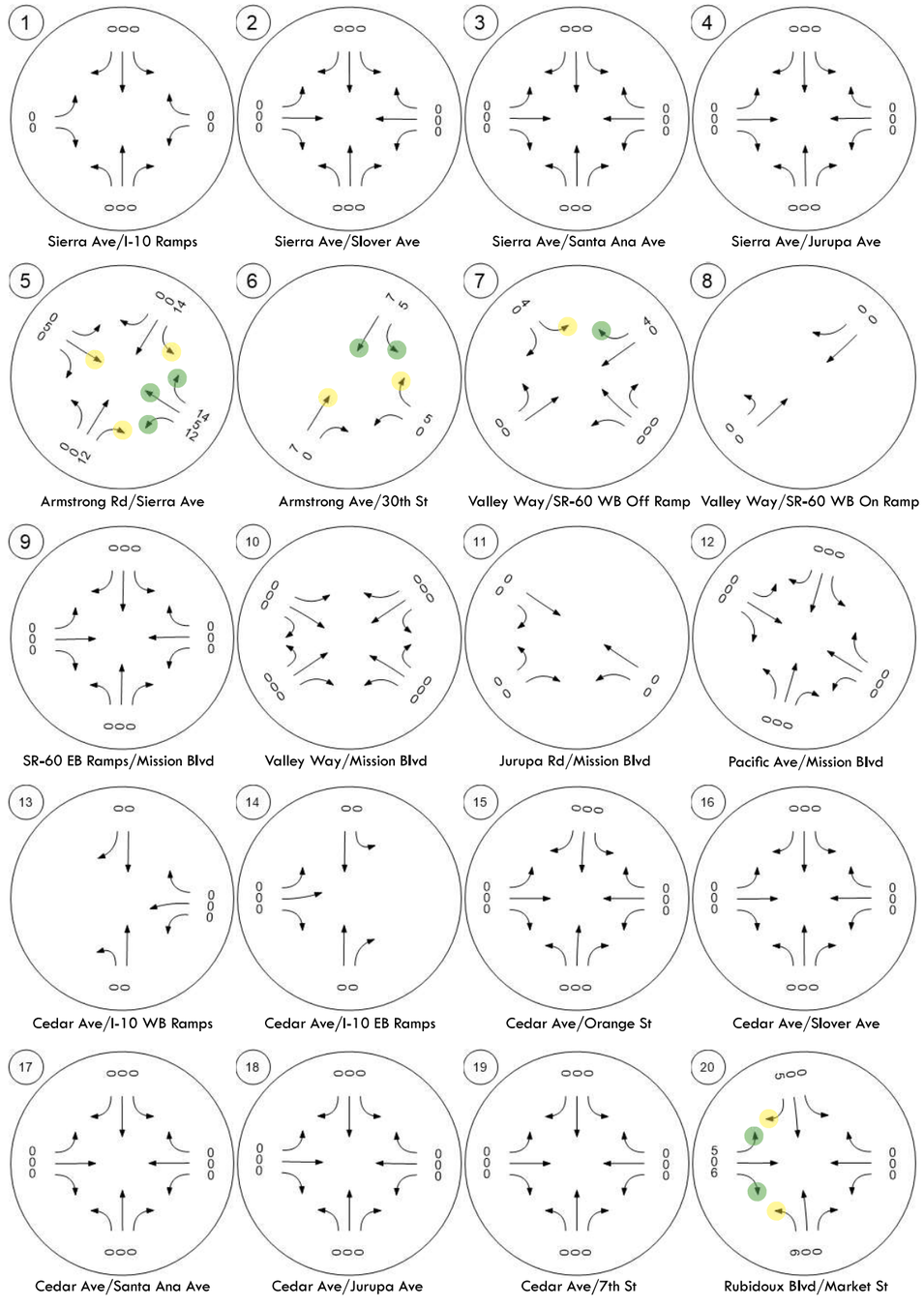
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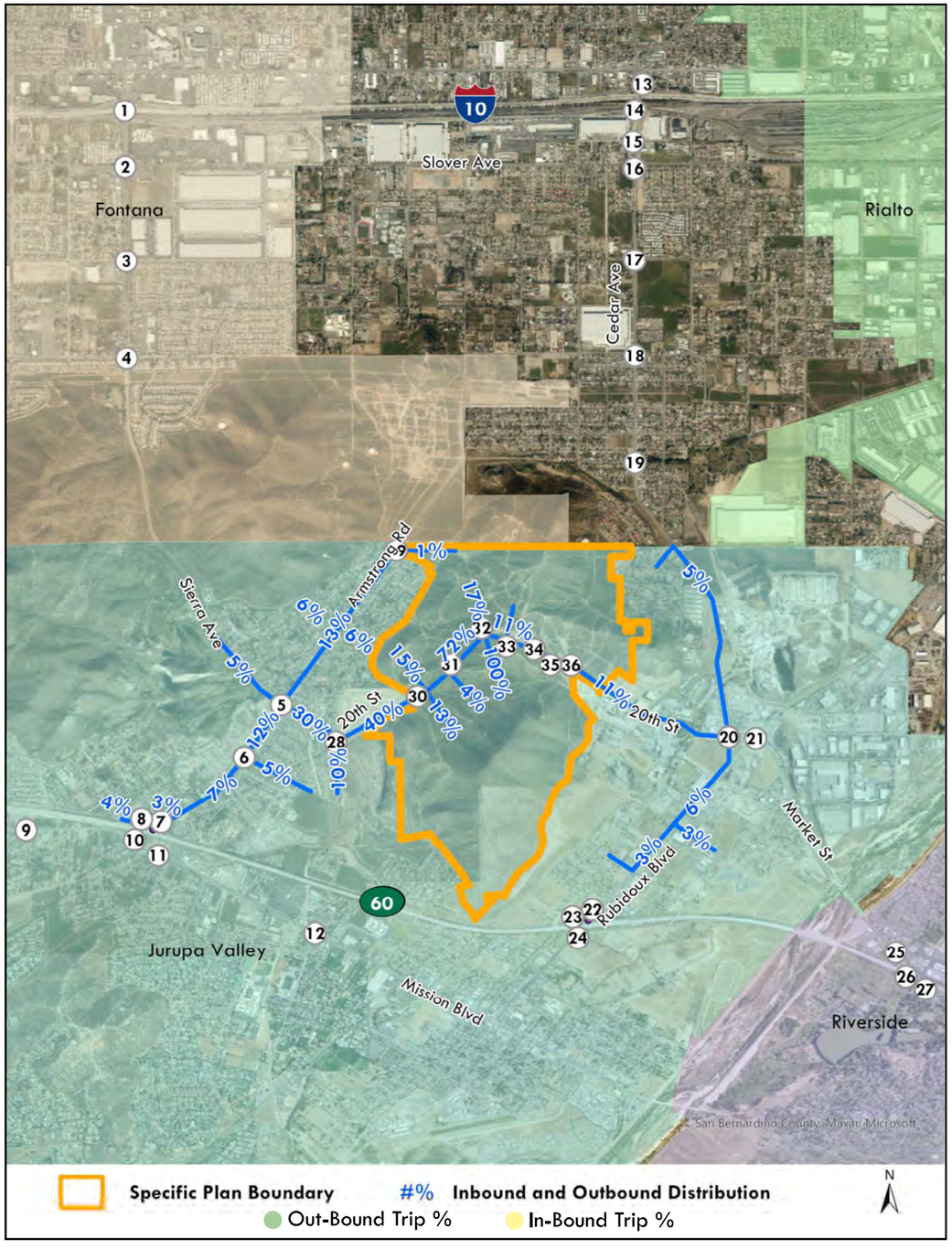


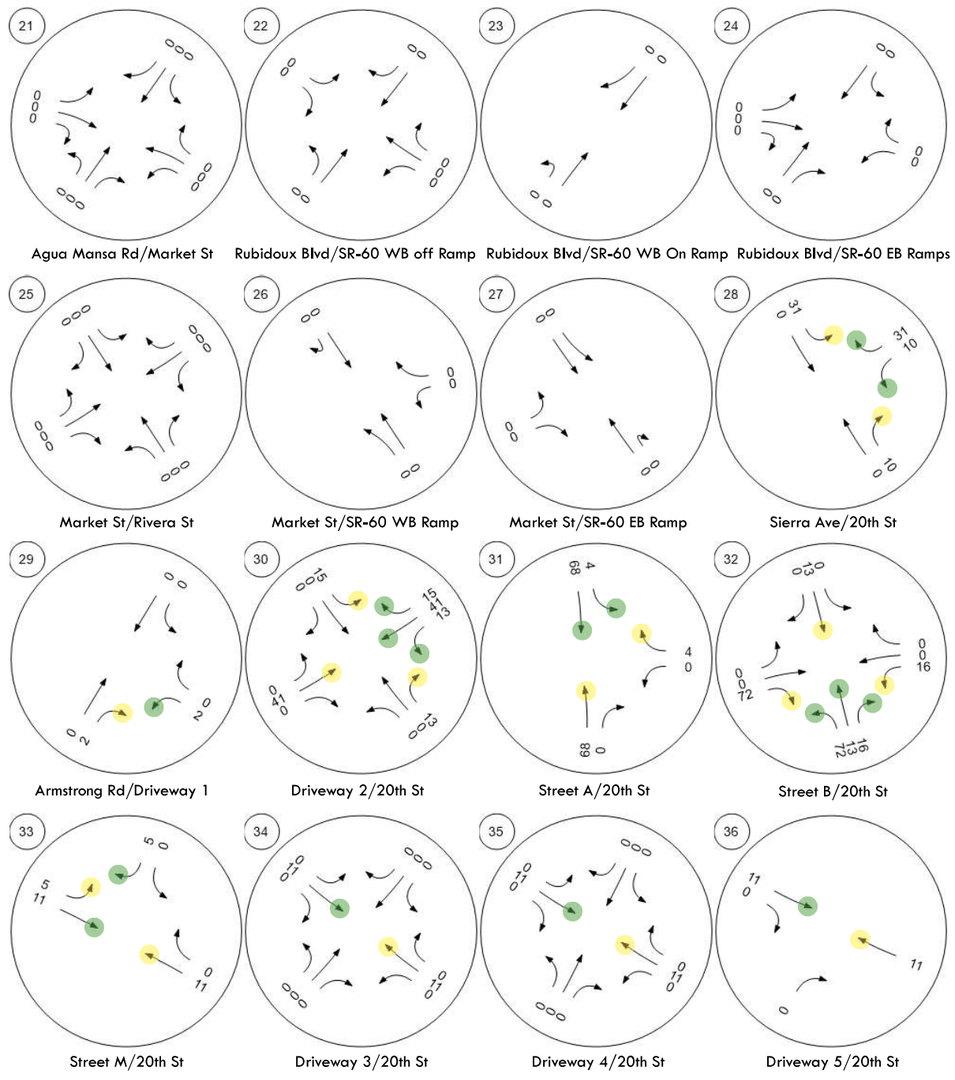
School/Park Distribution (A)



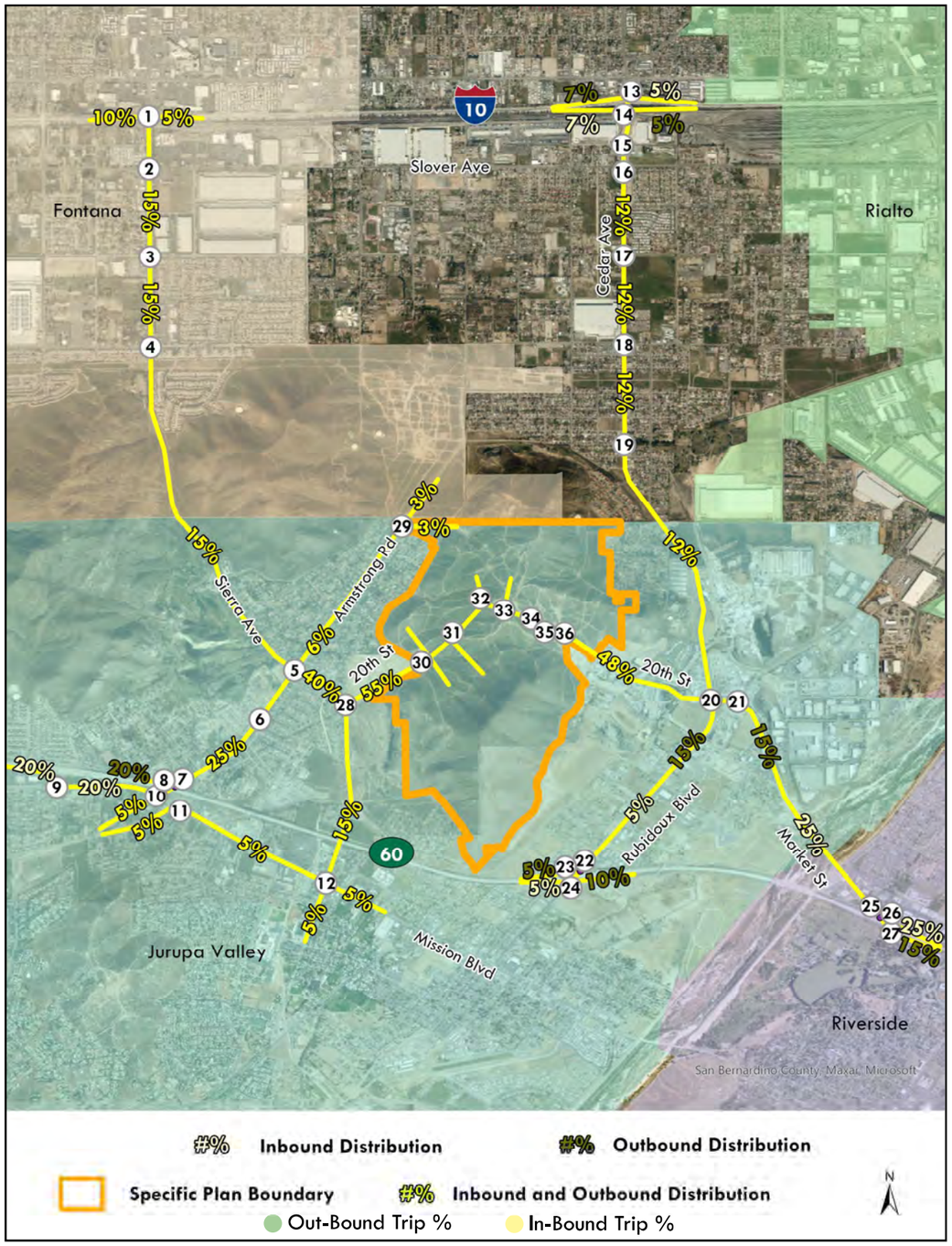


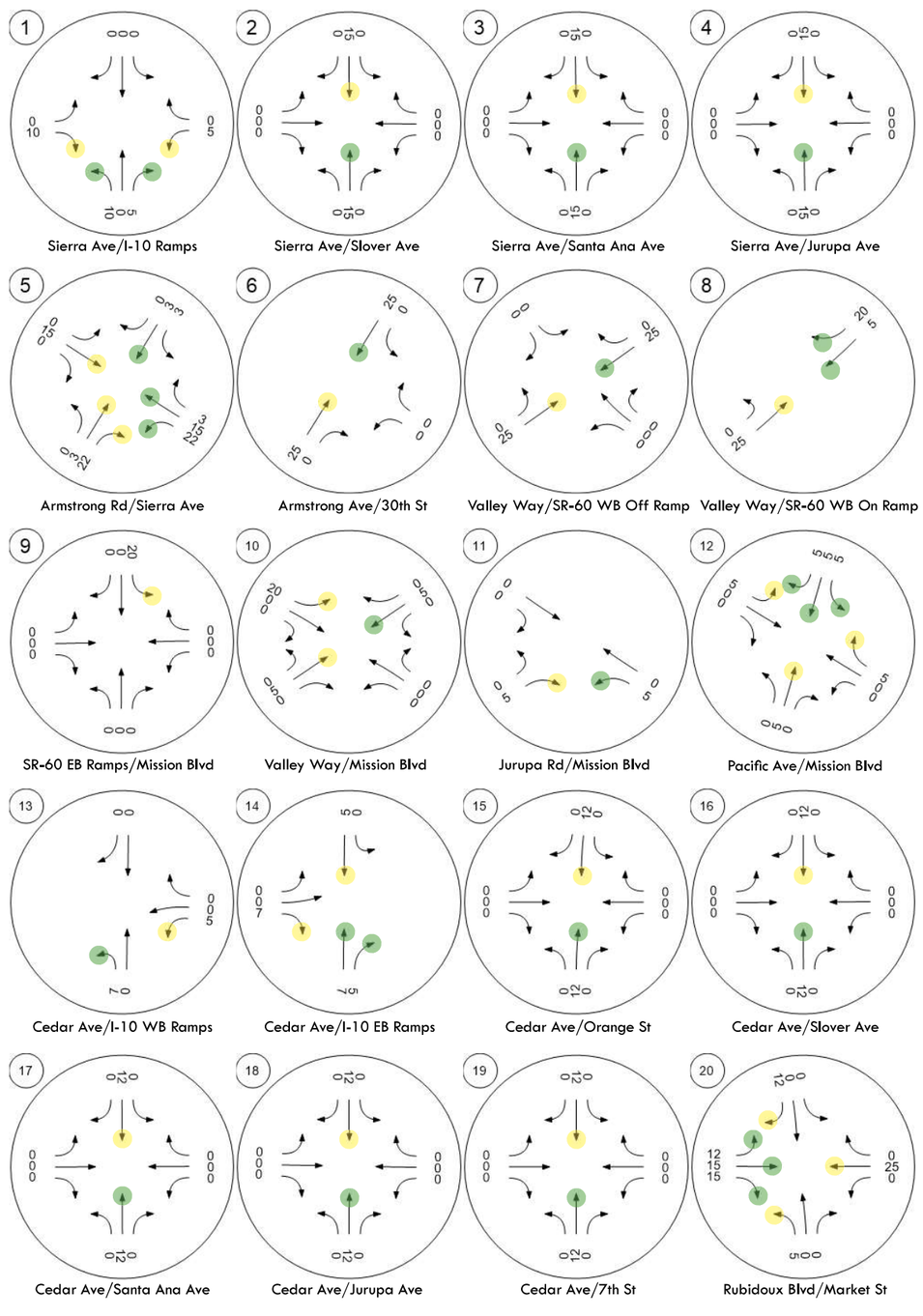
School/Park Distribution (B)



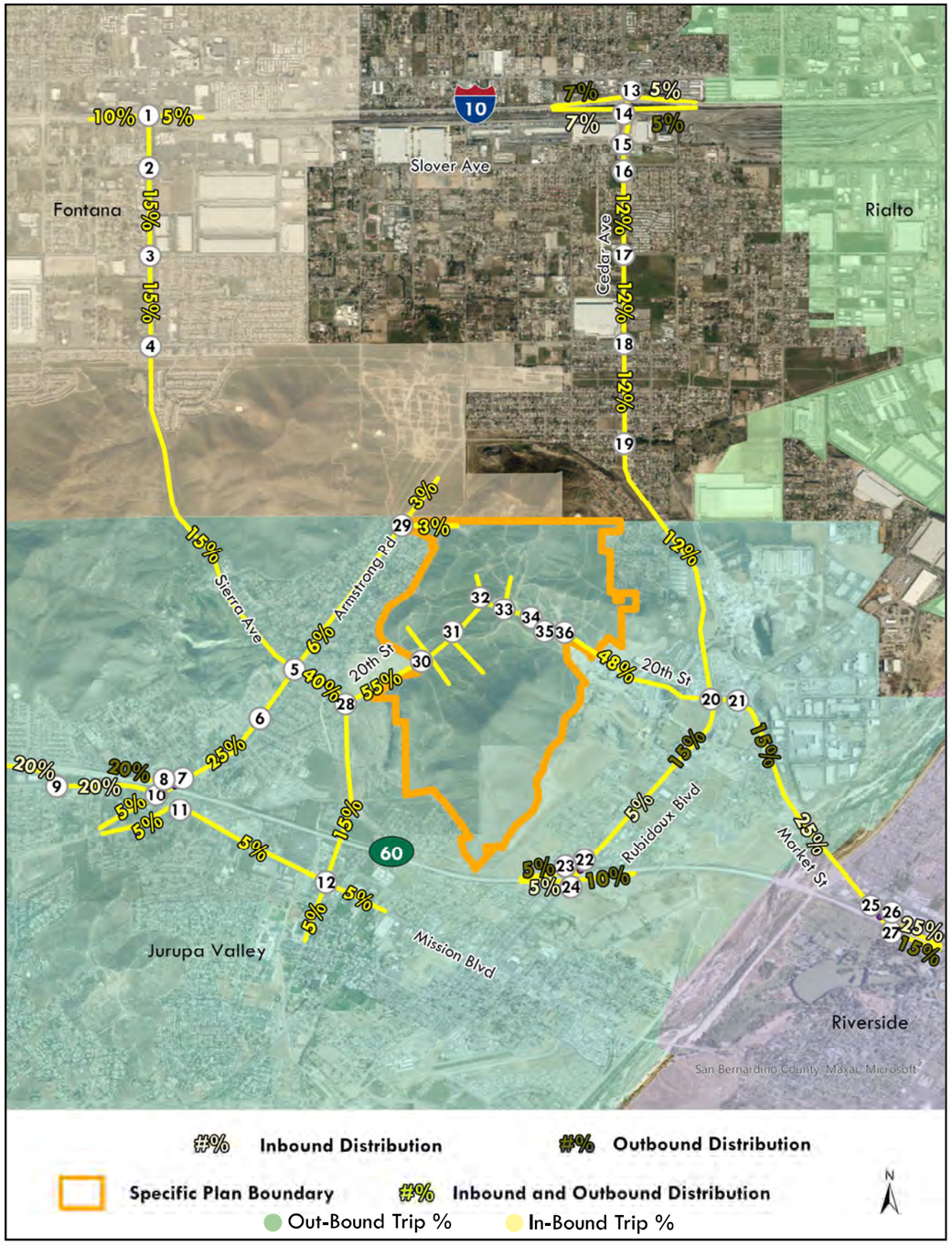


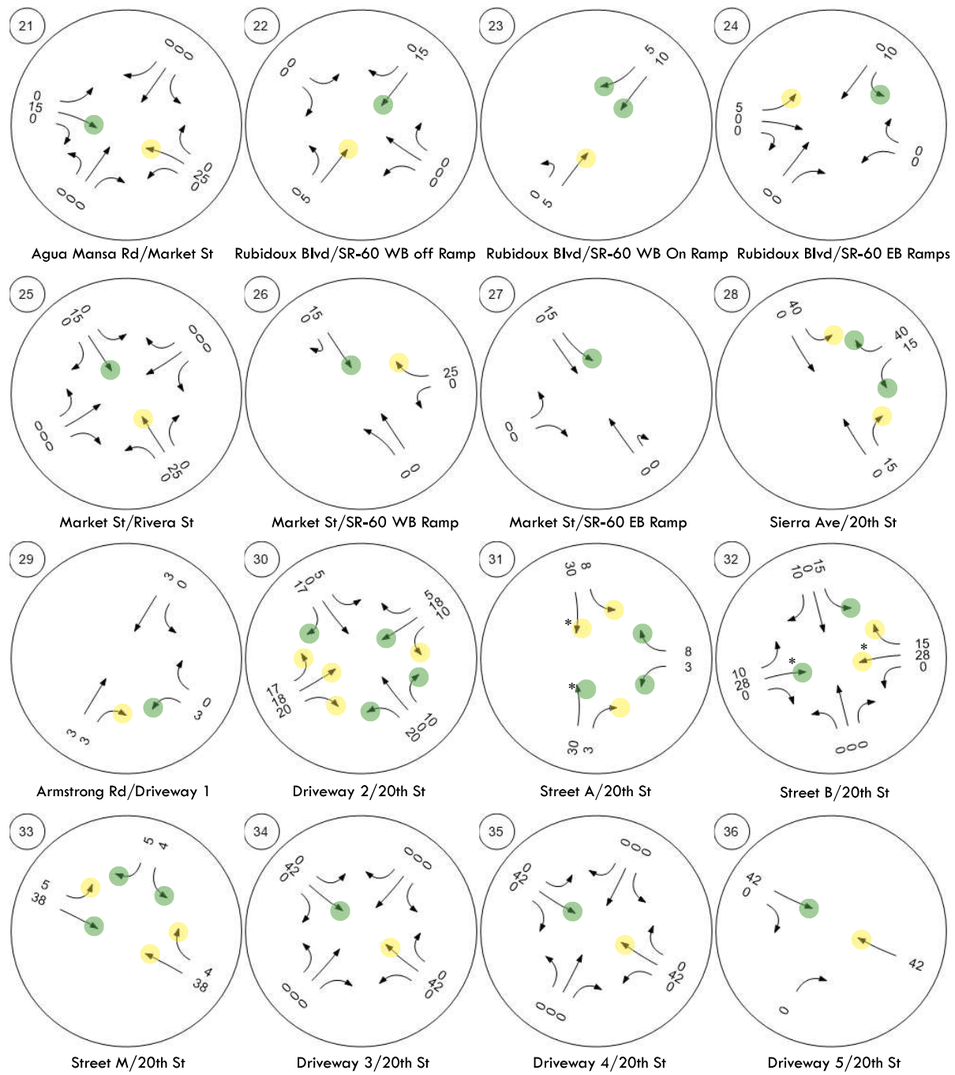
Residential Distribution (A)





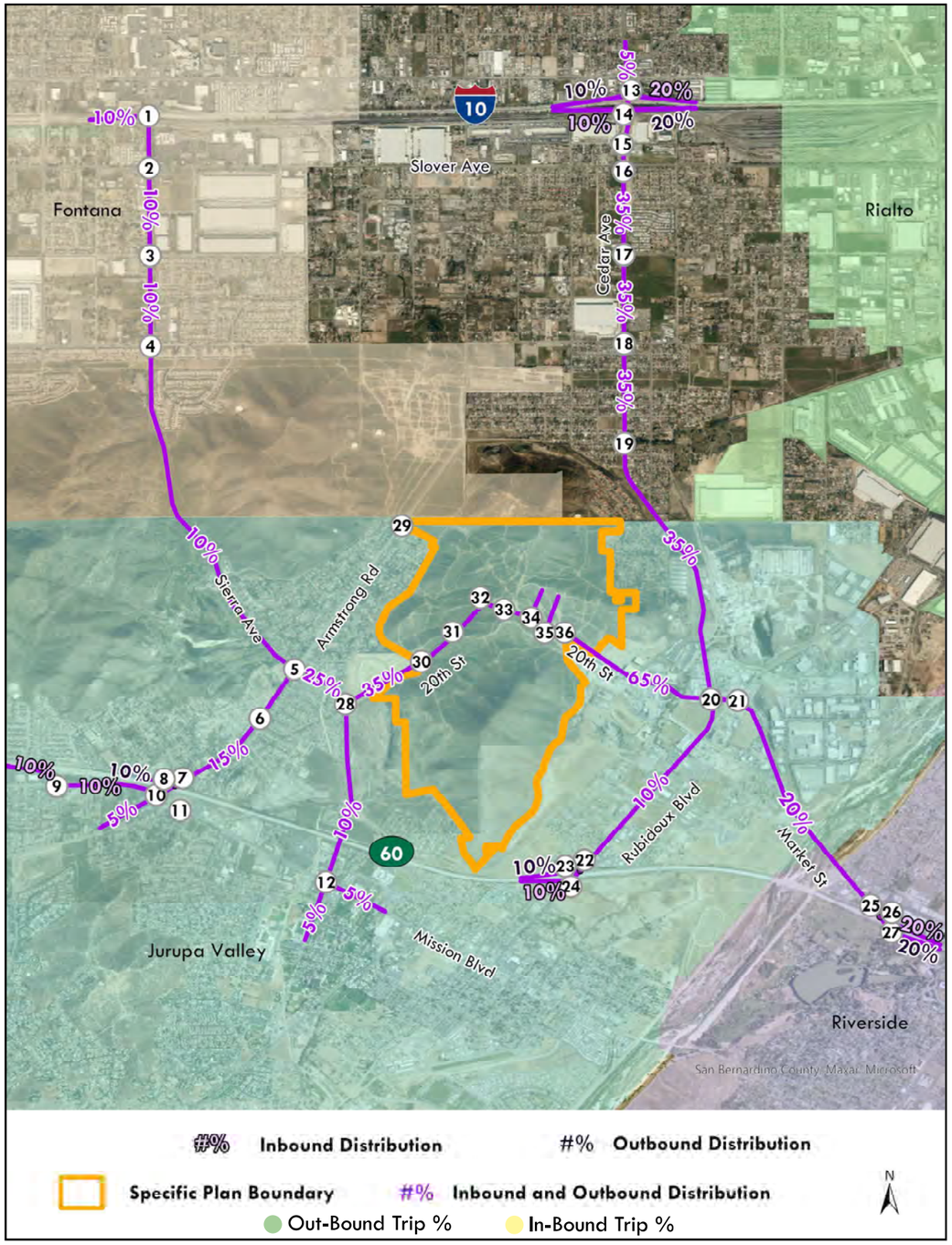
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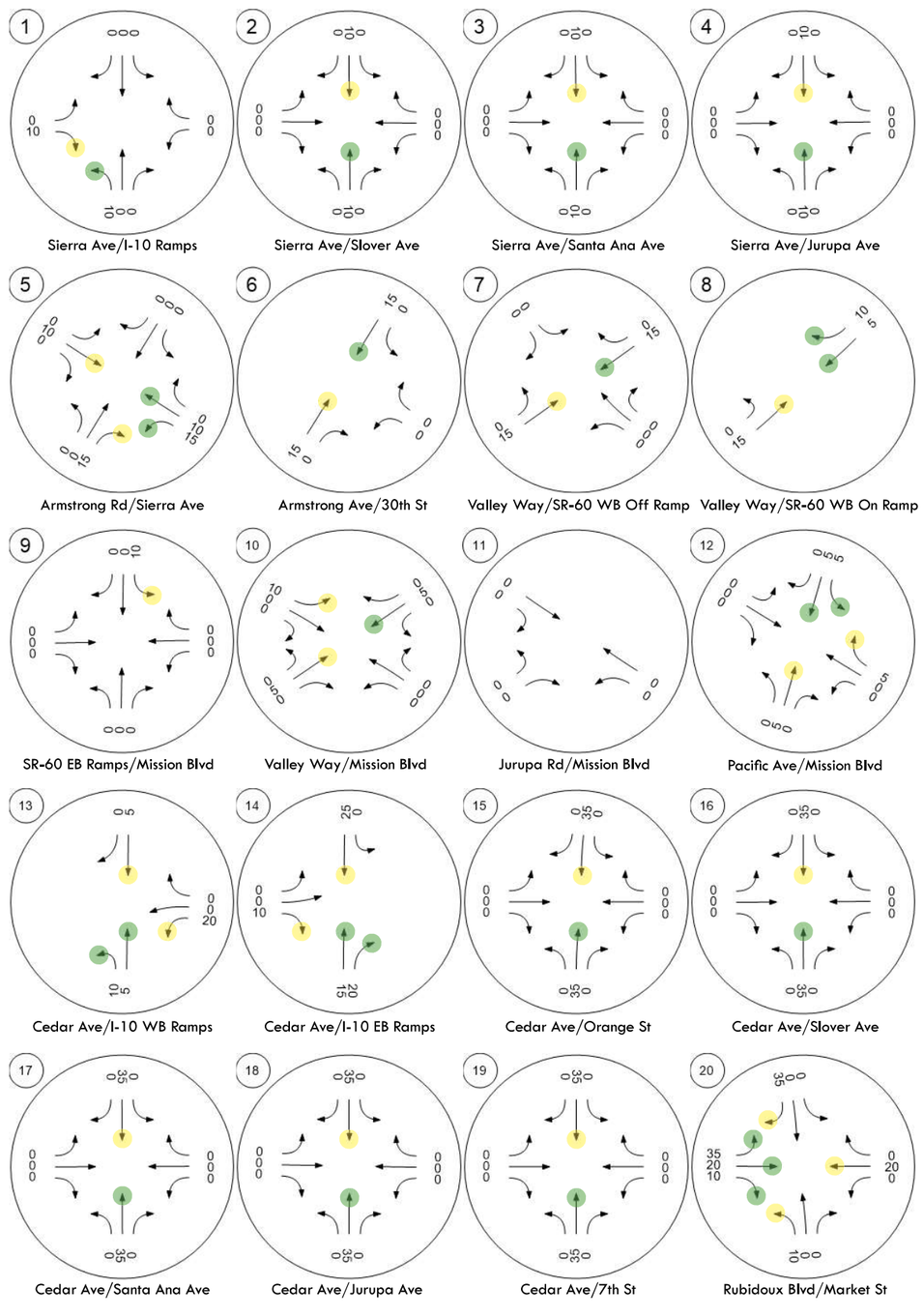




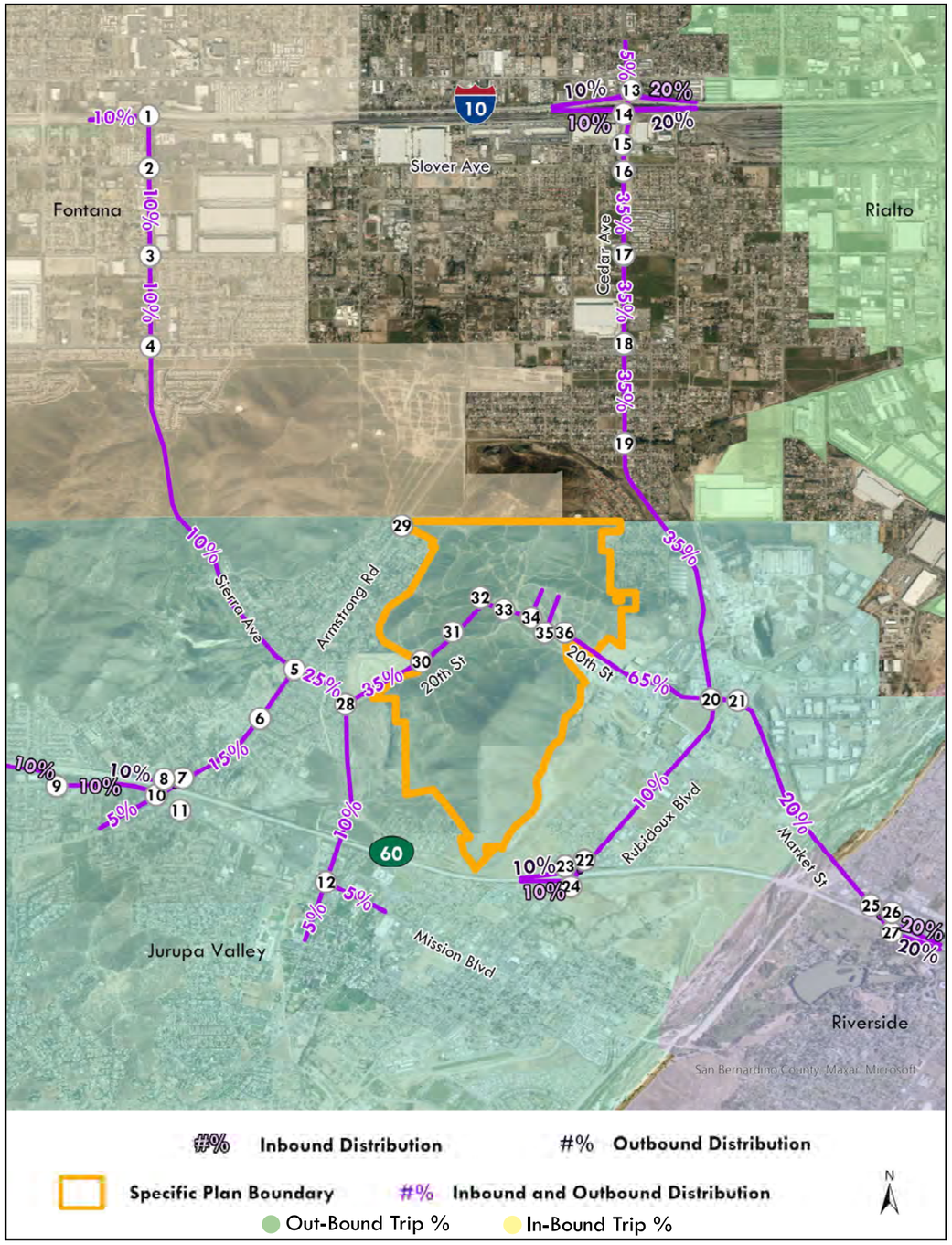
*Includes both in-bound and out-bound distribution

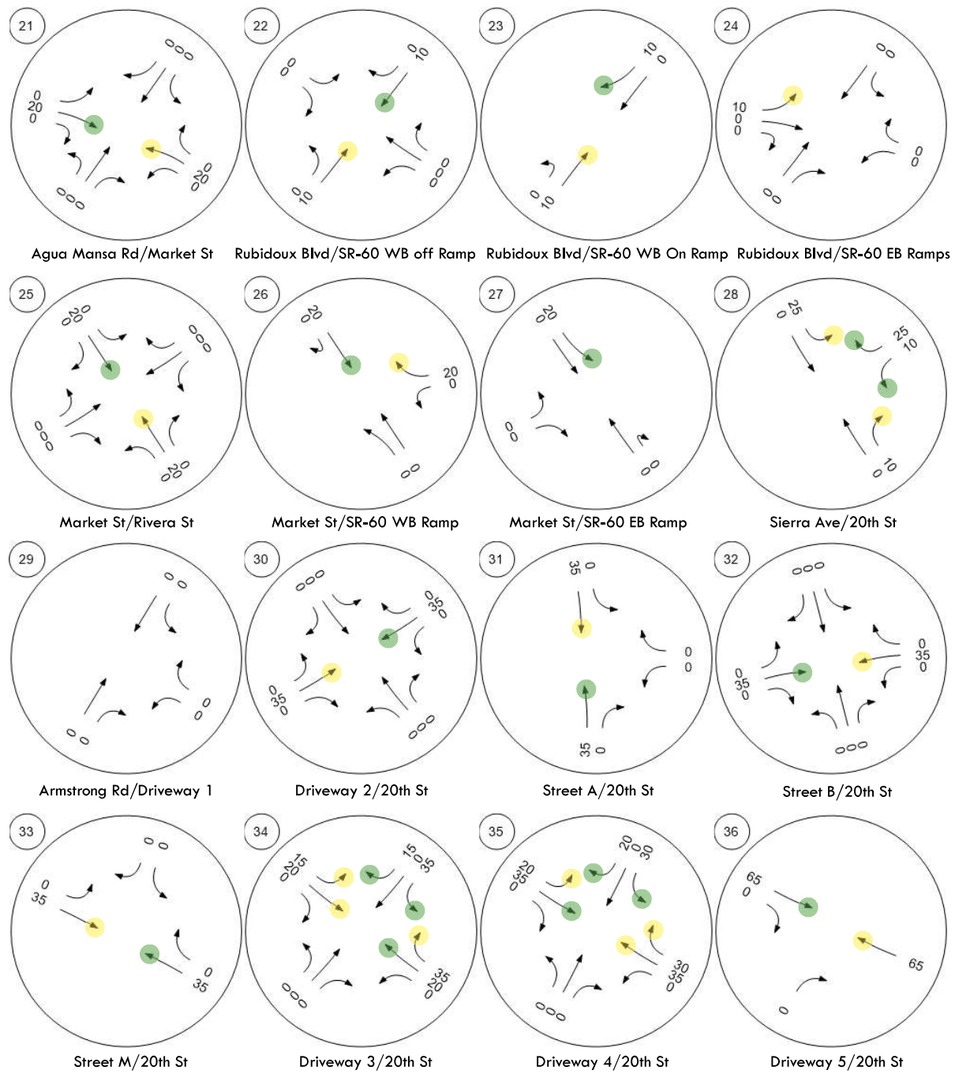
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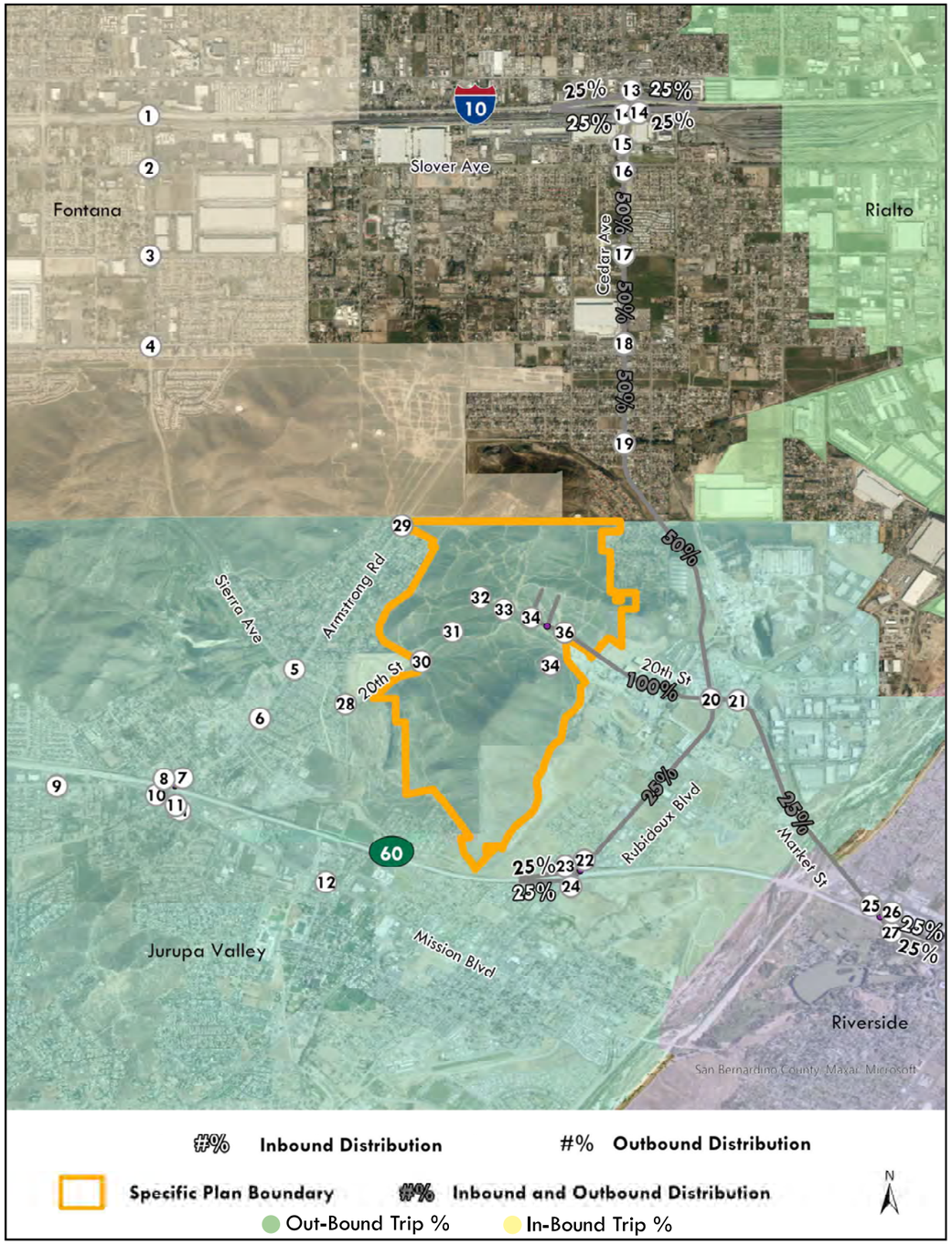


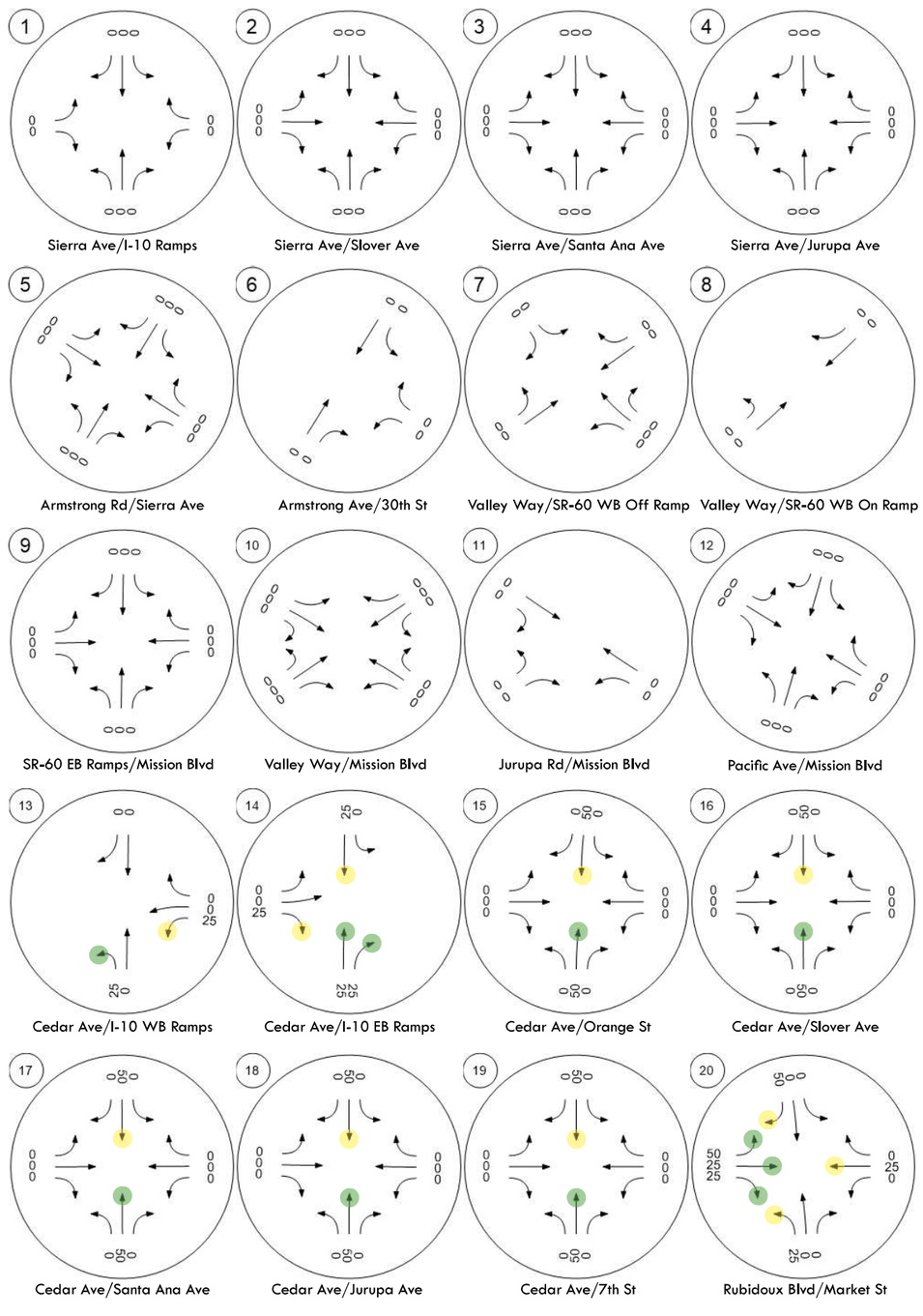
Industrial/Business Park Auto Distribution (B)



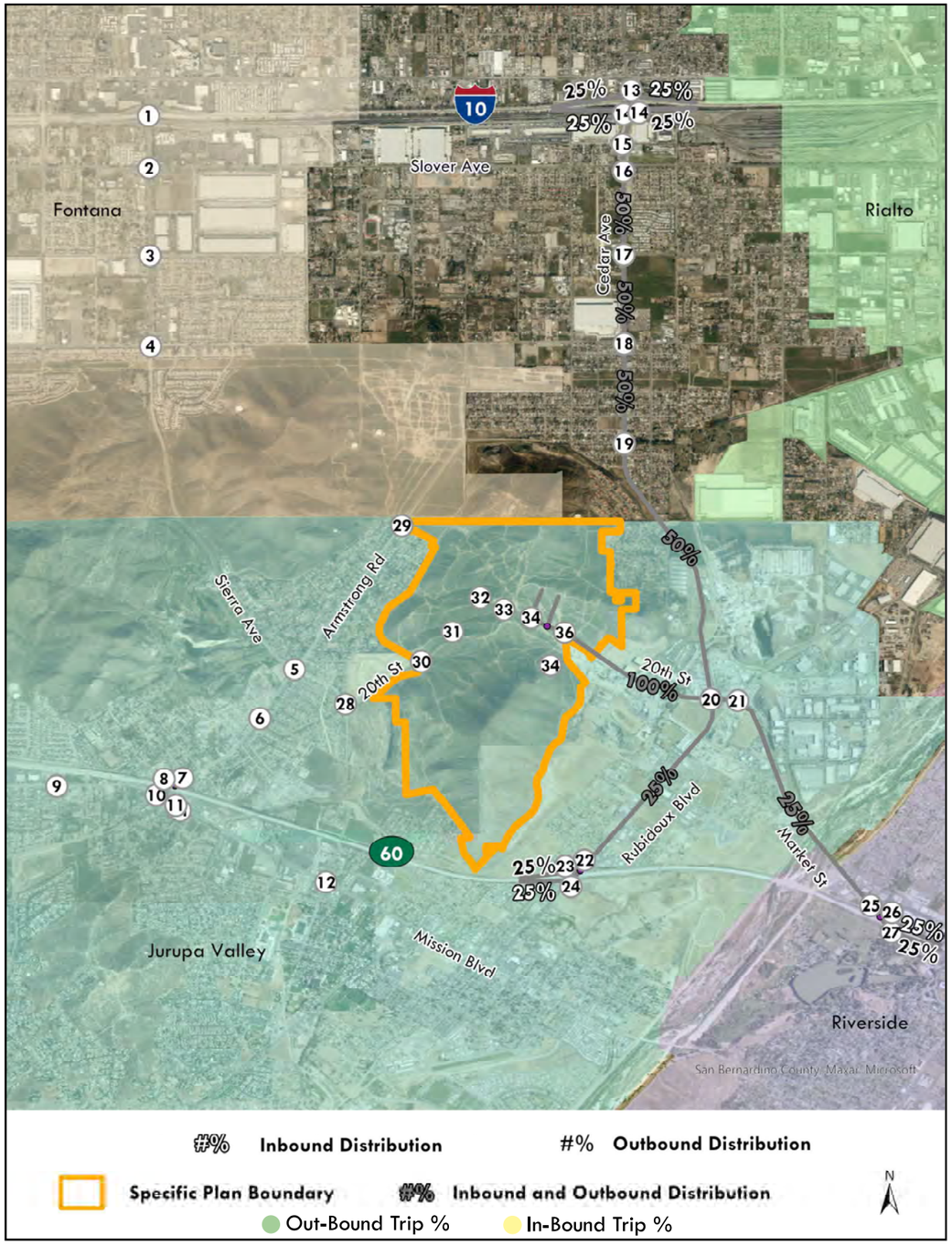


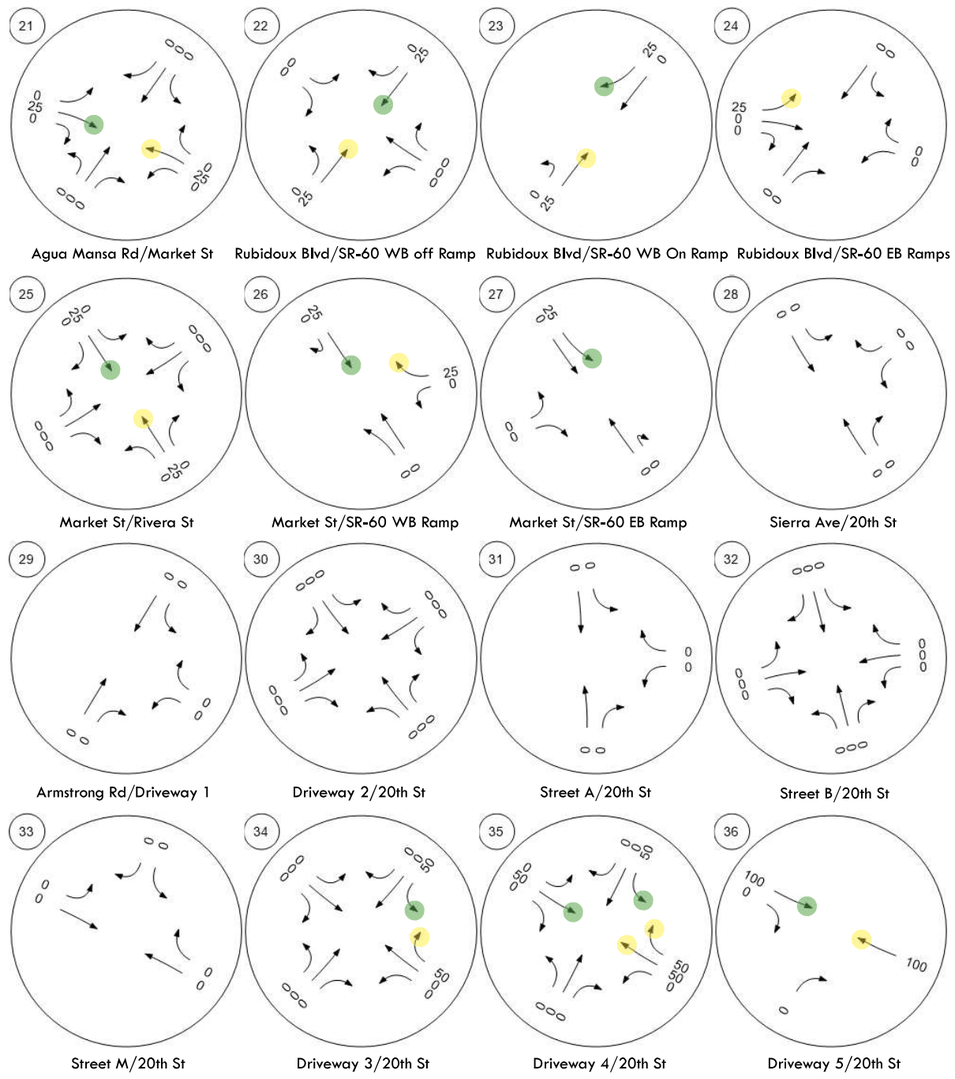
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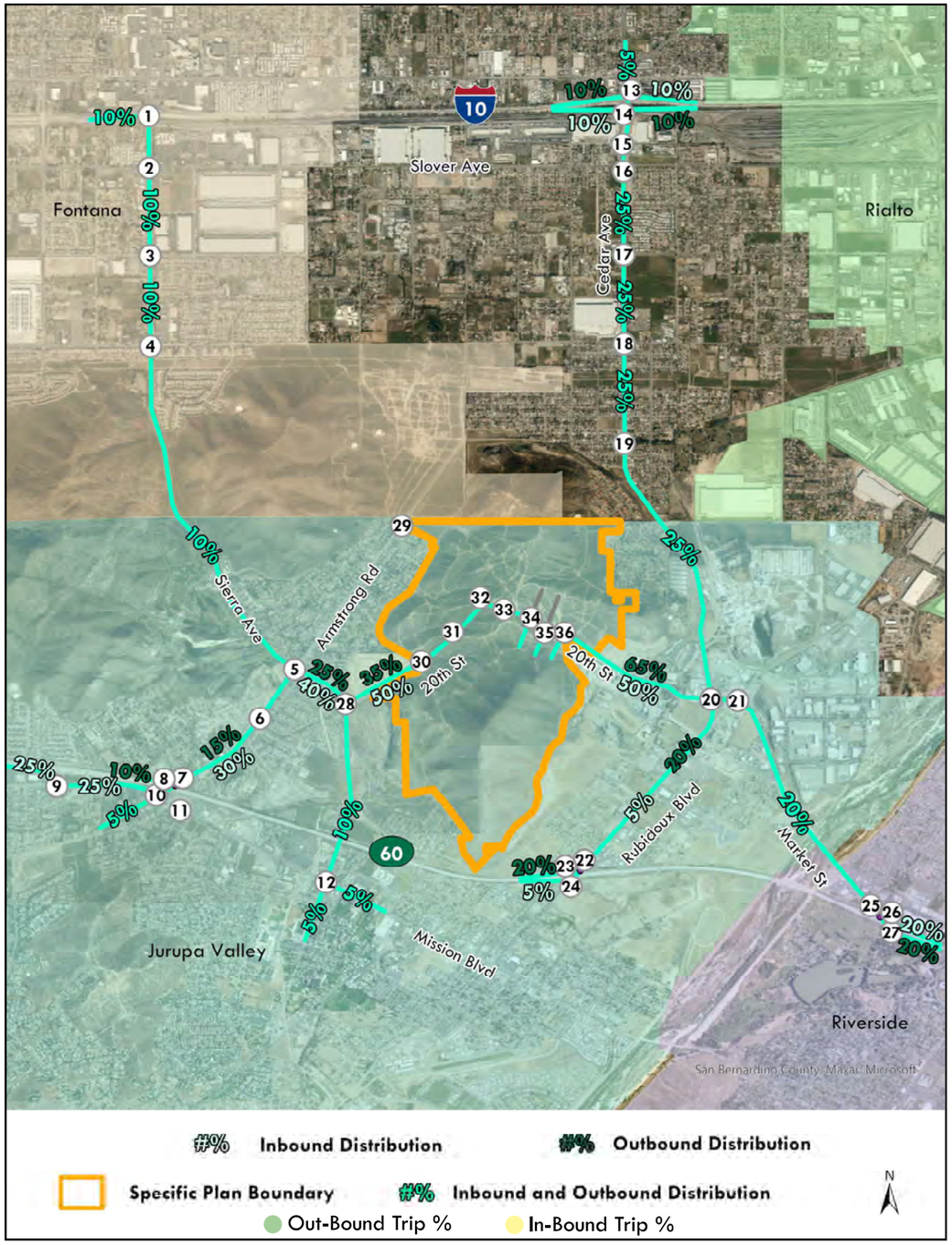


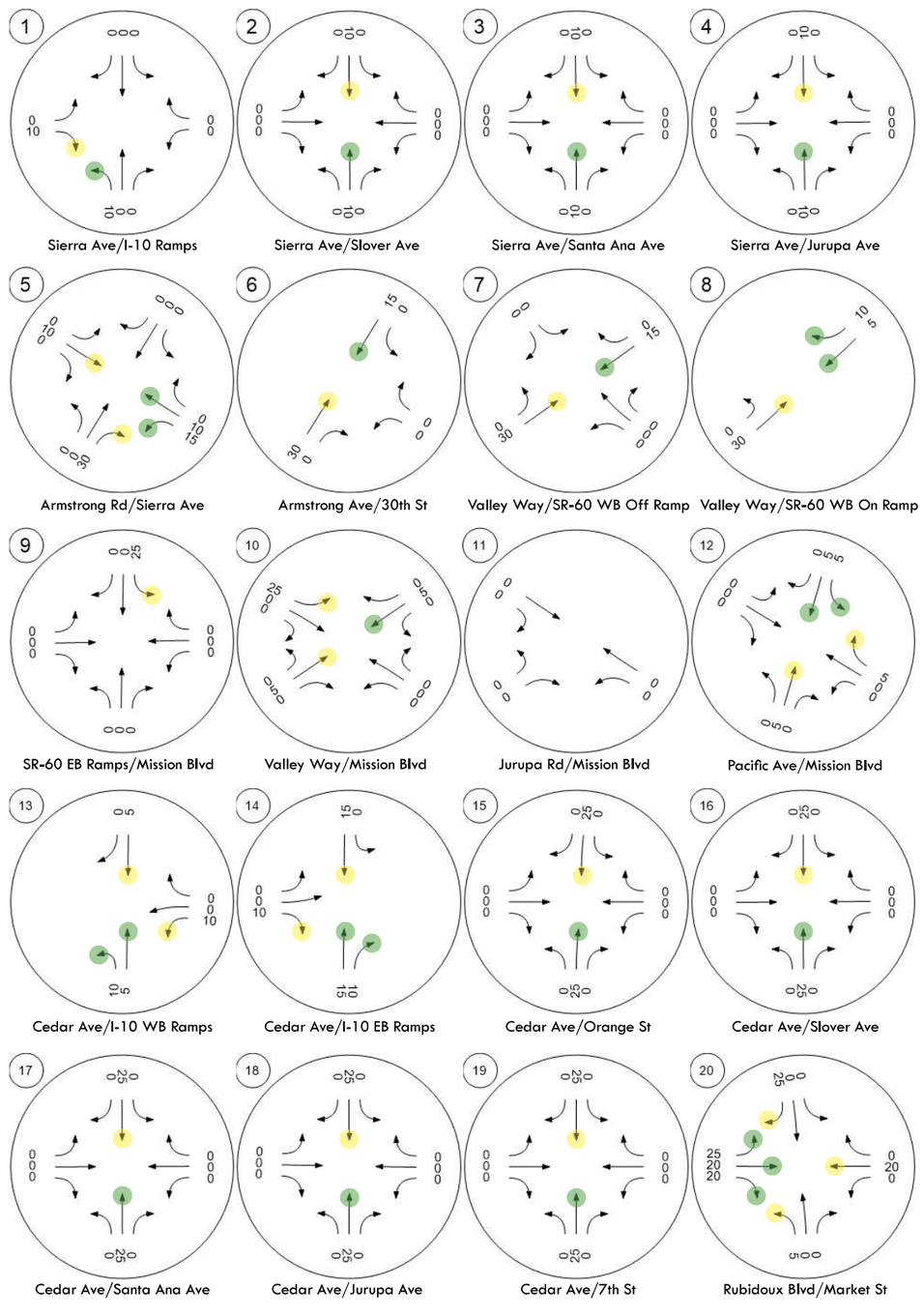
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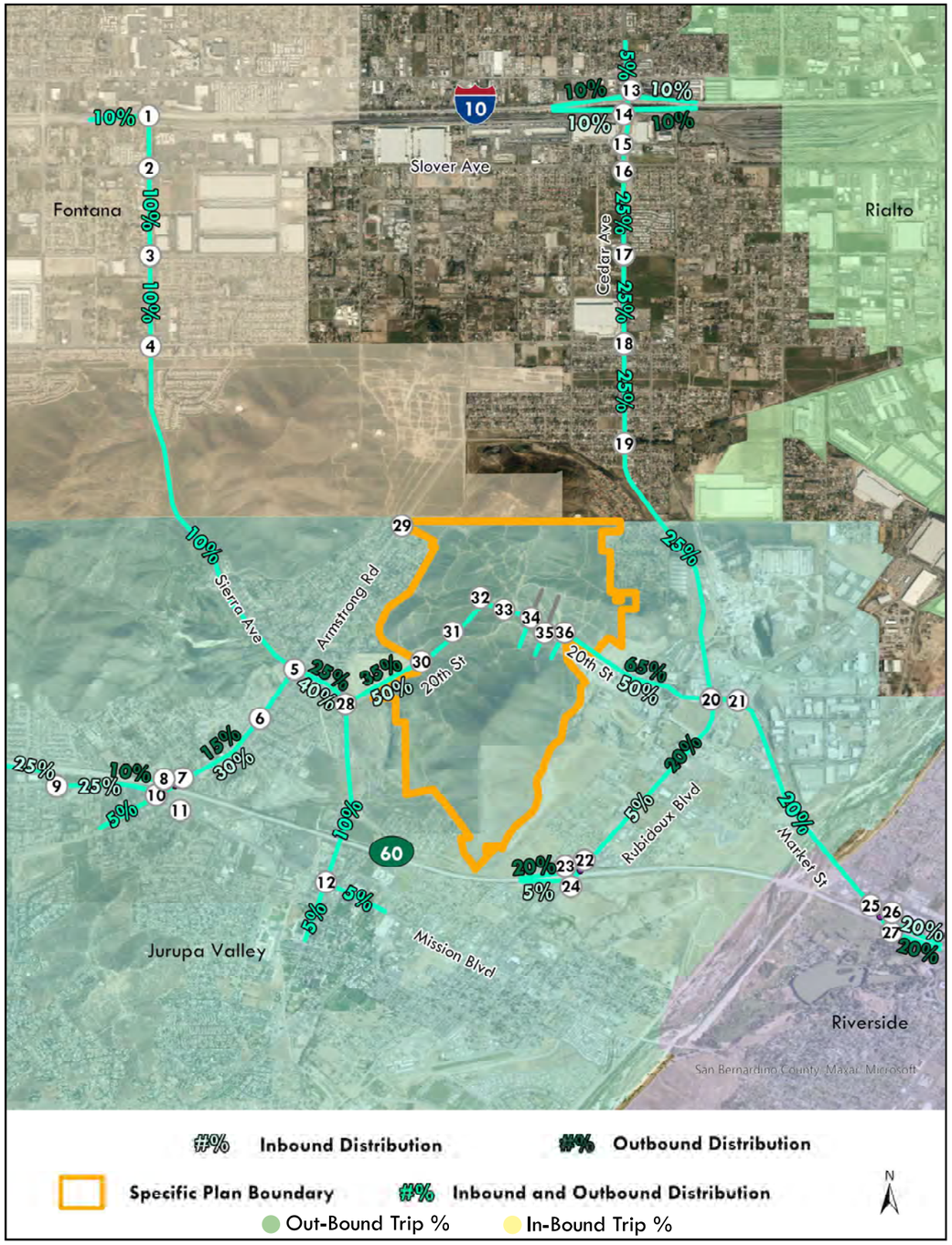


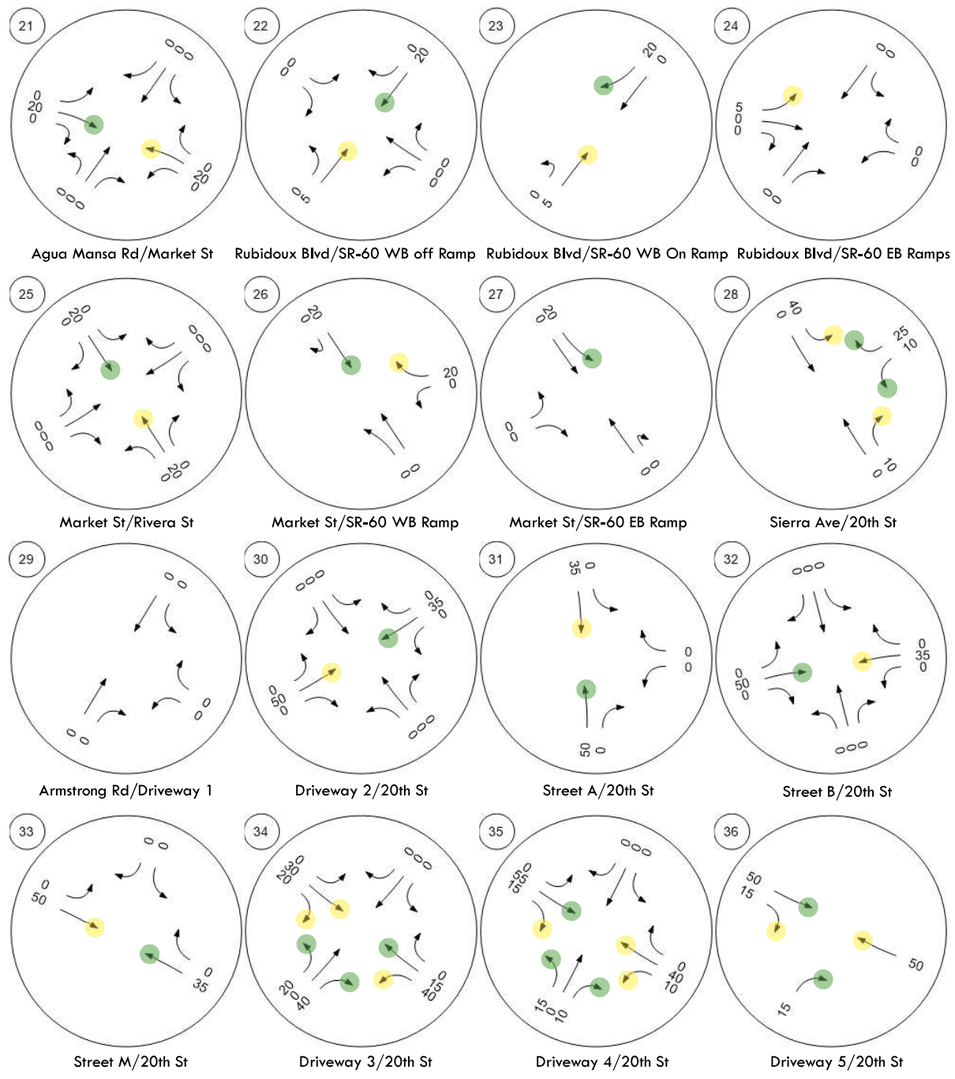
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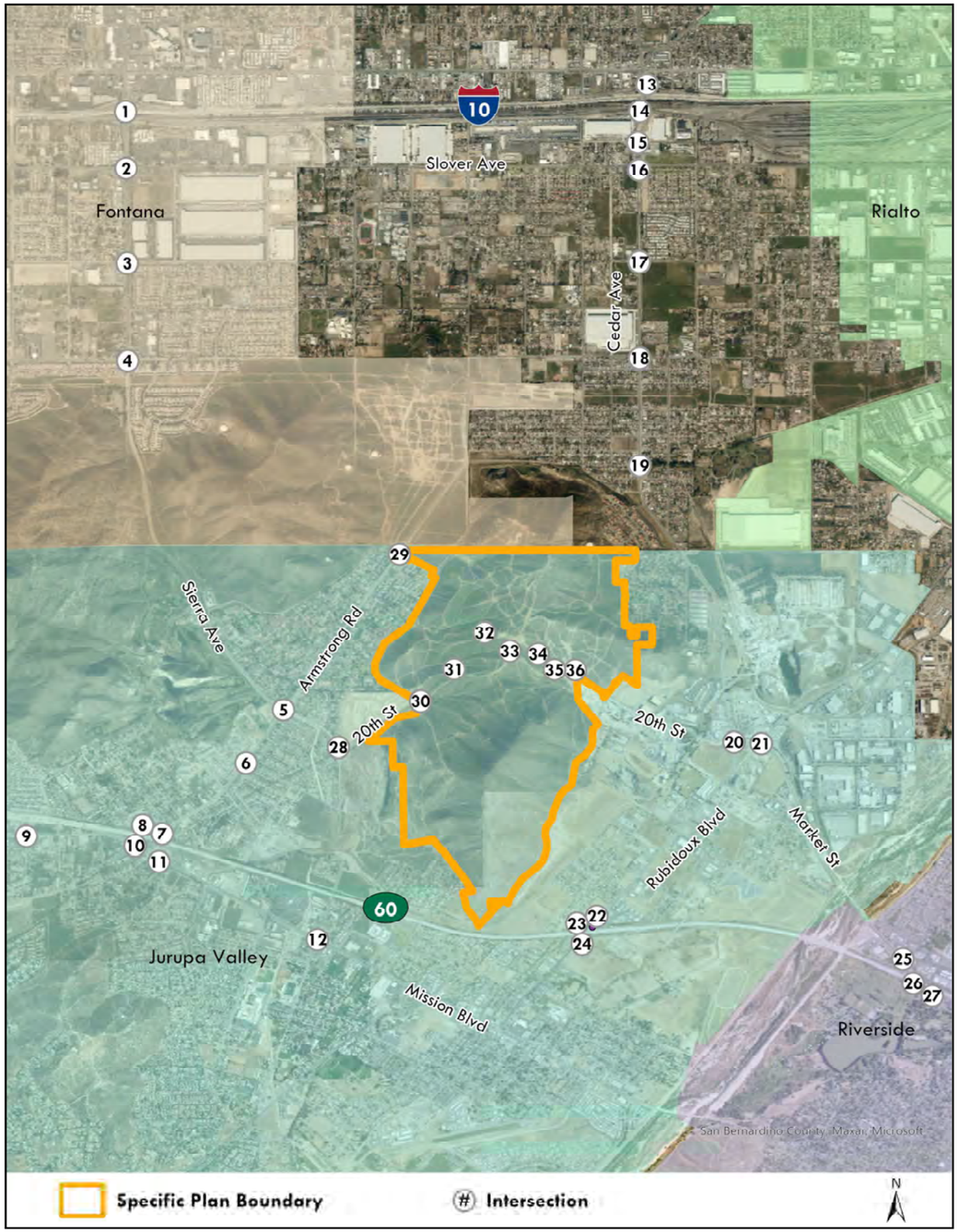


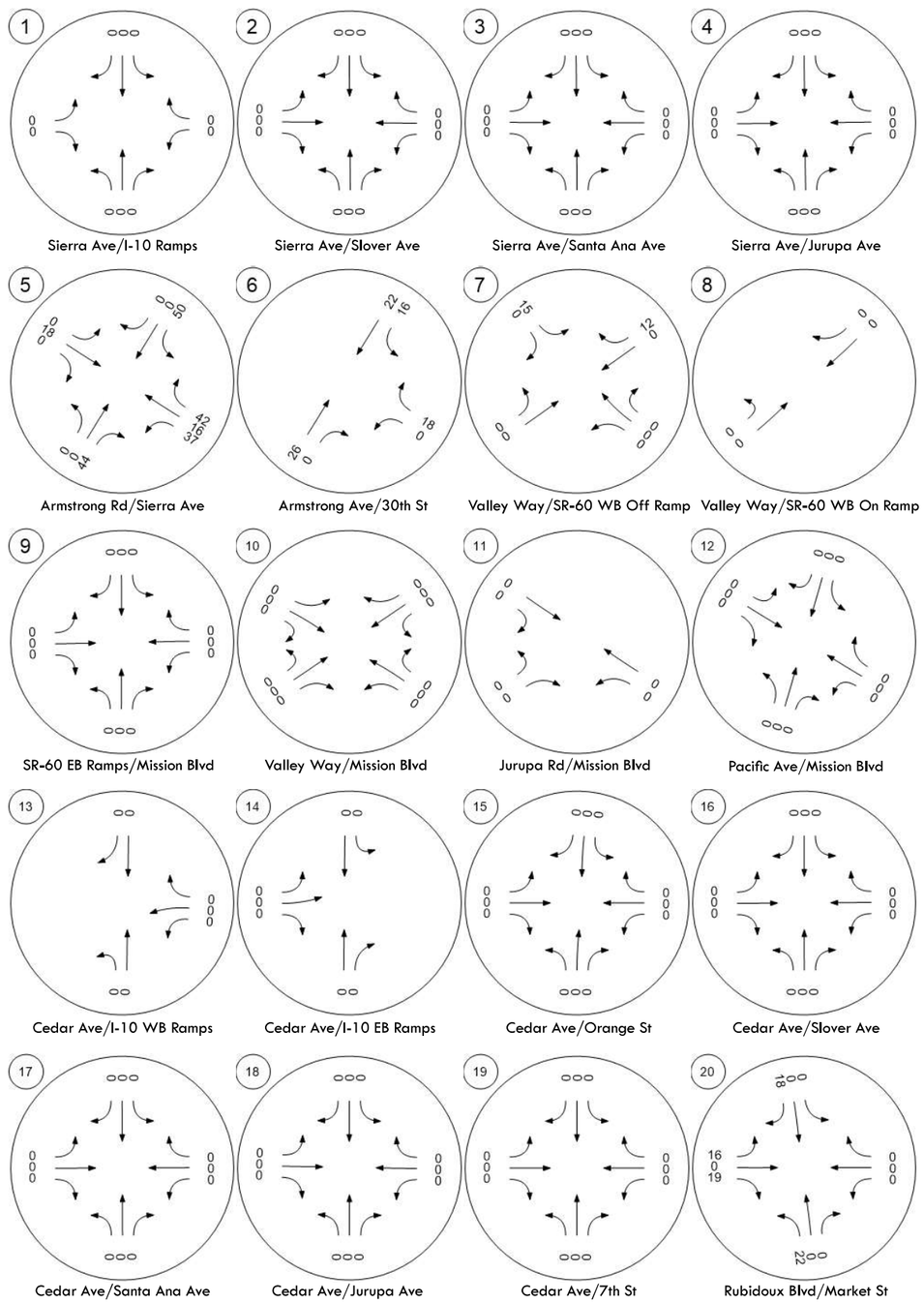
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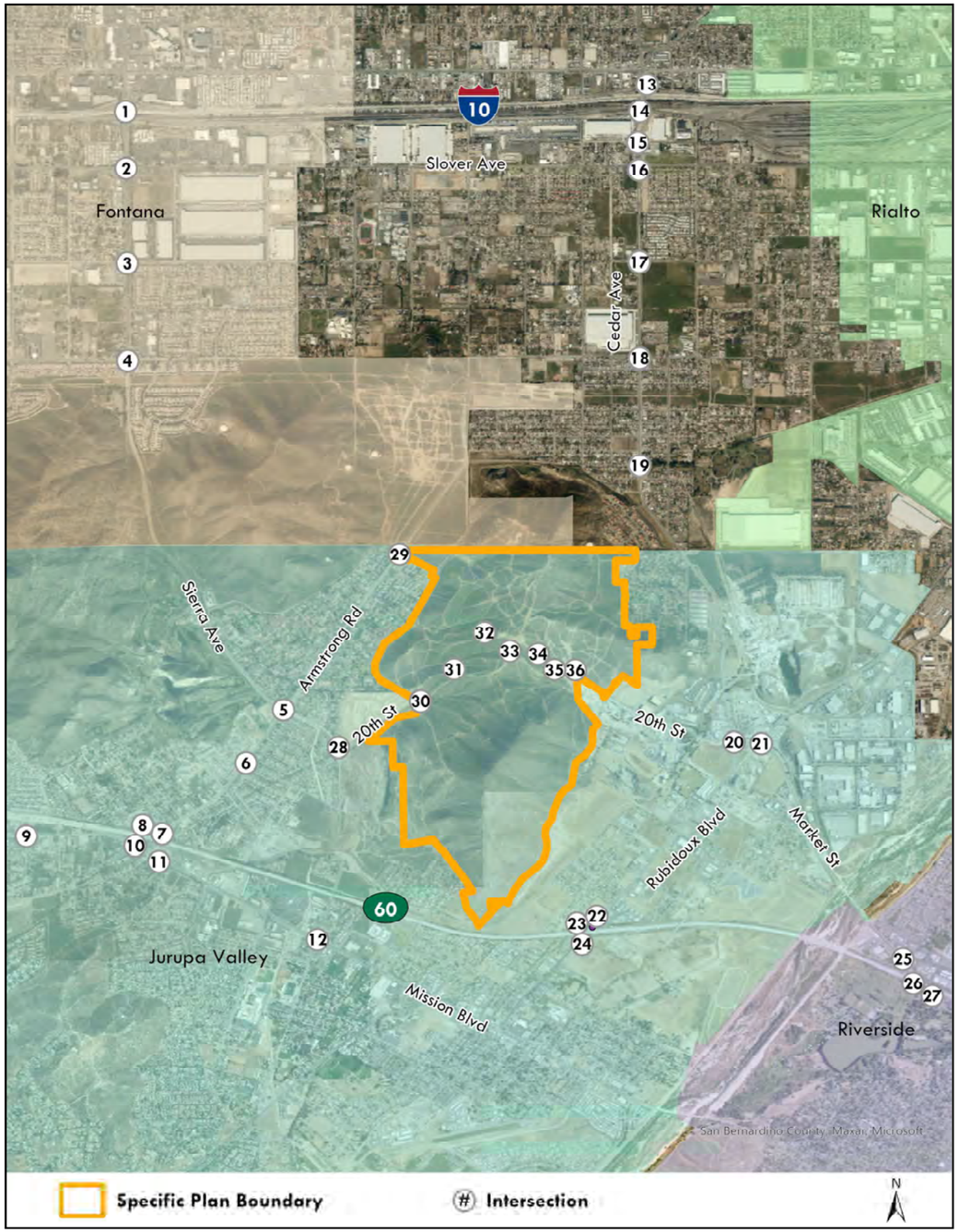


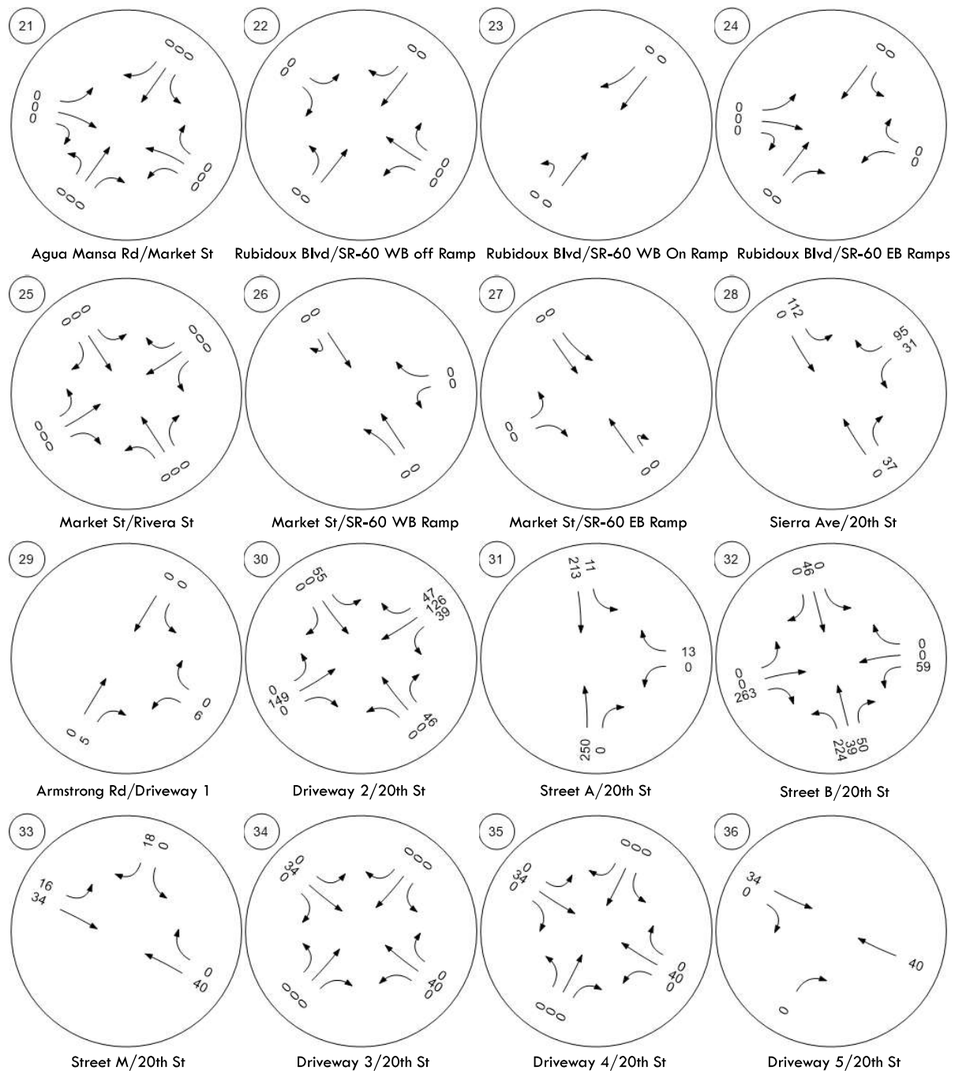
School/Park AM Assignment (A)



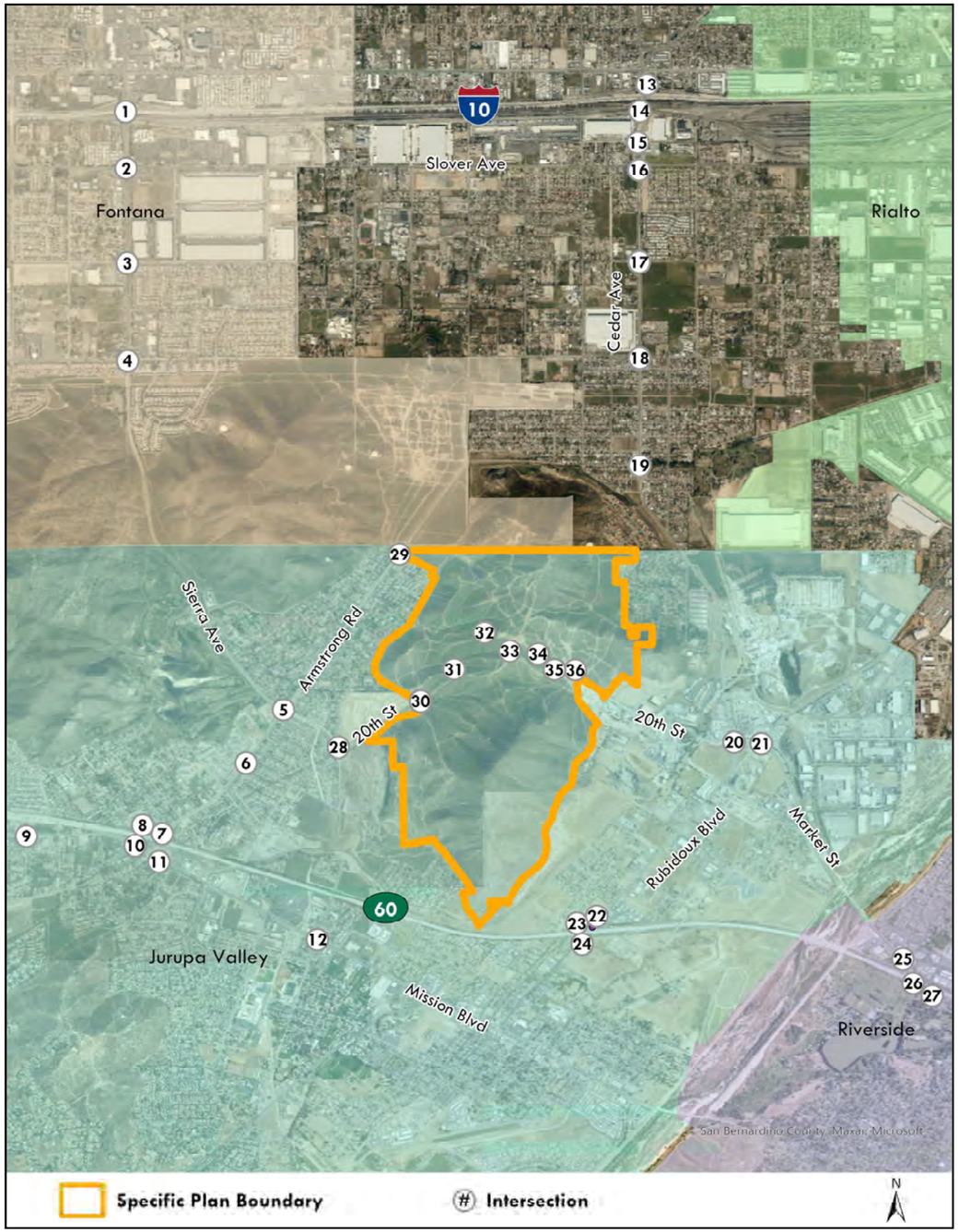


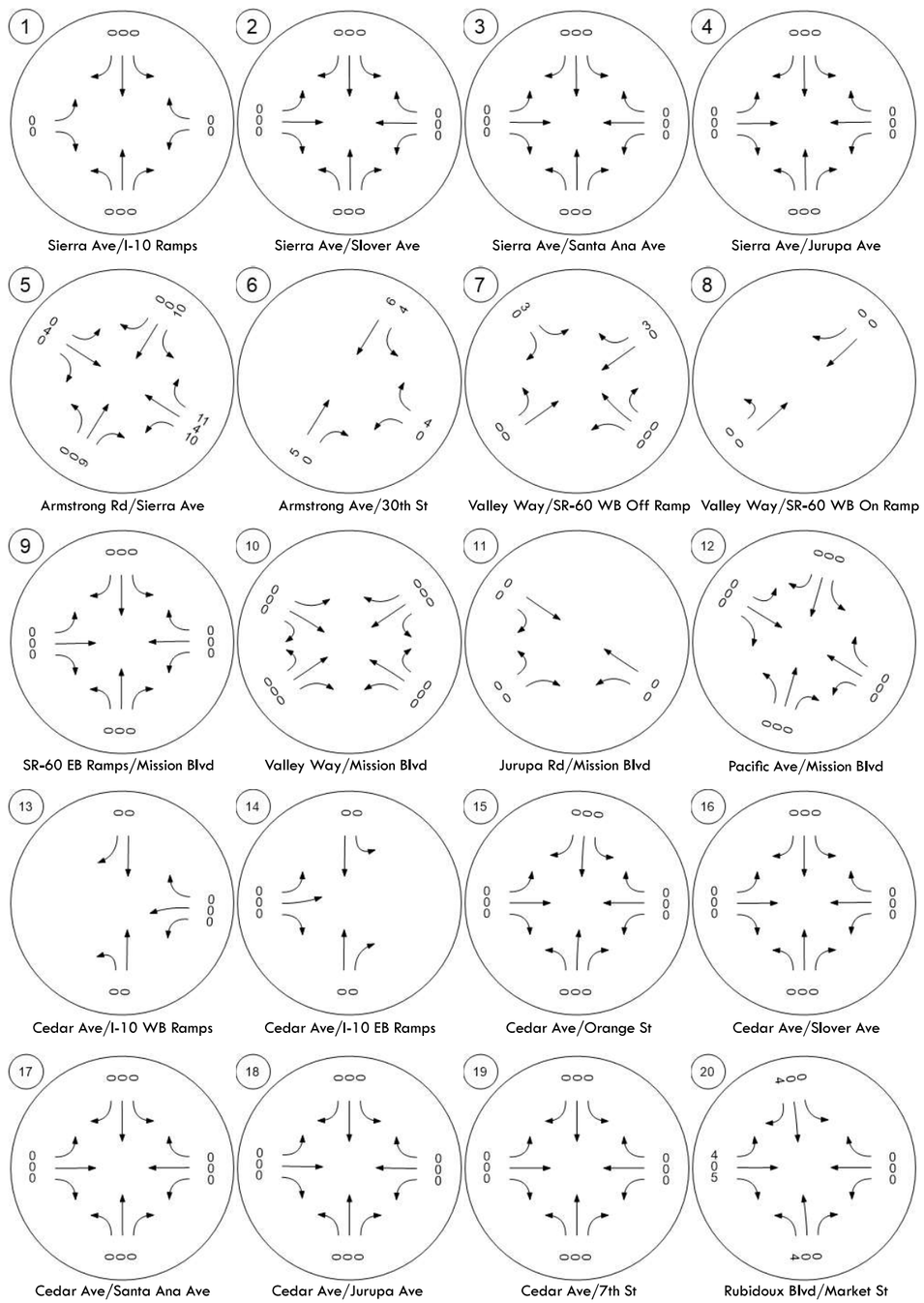
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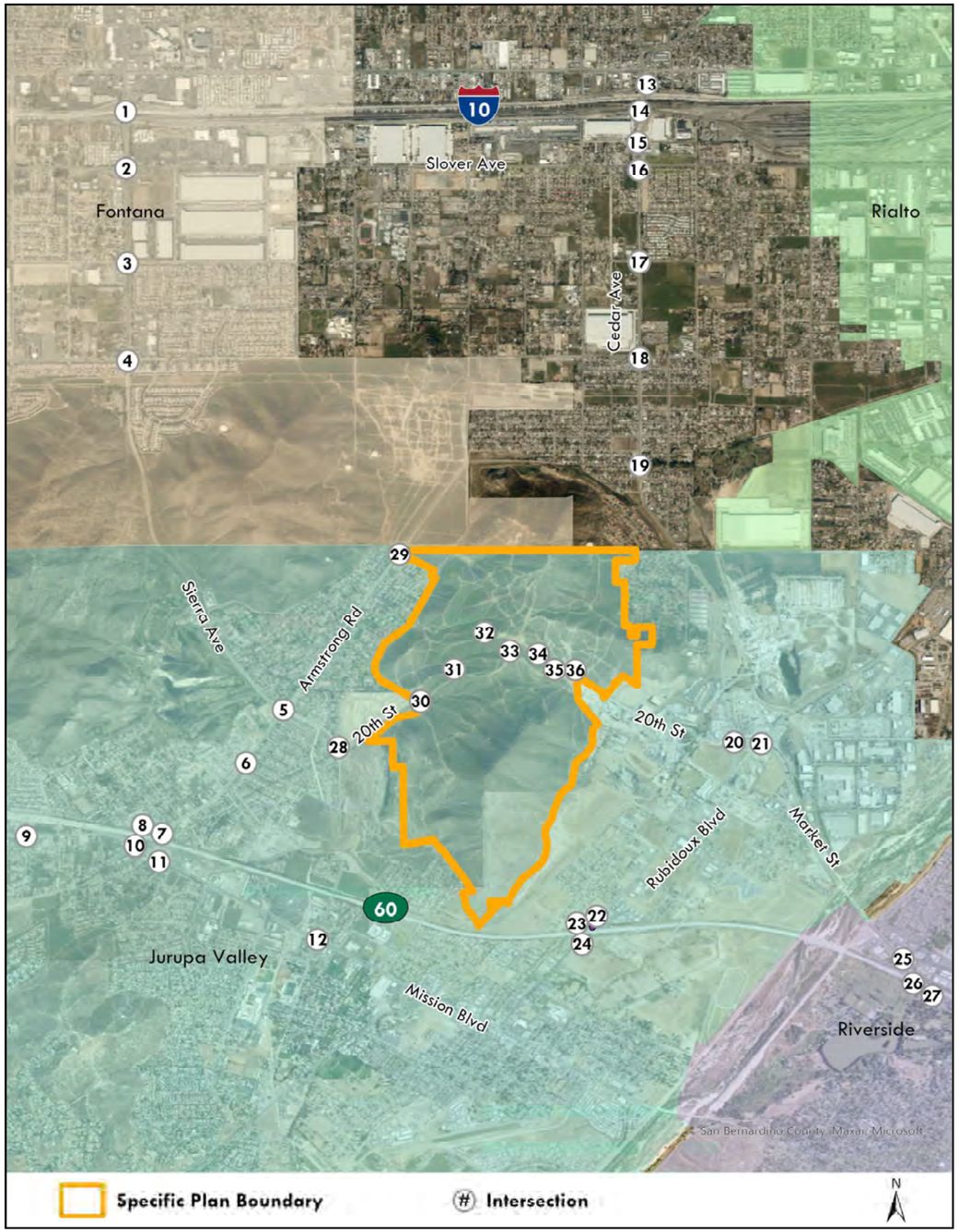


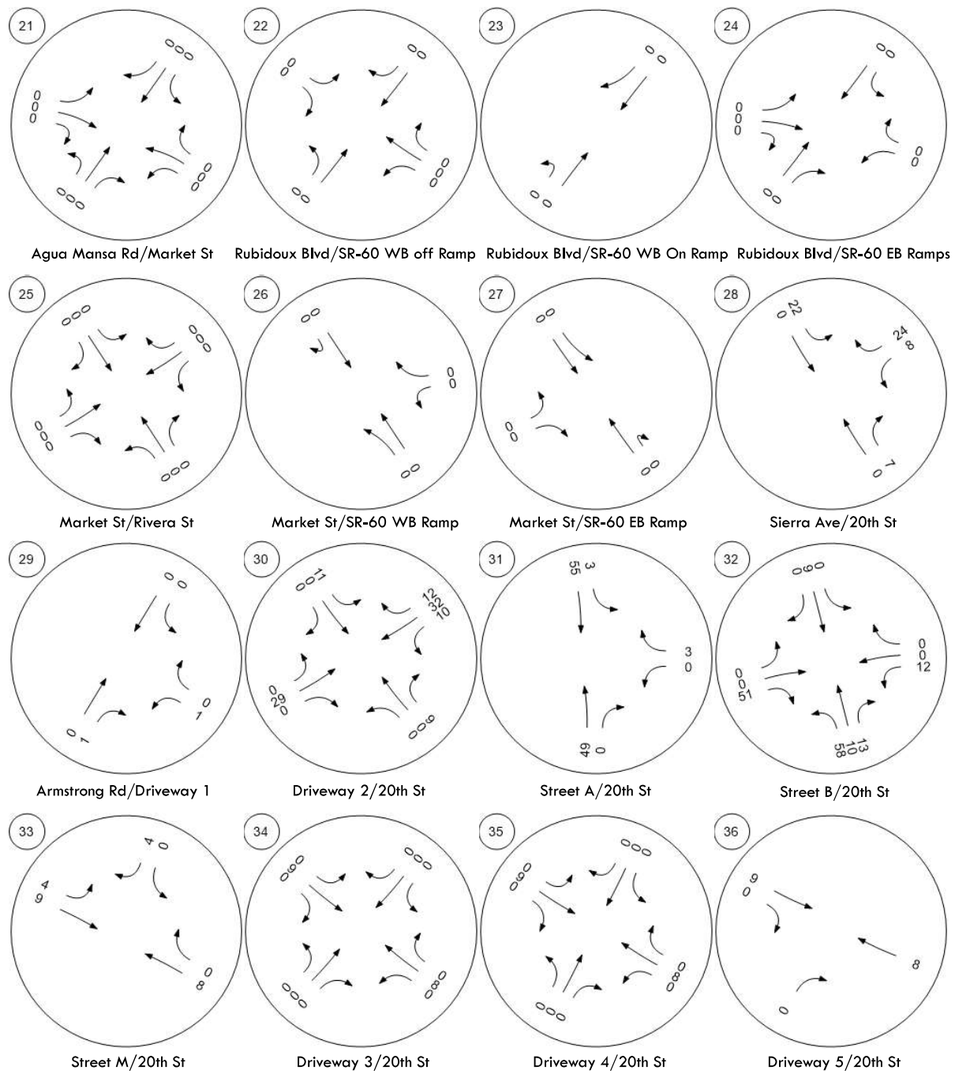
School/Park PM Assignment (A)



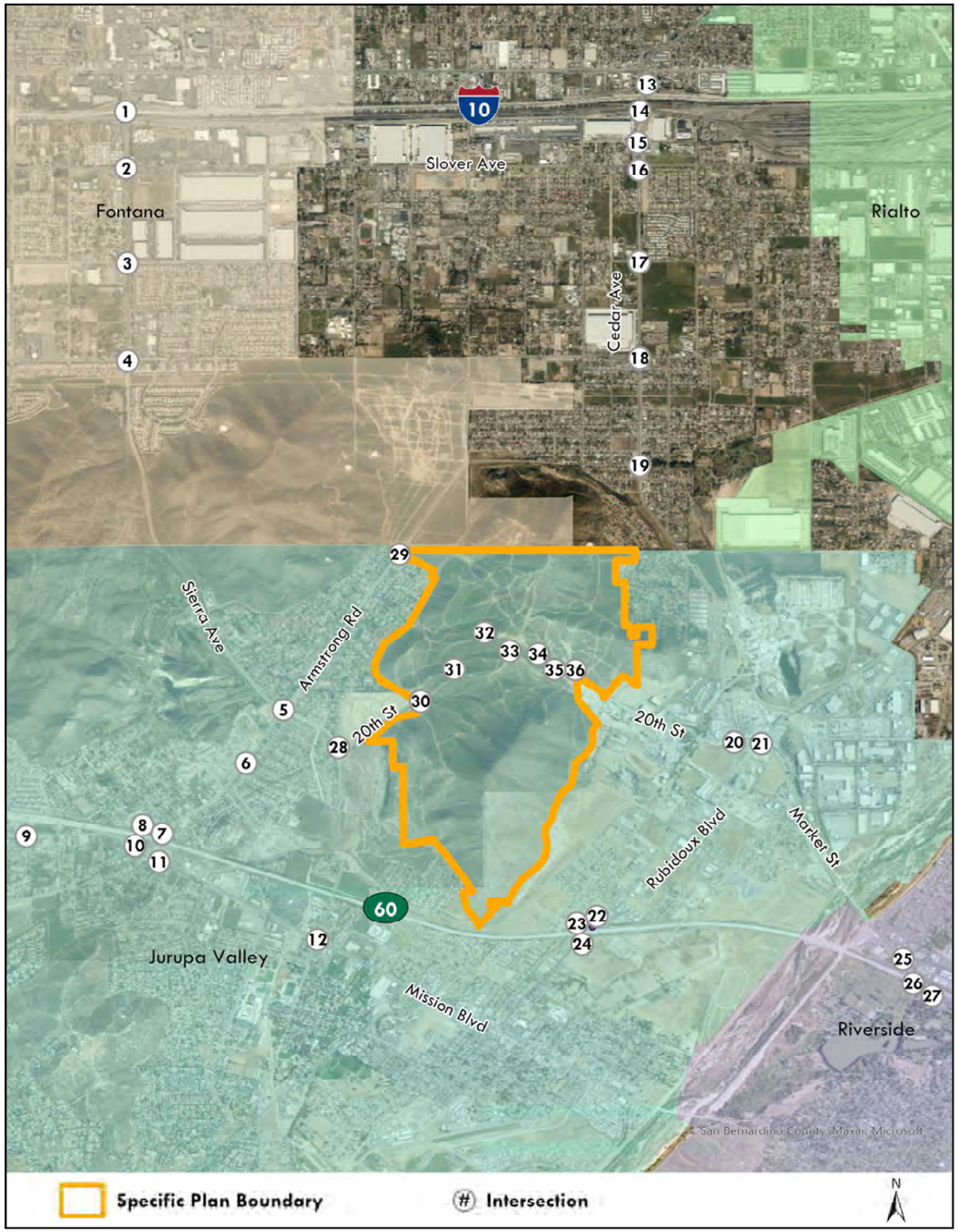


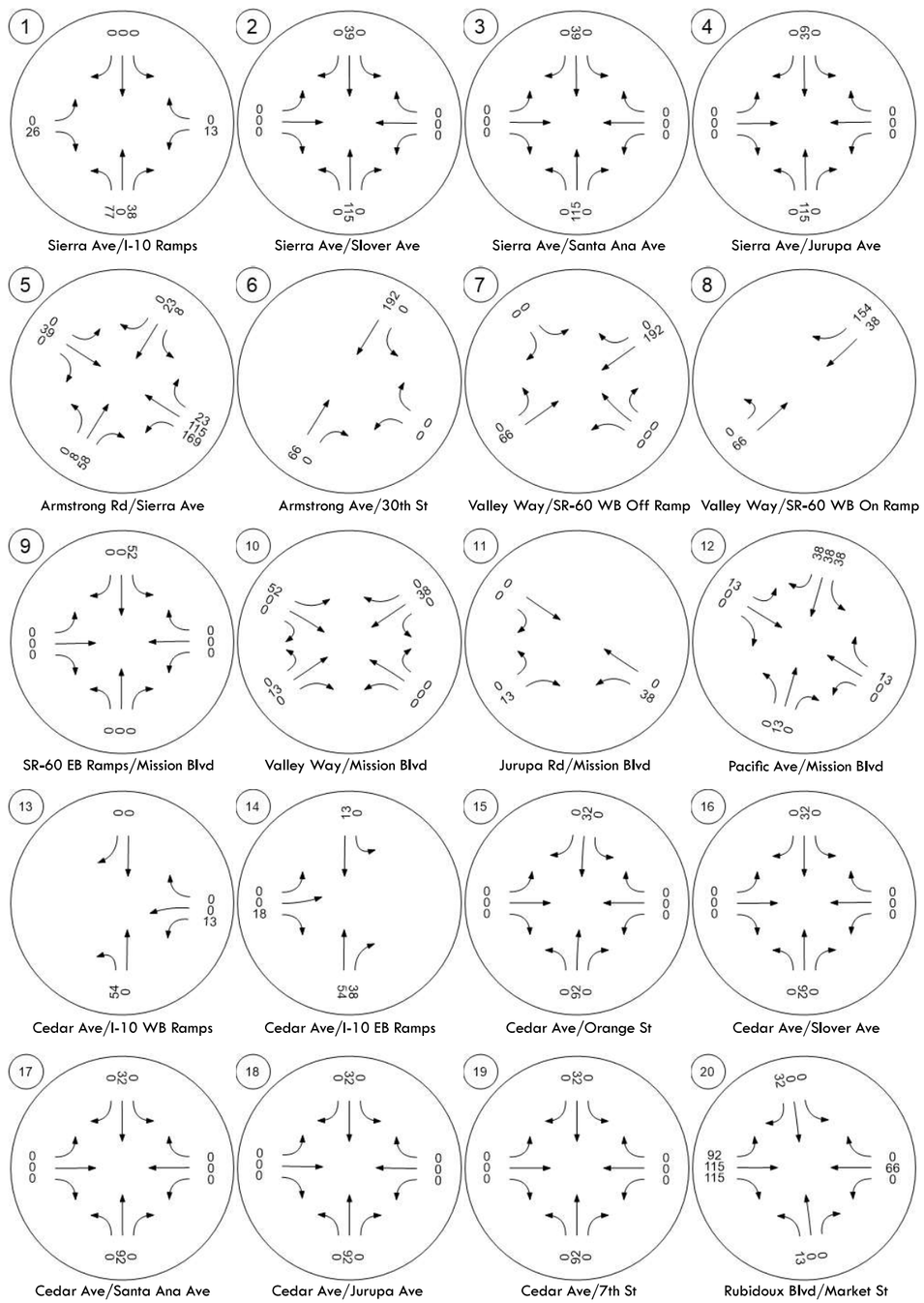
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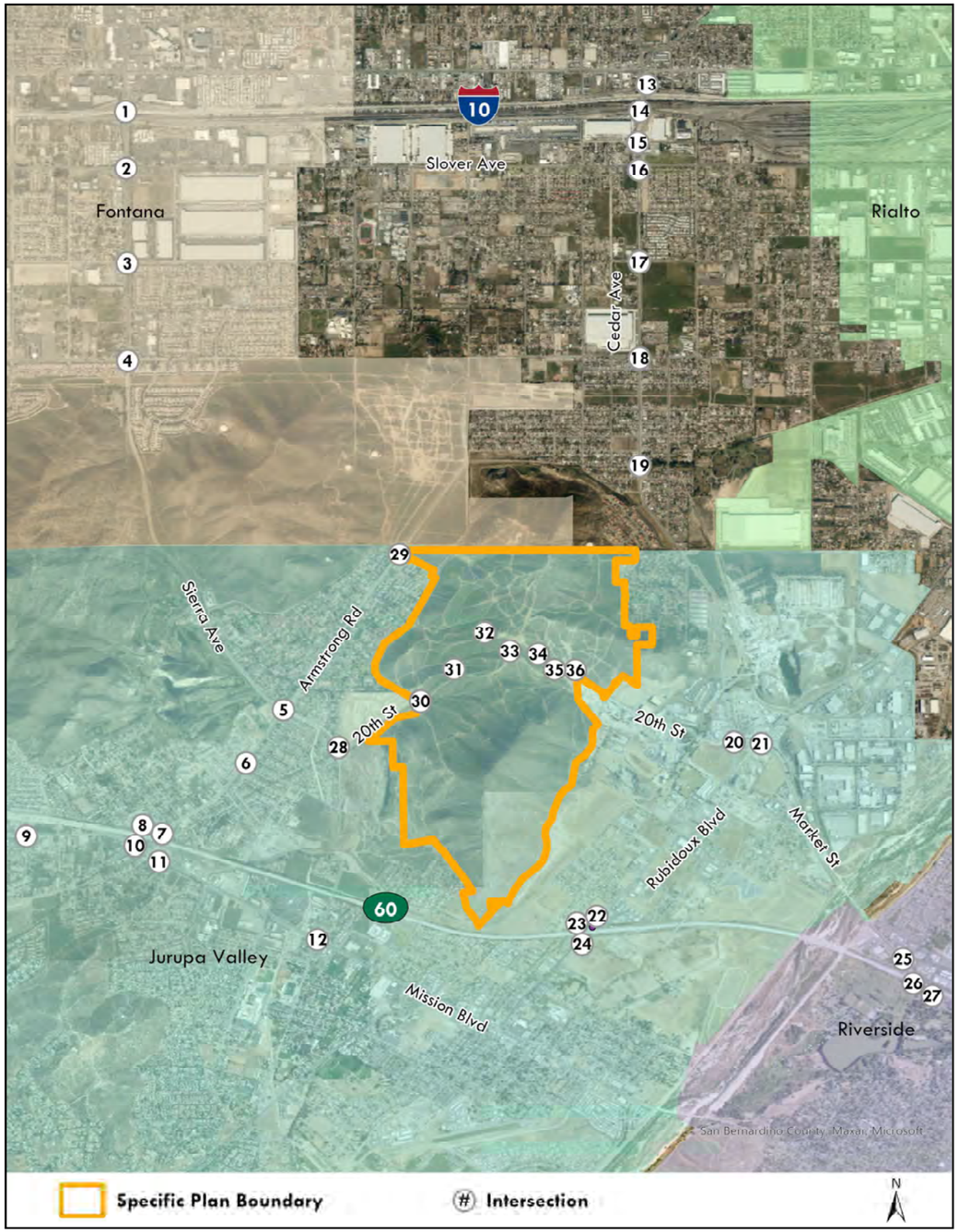


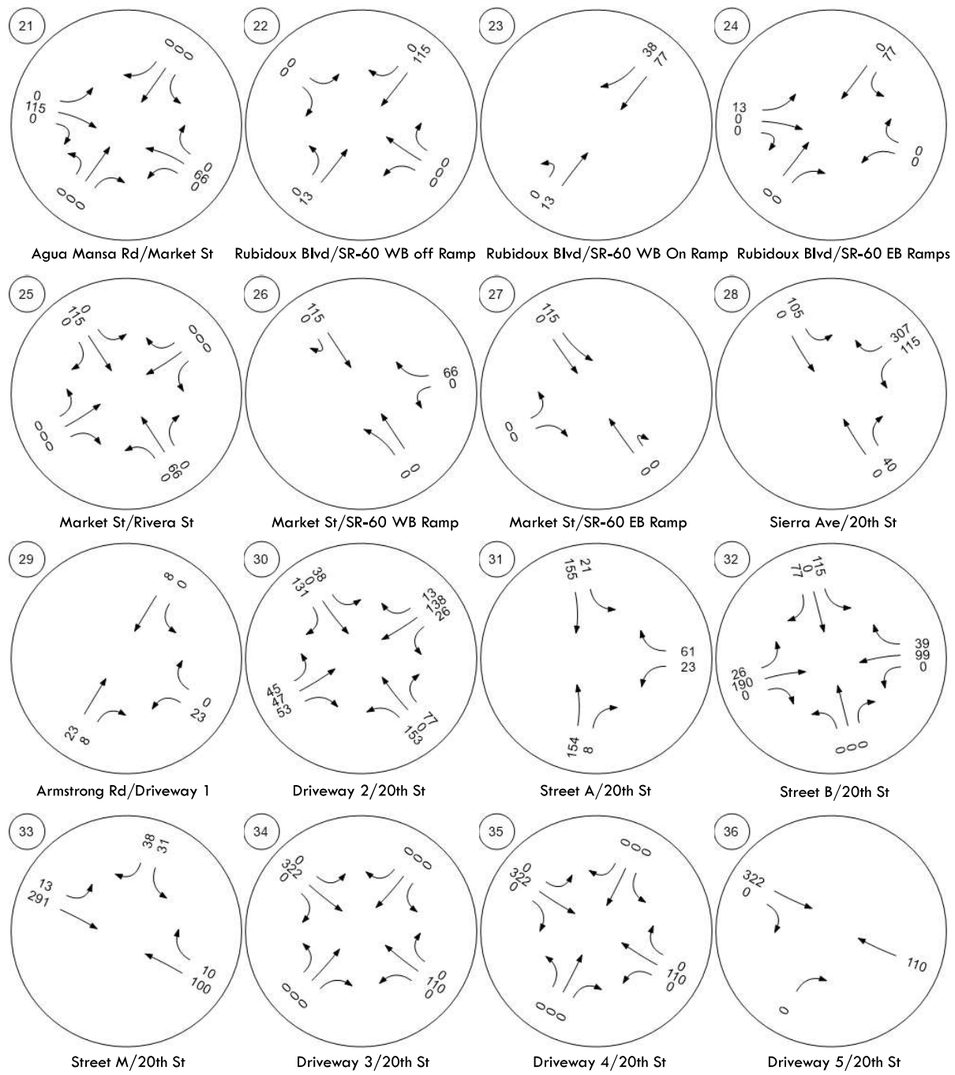
Residential AM Assignment (A)



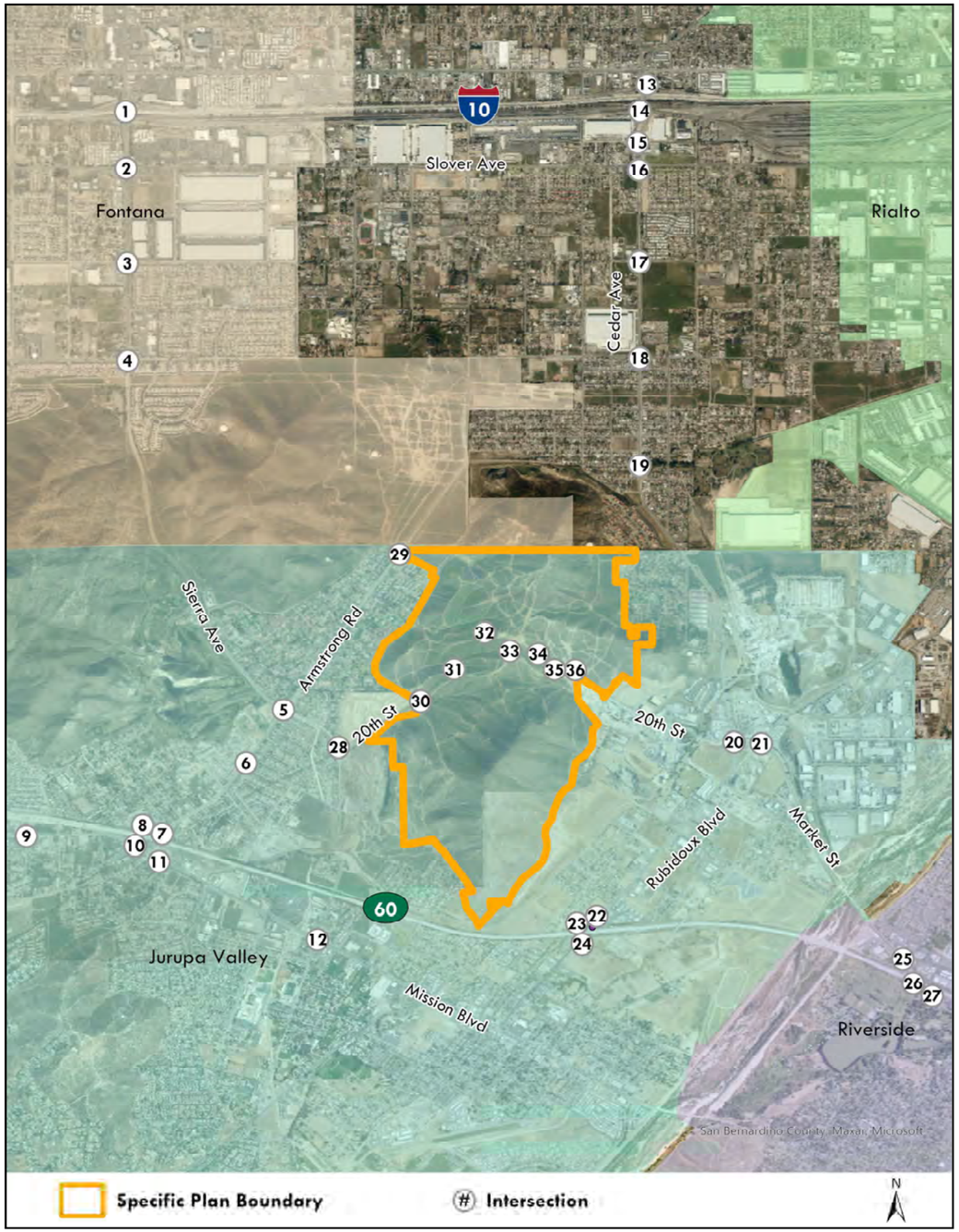


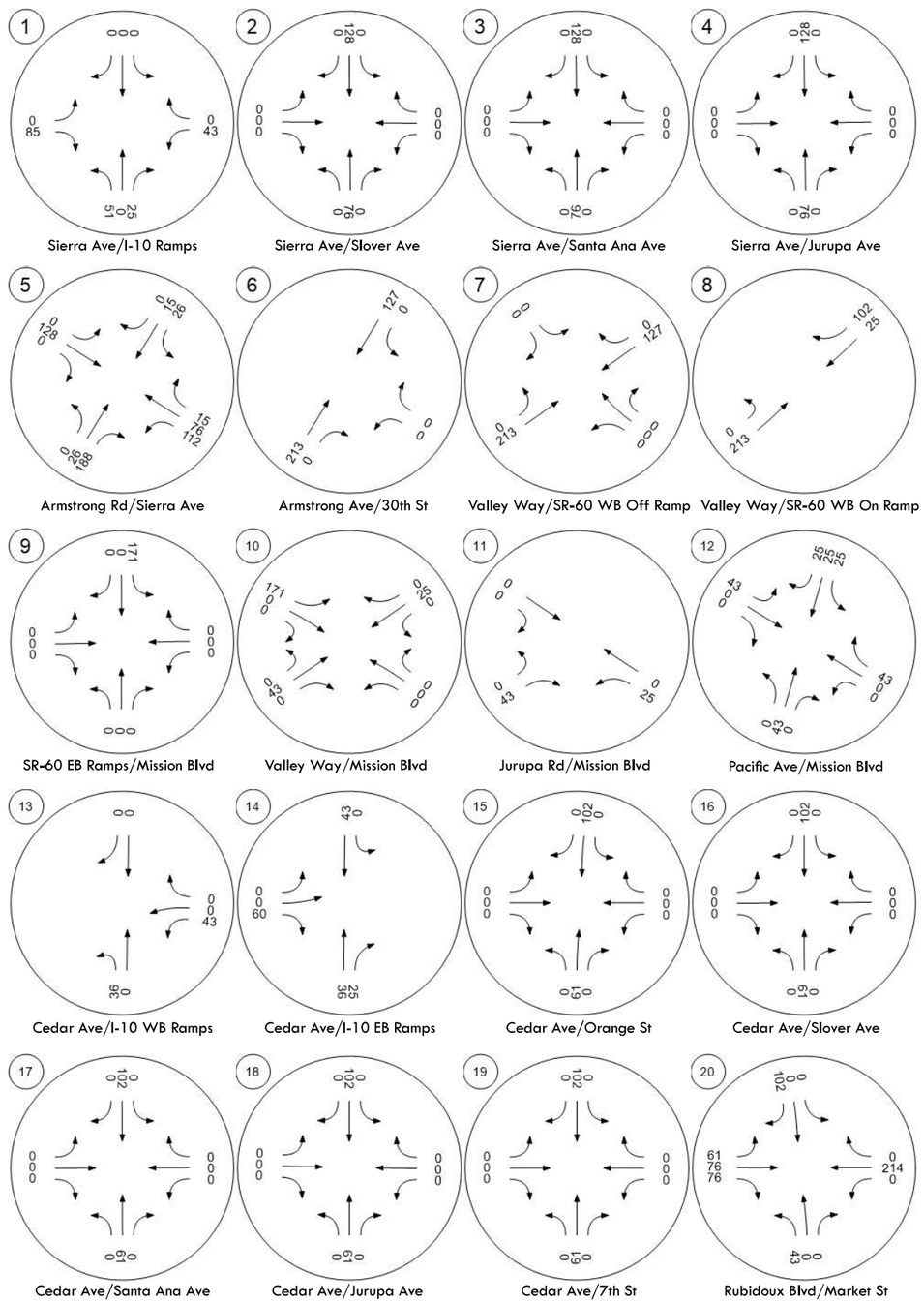
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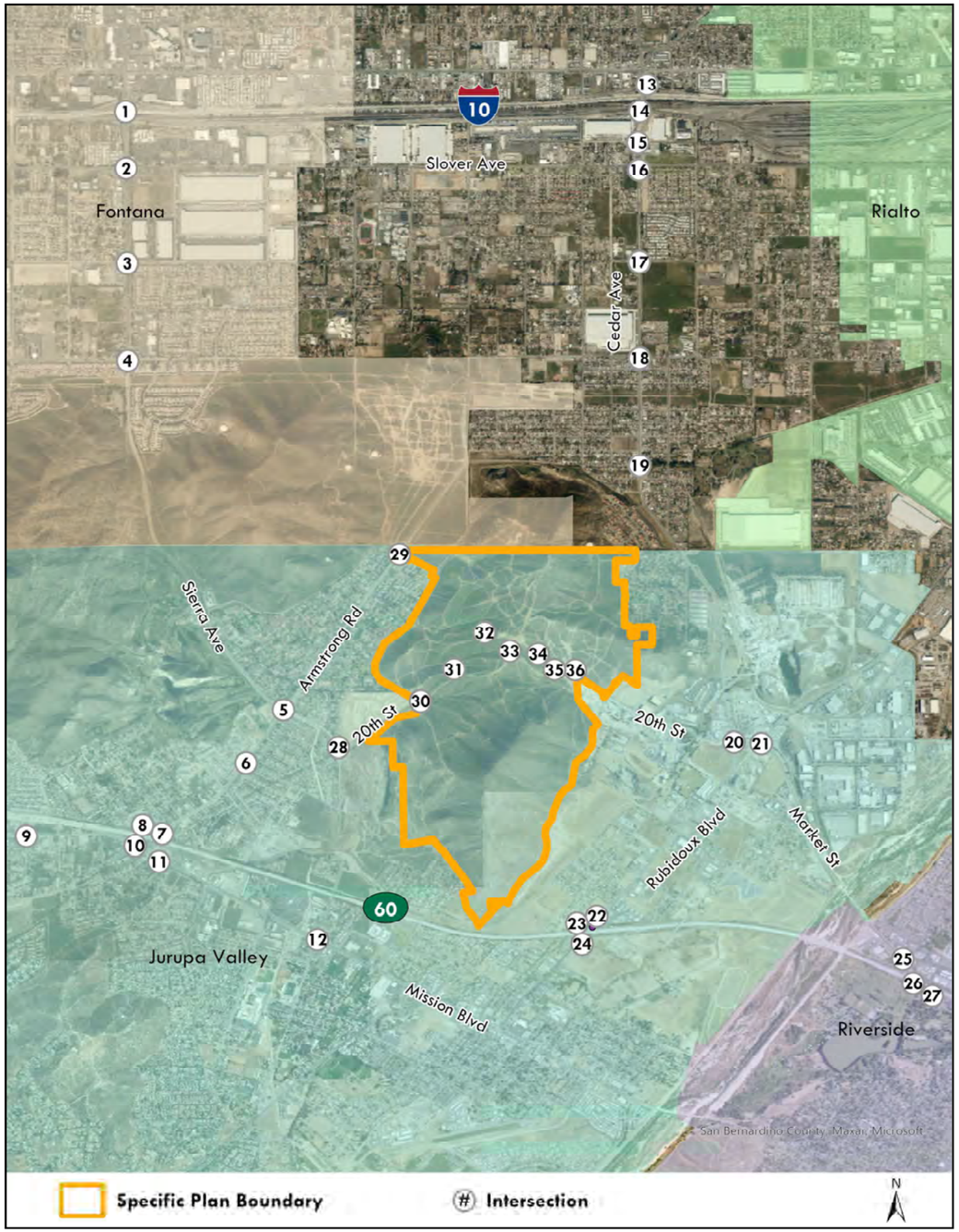


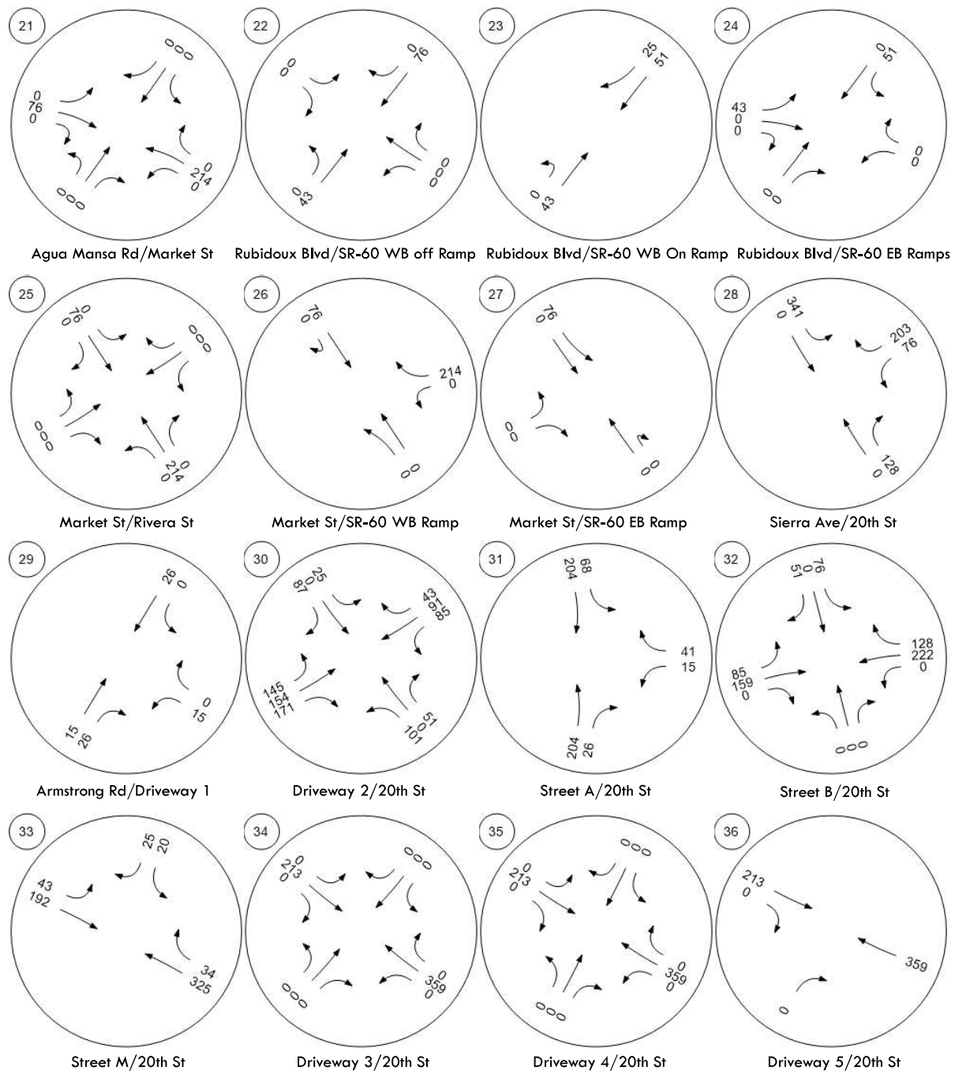
Residential PM Assignment (A)



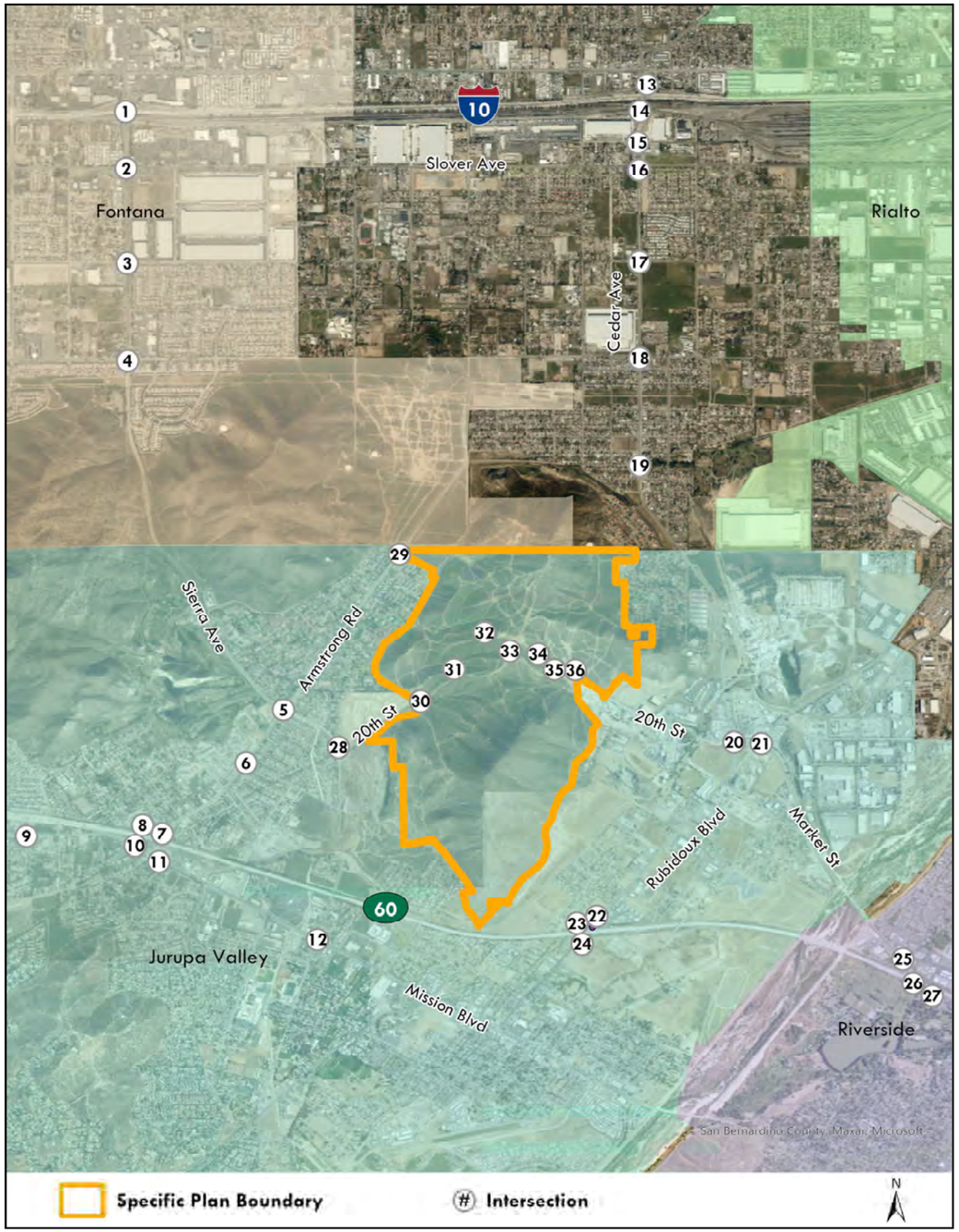


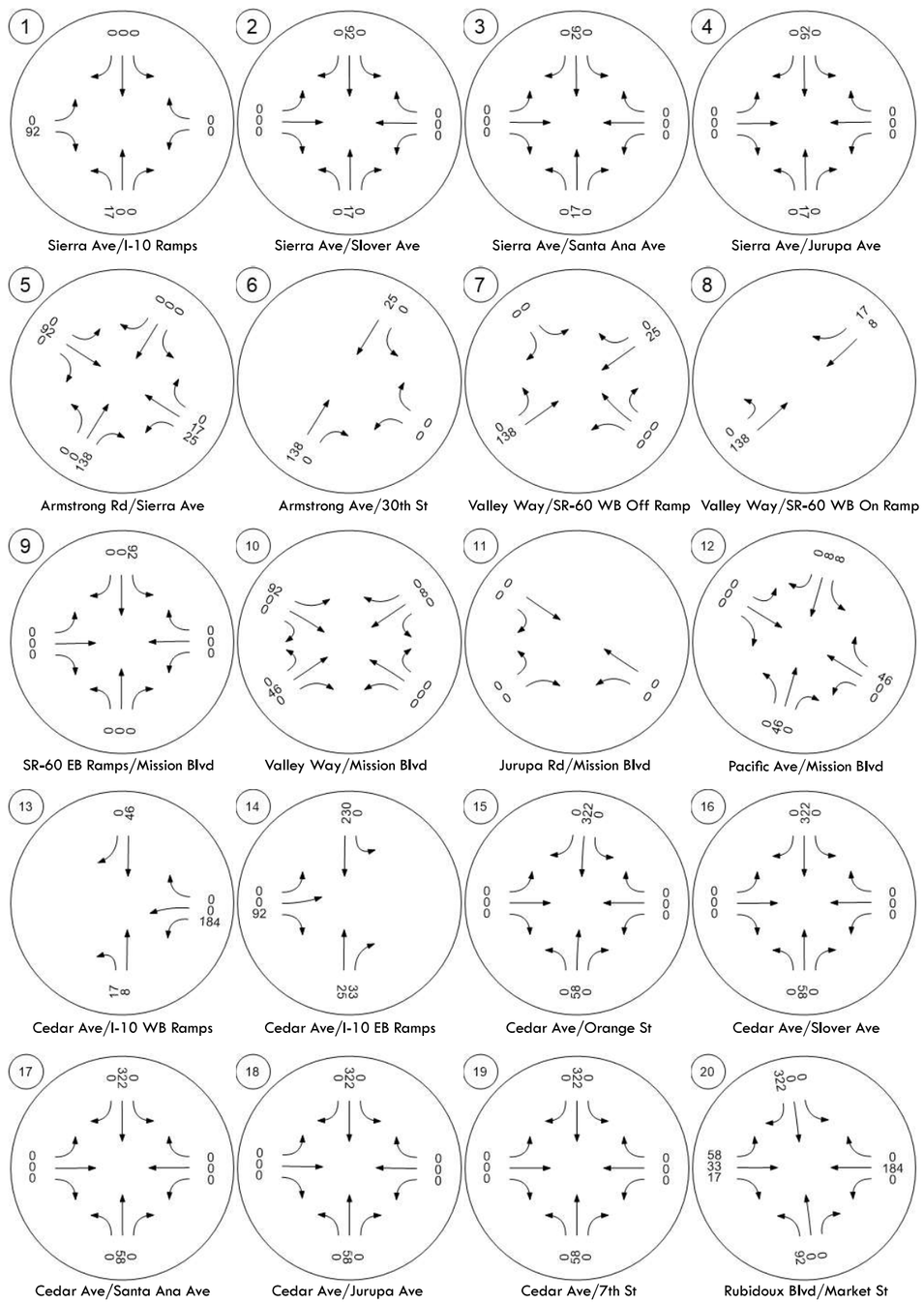
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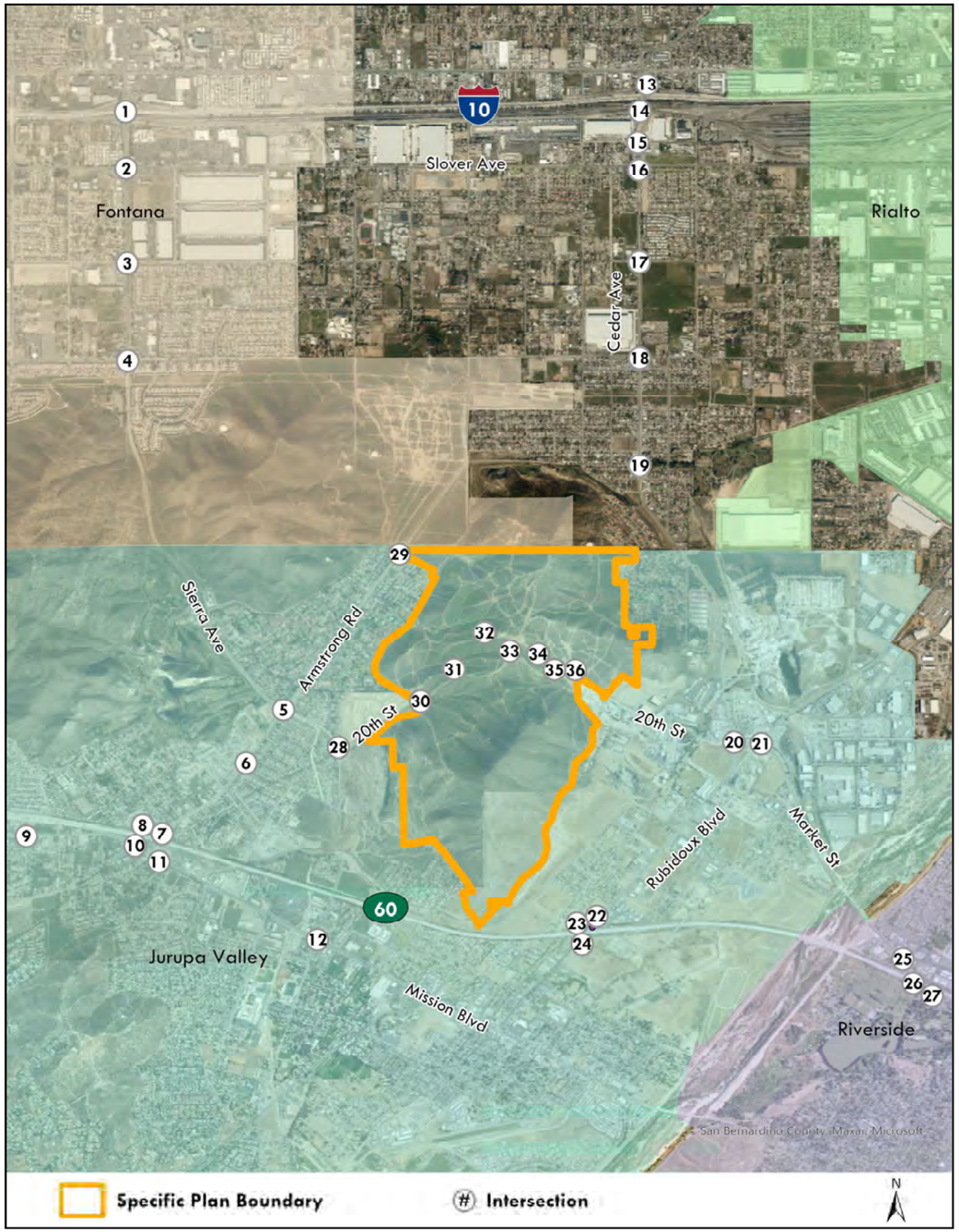


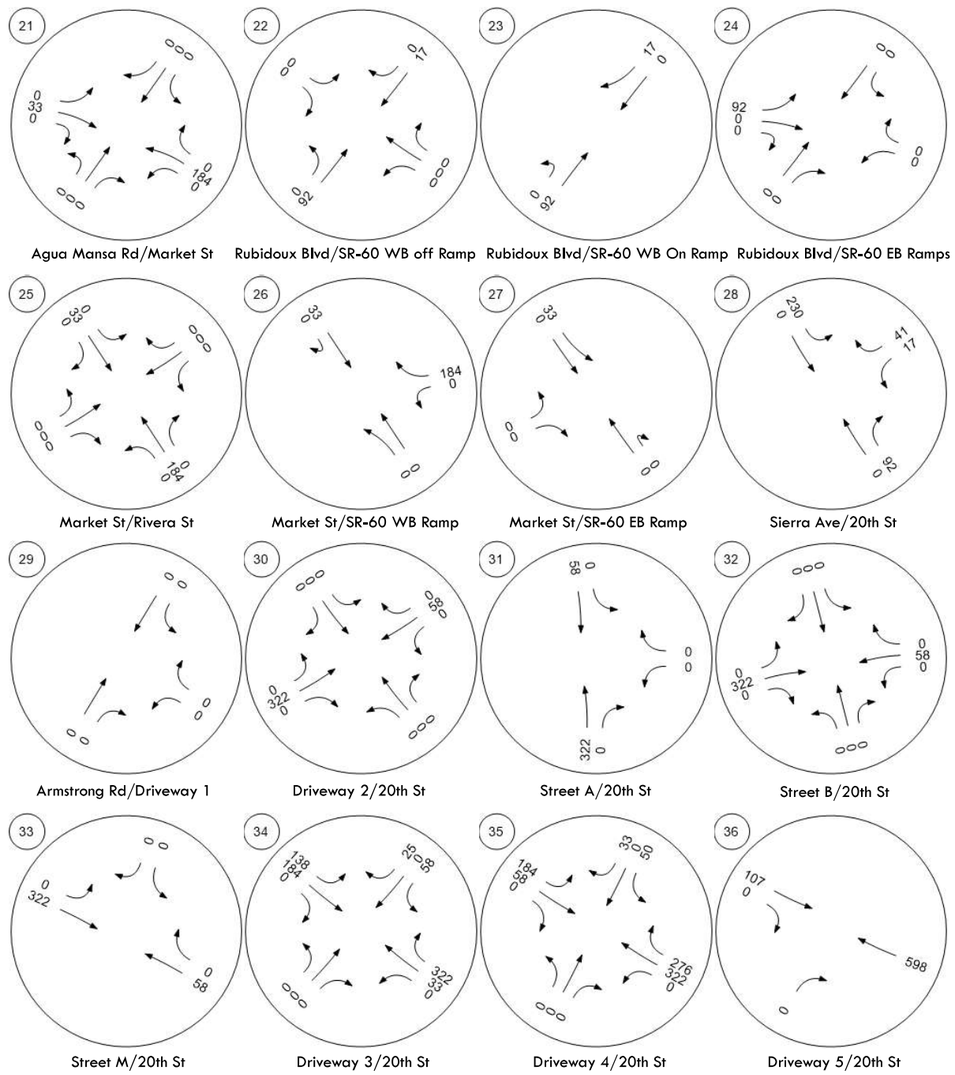
Industrial/Business Park Auto AM Assignment (A)



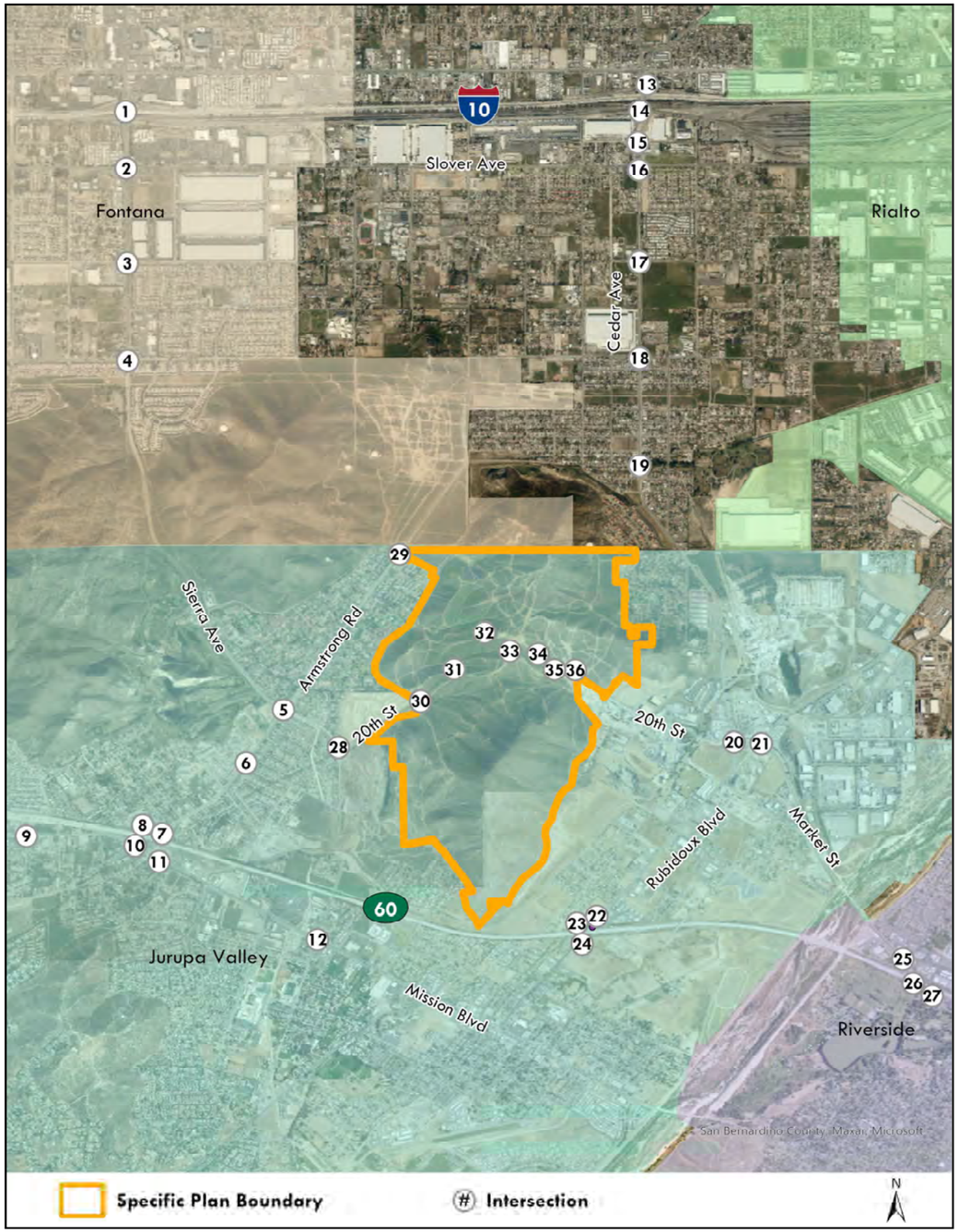


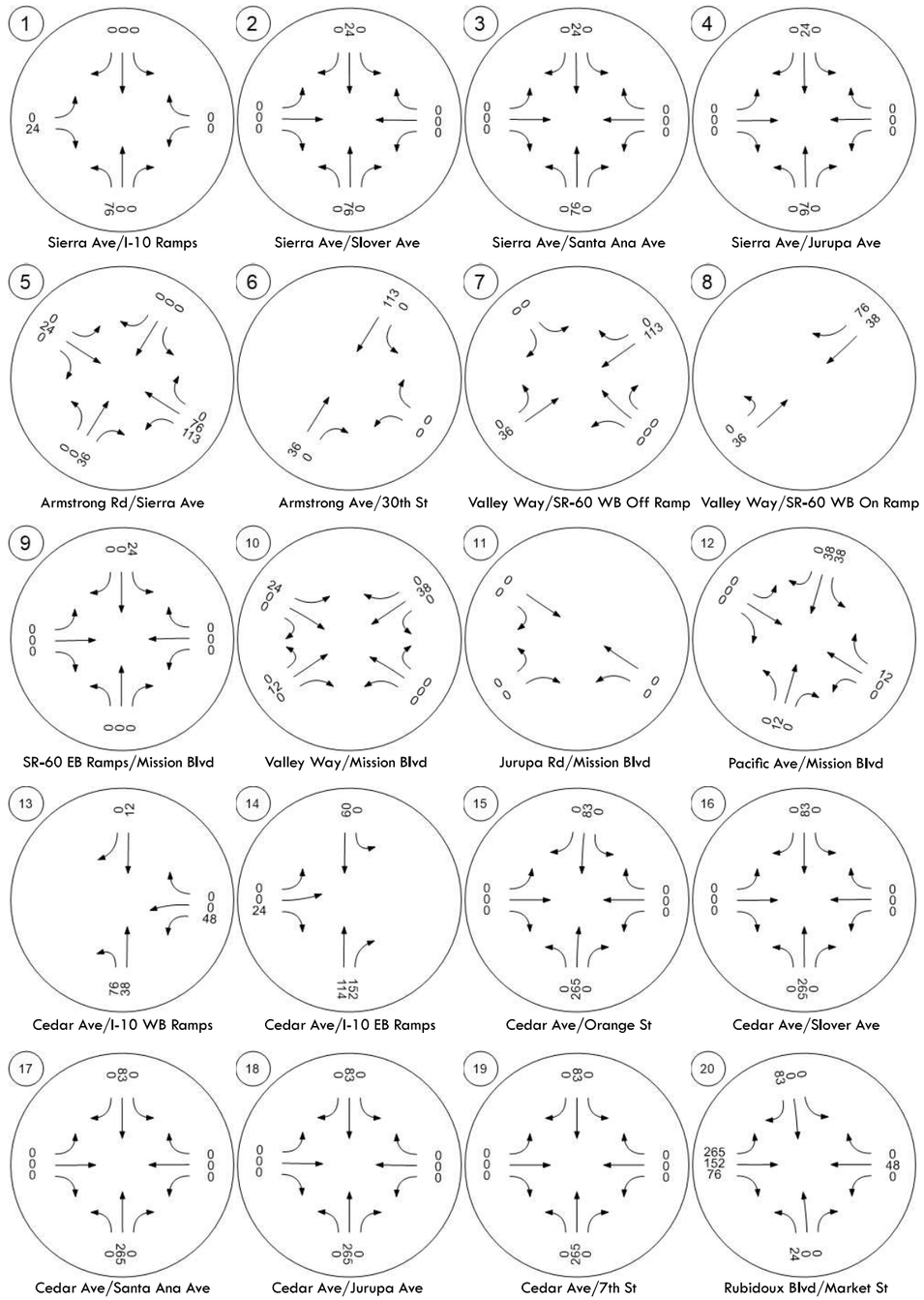
Industrial/Business Park Auto AM Assignment (B)



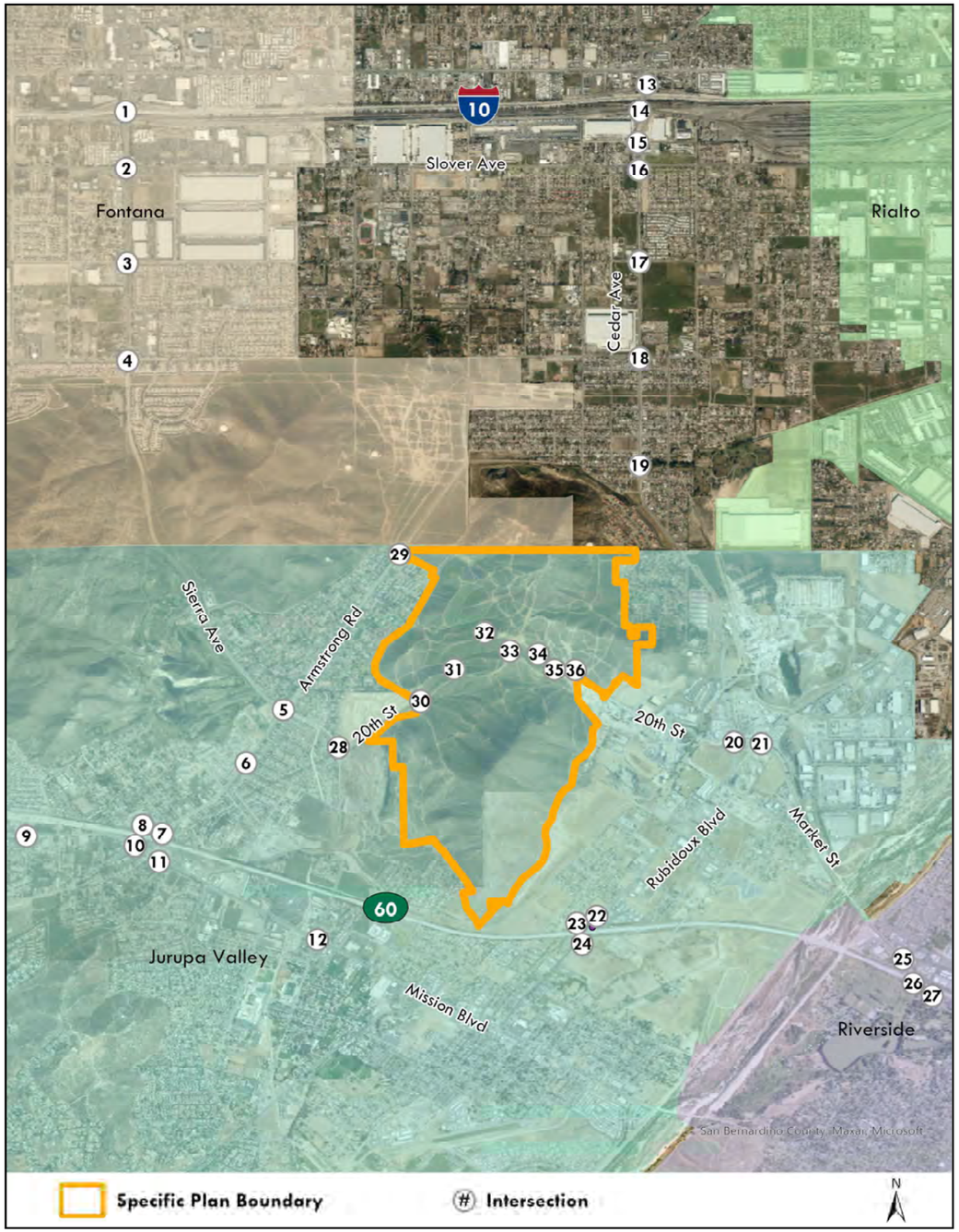


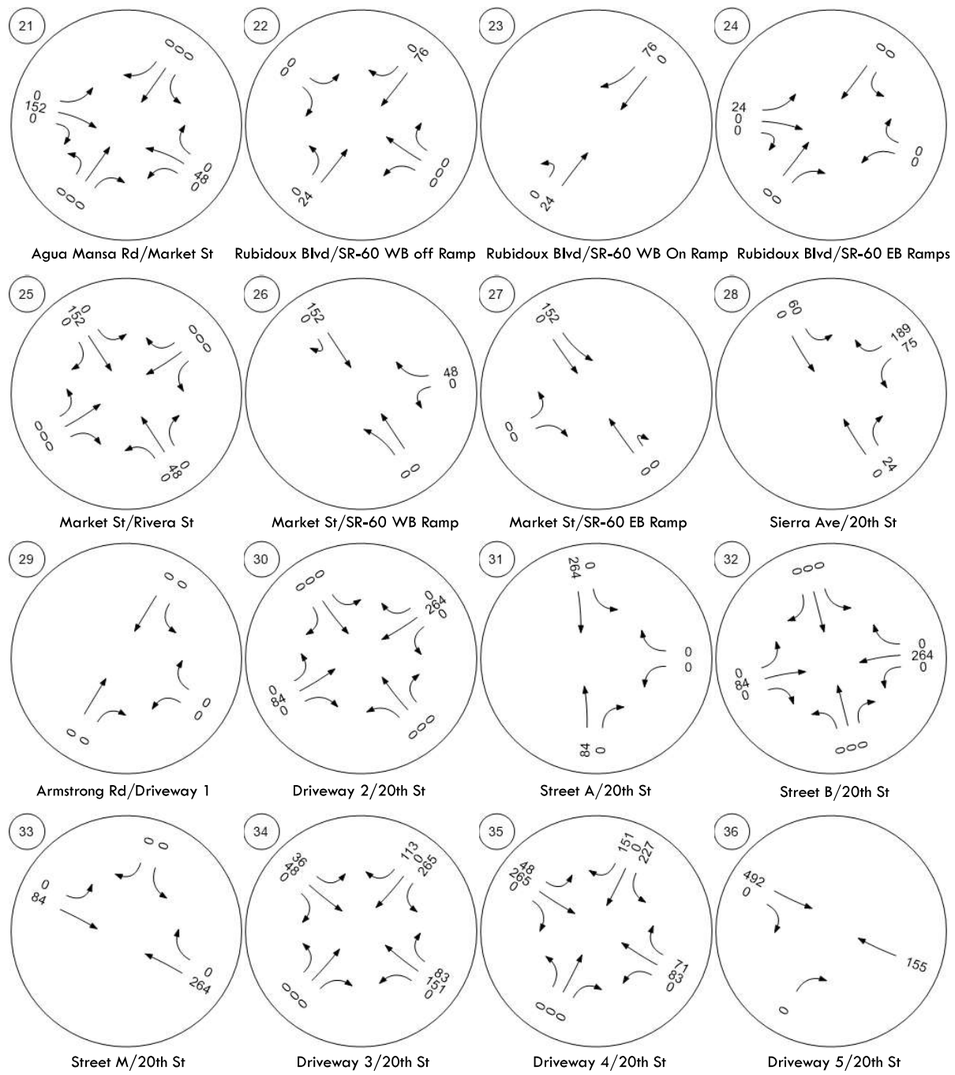
Industrial/Business Park Auto PM Assignment (A)



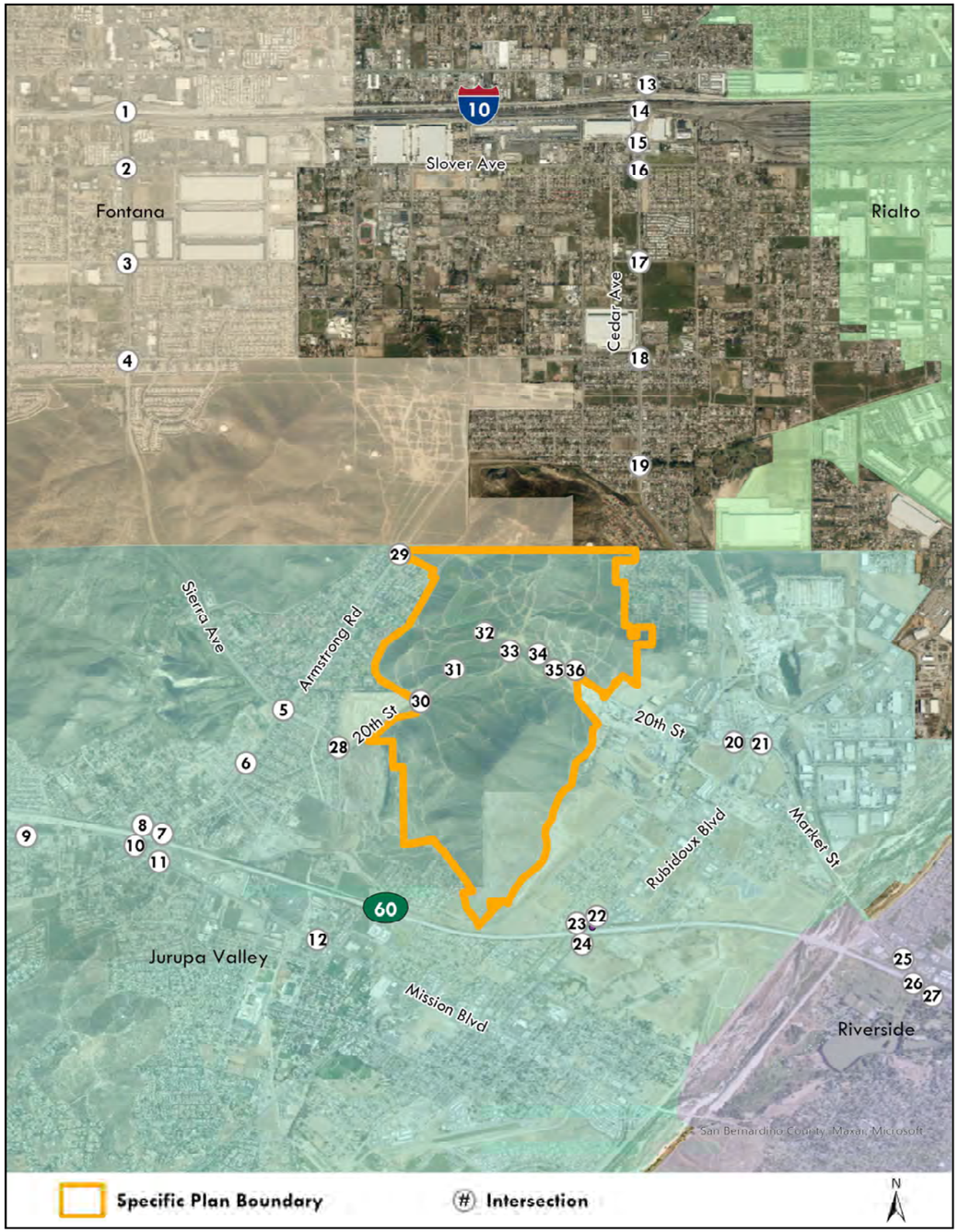


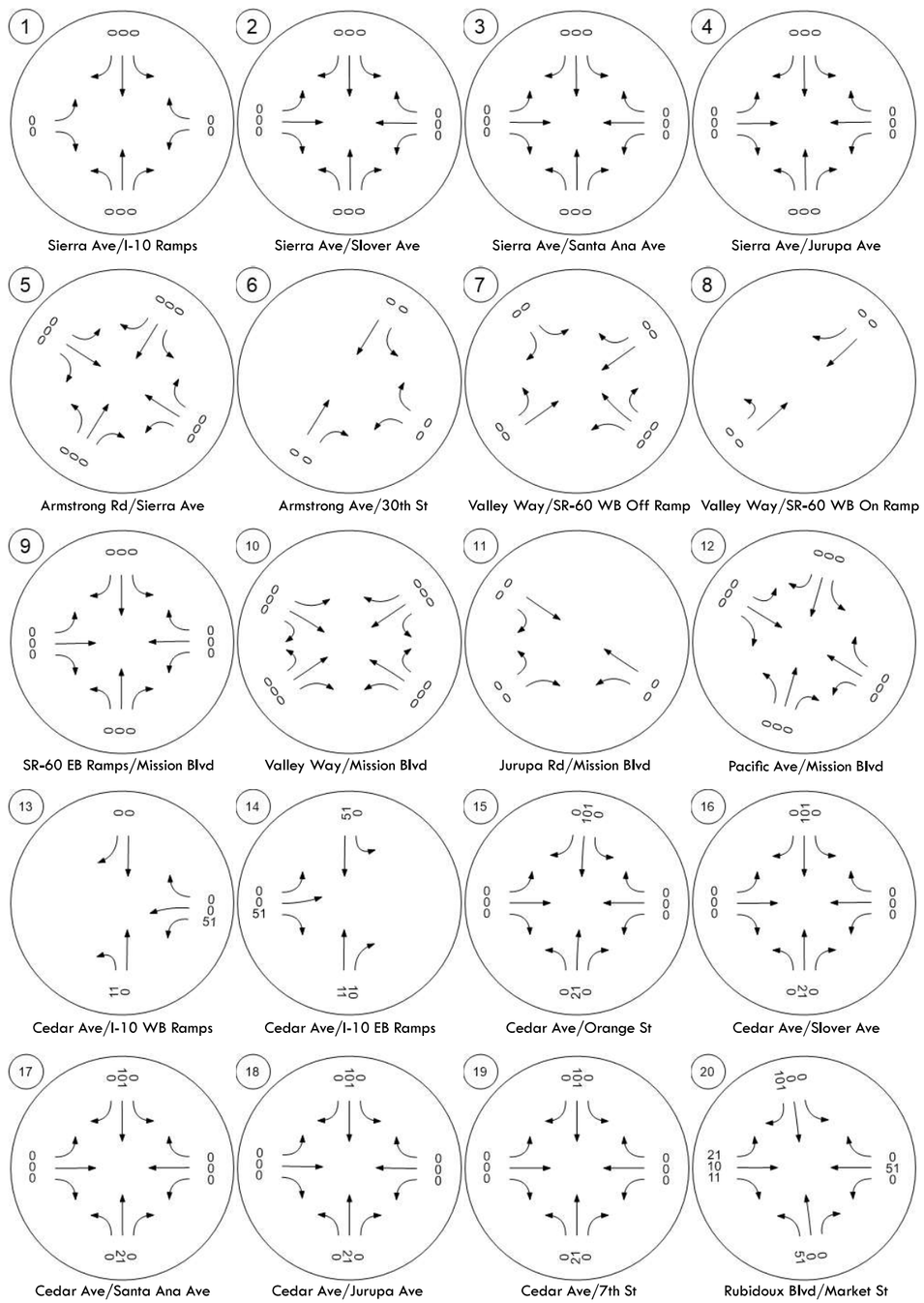
Industrial/Business Park Auto PM Assignment (B)



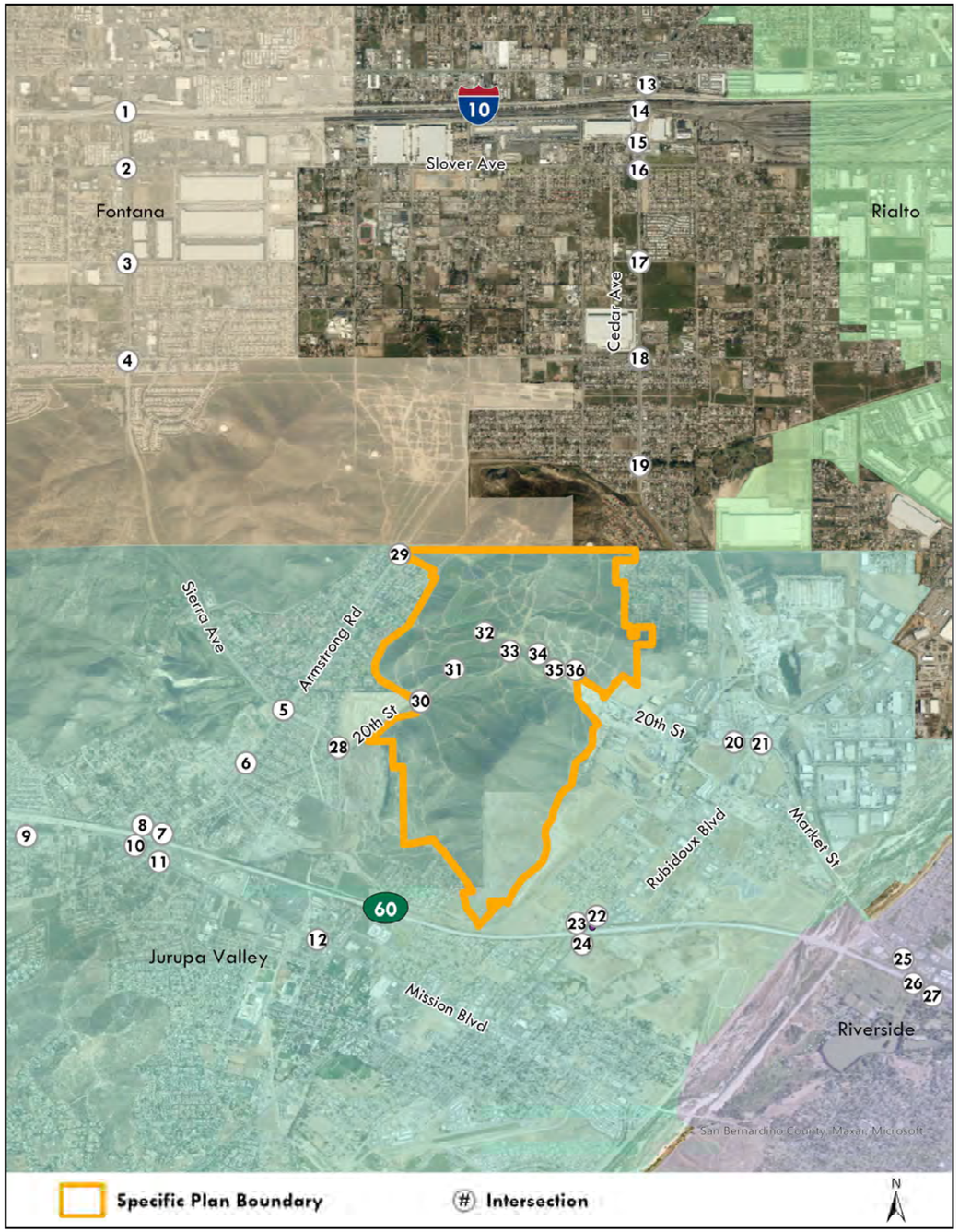


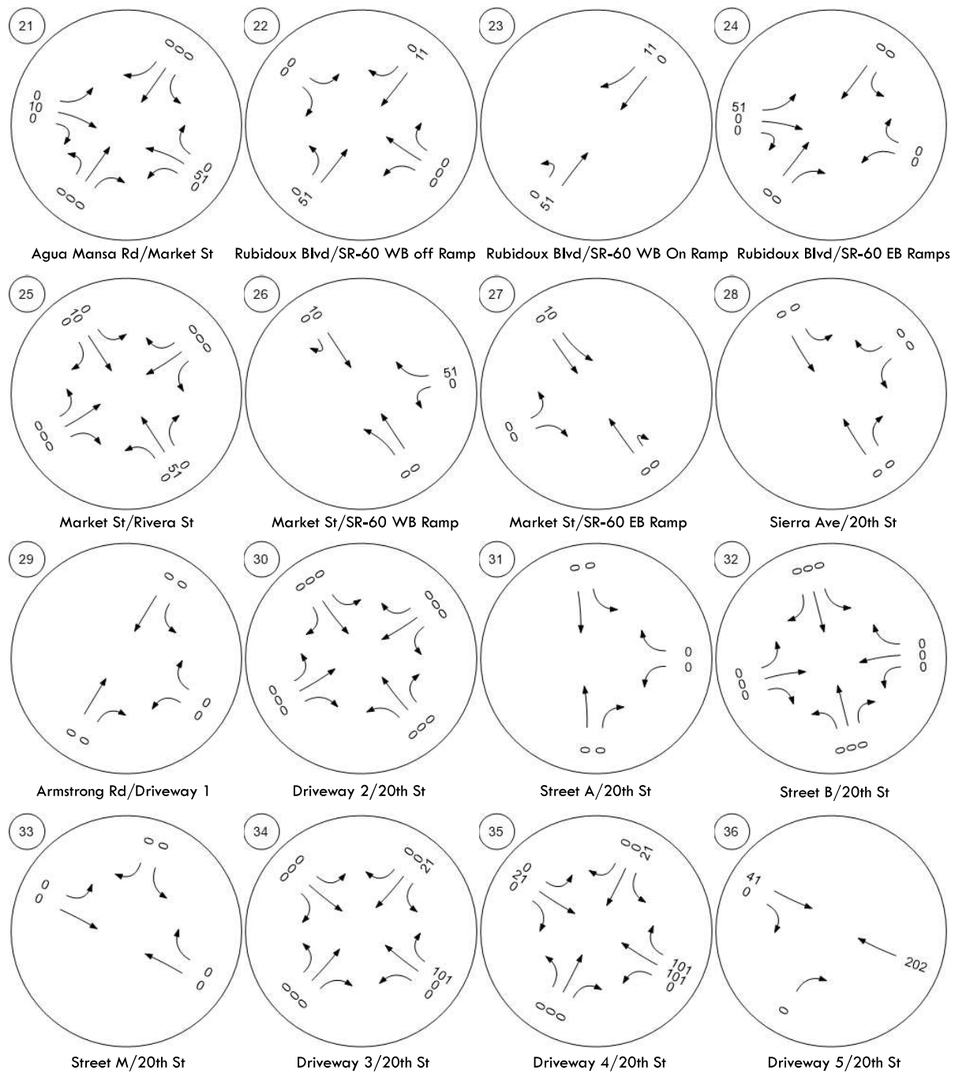
Industiral Truck AM Assignment (A)



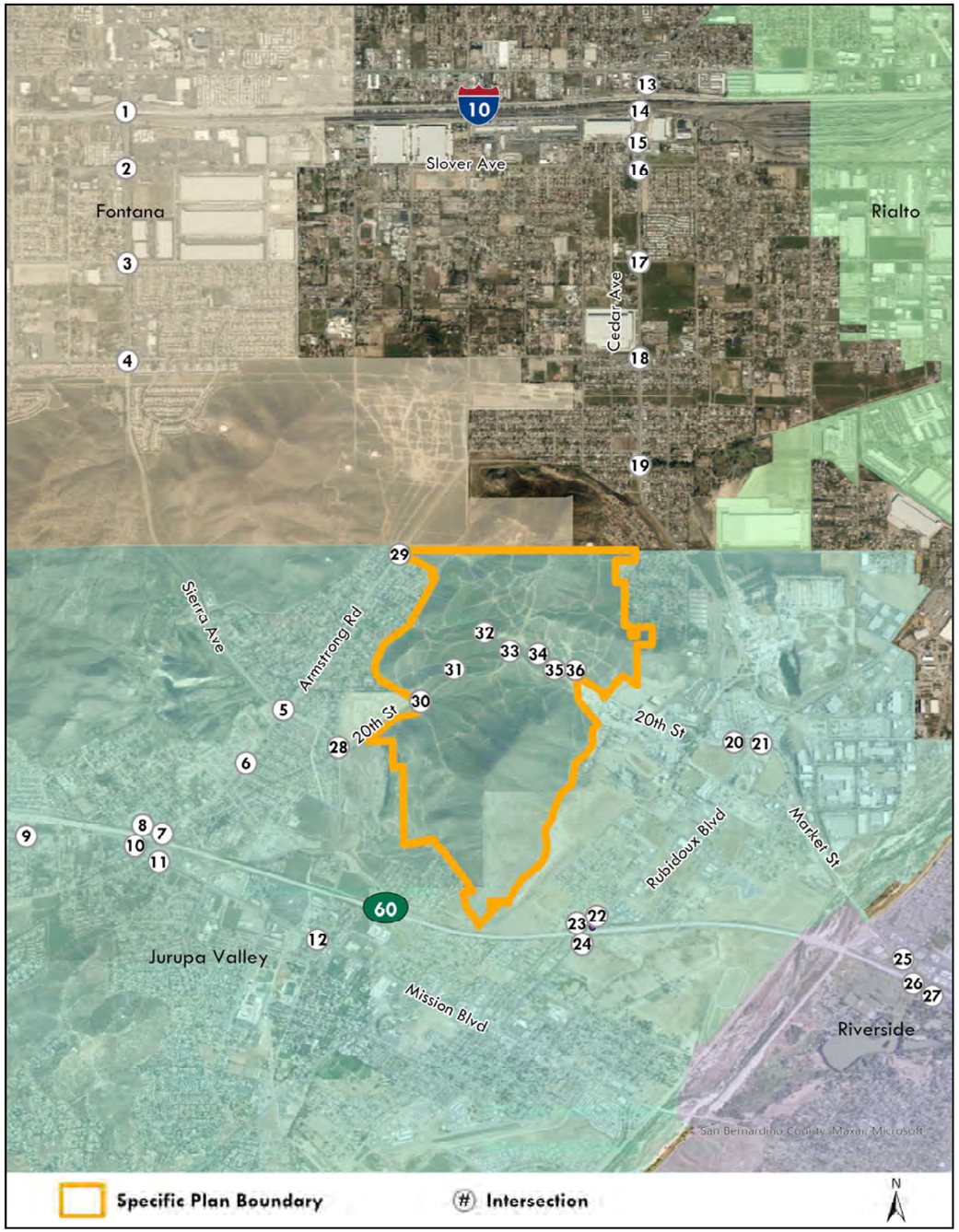


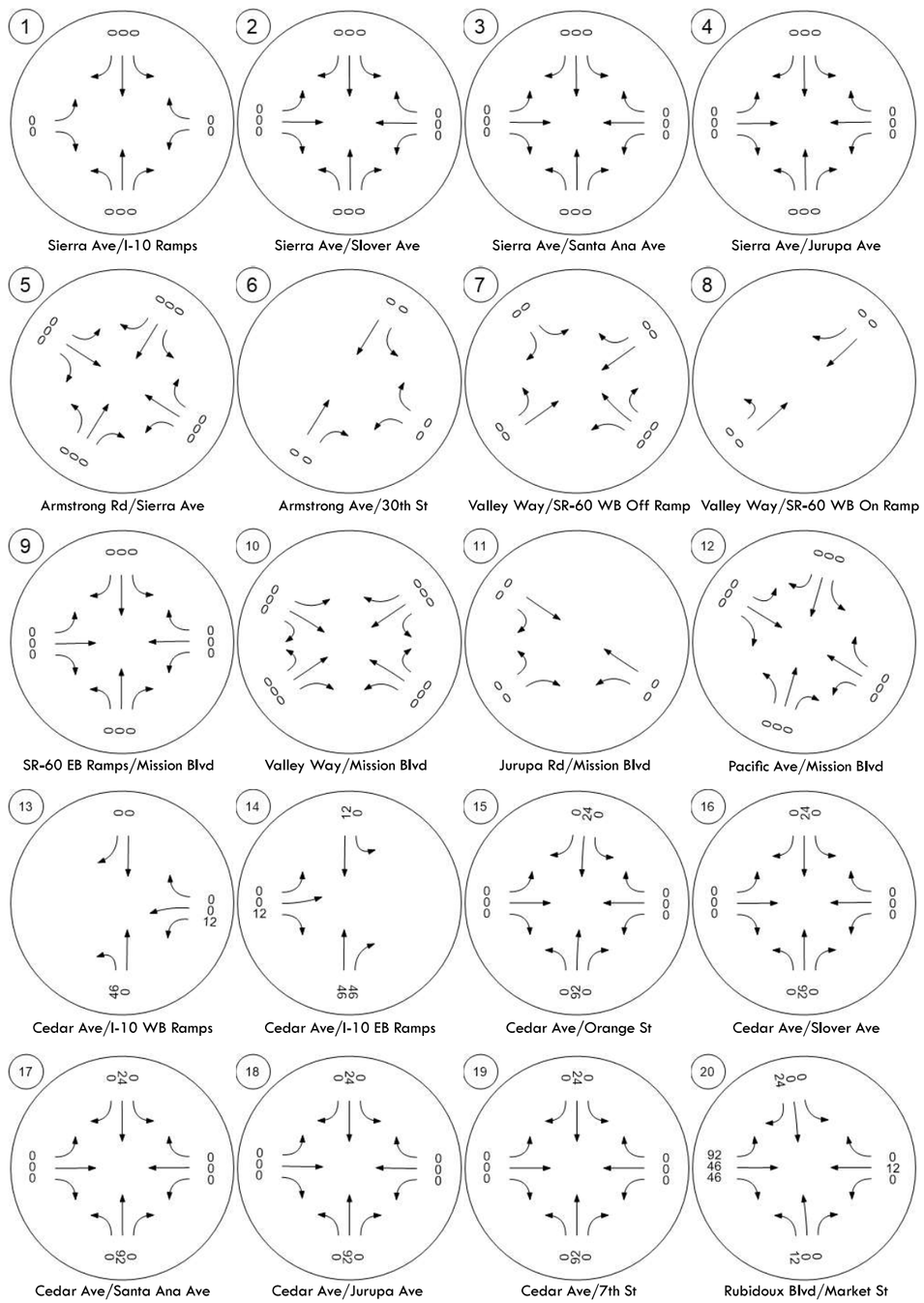
Industrial Truck AM Assignment (B)



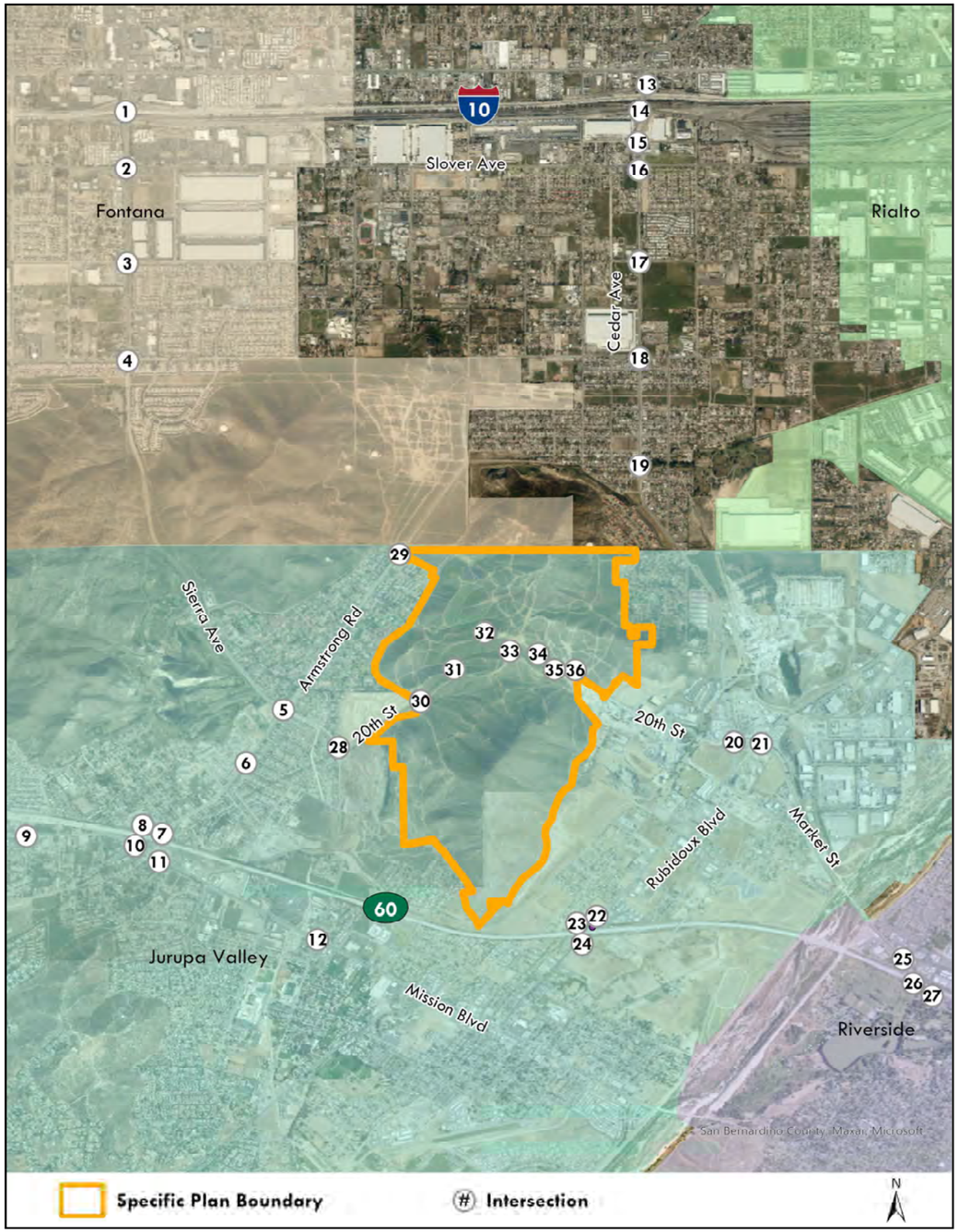


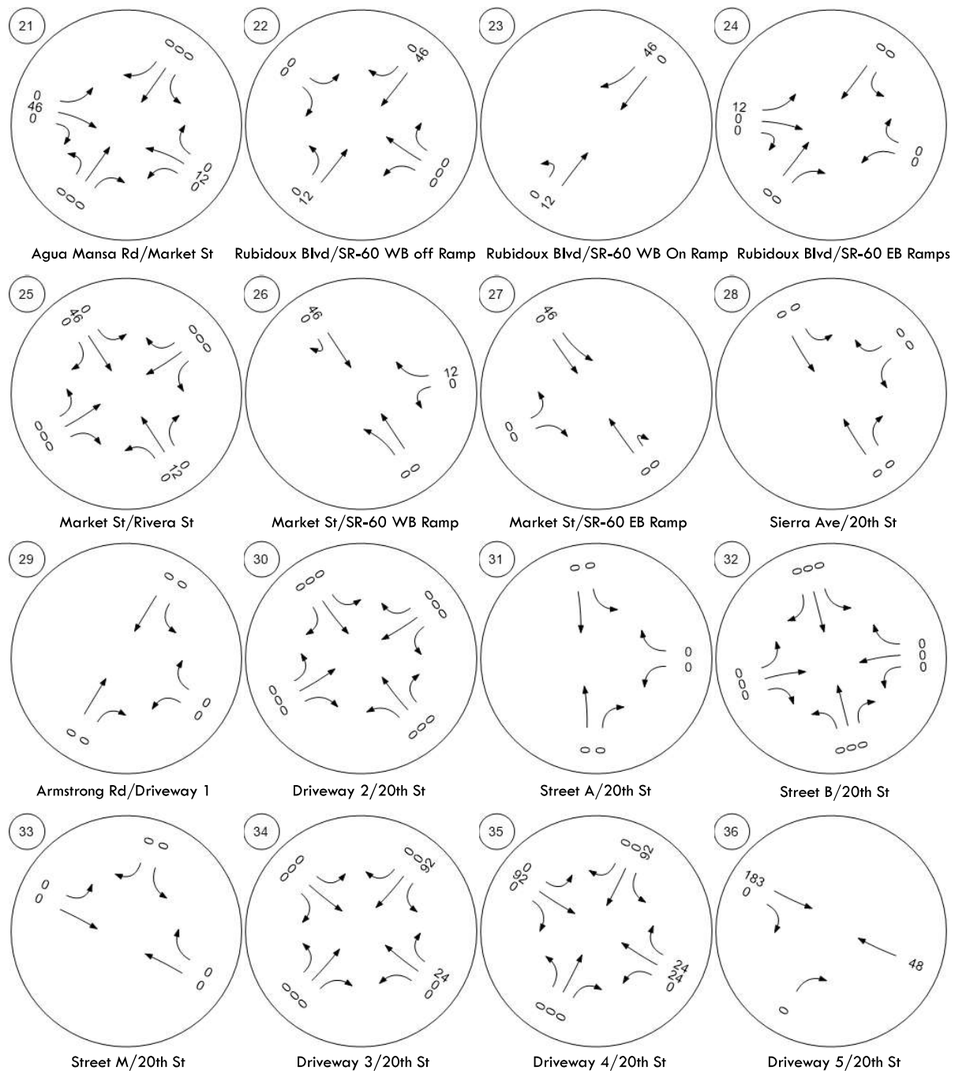
Industrial Truck PM Assignment (A)



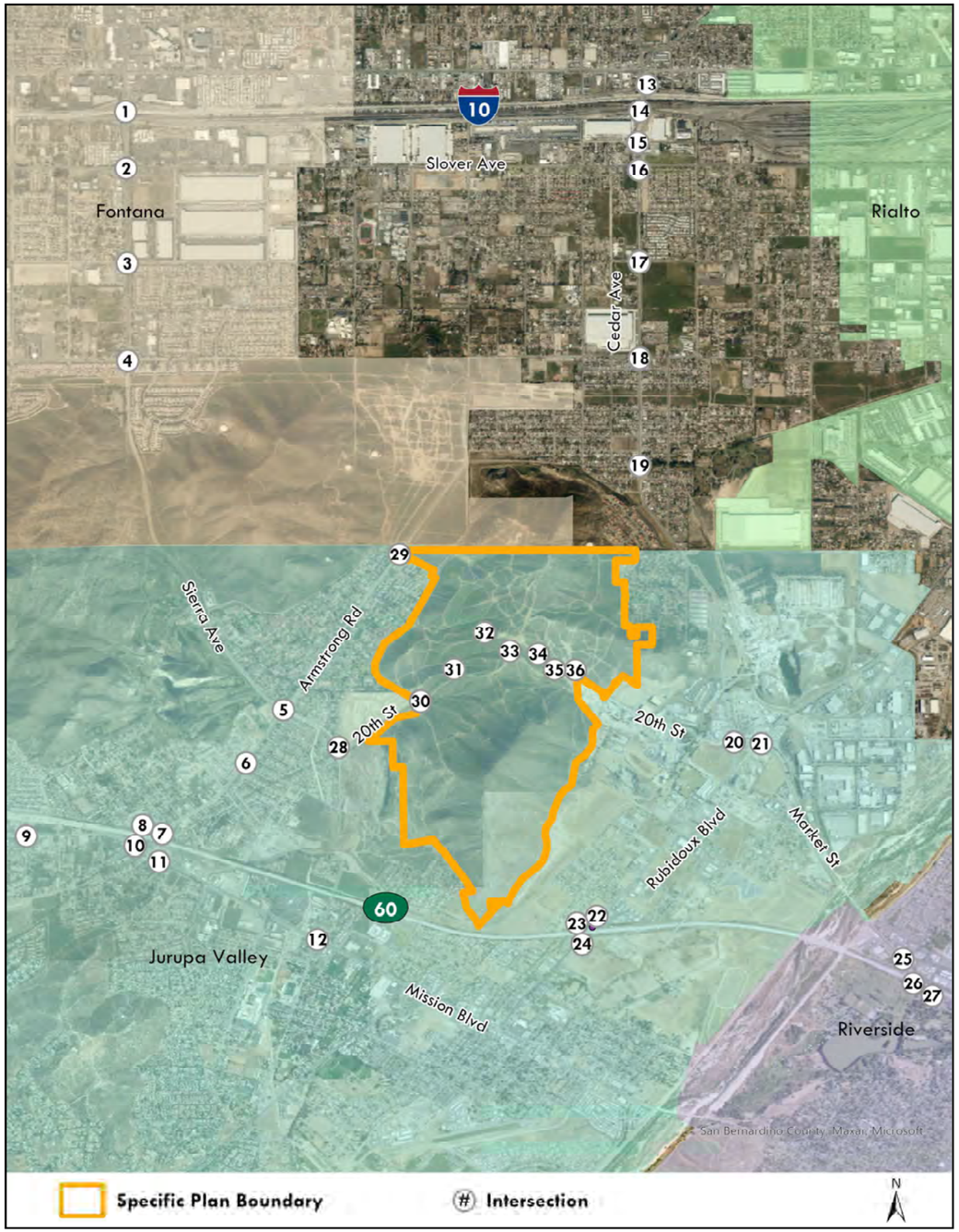


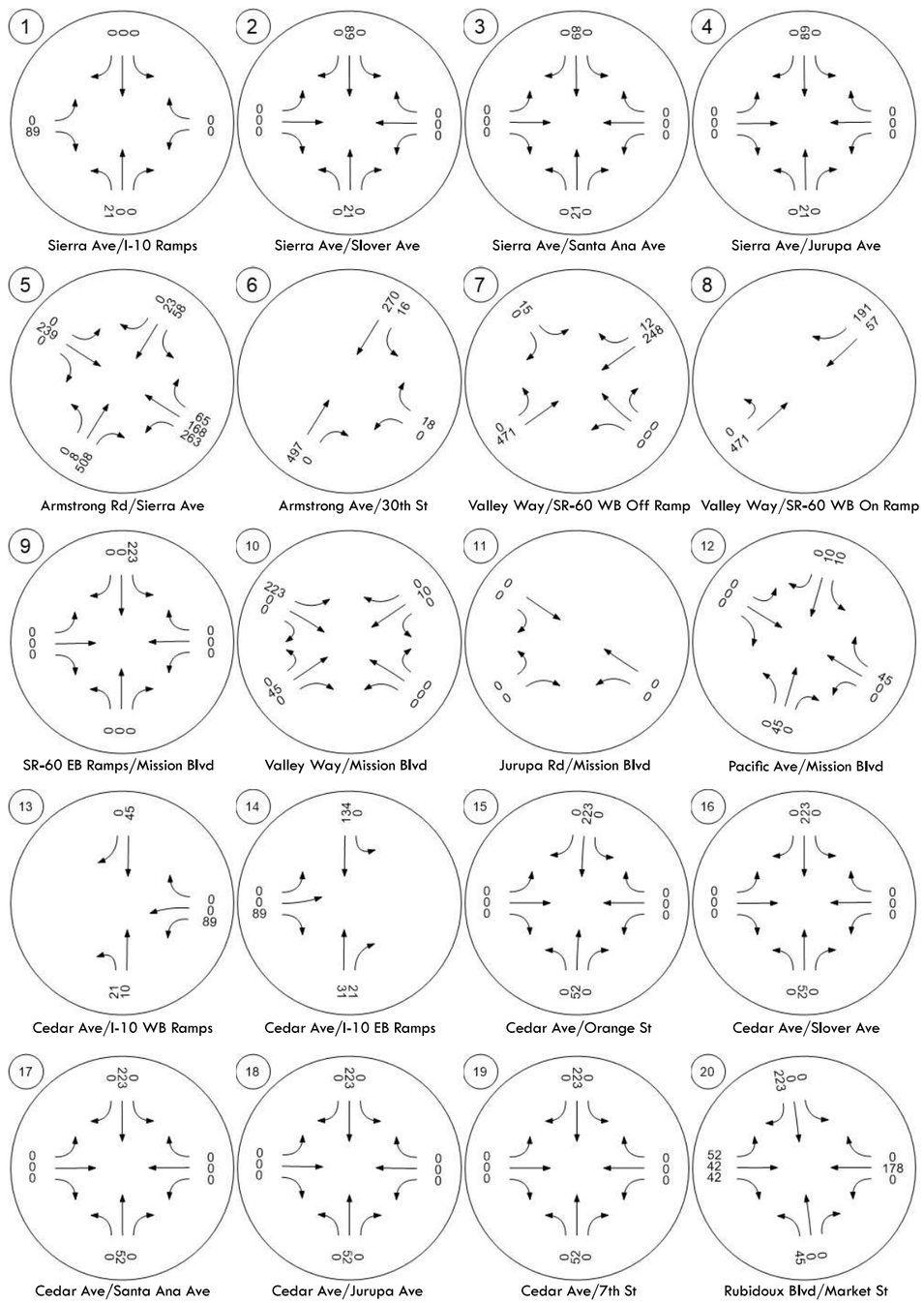
Industrial Truck PM Assignment (B)



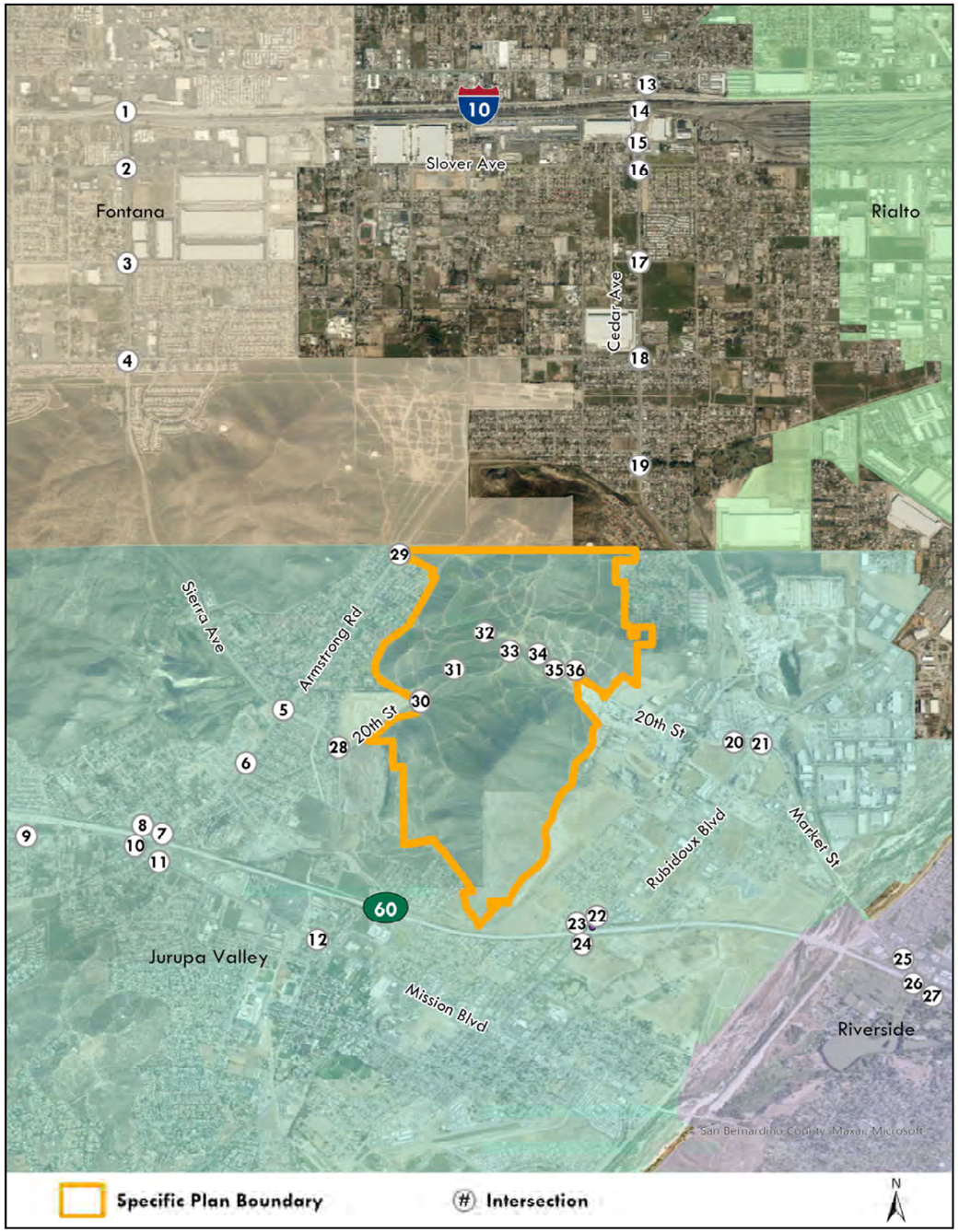


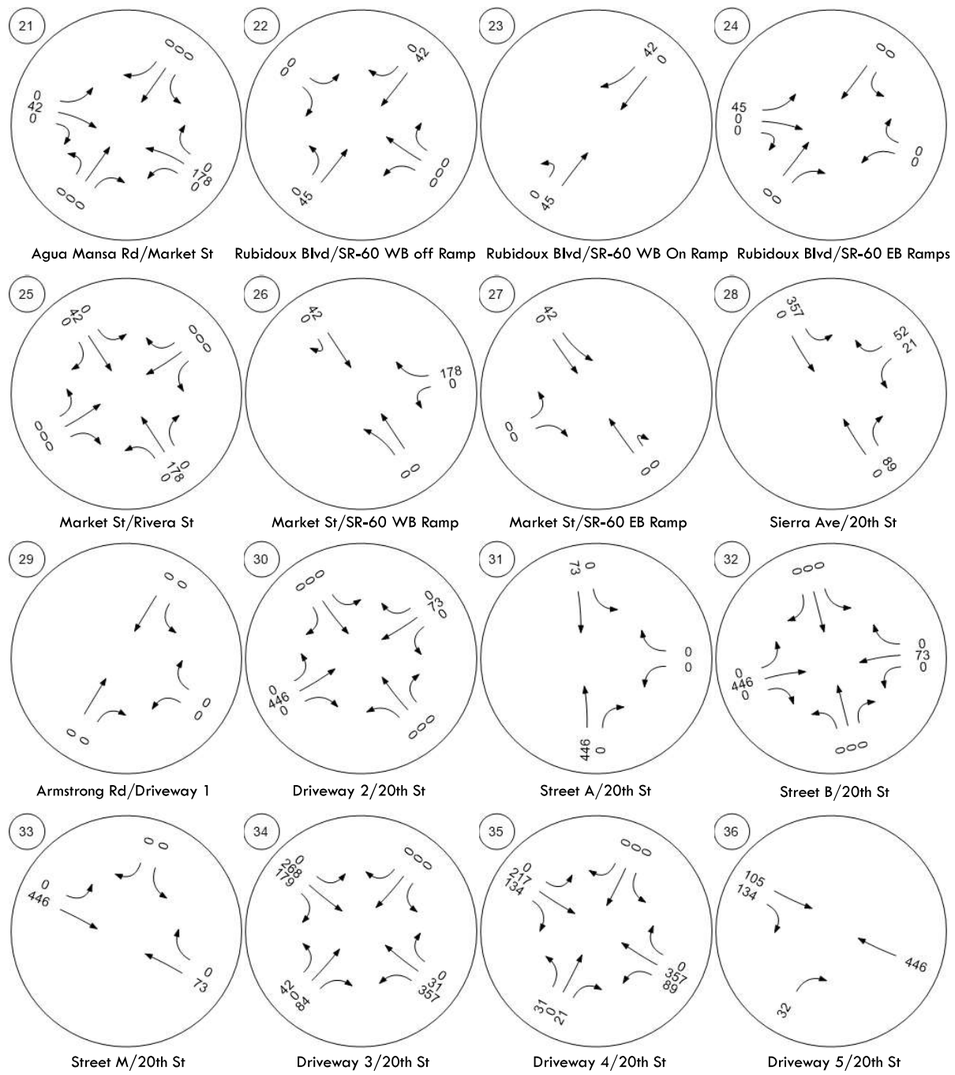
Technical School AM Assignment (A)



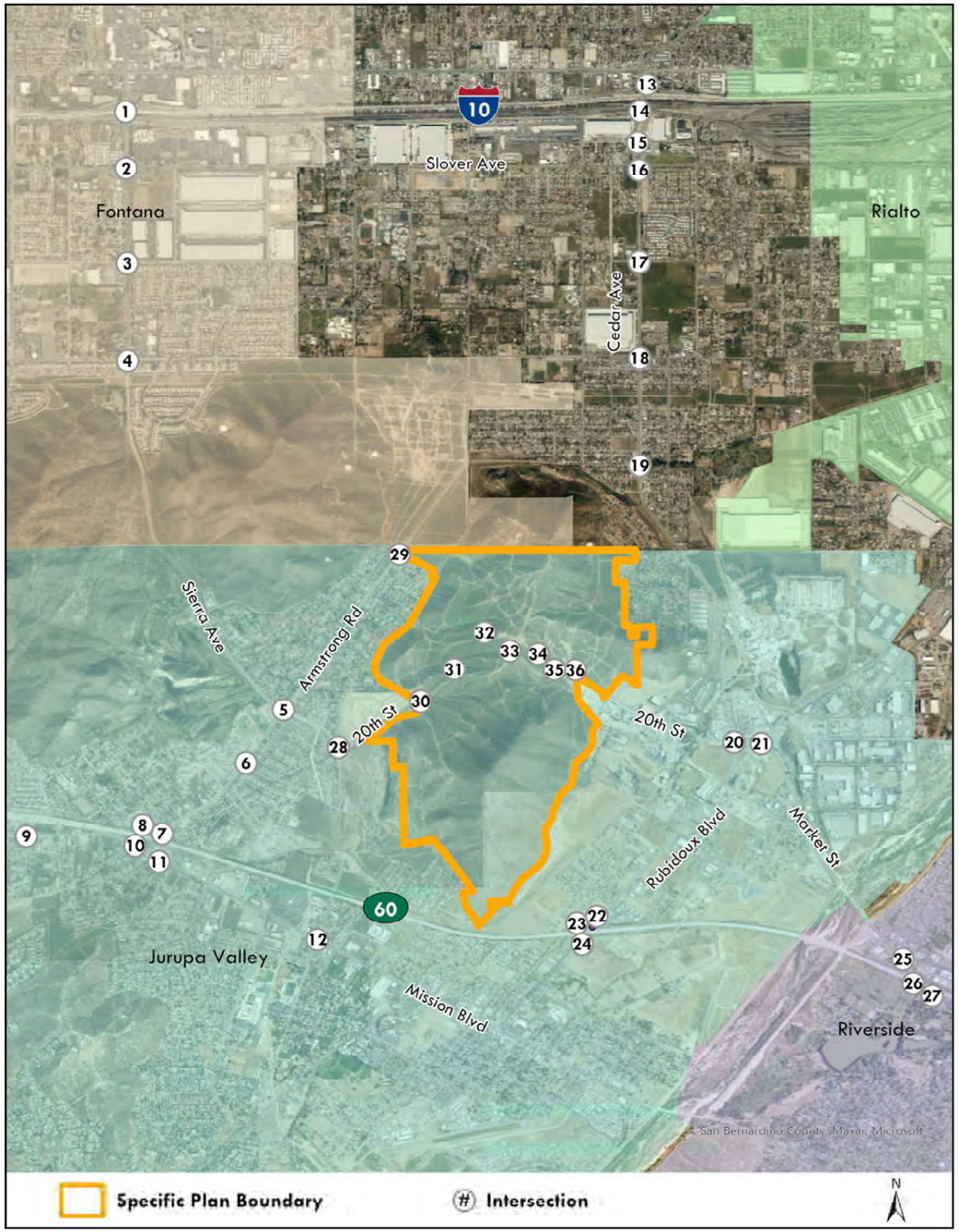


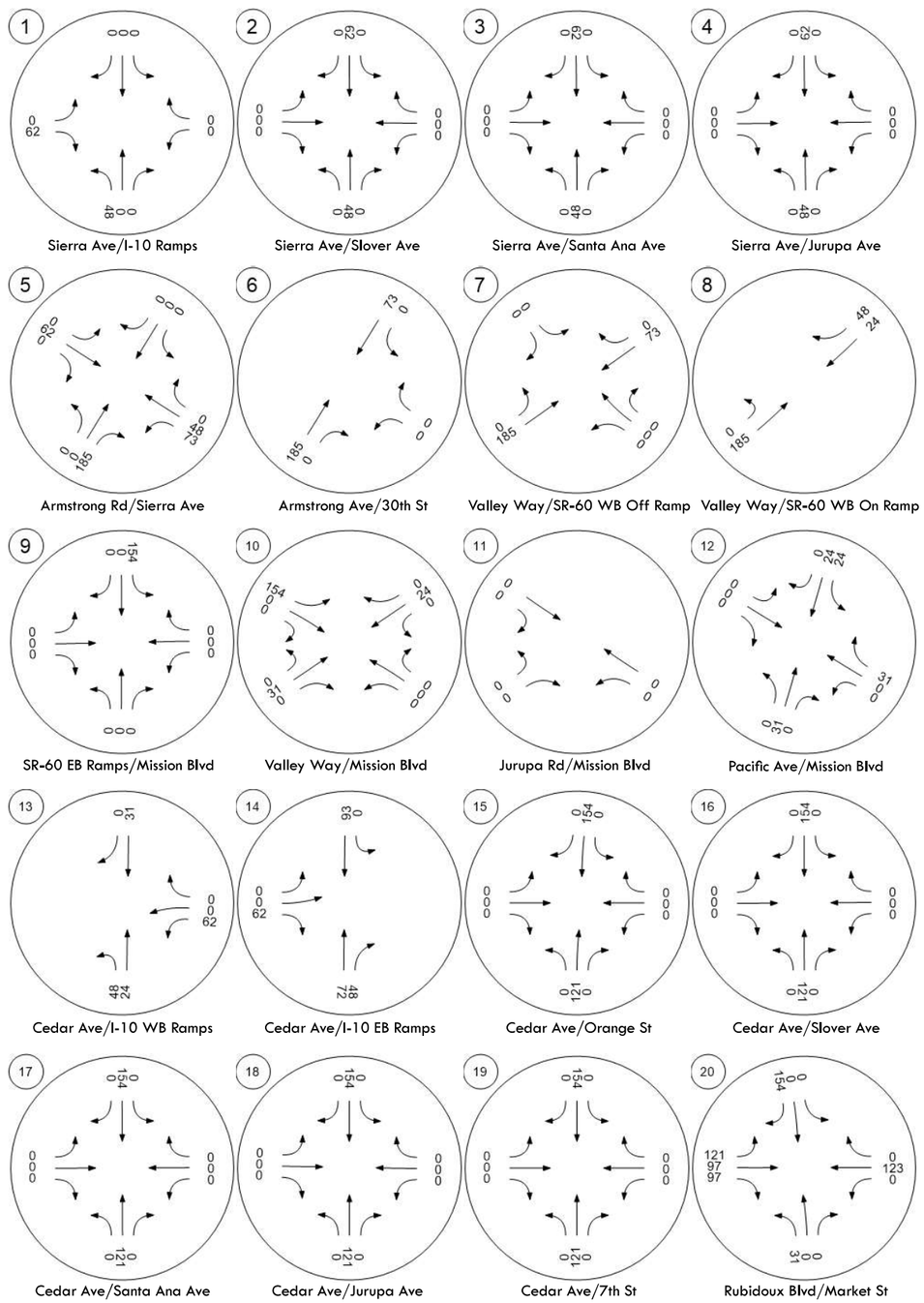
Technical School AM Assignment (B)



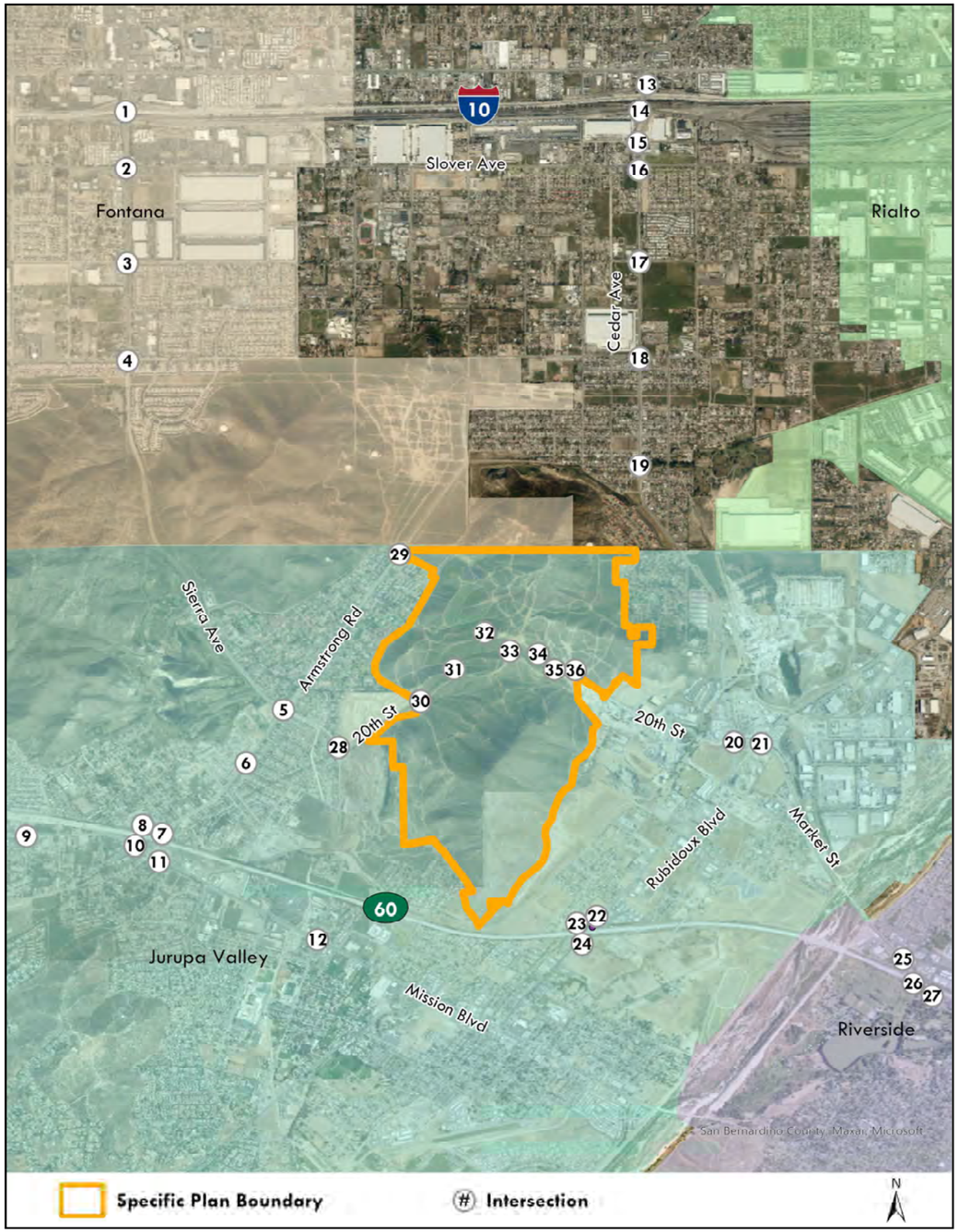


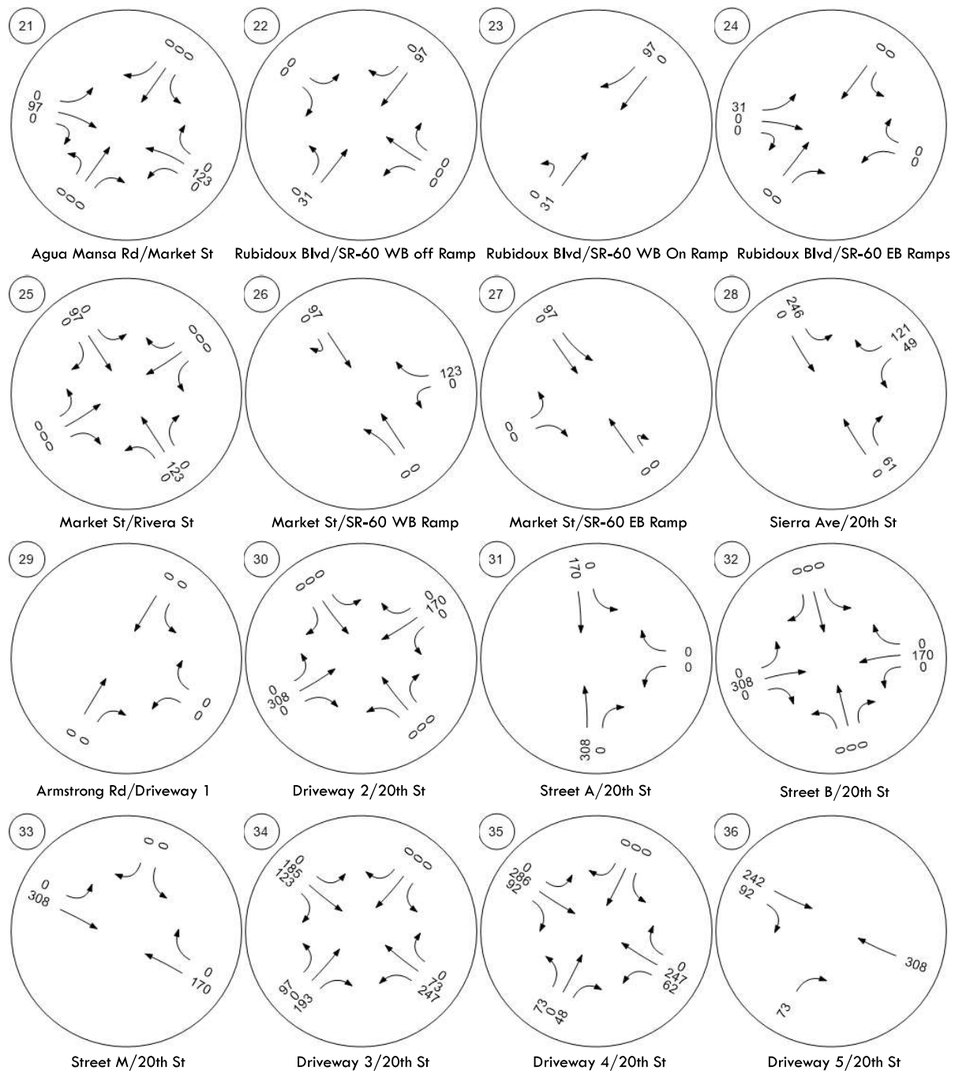
Technical School PM Assignment (A)





Technical School PM Assignment (B)





APPENDIX E – 2045 POST PROCESSING SHEETS

Existing Traffic Volumes

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	415	804	418	538	840	747	861	0	448	432	0	558
2	104	1026	108	577	851	284	181	267	56	65	267	444
3	170	1000	52	95	675	101	111	70	71	51	104	96
4	284	740	49	33	395	208	248	187	205	128	241	100
5	933	209	85	15	344	50	40	18	649	84	44	23
6		1191	37	13	1061					65		31
7	91	695			1082	10	52		170	193	100	546
8	218	786			1039	406						
9	12	2	4	364	4	45	103	338	6	5	354	234
10	16	364	45	403	329	351	300	296	17	56	167	588
11	25		170					687	22	127	748	
12	111	39	102	14	68	85	93	606	65	153	600	22
13	273	1231			1321	718				441	3	410
14		1029	404	420	1339		476	3	373			
15	4	1026	3	107	1143	456	272	5	13	0	1	136
16	163	734	14	103	851	163	211	154	73	19	204	101
17	84	759	20	46	874	55	66	82	80	47	88	44
18	36	678	43	87	901	21	50	73	53	42	72	136
19	40	663	6	19	861	21	25	9	110	42	14	12
20	8	228	277	520	544	88	64	72	62	261	41	397
21	0	3	0	123	0	312	283	547	3	0	455	196
22	37	587			872	18	16	0	158	386	67	79
23	271	624			776	642						
24		505	483	149	612		382	10	182	8		3
25	17	709	259	35	797	3	0	0	29	259	3	52
26	188	330			944	141				70		655
27		408	141	601	412		113		511			
28		61	0	0	129					0		0
29		225	0	0	298					0		0
30												
31												
32												
33												
34												
35												

Existing Link Volumes												
NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)			
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	1637	1720	3357	2125	2223	4348	1309	1162	2471	990	956	1946
2	1238	972	2210	1712	1651	3363	504	655	1159	776	952	1728
3	1222	797	2019	871	1207	2078	252	375	627	251	217	468
4	1073	728	1801	636	1088	1724	640	733	1373	469	269	738
5	1227	1077	2304	409	272	681	707	1027	1734	151	118	269
6	1228	1126	2354	1074	1222	2296	0	0	0	96	50	146
7	786	1445	2231	1092	1293	2385	222	201	423	839	0	839
8	1004	1039	2043	1445	786	2231	0	624	624	0	0	0
9	18	15	33	413	339	752	447	411	858	593	706	1299
10	425	402	827	1083	1252	2335	613	534	1147	811	744	1555
11	195	149	344	0	0	0	709	773	1482	875	857	1732
12	252	286	538	167	154	321	764	796	1560	775	722	1497
13	1504	1762	3266	2039	1641	3680	0	994	994	854	0	854
14	1433	1712	3145	1759	1505	3264	852	0	852	0	827	827
15	1033	1156	2189	1706	1434	3140	290	461	751	137	115	252
16	911	943	1854	1117	1046	2163	438	530	968	324	271	595
17	863	1001	1864	975	869	1844	228	227	455	179	148	327
18	757	996	1753	1009	864	1873	176	129	305	250	203	453
19	709	1013	1722	901	700	1601	144	75	219	68	34	102
20	513	867	1380	1152	689	1841	198	137	335	699	869	1568
21	3	3	6	435	482	917	833	767	1600	651	670	1321
22	624	1416	2040	890	682	1572	174	122	296	532	0	532
23	895	776	1671	1418	624	2042	0	913	913	0	0	0
24	988	802	1790	761	890	1651	574	0	574	11	642	653
25	985	1085	2070	835	761	1596	29	23	52	314	294	608
26	518	1014	1532	1085	985	2070	0	329	329	725	0	725
27	549	923	1472	1013	521	1534	624	0	624	0	742	742
28	61	129	190	129	61	190	0	0	0	0	0	0
29	225	298	523	298	225	523	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0

BASE YEAR (MODEL)

Peak Period Modeled Base Year Link Volumes

	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	5148	4765	9913	9090	7796	16886	4313	4265	8578	1970	3695	5665
2	4620	4376	8996	4765	5148	9913	337	579	916	1178	797	1975
3	3160	2058	5218	3681	4325	8006	788	1068	1856	2588	2766	5354
4	4274	3838	8112	2058	3160	5218	2259	953	3212	862	1503	2365
5	5364	5017	10381	1236	1474	2710	3752	4090	7842	735	506	1241
6	4899	4770	9669	5017	5364	10381	0	0	0	465	247	712
7	4008	6507	10515	5356	5329	10685	469	244	713	2247	0	2247
8	6153	5562	11715	6507	4008	10515	0	3090	3090	0	0	0
9	0	0	0	2657	1667	4324	2968	2689	5657	2164	3432	5596
10	1801	1306	3107	3671	6876	10547	3432	2164	5596	4195	2754	6949
11	236	225	461	0	0	0	2754	4195	6949	4420	2990	7410
12	774	658	1432	1514	1427	2941	2997	3438	6435	2624	2386	5010
13	7032	5207	12239	8276	7411	15687	0	4541	4541	1852	0	1852
14	5343	5487	10830	5207	7032	12239	3649	0	3649	0	1680	1680
15	5343	5487	10830	5487	5343	10830	0	0	0	0	0	0
16	2419	2400	4819	5487	5343	10830	2110	2153	4263	1361	1479	2840
17	3463	3103	6566	2400	2419	4819	755	1106	1861	355	346	701
18	3152	3220	6372	3103	3463	6566	1049	979	2028	707	349	1056
19	3160	3289	6449	3269	3152	6421	20	8	28	0	0	0
20	4272	4187	8459	4635	4118	8753	0	0	0	2231	2834	5065
21	0	0	0	1824	2410	4234	2834	2231	5065	1421	1437	2858
22	3076	3348	6424	2690	3437	6127	0	0	0	2162	0	2162
23	3076	3348	6424	2690	3437	6127	0	1144	1144	0	0	0
24	4335	3283	7618	3348	3076	6424	1129	0	1129	0	2453	2453
25	3378	3478	6856	2978	2824	5802	0	0	0	652	707	1359
26	3356	3042	6398	3478	3378	6856	0	1807	1807	1394	0	1394
27	2927	3194	6121	3042	3356	6398	2473	0	2473	0	1892	1892
28	18	16	34	506	735	1241	0	0	0	752	524	1276
29	1449	1026	2475	1026	1449	2475	0	0	0	0	0	0
30	0	0	0	0	0	0	524	752	1276	752	524	1276
31	0	0	0	0	0	0	524	752	1276	752	524	1276
32	0	0	0	0	0	0	524	752	1276	752	524	1276
33	0	0	0	0	0	0	960	623	1583	623	960	1583
34	0	0	0	0	0	0	960	623	1583	623	960	1583
35	0	0	0	0	0	0	960	623	1583	623	960	1583

Peak Hour Modeled Base Year Link Volumes												
HOUR FACTOR	0.38											
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	1956	1811	3767	3454	2962	6417	1639	1621	3260	749	1404	2153
2	1756	1663	3418	1811	1956	3767	128	220	348	448	303	751
3	1201	782	1983	1399	1644	3042	299	406	705	983	1051	2035
4	1624	1458	3083	782	1201	1983	858	362	1221	328	571	899
5	2038	1906	3945	470	560	1030	1426	1554	2980	279	192	472
6	1862	1813	3674	1906	2038	3945	0	0	0	177	94	271
7	1523	2473	3996	2035	2025	4060	178	93	271	854	0	854
8	2338	2114	4452	2473	1523	3996	0	1174	1174	0	0	0
9	0	0	0	1010	633	1643	1128	1022	2150	822	1304	2126
10	684	496	1181	1395	2613	4008	1304	822	2126	1594	1047	2641
11	90	86	175	0	0	0	1047	1594	2641	1680	1136	2816
12	294	250	544	575	542	1118	1139	1306	2445	997	907	1904
13	2672	1979	4651	3145	2816	5961	0	1726	1726	704	0	704
14	2030	2085	4115	1979	2672	4651	1387	0	1387	0	638	638
15	2030	2085	4115	2085	2030	4115	0	0	0	0	0	0
16	919	912	1831	2085	2030	4115	802	818	1620	517	562	1079
17	1316	1179	2495	912	919	1831	287	420	707	135	131	266
18	1198	1224	2421	1179	1316	2495	399	372	771	269	133	401
19	1201	1250	2451	1242	1198	2440	8	3	11	0	0	0
20	1623	1591	3214	1761	1565	3326	0	0	0	848	1077	1925
21	0	0	0	693	916	1609	1077	848	1925	540	546	1086
22	1169	1272	2441	1022	1306	2328	0	0	0	822	0	822
23	1169	1272	2441	1022	1306	2328	0	435	435	0	0	0
24	1647	1248	2895	1272	1169	2441	429	0	429	0	932	932
25	1284	1322	2605	1132	1073	2205	0	0	0	248	269	516
26	1275	1156	2431	1322	1284	2605	0	687	687	530	0	530
27	1112	1214	2326	1156	1275	2431	940	0	940	0	719	719
28	7	6	13	192	279	472	0	0	0	286	199	485
29	551	390	941	390	551	941	0	0	0	0	0	0
30	0	0	0	0	0	0	199	286	485	286	199	485
31	0	0	0	0	0	0	199	286	485	286	199	485
32	0	0	0	0	0	0	199	286	485	286	199	485
33	0	0	0	0	0	0	365	237	602	237	365	602
34	0	0	0	0	0	0	365	237	602	237	365	602

35	0	0	0	0	0	0	365	237	602	237	365	602

FUTURE YEAR (MODEL)

Peak Period Modeled Future Year Link Volumes												
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	5001	4261	9262	7373	7031	14404	4426	4594	9020	1139	2054	3193
2	4994	4175	9169	4261	5001	9262	37	533	570	627	209	836
3	3049	1972	5021	3197	4551	7748	1029	1530	2559	3283	2504	5787
4	5301	4918	10219	1972	3049	5021	2393	1889	4282	2390	2199	4589
5	5155	4844	9999	2023	2505	4528	4835	5082	9917	3279	2861	6140
6	4902	5230	10132	4844	5155	9999	0	0	0	1287	649	1936
7	3816	6182	9998	5230	4902	10132	530	459	989	1968	0	1968
8	6041	4767	10808	6182	3816	9998	0	3640	3640	0	0	0
9	0	0	0	3096	1629	4725	2884	2620	5504	1846	3576	5422
10	1757	1542	3299	2916	6462	9378	3576	1846	5422	3694	2092	5786
11	393	314	707	0	0	0	2092	3694	5786	4008	2485	6493
12	1572	1342	2914	2127	2396	4523	3076	3473	6549	3498	3062	6560
13	9017	6948	15965	9953	9077	19030	0	4842	4842	1897	0	1897
14	6394	6301	12695	6948	9017	15965	4711	0	4711	0	1368	1368
15	6378	6157	12535	6301	6394	12695	0	0	0	16	144	160
16	2915	2464	5379	6157	6378	12535	3374	3558	6932	1896	1941	3837
17	3357	2811	6168	2464	2915	5379	405	669	1074	423	253	676
18	3361	3226	6587	2811	3357	6168	900	399	1299	198	290	488
19	3733	3261	6994	3226	3726	6952	36	7	43	0	0	0
20	4187	3448	7635	4619	4608	9227	399	72	471	3106	4183	7289
21	0	0	0	1500	3166	4666	4183	3106	7289	3299	2710	6009
22	2663	4106	6769	2247	3779	6026	0	0	0	2975	0	2975
23	3351	3415	6766	4106	2663	6769	0	1378	1378	0	0	0
24	4181	3327	7508	3415	3351	6766	1331	0	1331	423	2671	3094
25	3638	3901	7539	3590	3337	6927	0	0	0	594	584	1178
26	3609	3617	7226	3901	3638	7539	0	2467	2467	2213	0	2213
27	3387	3258	6645	3617	3609	7226	2497	0	2497	0	2634	2634
28	2300	1930	4230	2861	3279	6140	0	0	0	1155	780	1935
29	2501	1828	4329	1828	2501	4329	0	0	0	0	0	0
30	0	0	0	0	0	0	780	1155	1935	1155	780	1935
31	0	0	0	0	0	0	780	1155	1935	1155	780	1935
32	0	0	0	0	0	0	780	1155	1935	1155	780	1935
33	0	0	0	0	0	0	1252	666	1918	666	1252	1918
34	0	0	0	0	0	0	1252	666	1918	666	1252	1918
35	0	0	0	0	0	0	1252	666	1918	666	1252	1918

Peak Hour Modeled Future Year Link Volumes												
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	1900	1619	3520	2802	2672	5474	1682	1746	3428	433	781	1213
2	1898	1587	3484	1619	1900	3520	14	203	217	238	79	318
3	1159	749	1908	1215	1729	2944	391	581	972	1248	952	2199
4	2014	1869	3883	749	1159	1908	909	718	1627	908	836	1744
5	1959	1841	3800	769	952	1721	1837	1931	3768	1246	1087	2333
6	1863	1987	3850	1841	1959	3800	0	0	0	489	247	736
7	1450	2349	3799	1987	1863	3850	201	174	376	748	0	748
8	2296	1811	4107	2349	1450	3799	0	1383	1383	0	0	0
9	0	0	0	1176	619	1796	1096	996	2092	701	1359	2060
10	668	586	1254	1108	2456	3564	1359	701	2060	1404	795	2199
11	149	119	269	0	0	0	795	1404	2199	1523	944	2467
12	597	510	1107	808	910	1719	1169	1320	2489	1329	1164	2493
13	3426	2640	6067	3782	3449	7231	0	1840	1840	721	0	721
14	2430	2394	4824	2640	3426	6067	1790	0	1790	0	520	520
15	2424	2340	4763	2394	2430	4824	0	0	0	6	55	61
16	1108	936	2044	2340	2424	4763	1282	1352	2634	720	738	1458
17	1276	1068	2344	936	1108	2044	154	254	408	161	96	257
18	1277	1226	2503	1068	1276	2344	342	152	494	75	110	185
19	1419	1239	2658	1226	1416	2642	14	3	16	0	0	0
20	1591	1310	2901	1755	1751	3506	152	27	179	1180	1590	2770
21	0	0	0	570	1203	1773	1590	1180	2770	1254	1030	2283
22	1012	1560	2572	854	1436	2290	0	0	0	1131	0	1131
23	1273	1298	2571	1560	1012	2572	0	524	524	0	0	0
24	1589	1264	2853	1298	1273	2571	506	0	506	161	1015	1176
25	1382	1482	2865	1364	1268	2632	0	0	0	226	222	448
26	1371	1374	2746	1482	1382	2865	0	937	937	841	0	841
27	1287	1238	2525	1374	1371	2746	949	0	949	0	1001	1001
28	874	733	1607	1087	1246	2333	0	0	0	439	296	735
29	950	695	1645	695	950	1645	0	0	0	0	0	0
30	0	0	0	0	0	0	296	439	735	439	296	735
31	0	0	0	0	0	0	296	439	735	439	296	735
32	0	0	0	0	0	0	296	439	735	439	296	735
33	0	0	0	0	0	0	476	253	729	253	476	729
34	0	0	0	0	0	0	476	253	729	253	476	729
35	0	0	0	0	0	0	476	253	729	253	476	729

Total Modeled Growth												
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	-0.0286	-0.1058		-0.1889	-0.0981		0.0262	0.0771		-0.4218	-0.4441	
2	0.0810	-0.0459		-0.1058	-0.0286		-0.8902	-0.0794		-0.4677	-0.7378	
3	-0.0351	-0.0418		-0.1315	0.0523		0.3058	0.4326		0.2685	-0.0947	
4	0.2403	0.2814		-0.0418	-0.0351		0.0593	0.9822		1.7726	0.4631	
5	-0.0390	-0.0345		0.6367	0.6995		0.2886	0.2425		3.4612	4.6542	
6	0.0006	0.0964		-0.0345	-0.0390		0.0000	0.0000		1.7677	1.6275	
7	-0.0479	-0.0499		-0.0235	-0.0801		0.1301	0.8811		-0.1242	0.0000	
8	-0.0182	-0.1429		-0.0499	-0.0479		0.0000	0.1780		0.0000	0.0000	
9	0.0000	0.0000		0.1652	-0.0228		-0.0283	-0.0257		-0.1470	0.0420	
10	-0.0244	0.1807		-0.2057	-0.0602		0.0420	-0.1470		-0.1194	-0.2404	
11	0.6653	0.3956		0.0000	0.0000		-0.2404	-0.1194		-0.0932	-0.1689	
12	1.0310	1.0395		0.4049	0.6790		0.0264	0.0102		0.3331	0.2833	
13	0.2823	0.3344		0.2026	0.2248		0.0000	0.0663		0.0243	0.0000	
14	0.1967	0.1484		0.3344	0.2823		0.2910	0.0000		0.0000	-0.1857	
15	0.1937	0.1221		0.1484	0.1967		0.0000	0.0000		0.0000	0.0000	
16	0.2050	0.0267		0.1221	0.1937		0.5991	0.6526		0.3931	0.3124	
17	-0.0306	-0.0941		0.0267	0.2050		-0.4636	-0.3951		0.1915	-0.2688	
18	0.0663	0.0019		-0.0941	-0.0306		-0.1420	-0.5924		-0.7199	-0.1691	
19	0.1813	-0.0085		-0.0132	0.1821		0.8000	-0.1250		0.0000	0.0000	
20	-0.0199	-0.1765		-0.0035	0.1190		0.0000	0.0000		0.3922	0.4760	
21	0.0000	0.0000		-0.1776	0.3137		0.4760	0.3922		1.3216	0.8859	
22	-0.1343	0.2264		-0.1647	0.0995		0.0000	0.0000		0.3760	0.0000	
23	0.0894	0.0200		0.5264	-0.2252		0.0000	0.2045		0.0000	0.0000	
24	-0.0355	0.0134		0.0200	0.0894		0.1789	0.0000		0.0000	0.0889	
25	0.0770	0.1216		0.2055	0.1817		0.0000	0.0000		-0.0890	-0.1740	
26	0.0754	0.1890		0.1216	0.0770		0.0000	0.3652		0.5875	0.0000	
27	0.1572	0.0200		0.1890	0.0754		0.0097	0.0000		0.0000	0.3922	
28	126.7778	119.6250		4.6542	3.4612		0.0000	0.0000		0.5359	0.4885	
29	0.7260	0.7817		0.7817	0.7260		0.0000	0.0000		0.0000	0.0000	
30	0.0000	0.0000		0.0000	0.0000		0.4885	0.5359		0.5359	0.4885	
31	0.0000	0.0000		0.0000	0.0000		0.4885	0.5359		0.5359	0.4885	
32	0.0000	0.0000		0.0000	0.0000		0.4885	0.5359		0.5359	0.4885	
33	0.0000	0.0000		0.0000	0.0000		0.3042	0.0690		0.0690	0.3042	
34	0.0000	0.0000		0.0000	0.0000		0.3042	0.0690		0.0690	0.3042	
35	0.0000	0.0000		0.0000	0.0000		0.3042	0.0690		0.0690	0.3042	

Modeled Growth Per Year												
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	-0.0011	-0.0039		-0.0070	-0.0036		0.0010	0.0029		-0.0156	-0.0164	
2	0.0030	-0.0017		-0.0039	-0.0011		-0.0330	-0.0029		-0.0173	-0.0273	
3	-0.0013	-0.0015		-0.0049	0.0019		0.0113	0.0160		0.0099	-0.0035	
4	0.0089	0.0104		-0.0015	-0.0013		0.0022	0.0364		0.0657	0.0172	
5	-0.0014	-0.0013		0.0236	0.0259		0.0107	0.0090		0.1282	0.1724	
6	0.0000	0.0036		-0.0013	-0.0014		0.0000	0.0000		0.0655	0.0603	
7	-0.0018	-0.0018		-0.0009	-0.0030		0.0048	0.0326		-0.0046	0.0000	
8	-0.0007	-0.0053		-0.0018	-0.0018		0.0000	0.0066		0.0000	0.0000	
9	0.0000	0.0000		0.0061	-0.0008		-0.0010	-0.0010		-0.0054	0.0016	
10	-0.0009	0.0067		-0.0076	-0.0022		0.0016	-0.0054		-0.0044	-0.0089	
11	0.0246	0.0147		0.0000	0.0000		-0.0089	-0.0044		-0.0035	-0.0063	
12	0.0382	0.0385		0.0150	0.0251		0.0010	0.0004		0.0123	0.0105	
13	0.0105	0.0124		0.0075	0.0083		0.0000	0.0025		0.0009	0.0000	
14	0.0073	0.0055		0.0124	0.0105		0.0108	0.0000		0.0000	-0.0069	
15	0.0072	0.0045		0.0055	0.0073		0.0000	0.0000		0.0000	0.0000	
16	0.0076	0.0010		0.0045	0.0072		0.0222	0.0242		0.0146	0.0116	
17	-0.0011	-0.0035		0.0010	0.0076		-0.0172	-0.0146		0.0071	-0.0100	
18	0.0025	0.0001		-0.0035	-0.0011		-0.0053	-0.0219		-0.0267	-0.0063	
19	0.0067	-0.0003		-0.0005	0.0067		0.0296	-0.0046		0.0000	0.0000	
20	-0.0007	-0.0065		-0.0001	0.0044		0.0000	0.0000		0.0145	0.0176	
21	0.0000	0.0000		-0.0066	0.0116		0.0176	0.0145		0.0489	0.0328	
22	-0.0050	0.0084		-0.0061	0.0037		0.0000	0.0000		0.0139	0.0000	
23	0.0033	0.0007		0.0195	-0.0083		0.0000	0.0076		0.0000	0.0000	
24	-0.0013	0.0005		0.0007	0.0033		0.0066	0.0000		0.0000	0.0033	
25	0.0029	0.0045		0.0076	0.0067		0.0000	0.0000		-0.0033	-0.0064	
26	0.0028	0.0070		0.0045	0.0029		0.0000	0.0135		0.0218	0.0000	
27	0.0058	0.0007		0.0070	0.0028		0.0004	0.0000		0.0000	0.0145	
28	4.6955	4.4306		0.1724	0.1282		0.0000	0.0000		0.0198	0.0181	
29	0.0269	0.0290		0.0290	0.0269		0.0000	0.0000		0.0000	0.0000	
30	0.0000	0.0000		0.0000	0.0000		0.0181	0.0198		0.0198	0.0181	
31	0.0000	0.0000		0.0000	0.0000		0.0181	0.0198		0.0198	0.0181	
32	0.0000	0.0000		0.0000	0.0000		0.0181	0.0198		0.0198	0.0181	
33	0.0000	0.0000		0.0000	0.0000		0.0113	0.0026		0.0026	0.0113	
34	0.0000	0.0000		0.0000	0.0000		0.0113	0.0026		0.0026	0.0113	
35	0.0000	0.0000		0.0000	0.0000		0.0113	0.0026		0.0026	0.0113	

Future Baseline Peak Hour Link Volumes												
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	1595	1558	3154	1768	2029	3797	1339	1242	2581	619	579	1197
2	1327	932	2259	1551	1609	3160	105	609	714	453	328	781
3	1184	767	1951	769	1263	2032	321	519	840	311	199	510
4	1302	910	2212	612	1054	1666	674	1373	2047	1208	380	1588
5	1185	1044	2228	640	441	1082	888	1248	2137	616	606	1222
6	1229	1223	2451	1041	1180	2221	0	0	0	247	122	369
7	753	1381	2133	1069	1201	2270	248	358	606	746	0	746
8	988	907	1895	1381	753	2133	0	723	723	0	0	0
9	18	15	33	474	332	806	436	402	837	516	732	1248
10	416	467	882	885	1185	2070	636	464	1100	725	585	1310
11	310	201	512	0	0	0	558	691	1248	803	728	1531
12	483	550	1033	227	247	474	782	803	1585	1004	904	1908
13	1881	2286	4167	2406	1969	4375	0	1053	1053	872	0	872
14	1684	1938	3621	2282	1883	4164	1072	0	1072	0	690	690
15	1211	1281	2492	1931	1685	3616	290	461	751	137	115	252
16	1077	965	2042	1238	1226	2464	671	837	1509	437	346	783
17	840	917	1757	998	1027	2025	134	147	281	209	113	322
18	802	998	1799	925	840	1765	154	61	215	90	172	263
19	823	1005	1829	890	813	1704	246	67	313	68	34	102
20	504	731	1235	1148	762	1910	198	137	335	943	1237	2179
21	3	3	6	366	616	983	1185	1034	2220	1416	1198	2613
22	550	1701	2250	760	742	1502	174	122	296	710	0	710
23	966	790	1756	2081	499	2581	0	1079	1079	0	0	0
24	957	812	1768	775	961	1735	665	0	665	11	693	704
25	1052	1202	2255	988	884	1871	29	23	52	289	249	538
26	553	1184	1737	1202	1052	2255	0	436	436	1104	0	1104
27	626	939	1565	1183	556	1739	629	0	629	0	1001	1001
28	6935	13846	20781	663	249	911	0	0	0	0	0	0
29	370	505	875	505	370	875	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0

Existing Traffic Volumes

Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	591	1241	718	519	918	749	902	0	437	427	0	589
2	164	1274	177	687	973	148	346	687	89	219	385	894
3	190	1384	84	114	988	114	197	181	123	80	130	95
4	265	924	103	90	528	234	489	243	333	134	238	83
5	1181	737	38	8	185	40	171	59	700	54	45	44
6		1904	56	32	917					22		27
7	30	1155			809	4	230		85	294	60	572
8	168	1202			981	198						
9	20	1	15	1274	4	108	83	472	20	12	312	115
10	24	385	82	424	335	208	597	1013	31	52	192	422
11	14		245					1479	47	120	635	
12	91	36	66	29	27	77	136	1234	161	170	583	27
13	221	1349	0	0	1185	594	0	0	0	285	0	448
14		1015	350	367	1102		556	6	187			
15	10	814	2	85	955	246	280	22	15	11	7	272
16	96	541	25	116	773	89	189	355	135	19	261	125
17	148	631	53	70	765	48	62	135	122	22	132	43
18	78	736	76	105	800	45	51	198	72	45	64	69
19	125	776	12	45	796	33	30	29	293	40	12	26
20	25	354	433	469	604	52	47	111	29	276	60	535
21	0	0	0	120	0	316	491	532	0	0	534	174
22	61	783			863	12	13		135	448	72	92
23	203	843			953	494						
24		484	235	61	918		531	46	379	19		1
25	9	729	226	89	1006	1	1	13	53	201	0	50
26	249	341			1071	187				89		626
27		514	59	393	592		134	3	856			
28		100	0	0	67					0		0
29		868	0	0	224					0		0
30												
31												
32												
33												
34												
35												

Existing Link Volumes												
NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)			
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	2550	1782	4332	2186	2732	4918	1339	1340	2679	1016	1237	2253
2	1615	1281	2896	1808	2514	4322	1122	697	1819	1498	1551	3049
3	1658	1191	2849	1216	1676	2892	501	434	935	305	379	684
4	1292	995	2287	852	1496	2348	1065	737	1802	455	436	891
5	1956	939	2895	233	952	1185	930	1266	2196	143	105	248
6	1960	939	2899	949	1931	2880	0	0	0	49	88	137
7	1185	1188	2373	813	1957	2770	315	94	409	926	0	926
8	1370	981	2351	1179	1202	2381	0	366	366	0	0	0
9	36	36	72	1386	199	1585	575	440	1015	439	1761	2200
10	491	418	909	967	1404	2371	1641	424	2065	666	1519	2185
11	259	167	426	0	0	0	1526	649	2175	755	1724	2479
12	193	358	551	133	199	332	1531	751	2282	780	1329	2109
13	1570	1470	3040	1779	1797	3576	0	815	815	733	0	733
14	1365	1289	2654	1469	1571	3040	749	0	749	0	723	723
15	826	981	1807	1286	1366	2652	317	263	580	290	109	399
16	662	927	1589	978	855	1833	679	446	1125	405	496	901
17	832	909	1741	883	736	1619	319	328	647	197	258	455
18	890	917	1807	950	856	1806	321	187	508	178	379	557
19	913	1129	2042	874	832	1706	352	170	522	78	86	164
20	812	909	1721	1125	936	2061	187	137	324	871	1013	1884
21	0	0	0	436	665	1101	1023	850	1873	708	652	1360
22	844	1446	2290	875	888	1763	148	145	293	612	0	612
23	1046	953	1999	1447	843	2290	0	697	697	0	0	0
24	719	1316	2035	979	1016	1995	956	0	956	20	342	362
25	964	1260	2224	1096	780	1876	67	10	77	251	328	579
26	590	1160	1750	1258	967	2225	0	436	436	715	0	715
27	573	1448	2021	985	648	1633	993	0	993	0	455	455
28	100	67	167	67	100	167	0	0	0	0	0	0
29	868	224	1092	224	868	1092	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0

BASE YEAR (MODEL)

Peak Period Modeled Base Year Link Volumes

	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	6114	5765	11879	10877	11424	22301	6258	5969	12227	3480	3572	7052
2	5532	5382	10914	5765	6114	11879	483	385	868	1047	945	1992
3	2977	3333	6310	4941	4821	9762	1189	1117	2306	3299	3133	6432
4	5119	5136	10255	3333	2977	6310	1530	2204	3734	1696	1361	3057
5	6457	6599	13056	1814	1531	3345	4932	4979	9911	736	831	1567
6	6117	6075	12192	6599	6457	13056	0	0	0	341	524	865
7	4531	8297	12828	6771	6986	13757	524	453	977	3910	0	3910
8	6466	7066	13532	8297	4531	12828	0	3166	3166	0	0	0
9	0	0	0	4460	1852	6312	3240	2932	6172	2453	5369	7822
10	2072	2315	4387	5585	7110	12695	5369	2453	7822	3924	5073	8997
11	359	263	622	0	0	0	5073	3924	8997	4187	5432	9619
12	818	921	1739	1770	1856	3626	4538	3921	8459	3137	3565	6702
13	9701	6579	16280	9911	10460	20371	0	5583	5583	3010	0	3010
14	6842	7266	14108	6579	9701	16280	5084	0	5084	0	1538	1538
15	6842	7266	14108	7266	6842	14108	0	0	0	0	0	0
16	2800	3201	6001	7266	6842	14108	2781	2793	5574	1817	1828	3645
17	3692	4109	7801	3201	2800	6001	961	832	1793	326	438	764
18	3806	3980	7786	4109	3692	7801	909	1080	1989	494	566	1060
19	3825	3996	7821	3980	3806	7786	16	19	35	0	0	0
20	5084	5321	10405	5375	5387	10762	0	0	0	3326	3077	6403
21	0	0	0	2963	2507	5470	3077	3326	6403	1761	1968	3729
22	3034	5087	8121	3812	3354	7166	0	0	0	3220	0	3220
23	3034	5087	8121	3812	3354	7166	0	1625	1625	0	0	0
24	4161	4910	9071	5087	3034	8121	1484	0	1484	0	2788	2788
25	4312	4540	8852	3874	3568	7442	0	0	0	839	917	1756
26	4397	3930	8327	4540	4312	8852	0	2662	2662	1967	0	1967
27	3963	3062	7025	3930	4397	8327	2544	0	2544	0	2978	2978
28	23	24	47	831	736	1567	0	0	0	761	854	1615
29	1317	1708	3025	1708	1317	3025	0	0	0	0	0	0
30	0	0	0	0	0	0	854	761	1615	761	854	1615
31	0	0	0	0	0	0	854	761	1615	761	854	1615
32	0	0	0	0	0	0	854	761	1615	761	854	1615
33	0	0	0	0	0	0	881	1111	1992	1111	881	1992
34	0	0	0	0	0	0	881	1111	1992	1111	881	1992
35	0	0	0	0	0	0	881	1111	1992	1111	881	1992

Peak Hour Modeled Base Year Link Volumes												
HOUR FACTOR	0.28											
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	1712	1614	3326	3046	3199	6244	1752	1671	3424	974	1000	1975
2	1549	1507	3056	1614	1712	3326	135	108	243	293	265	558
3	834	933	1767	1383	1350	2733	333	313	646	924	877	1801
4	1433	1438	2871	933	834	1767	428	617	1046	475	381	856
5	1808	1848	3656	508	429	937	1381	1394	2775	206	233	439
6	1713	1701	3414	1848	1808	3656	0	0	0	95	147	242
7	1269	2323	3592	1896	1956	3852	147	127	274	1095	0	1095
8	1810	1978	3789	2323	1269	3592	0	886	886	0	0	0
9	0	0	0	1249	519	1767	907	821	1728	687	1503	2190
10	580	648	1228	1564	1991	3555	1503	687	2190	1099	1420	2519
11	101	74	174	0	0	0	1420	1099	2519	1172	1521	2693
12	229	258	487	496	520	1015	1271	1098	2369	878	998	1877
13	2716	1842	4558	2775	2929	5704	0	1563	1563	843	0	843
14	1916	2034	3950	1842	2716	4558	1424	0	1424	0	431	431
15	1916	2034	3950	2034	1916	3950	0	0	0	0	0	0
16	784	896	1680	2034	1916	3950	779	782	1561	509	512	1021
17	1034	1151	2184	896	784	1680	269	233	502	91	123	214
18	1066	1114	2180	1151	1034	2184	255	302	557	138	158	297
19	1071	1119	2190	1114	1066	2180	4	5	10	0	0	0
20	1424	1490	2913	1505	1508	3013	0	0	0	931	862	1793
21	0	0	0	830	702	1532	862	931	1793	493	551	1044
22	850	1424	2274	1067	939	2006	0	0	0	902	0	902
23	850	1424	2274	1067	939	2006	0	455	455	0	0	0
24	1165	1375	2540	1424	850	2274	416	0	416	0	781	781
25	1207	1271	2479	1085	999	2084	0	0	0	235	257	492
26	1231	1100	2332	1271	1207	2479	0	745	745	551	0	551
27	1110	857	1967	1100	1231	2332	712	0	712	0	834	834
28	6	7	13	233	206	439	0	0	0	213	239	452
29	369	478	847	478	369	847	0	0	0	0	0	0
30	0	0	0	0	0	0	239	213	452	213	239	452
31	0	0	0	0	0	0	239	213	452	213	239	452
32	0	0	0	0	0	0	239	213	452	213	239	452
33	0	0	0	0	0	0	247	311	558	311	247	558
34	0	0	0	0	0	0	247	311	558	311	247	558

35	0	0	0	0	0	0	247	311	558	311	247	558

FUTURE YEAR (MODEL)

Peak Period Modeled Future Year Link Volumes												
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	6018	6143	12161	9325	9025	18350	5933	6269	12202	2039	1879	3918
2	6042	6071	12113	6143	6018	12161	200	27	227	118	388	506
3	2882	3774	6656	5390	4933	10323	1885	917	2802	3264	3797	7061
4	6337	6688	13025	3774	2882	6656	2558	2670	5228	2512	2940	5452
5	6363	6614	12977	3129	2504	5633	6472	6194	12666	3435	4086	7521
6	6668	6505	13173	6614	6363	12977	0	0	0	1023	1436	2459
7	4345	7861	12206	6505	6668	13173	586	584	1170	3676	0	3676
8	6146	6304	12450	7861	4345	12206	0	3358	3358	0	0	0
9	0	0	0	5163	1298	6461	2709	3246	5955	2303	5631	7934
10	2385	2431	4816	4804	6860	11664	5631	2303	7934	2920	4147	7067
11	379	304	683	0	0	0	4147	2920	7067	3224	4525	7749
12	1754	1943	3697	3028	2702	5730	4274	3692	7966	3769	4488	8257
13	12091	8133	20224	11516	12857	24373	0	6028	6028	3412	0	3412
14	7839	8098	15937	8133	12091	20224	6689	0	6689	0	1237	1237
15	7839	8068	15907	8098	7839	15937	0	0	0	0	30	30
16	3364	3628	6992	8068	7839	15907	4342	4251	8593	2282	2338	4620
17	3731	4201	7932	3628	3364	6992	605	590	1195	448	257	705
18	4007	4364	8371	4201	3731	7932	770	825	1595	323	382	705
19	4039	4376	8415	4364	4007	8371	11	32	43	0	0	0
20	4447	4776	9223	7909	3052	10961	149	141	290	4693	4536	9229
21	0	0	0	3012	2006	5018	4536	4693	9229	3106	3956	7062
22	2204	6678	8882	3519	3499	7018	0	0	0	4454	0	4454
23	3096	5620	8716	6678	2204	8882	0	1950	1950	0	0	0
24	4036	5470	9506	5620	3096	8716	1456	0	1456	439	2985	3424
25	4655	5086	9741	4618	3982	8600	0	0	0	795	1000	1795
26	5150	4686	9836	5086	4655	9741	0	3570	3570	2677	0	2677
27	4861	3612	8473	4686	5150	9836	2974	0	2974	0	3760	3760
28	2473	2883	5356	4086	3435	7521	0	0	0	1134	1368	2502
29	2319	3073	5392	3073	2319	5392	0	0	0	0	0	0
30	0	0	0	0	0	0	1368	1134	2502	1134	1368	2502
31	0	0	0	0	0	0	1368	1134	2502	1134	1368	2502
32	0	0	0	0	0	0	1368	1134	2502	1134	1368	2502
33	0	0	0	0	0	0	1048	1355	2403	1355	1048	2403
34	0	0	0	0	0	0	1048	1355	2403	1355	1048	2403
35	0	0	0	0	0	0	1048	1355	2403	1355	1048	2403

Peak Hour Modeled Future Year Link Volumes												
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	1685	1720	3405	2611	2527	5138	1661	1755	3417	571	526	1097
2	1692	1700	3392	1720	1685	3405	56	8	64	33	109	142
3	807	1057	1864	1509	1381	2890	528	257	785	914	1063	1977
4	1774	1873	3647	1057	807	1864	716	748	1464	703	823	1527
5	1782	1852	3634	876	701	1577	1812	1734	3546	962	1144	2106
6	1867	1821	3688	1852	1782	3634	0	0	0	286	402	689
7	1217	2201	3418	1821	1867	3688	164	164	328	1029	0	1029
8	1721	1765	3486	2201	1217	3418	0	940	940	0	0	0
9	0	0	0	1446	363	1809	759	909	1667	645	1577	2222
10	668	681	1348	1345	1921	3266	1577	645	2222	818	1161	1979
11	106	85	191	0	0	0	1161	818	1979	903	1267	2170
12	491	544	1035	848	757	1604	1197	1034	2230	1055	1257	2312
13	3385	2277	5663	3224	3600	6824	0	1688	1688	955	0	955
14	2195	2267	4462	2277	3385	5663	1873	0	1873	0	346	346
15	2195	2259	4454	2267	2195	4462	0	0	0	0	8	8
16	942	1016	1958	2259	2195	4454	1216	1190	2406	639	655	1294
17	1045	1176	2221	1016	942	1958	169	165	335	125	72	197
18	1122	1222	2344	1176	1045	2221	216	231	447	90	107	197
19	1131	1225	2356	1222	1122	2344	3	9	12	0	0	0
20	1245	1337	2582	2215	855	3069	42	39	81	1314	1270	2584
21	0	0	0	843	562	1405	1270	1314	2584	870	1108	1977
22	617	1870	2487	985	980	1965	0	0	0	1247	0	1247
23	867	1574	2440	1870	617	2487	0	546	546	0	0	0
24	1130	1532	2662	1574	867	2440	408	0	408	123	836	959
25	1303	1424	2727	1293	1115	2408	0	0	0	223	280	503
26	1442	1312	2754	1424	1303	2727	0	1000	1000	750	0	750
27	1361	1011	2372	1312	1442	2754	833	0	833	0	1053	1053
28	692	807	1500	1144	962	2106	0	0	0	318	383	701
29	649	860	1510	860	649	1510	0	0	0	0	0	0
30	0	0	0	0	0	0	383	318	701	318	383	701
31	0	0	0	0	0	0	383	318	701	318	383	701
32	0	0	0	0	0	0	383	318	701	318	383	701
33	0	0	0	0	0	0	293	379	673	379	293	673
34	0	0	0	0	0	0	293	379	673	379	293	673
35	0	0	0	0	0	0	293	379	673	379	293	673

Total Modeled Growth												
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	-0.0157	0.0656		-0.1427	-0.2100		-0.0519	0.0503		-0.4141	-0.4740	
2	0.0922	0.1280		0.0656	-0.0157		-0.5859	-0.9299		-0.8873	-0.5894	
3	-0.0319	0.1323		0.0909	0.0232		0.5854	-0.1791		-0.0106	0.2119	
4	0.2379	0.3022		0.1323	-0.0319		0.6719	0.2114		0.4811	1.1602	
5	-0.0146	0.0023		0.7249	0.6355		0.3122	0.2440		3.6671	3.9170	
6	0.0901	0.0708		0.0023	-0.0146		0.0000	0.0000		2.0000	1.7405	
7	-0.0411	-0.0525		-0.0393	-0.0455		0.1183	0.2892		-0.0598	0.0000	
8	-0.0495	-0.1078		-0.0525	-0.0411		0.0000	0.0606		0.0000	0.0000	
9	0.0000	0.0000		0.1576	-0.2991		-0.1639	0.1071		-0.0611	0.0488	
10	0.1511	0.0501		-0.1398	-0.0352		0.0488	-0.0611		-0.2559	-0.1825	
11	0.0557	0.1559		0.0000	0.0000		-0.1825	-0.2559		-0.2300	-0.1670	
12	1.1443	1.1097		0.7107	0.4558		-0.0582	-0.0584		0.2015	0.2589	
13	0.2464	0.2362		0.1619	0.2292		0.0000	0.0797		0.1336	0.0000	
14	0.1457	0.1145		0.2362	0.2464		0.3157	0.0000		0.0000	-0.1957	
15	0.1457	0.1104		0.1145	0.1457		0.0000	0.0000		0.0000	0.0000	
16	0.2014	0.1334		0.1104	0.1457		0.5613	0.5220		0.2559	0.2790	
17	0.0106	0.0224		0.1334	0.2014		-0.3704	-0.2909		0.3742	-0.4132	
18	0.0528	0.0965		0.0224	0.0106		-0.1529	-0.2361		-0.3462	-0.3251	
19	0.0559	0.0951		0.0965	0.0528		-0.3125	0.6842		0.0000	0.0000	
20	-0.1253	-0.1024		0.4714	-0.4335		0.0000	0.0000		0.4110	0.4742	
21	0.0000	0.0000		0.0165	-0.1998		0.4742	0.4110		0.7638	1.0102	
22	-0.2736	0.3128		-0.0769	0.0432		0.0000	0.0000		0.3832	0.0000	
23	0.0204	0.1048		0.7518	-0.3429		0.0000	0.2000		0.0000	0.0000	
24	-0.0300	0.1141		0.1048	0.0204		-0.0189	0.0000		0.0000	0.0707	
25	0.0795	0.1203		0.1920	0.1160		0.0000	0.0000		-0.0524	0.0905	
26	0.1713	0.1924		0.1203	0.0795		0.0000	0.3411		0.3610	0.0000	
27	0.2266	0.1796		0.1924	0.1713		0.1690	0.0000		0.0000	0.2626	
28	106.5217	119.1250		3.9170	3.6671		0.0000	0.0000		0.4901	0.6019	
29	0.7608	0.7992		0.7992	0.7608		0.0000	0.0000		0.0000	0.0000	
30	0.0000	0.0000		0.0000	0.0000		0.6019	0.4901		0.4901	0.6019	
31	0.0000	0.0000		0.0000	0.0000		0.6019	0.4901		0.4901	0.6019	
32	0.0000	0.0000		0.0000	0.0000		0.6019	0.4901		0.4901	0.6019	
33	0.0000	0.0000		0.0000	0.0000		0.1896	0.2196		0.2196	0.1896	
34	0.0000	0.0000		0.0000	0.0000		0.1896	0.2196		0.2196	0.1896	
35	0.0000	0.0000		0.0000	0.0000		0.1896	0.2196		0.2196	0.1896	

Modeled Growth Per Year												
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	-0.0006	0.0024		-0.0053	-0.0078		-0.0019	0.0019		-0.0153	-0.0176	
2	0.0034	0.0047		0.0024	-0.0006		-0.0217	-0.0344		-0.0329	-0.0218	
3	-0.0012	0.0049		0.0034	0.0009		0.0217	-0.0066		-0.0004	0.0078	
4	0.0088	0.0112		0.0049	-0.0012		0.0249	0.0078		0.0178	0.0430	
5	-0.0005	0.0001		0.0268	0.0235		0.0116	0.0090		0.1358	0.1451	
6	0.0033	0.0026		0.0001	-0.0005		0.0000	0.0000		0.0741	0.0645	
7	-0.0015	-0.0019		-0.0015	-0.0017		0.0044	0.0107		-0.0022	0.0000	
8	-0.0018	-0.0040		-0.0019	-0.0015		0.0000	0.0022		0.0000	0.0000	
9	0.0000	0.0000		0.0058	-0.0111		-0.0061	0.0040		-0.0023	0.0018	
10	0.0056	0.0019		-0.0052	-0.0013		0.0018	-0.0023		-0.0095	-0.0068	
11	0.0021	0.0058		0.0000	0.0000		-0.0068	-0.0095		-0.0085	-0.0062	
12	0.0424	0.0411		0.0263	0.0169		-0.0022	-0.0022		0.0075	0.0096	
13	0.0091	0.0087		0.0060	0.0085		0.0000	0.0030		0.0049	0.0000	
14	0.0054	0.0042		0.0087	0.0091		0.0117	0.0000		0.0000	-0.0072	
15	0.0054	0.0041		0.0042	0.0054		0.0000	0.0000		0.0000	0.0000	
16	0.0075	0.0049		0.0041	0.0054		0.0208	0.0193		0.0095	0.0103	
17	0.0004	0.0008		0.0049	0.0075		-0.0137	-0.0108		0.0139	-0.0153	
18	0.0020	0.0036		0.0008	0.0004		-0.0057	-0.0087		-0.0128	-0.0120	
19	0.0021	0.0035		0.0036	0.0020		-0.0116	0.0253		0.0000	0.0000	
20	-0.0046	-0.0038		0.0175	-0.0161		0.0000	0.0000		0.0152	0.0176	
21	0.0000	0.0000		0.0006	-0.0074		0.0176	0.0152		0.0283	0.0374	
22	-0.0101	0.0116		-0.0028	0.0016		0.0000	0.0000		0.0142	0.0000	
23	0.0008	0.0039		0.0278	-0.0127		0.0000	0.0074		0.0000	0.0000	
24	-0.0011	0.0042		0.0039	0.0008		-0.0007	0.0000		0.0000	0.0026	
25	0.0029	0.0045		0.0071	0.0043		0.0000	0.0000		-0.0019	0.0034	
26	0.0063	0.0071		0.0045	0.0029		0.0000	0.0126		0.0134	0.0000	
27	0.0084	0.0067		0.0071	0.0063		0.0063	0.0000		0.0000	0.0097	
28	3.9452	4.4120		0.1451	0.1358		0.0000	0.0000		0.0182	0.0223	
29	0.0282	0.0296		0.0296	0.0282		0.0000	0.0000		0.0000	0.0000	
30	0.0000	0.0000		0.0000	0.0000		0.0223	0.0182		0.0182	0.0223	
31	0.0000	0.0000		0.0000	0.0000		0.0223	0.0182		0.0182	0.0223	
32	0.0000	0.0000		0.0000	0.0000		0.0223	0.0182		0.0182	0.0223	
33	0.0000	0.0000		0.0000	0.0000		0.0070	0.0081		0.0081	0.0070	
34	0.0000	0.0000		0.0000	0.0000		0.0070	0.0081		0.0081	0.0070	
35	0.0000	0.0000		0.0000	0.0000		0.0070	0.0081		0.0081	0.0070	

Future Baseline Peak Hour Link Volumes												
	NB LINK (SOUTH LEG)			SB LINK (NORTH LEG)			EB LINK (WEST LEG)			WB LINK (EAST LEG)		
Intersection	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL	APPROACH	DEPARTURE	TOTAL
1	2514	1886	4400	1909	2222	4131	1277	1400	2677	642	716	1358
2	1747	1427	3174	1913	2479	4392	538	121	659	317	738	1055
3	1611	1331	2942	1314	1711	3025	762	365	1127	302	450	753
4	1565	1262	2828	952	1454	2406	1701	876	2577	650	886	1535
5	1931	941	2872	383	1490	1873	1188	1541	2729	609	471	1080
6	2117	998	3115	951	1906	2857	0	0	0	136	224	360
7	1142	1133	2274	785	1878	2662	348	118	466	877	0	877
8	1310	887	2197	1124	1158	2282	0	386	386	0	0	0
9	36	36	72	1580	146	1726	491	482	973	415	1837	2253
10	557	437	994	847	1360	2207	1712	401	2113	515	1273	1787
11	272	190	462	0	0	0	1278	501	1780	601	1468	2069
12	389	711	1100	217	280	497	1452	712	2164	920	1635	2555
13	1914	1779	3692	2035	2163	4198	0	873	873	820	0	820
14	1542	1420	2962	1777	1915	3692	959	0	959	0	597	597
15	933	1077	2010	1417	1543	2960	317	263	580	290	109	399
16	781	1037	1817	1074	966	2040	1018	653	1671	497	619	1116
17	840	927	1767	988	868	1855	214	243	457	263	163	426
18	932	996	1927	969	864	1833	277	148	425	123	269	393
19	958	1224	2183	949	871	1820	254	273	528	78	86	164
20	722	826	1548	1596	575	2172	187	137	324	1189	1440	2629
21	0	0	0	442	547	989	1454	1161	2615	1189	1237	2426
22	639	1848	2487	815	922	1737	148	145	293	820	0	820
23	1065	1042	2107	2414	586	3000	0	821	821	0	0	0
24	700	1449	2149	1070	1034	2105	940	0	940	20	363	383
25	1032	1395	2427	1283	860	2144	67	10	77	239	354	594
26	680	1358	2038	1392	1035	2428	0	568	568	944	0	944
27	688	1679	2368	1153	747	1900	1142	0	1142	0	561	561
28	9569	7162	16730	300	426	726	0	0	0	0	0	0
29	1455	383	1838	383	1455	1838	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0

	Daily Counts/Existing	
	Roadway Segment	Segment Volume
Sierra Ave: Santa Ana Ave to Jurupa Ave	1	34574
Sierra Ave: Jurupa Ave to Armstrong Rd	2	25899
Sierra Ave: Armstrong Rd to 20th Street	3	2065
Sierra Ave: 20th Street to UPRR Tracks	4	400
Sierra Ave: UPRR Tracks to Mission Boulevard	5	3584
Valley Way: Sierra Ave to 34th St	6	34358
Valley Way: 34th St to Granite Hill	7	34987
Cedar Ave: I-10 EB Ramps to Slover Ave	8	33533
Cedar Ave: Slover Ave to Santa Ana Ave	9	27267
Cedar Ave: Santa Ana Ave to Jurupa Ave	10	26995
Cedar Ave: Jurupa Ave to 7th St	11	25657
Cedar Ave:7th St to El Rivino Rd	12	25575
Rubidoux Blvd: El Rivino to Market St	13	26065
Rubidoux Blvd: Market to 28th St	14	21183
Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	15	25258
Market St: Agua Mansa Road to 24th St	16	20125
Market St: 24th St to SR-60 WB Off Ramp	17	26156
Mission St: SR-60 EB Ramps to Valley Way	18	22381
20th St: Street "B" to Street "C"	19	0
20th St: Street "C" to Street "D"	20	0
20th St: Street "D" to Street "E"	21	0
20th St: Street "E" to Rubidoux Blvd	22	0

	Opening Year	
	Intersection	Segment Volume
Sierra Ave: Santa Ana Ave to Jurupa Ave	1	42185
Sierra Ave: Jurupa Ave to Armstrong Rd	2	34624
Sierra Ave: Armstrong Rd to 20th Street	3	6678
Sierra Ave: 20th Street to UPRR Tracks	4	4456
Sierra Ave: UPRR Tracks to Mission Boulevard	5	4229
Valley Way: Sierra Ave to 34th St	6	49540
Valley Way: 34th St to Granite Hill	7	50283
Cedar Ave: I-10 EB Ramps to Slover Ave	8	51316
Cedar Ave: Slover Ave to Santa Ana Ave	9	41807
Cedar Ave: Santa Ana Ave to Jurupa Ave	10	43480
Cedar Ave: Jurupa Ave to 7th St	11	40818
Cedar Ave:7th St to El Rivino Rd	12	41647
Rubidoux Blvd: El Rivino to Market St	13	41148
Rubidoux Blvd: Market to 28th St	14	32763
Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	15	35991
Market St: Agua Mansa Road to 24th St	16	33623
Market St: 24th St to SR-60 WB Off Ramp	17	47904

Mission St: SR-60 EB Ramps to Valley Way	18	29693
20th St: Street "B" to Street "C"	19	257
20th St: Street "C" to Street "D"	20	257
20th St: Street "D" to Street "E"	21	257
20th St: Street "E" to Rubidoux Blvd	22	1709

	Base Year Model (2018)	
	Intersection	Segment Volume
Sierra Ave: Santa Ana Ave to Jurupa Ave	1	22137
Sierra Ave: Jurupa Ave to Armstrong Rd	2	35249
Sierra Ave: Armstrong Rd to 20th Street	3	4884
Sierra Ave: 20th Street to UPRR Tracks	4	145
Sierra Ave: UPRR Tracks to Mission Boulevard	5	11432
Valley Way: Sierra Ave to 34th St	6	43608
Valley Way: 34th St to Granite Hill	7	45890
Cedar Ave: I-10 EB Ramps to Slover Ave	8	45969
Cedar Ave: Slover Ave to Santa Ana Ave	9	19423
Cedar Ave: Santa Ana Ave to Jurupa Ave	10	24482
Cedar Ave: Jurupa Ave to 7th St	11	23814
Cedar Ave:7th St to El Rivino Rd	12	23893
Rubidoux Blvd: El Rivino to Market St	13	33722
Rubidoux Blvd: Market to 28th St	14	30332
Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	15	19963
Market St: Agua Mansa Road to 24th St	16	12615
Market St: 24th St to SR-60 WB Off Ramp	17	29612
Mission St: SR-60 EB Ramps to Valley Way	18	22270
20th St: Street "B" to Street "C"	19	5029
20th St: Street "C" to Street "D"	20	5029
20th St: Street "D" to Street "E"	21	6717
20th St: Street "E" to Rubidoux Blvd	22	6717

	Future Year Model (2045)	
	Intersection	Segment Volume
Sierra Ave: Santa Ana Ave to Jurupa Ave	1	23509
Sierra Ave: Jurupa Ave to Armstrong Rd	2	43912
Sierra Ave: Armstrong Rd to 20th Street	3	23159
Sierra Ave: 20th Street to UPRR Tracks	4	16315
Sierra Ave: UPRR Tracks to Mission Boulevard	5	17460
Valley Way: Sierra Ave to 34th St	6	42797
Valley Way: 34th St to Granite Hill	7	43497
Cedar Ave: I-10 EB Ramps to Slover Ave	8	49187
Cedar Ave: Slover Ave to Santa Ana Ave	9	22622
Cedar Ave: Santa Ana Ave to Jurupa Ave	10	25228
Cedar Ave: Jurupa Ave to 7th St	11	26430

Cedar Ave:7th St to El Rivino Rd	12	26534
Rubidoux Blvd: El Rivino to Market St	13	36784
Rubidoux Blvd: Market to 28th St	14	25909
Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	15	19038
Market St: Agua Mansa Road to 24th St	16	23143
Market St: 24th St to SR-60 WB Off Ramp	17	28848
Mission St: SR-60 EB Ramps to Valley Way	18	21402
20th St: Street "B" to Street "C"	19	7974
20th St: Street "C" to Street "D"	20	7974
20th St: Street "D" to Street "E"	21	7745
20th St: Street "E" to Rubidoux Blvd	22	7745

	Growth (2018-2045)	
	Intersection	Segment Volume
Sierra Ave: Santa Ana Ave to Jurupa Ave	1	0.0620
Sierra Ave: Jurupa Ave to Armstrong Rd	2	0.2458
Sierra Ave: Armstrong Rd to 20th Street	3	3.7418
Sierra Ave: 20th Street to UPRR Tracks	4	111.5172
Sierra Ave: UPRR Tracks to Mission Boulevard	5	0.5273
Valley Way: Sierra Ave to 34th St	6	-0.0186
Valley Way: 34th St to Granite Hill	7	-0.0521
Cedar Ave: I-10 EB Ramps to Slover Ave	8	0.0700
Cedar Ave: Slover Ave to Santa Ana Ave	9	0.1647
Cedar Ave: Santa Ana Ave to Jurupa Ave	10	0.0305
Cedar Ave: Jurupa Ave to 7th St	11	0.1099
Cedar Ave:7th St to El Rivino Rd	12	0.1105
Rubidoux Blvd: El Rivino to Market St	13	0.0908
Rubidoux Blvd: Market to 28th St	14	-0.1458
Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	15	-0.0463
Market St: Agua Mansa Road to 24th St	16	0.8346
Market St: 24th St to SR-60 WB Off Ramp	17	-0.0258
Mission St: SR-60 EB Ramps to Valley Way	18	-0.0390
20th St: Street "B" to Street "C"	19	0.5856
20th St: Street "C" to Street "D"	20	0.5856
20th St: Street "D" to Street "E"	21	0.1530
20th St: Street "E" to Rubidoux Blvd	22	0.1530

	Growth Per Year	
	Intersection	Segment Volume
Sierra Ave: Santa Ana Ave to Jurupa Ave	1	0.0023
Sierra Ave: Jurupa Ave to Armstrong Rd	2	0.0091
Sierra Ave: Armstrong Rd to 20th Street	3	0.1386
Sierra Ave: 20th Street to UPRR Tracks	4	4.1303
Sierra Ave: UPRR Tracks to Mission Boulevard	5	0.0195

Valley Way: Sierra Ave to 34th St	6	-0.0007
Valley Way: 34th St to Granite Hill	7	-0.0019
Cedar Ave: I-10 EB Ramps to Slover Ave	8	0.0026
Cedar Ave: Slover Ave to Santa Ana Ave	9	0.0061
Cedar Ave: Santa Ana Ave to Jurupa Ave	10	0.0011
Cedar Ave: Jurupa Ave to 7th St	11	0.0041
Cedar Ave:7th St to El Rivino Rd	12	0.0041
Rubidoux Blvd: El Rivino to Market St	13	0.0034
Rubidoux Blvd: Market to 28th St	14	-0.0054
Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	15	-0.0017
Market St: Agua Mansa Road to 24th St	16	0.0309
Market St: 24th St to SR-60 WB Off Ramp	17	-0.0010
Mission St: SR-60 EB Ramps to Valley Way	18	-0.0014
20th St: Street "B" to Street "C"	19	0.0217
20th St: Street "C" to Street "D"	20	0.0217
20th St: Street "D" to Street "E"	21	0.0057
20th St: Street "E" to Rubidoux Blvd	22	0.0057

	2045 Daily Link Volumes	
	Intersection	Segment Volume
Sierra Ave: Santa Ana Ave to Jurupa Ave	1	42185
Sierra Ave: Jurupa Ave to Armstrong Rd	2	34624
Sierra Ave: Armstrong Rd to 20th Street	3	8933
Sierra Ave: 20th Street to UPRR Tracks	4	5997
Sierra Ave: UPRR Tracks to Mission Boulevard	5	5264
Valley Way: Sierra Ave to 34th St	6	49540
Valley Way: 34th St to Granite Hill	7	50283
Cedar Ave: I-10 EB Ramps to Slover Ave	8	51316
Cedar Ave: Slover Ave to Santa Ana Ave	9	41807
Cedar Ave: Santa Ana Ave to Jurupa Ave	10	43480
Cedar Ave: Jurupa Ave to 7th St	11	40818
Cedar Ave:7th St to El Rivino Rd	12	41647
Rubidoux Blvd: El Rivino to Market St	13	41148
Rubidoux Blvd: Market to 28th St	14	32763
Rubidoux Blvd: 28th St to SR-60 WB Off-Ramp	15	35991
Market St: Agua Mansa Road to 24th St	16	35054
Market St: 24th St to SR-60 WB Off Ramp	17	47904
Mission St: SR-60 EB Ramps to Valley Way	18	29693
20th St: Street "B" to Street "C"	19	257
20th St: Street "C" to Street "D"	20	257
20th St: Street "D" to Street "E"	21	257
20th St: Street "E" to Rubidoux Blvd	22	1709

Changed to 2% growth per year for 15 years (2030 opening year-2045) due to excessive model growth

J.2 - Vehicle Miles Traveled Analysis

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MEMORANDUM

URBAN CROSSROADS

DATE: May 31, 2023
TO: Brian Hardy, Richland Communities
FROM: Alex So, Urban Crossroads, Inc.
JOB NO: 15288-04 VMT

RIO VISTA SPECIFIC PLAN AMENDMENT VEHICLE MILES TRAVELED (VMT) ANALYSIS

Urban Crossroads, Inc. has completed the following Vehicle Miles Traveled (VMT) Analysis for the Rio Vista Specific Plan Amendment (**Project**), which is located north of State Route (SR) 60, east of Armstrong Road and west of Rubidoux Boulevard in the City of Jurupa Valley.

PROJECT OVERVIEW

The currently approved Rio Vista Specific Plan entitlements include the following:

- Low Density Single Family Residential (171 dwelling units)
- Medium Density Single Family Residential (1,078 dwelling units)
- High Density Multi-Family Residential (60 dwelling units)
- Very High-Density Multi-Family Residential (388 dwelling units)
- Commercial (5 acres)
- Public Park (4 acres)
- Schools (7 acres)

The Project proposes to amend the Rio Vista Specific Plan to include the following land uses:

- Single Family Detached Housing (1,133 dwelling units)
- Single Family Attached Housing (144 dwelling units)
- Multifamily Housing (420 dwelling units)
- Elementary School (620 students)
- Middle School (330 students)
- Technical School (10,000 students)
- Public Park (18.4 acres)
- Business Park (559,310 square feet)
- Industrial Uses (1,269,774 square feet)

A Project concept land use plan is included in Attachment A.

BACKGROUND

The California Environmental Quality Act (CEQA) requires all lead agencies to adopt VMT as the measure for identifying transportation impacts for land use projects. To comply with CEQA, the City of Jurupa Valley adopted their Traffic Impact Analysis Guidelines – Methodologies and Requirements for General Plan Compliance Analysis and CEQA VMT Analysis (November 2020) (1) (**City Guidelines**). This VMT analysis has been prepared consistent with the adopted City Guidelines.

VMT ANALYSIS

VMT SCREENING

City Guidelines list three screening steps to be used to screen projects from the need to prepare a project-level VMT assessment. The screening steps can be used to identify if qualifying projects are located within transit priority areas (TPA's), areas of the City already known to exhibit low levels of VMT or small local serving land uses such as neighborhood retail that would improve the convenience of shopping close to home and has the effect of reducing vehicle travel. As the Project is not located within a TPA, a low VMT area, or qualifies as a small local serving land use, a full project-level VMT analysis has been prepared.

TRAFFIC MODELING METHODOLOGY

City Guidelines identifies the Riverside County Transportation Model (RIVCOM) as the appropriate tool for conducting VMT analysis for land development projects in the City of Jurupa Valley. RIVCOM is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households, and employment. RIVCOM is a travel forecasting model that represents a sub-area (Riverside County) of the Southern California Association of Governments (SCAG) regional traffic model and was designed to provide a greater level of detail and sensitivity in the Riverside County area as compared to the regional SCAG model.

VMT ANALYSIS METHODOLOGY

For the purposes of this analysis, Project generated VMT has been estimated using the Production/Attraction method, Origin/Destination method, and Boundary method. Consistent with City Guidelines, VMT has been presented as total VMT and total VMT per Service Population, Home-Based VMT per Capita (resident), and Home-Based Work (HBW) VMT per Employee. Total VMT represents all VMT generated in the City of Jurupa Valley on a typical weekday. Total VMT per service population, HB VMT per capita and HBW VMT per employee are efficiency metrics representing VMT generated on a typical weekday per person who lives and/or works in the City or travels to the City for another purpose. City Guidelines note that VMT per capita should be used for residential projects, VMT per employee used to evaluate employment-based projects (i.e., office, industrial, etc.) and total VMT and total VMT per service population for all other land uses.

PRODUCTION/ATTRACTION METHOD

The Production/Attraction (PA) method for calculating VMT sums all weekday VMT generated by HB and HBW trips with at least one trip-end in the study area (i.e., City Boundary or Project Traffic Analysis Zone) by trip purpose. Productions are land use types that generate trips (residences and school[1]), and attractions are land use types that attract trips (employment). The PA method allows project VMT to be evaluated based on trip purpose, which is consistent with the Office of Planning and Research's (OPR's) Technical Advisory. It should be noted that the PA matrices do not include external trips that have one trip outside of the model boundary or truck trips.

ORIGIN/DESTINATION VMT METHOD

The Origin/Destination (OD) method for calculating VMT sums all weekday VMT generated by trips with at least one trip-end in the study area and tracks those trips to their origin or destination. Origins are all vehicle trips that start in a specific traffic analysis zone, while destinations are all vehicle trips that end in a specific traffic analysis zone. The OD method accounts for all trips (i.e., both passenger cars and trucks) and trip purposes (i.e., total VMT) and therefore provides a more complete estimate of VMT.

BOUNDARY VMT METHOD

The boundary method is the sum of all weekday VMT on the roadway network within a designated boundary (i.e., City boundary or other designated geographic area). The boundary method estimates VMT by multiplying vehicle trips on each roadway segment within the boundary by that segment's length. This approach consists of all trips, including those trips that do not begin or end in the designated boundary. Consistent with City Guidelines, the City of Jurupa Valley was used as the boundary for this assessment. In addition, as the Project is located near the edge of the City of Jurupa Valley, an additional assessment of a ten-mile boundary area surrounding the Project site has also been conducted to ensure trips associated with the Project are not omitted.

CITY OF JURUPA VALLEY VMT IMPACT CRITERIA

For the purposes of determining a potential VMT impact, the City of Jurupa Valley has adopted the following VMT significance criteria:

PROJECT VMT IMPACTS

City Guidelines state that a project would result in a significant project-generated impact if:

- For residential projects, in the Baseline Plus Project scenario its net VMT per capita exceeds the City's average VMT per capita.
- For office and industrial projects, its net VMT per employee exceeds the City's average VMT per employee.

[1] RIVCOM contains matrices that are home-based school, which captures trips made by students and is inclusive of the HB VMT calculations.

- For all other uses, a net increase in total VMT within the City would be considered a significant impact.

CUMULATIVE VMT IMPACTS

Per the City's Traffic Impact Assessment Guidelines, a project would result in a significant VMT impact if:

- For residential projects its cumulative project-generated VMT per capita exceeds the average VMT per capita for Jurupa Valley in the RTP/SCS horizon-year.
- For office and industrial projects its cumulative project generated VMT per employee exceeds the average VMT per employee for Jurupa Valley in the RTP/SCS horizon year.
- For all other land development project types, a net increase in total VMT in the Cumulative Plus Project scenario versus the RTP/SCS Without Project horizon-year would be considered a significant impact.

To be conservative and ensure that potential impacts were analyzed and disclosed, this report includes a VMT analysis that is based on these VMT standards and is separate from an analysis of consistency with the RTP/SCS. To make an impact determination for the previously described impact criteria, the City of Jurupa Valley's average VMT per capita, VMT per employee and VMT per service population must be calculated for Baseline (2021) and Cumulative (2045) conditions using the RIVCOM model. Baseline 2021 year as noted by City Guidelines will be the year consistent with the Notice of Preparation year. The Citywide averages were derived by using the base year and cumulative year unmodified model results. All the City of Jurupa Valley TAZs in RIVCOM (61 in total) were isolated and combined and divided by their respective denominator. Then a straight-line interpolation was calculated to obtain Baseline 2021 values. Table 2 presents the resulting impact thresholds used for this analysis.

TABLE 2: CITYWIDE AVERAGES

	Baseline (2021)	Cumulative (2045)
Population	107,760	116,889
Employees	28,267	31,890
Service Population	135,471	148,779
HB VMT	2,364,404	2,624,223
HB VMT per Capita	21.9	22.5
HBW VMT	1,355,141	1,510,852
HBW VMT per Employee	48.0	47.4
Total OD VMT	5,501,410	5,975,500
OD VMT per SP[2]	40.6	40.2

As shown in Table 2, the City of Jurupa Valley's Baseline average VMT per capita is 21.9, VMT per employee is 48.0 and VMT per service population is 40.6, while Cumulative average VMT per capita is 22.5, VMT per employee is 47.4 and VMT per service population is 40.2.

[2] SP refers to service population.

PROJECT VMT ESTIMATES

To estimate PA and OD Project generated VMT, standard land use information such as dwelling units and building square footage must first be converted into a RIVCOM compatible dataset. The RIVCOM model utilizes socio-economic data (SED) (e.g., population, households and employment) for the purposes of vehicle trip estimation. Table 3 summarizes the SED inputs used to represent the Project, which were coded into a separate TAZ to represent the Project.

TABLE 3: PROJECT LAND USE MODEL DATA INPUTS

	Project
Households	1,697
Total Population[3]	**6,297**
Business Park Employees[4]	700
Industrial Employees[3]	1,059
Technical School Employees[5]	300
K-8 Employees[6]	90
Total Employees	**2,139**

Table 4 presents Project generated VMT estimates for PA HB VMT per capita, PA HBW VMT per employee and OD VMT per service population. RIVCOM output data can be found in Attachment B.

TABLE 4: VMT RESULTS

	Baseline (2021)	Cumulative (2045)
Population	6,297	6,297
Employees	2,139	2,139
Service Population	8,436	8,436
Project HB VMT	168,922	178,861
Project HB VMT per Capita	26.8	28.4
City Threshold VMT per Capita	21.9	22.5
Percent Above Threshold	22.4%	26.2%
Project HBW VMT	81,823	98,979
Project HBW VMT per Employee	38.3	46.3
City Threshold VMT per Employee	48.0	47.4
Percent Below Threshold	-20.2%	-2.3%
Project Total OD VMT	389,363	406,788
Project OD VMT per SP	46.2	48.2
City Threshold OD VMT per SP	40.6	40.2
Percent Above Threshold	13.8%	19.9%

[3] Population conversion factors were derived from California Department of Finance 2022; Table E-5 of 3.71 person per household.
[4]Industrial and Business Park used conversion factors from City of Jurupa Valley General Plan; Page 2-15.
[5] Technical School employment provide by the Riverside Community College District
[6] 12 students/employee, 950 students; Riverside County Education Report

Project generated PA HB VMT per capita exceeds the City's VMT per capita impact threshold by 22.4% in the baseline condition and 26.2% in the cumulative condition and is considered potentially significant. Project generated PA HBW VMT per employee is below the City's VMT per employee impact threshold by 20.2% in the baseline condition and 2.3% in the cumulative condition and is considered less than significant. Although not a metric to determine VMT impacts in the City of Jurupa Valley and is presented for information purposes, the Project generated OD VMT per service population exceeds the City's VMT per service population impact threshold by 13.8% in the baseline condition and 19.9%. As any component of the Project exceeds the City's adopted impact threshold, the Project in its entirety is considered potentially significant.

PROJECT'S CUMULATIVE EFFECT ON VMT

The Project effect on VMT was performed using boundary VMT within Jurupa Valley City limits boundary and a ten-mile radius surrounding the Project site. Table 5 presents for No Project (i.e., Currently Adopted Rio Vista Specific Plan) and With Project (i.e., Proposed Rio Vista Specific Plan Amendment) boundary VMT for horizon-year.

TABLE 5: BOUNDARY VMT SUMMARY

	City Boundary		10-Mile Boundary	
Horizon-Year	No Project	With Project	No Project	With Project
Service Population	155,293	157,215	1,488,546	1,490,468
Boundary VMT	5,172,793	5,198,819	30,353,775	30,367,716
Change in Boundary VMT	26,026		13,941	
VMT per Service Population	33.31	33.07	20.39	20.37
Change in VMT per SP	-0.24		-0.02	

As shown in Table 5, the Project does not increase the VMT per service population. Therefore, the cumulative effect on VMT is considered less than significant for land uses to which the service population metric is applied.

VMT REDUCTIONS RELATED TO PROJECT DESIGN

The Project includes design features that promote reduction in project generated VMT. As the reduction in trips and associated VMT cannot be accurately accounted for by the calculations conducted using the RIVCOM model, these adjustments are made through the following calculations as described in the Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (CAPCOA, 2021) (**2021 Handbook**). The Project as previously noted exceeds the HB VMT per capita 22.4% in the baseline condition and 26.2% in the cumulative condition. To achieve a HB VMT below the City's threshold the Project will require a minimum 37,152 VMT[7] or 20.8%[8] reduction to the Project's HB VMT. The following project design features have the potential to reduce the project's VMT. Given the lack of specifics that are available for this conceptual level plan, it is not possible to fully account for the effect of specific design principles, policies and improvements that will reduce VMT as part of

[7] (28.4 VMT/CapitaProject x 6,297 Residents)-(22.25 VMT/CapitaThreshold x 6,297 Residents)=37,152 VMT
[8] (37,152/178,834)*100=20.8%

this analysis. These features are based on coordination with the City staff and the recommendations contained within the City's Traffic Impact Analysis Guidelines and the Western Riverside Council of governments (WRCOG) TDM Strategies Evaluation Memo. An agreeable VMT reduction program will be developed between the applicant and the City to mitigate the project VMT impacts. Reduction variables and calculation inputs can be found in Attachment C.

T-17 - IMPROVE STREET CONNECTIVITY

This feature accounts for the VMT reduction achieved by a project that is designed with a higher density of vehicle intersections compared to the average intersection density in the U.S. Increased vehicle intersection density is a proxy for street connectivity improvements, which help to facilitate a greater number of shorter trips and thus a reduction in GHG emissions. The Project will install a signal fiber interconnect along 20th Street between Sierra Ave and Rubidoux Blvd. If deemed infeasible by the City, the Project will install or pay cash in-lieu to install equivalent length for of signal interconnect elsewhere Citywide. Although the Project is not providing increased intersection density, by providing a fiber interconnect the Project will enhance the Project area's street connectivity, resulting in shorter trip lengths. The 2021 Handbook does not provide quantification of VMT reductions for a signal fiber interconnect and no VMT reductions are assumed.

T-18 - PROVIDE PEDESTRIAN NETWORK IMPROVEMENTS WITHIN THE DEVELOPMENT CONNECTING TO EXISTING OFF-SITE FACILITIES.

The Project proposes to construct 12.5 miles of sidewalks within the Project's study area and connecting to the adjacent network. The Project's study area was measured to include already 7.8 miles of existing sidewalk. Therefore, VMT reductions from feature T-18 – Provide Pedestrian Network Improvement was applied to the project VMT. Improving pedestrian networks increases accessibility of outdoor spaces, which can provide health benefits and thus improve community resilience. This can also improve connectivity between residents and resources that may be needed in an extreme weather event. This feature will increase the sidewalk coverage to improve pedestrian access. Providing sidewalks and an enhanced pedestrian network encourages people to walk instead of drive. This feature is expected to reduce VMT from the Project by 3.01%.

$$-3.01\% = \left(\left(\frac{12.5}{7.8}\right) - 1\right) \times -0.05$$

T-19A - CONSTRUCT OR IMPROVE BIKE FACILITY

The proposed Project proposes the construction of 1.08 miles of bike trails and equestrian trails. In addition, the Project proposed to construct a Class I bicycle path along both directions of 20th Street, which was measured to be 2.69 miles. Therefore, VMT reductions from feature T-19A – Construct or Improve Bike Facility was applied to the project VMT. This feature will construct bicycle lane facilities (only Class I, II, or IV) that connect to a larger existing bikeway network. Providing bicycle infrastructure helps to improve biking conditions within an area. This encourages a mode shift on the roadway parallel to the bicycle facility from vehicles to bicycles, displacing VMT and thus reducing GHG emissions. When constructing or improving a bicycle

facility, a best practice is to consider local or state bike lane width standards. This feature reduces VMT on the roadway segment parallel to the bicycle facility (i.e., the corridor). An adjustment factor is included in the formula to scale the VMT reduction from the corridor level to the plan/community level. The bicycle lane facility must be either Class I, II, or IV. This feature is expected to reduce VMT from the Project by 0.11%.

$$-0.11\% = 1 \times (((\frac{365}{365}) \times (0.002 + 0.002) \times 1.54 \times 2.2) \div 11.7)$$

Although the 2021 Handbook has superseded the CAPCOA Quantifying Greenhouse Gas Mitigation Measures (2010) (**2010 CAPCOA**), the 2010 CAPCOA document provides VMT reduction specifics that are no longer quantified in the 2021 Handbook. To fully capture the achievable VMT reduction the 2010 CAPCOA features below were applied to the Project.

TRT-10 – IMPLEMENT A SCHOOL POOL PROGRAM

This feature will create a ride sharing program for school children. Most school districts provide bus services to public schools only. SchoolPool helps match parents to transport students to private schools, or to schools where students cannot walk or bike but do not meet the requirements for bussing. As described in the 2010 CAPCOA document, moderate implementation of this feature assumes 16% of the Project families to participate in this program. This feature is expected to reduce VMT from the Project by 7.2%

$$-7.2\% = 16\% \times -45\%$$

TST-2 - IMPLEMENT TRANSIT ACCESS IMPROVEMENTS

This project will improve access to transit facilities through sidewalk / crosswalk safety enhancements and bus shelter improvements. The benefits of Transit Access Improvements alone have not been quantified by 2010 CAPCOA. The Project will provide four bus shelters subject to the approval of Riverside Transit Agency.

Design features included by the Project are expected to further reduce estimated VMT by 10.32%, which would not bring the Project to a level below the City's adopted VMT impact threshold.

However, as project specific development plans are not available the effectiveness of the above features cannot be quantified at this time and will need to be re-evaluated once a development plan is available. In addition, once a VMT mitigation fee program is available for the City of Jurupa Valley or Riverside County, future development projects can contribute to this fee program to further reduce their project VMT impacts.

SUMMARY

Based on the results of this analysis the following findings are made:

- The Project was evaluated against screening criteria as outlined in the City Guidelines. The Project was not found to meet any available screening criteria, and a VMT analysis was performed.
- Project generated PA HB VMT per capita exceeds the City's VMT per capita impact threshold by 22.4% in the baseline condition and 26.2% in the cumulative condition.

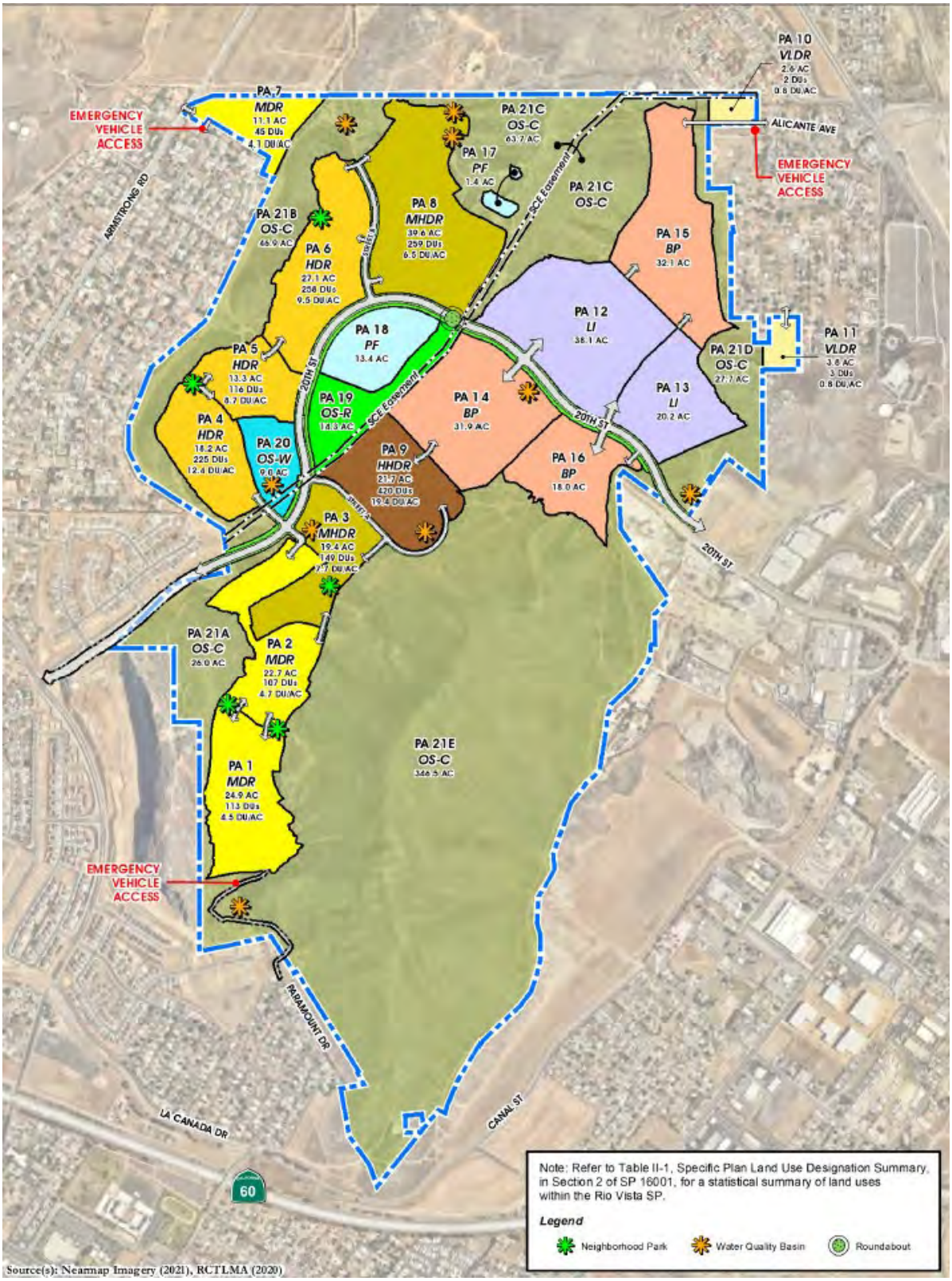
- Project generated PA HBW VMT per employee is below the City's VMT per employee impact threshold by 20.2% in the baseline condition and 2.3% in the cumulative condition.
- The Project's effect on VMT as measured by comparing citywide VMT per service Population for Cumulative (2045) No Project (Currently Approved Rio Vista Specific Plan) and With Project (Proposed Rio Vista Specific Plan Amendment) conditions were evaluated. The Project was not found to increase citywide VMT per service population as compared to the No Project conditions.
- Project design features that would contribute to a 10.32% reduction in VMT were considered.
- Project generated PA HB VMT per capita was found to exceed adopted VMT impact thresholds even with a 10.32% reduction to VMT related to Project design features. The Project's VMT impact is considered significant and unavoidable.

If you have any questions, please contact me directly at aso@urbanxroads.com.

REFERENCES

1. **City of Jurupa Valley.** *Traffic Impact Analysis Guidelines.* November 2020.

ATTACHEMENT A
PRELIMINARY SITE PLAN


PA 10
VLDR
2.6 AC
2 DUs
0.8 DU/AC
PA 7
MDR
11.1 AC
45 DUs
4.1 DU/AC
EMERGENCY VEHICLE ACCESS
ARMSTRONG RD
PA 21C
OS-C
63.7 AC
ALICANTE AVE
EMERGENCY VEHICLE ACCESS
PA 17
PF
1.4 AC
SCE Easement
PA 21B
OS-C
66.9 AC
PA 8
MHDR
39.6 AC
259 DUs
6.5 DU/AC
PA 21C
OS-C
PA 15
BP
32.1 AC
PA 6
HDR
27.1 AC
258 DUs
9.5 DU/AC
PA 18
PF
13.4 AC
PA 12
LI
38.1 AC
PA 11
VLDR
3.8 AC
3 DUs
0.8 DU/AC
PA 21D
OS-C
27.7 AC
PA 5
HDR
13.3 AC
116 DUs
8.7 DU/AC
20TH ST
PA 19
OS-R
14.3 AC
SCE Easement
PA 14
BP
31.9 AC
PA 13
LI
20.2 AC
PA 4
HDR
18.2 AC
225 DUs
12.4 DU/AC
PA 20
OS-W
9.0 AC
PA 9
HHDR
21.7 AC
420 DUs
19.4 DU/AC
PA 16
BP
18.0 AC
PA 3
MHDR
19.4 AC
149 DUs
7.7 DU/AC
20TH ST
PA 21A
OS-C
26.0 AC
PA 2
MDR
22.7 AC
107 DUs
4.7 DU/AC
PA 21E
OS-C
346.5 AC
PA 1
MDR
24.9 AC
113 DUs
4.5 DU/AC
EMERGENCY VEHICLE ACCESS
PARAMOUNT DR
LA CANADA DR
CANAL ST
60
Note: Refer to Table II-1, Specific Plan Land Use Designation Summary, in Section 2 of SP 16001, for a statistical summary of land uses within the Rio Vista SP.
Legend
Neighborhood Park
Water Quality Basin
Roundabout
Source(s): Nearmap Imagery (2021), RCTLMA (2020)

ATTACHMENT B
RIVCOM OUTPUT

TABLE B-1: 2018 RIVCOM OUTPUT

Daily_Home-Based (incl. IEHB) Prod VMT	167,680
Daily_HBW (incl. EIHBW) Attr VMT	79,679
Daily_Total Auto OD	362,744
Daily_Total Truck OD VMT	23,588
Daily_Total OD VMT	386,332
Daily_Total_TripLen	15.33
Population	6,297
Employment	2,139
Enrollment	10,950

TABLE B-2: 2045 RIVCOM OUTPUT

Daily_Home-Based (incl. IEHB) Prod VMT	130,111
Daily_HBW (incl. EIHBW) Attr VMT	98,979
Daily_Total Auto OD	385,940
Daily_Total Truck OD VMT	20,848
Daily_Total OD VMT	406,788
Daily_Total_TripLen	15.46
Population	6,297
Employment	2,139
Enrollment	10,950

ATTACHMENT C
VMT REDUCTION CALCULATIONS

TABLE B-1: T-18: PROVIDE PEDESTRIAN NETWORK IMPROVEMENT

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in GHG emissions from household vehicle travel in plan/community	0-6.4	%	calculated
User Inputs				
B	Existing sidewalk length in study area	12.5	miles	user input
C	Sidewalk length in study area with feature	7.8	miles	user input
Constants, Assumptions, and Available Defaults				
D	Elasticity of household VMT with respect to the ratio of sidewalks-to-streets	-0.05	unitless	Frank et al. 2011

TABLE B-2: T-19-A CONSTRUCT OR IMPROVE BIKE FACILITY

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in GHG emissions from displaced vehicles on roadway parallel to bicycle facility.	0-0.8	%	calculated
User Inputs				
B	Percent of plan/community VMT on parallel roadway	100	%	user input
C	Active Transportation adjustment factor	0.002	unitless	CARB 2020
D	Credits for key destinations near project	0.002	unitless	CARB 2020
E	Growth factor adjustment for facility type	1.54	unitless	CARB 2020
Constants, Assumptions, and Available Defaults				
F	Annual days of use of new facility	365	Days per Year	NOAA 2017
G	Existing regional average one-way bicycle	2.2	Miles per Trip	FHWA 2017
H	Existing regional average one-way vehicle trip length	11.7	Miles per Trip	FHWA 2017
I	Days per year	365	Days per Year	Standard

TABLE B-3: TRT-10 IMPLEMENT A SCHOOL POOL PROGRAM

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in school VMT from Project/Site VMT for residential developments	0-15.8	%	calculated
User Inputs				
B	Families that participate	16	%	user input
Constants, Assumptions, and Available Defaults				
D	Adjustments to convert from participation to daily VMT to annual school VMT	45	%	DRCOG

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Appendix K:
Utilities Supporting Information

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RUBIDOUX COMMUNITY SERVICES DISTRICT
3590 RUBIDOUX BOULEVARD
JURUPA VALLEY, CA 92509-4525
(915) 684-7580

WATER SUPPLY ASSESSMENT AND WRITTEN VERIFICATION FOR RIO VISTA SPECIFIC PLAN 16001 PROJECT

OCTOBER 2021

Prepared by

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REGISTERED PROFESSIONAL ENGINEER
DAVID F. SCRIVEN
No. 42922
CIVIL
STATE OF CALIFORNIA

Signed: _____

Date: 10/19/2021

Approved by:

RUBIDOUX COMMUNITY SERVICES DISTRICT

Signed: _____
General Manager

Date: 10-19-21

587-10p72
(587-10p72-WSA)
DFS/nr

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A2. Revised Proposed Land Use Plan (LUP) 8/5/2021

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C. California Water Code Section 10910 (Senate Bill No. 610 as Amended)

D. Determination of Water Demand for Rio Vista Specific Plan Project

E. Superior Court of the State Of California in and for the County Of Riverside Judgment 78426 (1969 Judgment)

F. Verified 2019 Extractions for Riverside South Groundwater Basin

CHAPTER I

INTRODUCTION

CHAPTER I
INTRODUCTION

On June 27, 2017, the City of Jurupa Valley Planning Department sent the Rubidoux Community Services District (RCSD) an Inter-Agency Project Review Request. In July 2018, the project developers requested RCSD to prepare a Water Supply Assessment for use in preparing the environmental impact report for the Rio Vista Specific Plan in accordance with the provisions of Senate Bill No. 221 and Senate Bill No. 610. A Water Supply Assessment (WSA) was completed in July 2018 and was approved by the Board of Directors on July 19, 2018. However, modifications to the Plan of Development were made subsequent to the completion of the WSA. On April 6, 2021, the City of Jurupa Valley Planning Department requested RCSD to prepare an updated WSA for use in preparing the environmental impact report for the Rio Vista Specific Plan Project. A copy of the City's request is included as **Appendix A.1**.

Under provisions of the Senate Bills, RCSD has 90 days to prepare the WSA. Since the City's request, the Project proponent has revised the proposed Land Use Plan. The revised proposed Land Use Plan is incorporated herein as **Appendix A.2.** This assessment was prepared in response to the City's request and was approved by the Board of Directors on October 12, 2021.

A. SENATE BILL NO. 221 (CALIFORNIA GOVERNMENT CODE SECTION 66473.7 (CGC 66473.7))

CGC 66473.7 (**Appendix B**) prohibits approval of a tentative map, or a parcel map for which a tentative map was not required, or a development agreement for subdivisions of more than 500 dwelling units unless the legislative body of a city or county provides written verification from the applicable public water system (PWS) that a sufficient water supply water supply is defined as "the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses".

In determining sufficient water supply, all of the following factors shall be considered:

- Availability of water supplies over a historical record of at least 20 years.

- Applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the PWS in response to water supply shortages.
- Reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted or a contract entered into by the PWS.
- Amount of water from other water supply projects such as conjunctive use, reclaimed water, water conservation, and water transfer.

In addition, the Written Verification shall be supported by substantial evidence which may include, but is not limited to, any of the following:

- The most recently adopted Urban Water Management Plan (UWMP).
- A WSA that was completed pursuant to Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code.
- A groundwater sustainability plan (GSP) adopted or alternative approved pursuant to Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code.
- Other information relating to the sufficiency of the water supply that contains analytical information substantially similar to the assessment required by Section 10635 of the Water Code.

If the Written Verification relies on projected water supplies that are not currently available, the availability of said supplies shall be based on written contracts or other proof of valid rights to the identified water supply, copies of a capital outlay program for financing the delivery of a sufficient water supply, securing of applicable federal, state, and local permits for construction of necessary infrastructure, and any necessary regulatory approvals.

The Written Verification shall also include a description, to the extent that data is reasonably available based on published records maintained by federal and state agencies, and public records of local agencies, of the reasonably foreseeable impacts of the proposed subdivision on the availability of water resources for agricultural and industrial uses within the PWS's service area that are not currently receiving water from the PWS but are utilizing the same sources of water.

If a water supply includes groundwater, the PWS shall evaluate, based on substantial evidence, the extent to which it or the landowner has the right to extract the additional groundwater to supply the proposed subdivision.

In addition, if the water supply includes groundwater, the following factors shall be considered in the Written Verification:

- For basins that have been adjudicated, a copy of the order or decree adopted by the court or the board.
- For basins that have not been adjudicated and are designated as medium- or high-priority under the Sustainable Groundwater Management Act (SGMA), the most recently adopted GSP or approved alternative plan;
- For medium- or high-priority basins that have not been adjudicated where no GSP or alternative has been approved, and for basins that have not been adjudicated that are designated as low- or very low-priority under SGMA, information as to whether the Department of Water Resources (DWR) has identified the basin as being overdrafted or projected that the basin will become overdrafted if present management conditions continue.

B. SENATE BILL NO. 610 (CALIFORNIA WATER CODE SECTION 10910 (CWC 10910))

CWC 10910 (**Appendix C**) requires that a city or county, upon determining that a project with a significant water demand is subject to CEQA, request that any PWS responsible for supplying water to the project determine whether the project's projected water demand was included in its most recently adopted UWMP. If such demand was not accounted for, the PWS must prepare a WSA, which must include a discussion of the ability of the PWS's available water supply to meet the project's projected water demand in addition to the PWS's existing and planned future demands.

CWC 10910 defines a Project as:

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- A mixed-use project that includes one or more of the aforementioned projects.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. If a PWS has fewer than 5,000 service connections, a project would also be defined as a proposed development that would account for an increase of 10% or more in the number of the PWS's existing service connections.

In addition to the above, CWC 10910 requires that the WSA identify any existing water supply entitlements, water rights, or water service contracts held by the PWS, as evidenced by written contracts, copies of capital outlay programs, necessary regulatory approvals, and federal, state, and local infrastructure construction permits relevant to the identified project's water supply, including a description of quantities of water received in prior years by the PWS under the existing water supply entitlements, water rights, or water service contracts. If no water has been received in prior years by the PWS, the WSA must identify another PWS that receives water supply from or has existing water supply entitlements, water rights, or water service contracts to the same source of water that the PWS has identified as a source of its water supply.

The WSA shall include:

- Identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and quantities of water received in prior years by the PWS under the existing water supply entitlements, water rights, or water service contracts, including a description of quantities of water received in prior years by the PWS under the existing water supply entitlements, water rights, or water service contracts. Identification of the existing entitlements, water rights, or contracts shall be demonstrated by providing information related to written contracts or other proof of entitlement to the identified water supply, copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the PWS, federal,

state, and local permits for construction of necessary infrastructure associated with delivering the water supply, and any necessary regulatory approvals required to convey or deliver the water supply. If no water has been received in prior years by the PWS, the WSA must identify another PWS that receives water supply from or has existing water supply entitlements, water rights, or water service contracts to the same source of water that the PWS has identified as a source of its water supply.

- Identification of other PWSs that receive a water supply or have existing water supply entitlements, water rights, or water service contracts to the same source of water.
- A review of any information in the UWMP relevant to the identified water supply for the proposed project.
- If the water supply for a proposed project includes groundwater, CWC 10910 requires that the following additional information be included in the WSA:
    - A description of the groundwater basin or basins from which the proposed project will be supplied, together with pertinent documents (if adjudicated) or information as to actual or pending [i.e. potential] overdraft (if not adjudicated).
    - If a basin has been adjudicated, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the PWS has the legal right to pump under the order or decree shall be addressed.
    - If a basin has not been adjudicated, and has been designated by the DWR as "low" or "very low" priority, information as to whether the DWR has identified the basin as overdrafted or has projected that the basin will become overdrafted in the most current bulletin of the DWR that characterizes the condition of the groundwater basin shall be addressed as well as a detailed description of the efforts being undertaken to eliminate the long-term overdraft condition.
    - If a basin has not been adjudicated, and has been designated by the DWR as "medium" or "high" priority, information regarding the following:
        (i) Whether the DWR has identified the basin as being subject to critical conditions of overdraft.
        (ii) If a groundwater sustainability agency has adopted a groundwater sustainability plan or has an approved alternative, a copy of that alternative or plan.

- A detailed description and analysis of the amount and location of groundwater pumped by the PWS for the past five years from any groundwater basin from which the proposed project will be supplied.
- A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the PWS from any basin from which the proposed project will be supplied.
- An analysis of the sufficiency of the groundwater from the basin from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.

The city or county shall request the PWS to determine if the projected water demand associated with a project was included in the most recently adopted UWMP. If the projected water demand was accounted for in the most recently adopted UWMP, the PWS may incorporate information from the UWMP to comply with the aforementioned requirements.

If, as a result of the assessment, the PWS concludes that its water supplies are or will be insufficient for the proposed Project, the PWS shall provide its plans for acquiring additional water supplies. Said plans may include, but are not limited to, estimated total cost and proposed method of financing the costs associated with the additional water supplies; all federal, state, and local permits, approvals, or entitlements anticipated to be required to acquire and develop the additional water supplies; and estimated time frames to acquire the additional water supplies.

CHAPTER II

PROJECT

CHAPTER II
PROJECT

A. GENERAL

The Project is located in the northeast quadrant of the City of Jurupa Valley, specifically west of Rubidoux Boulevard, south of the Riverside/San Bernardino county line, east of Armstrong Road and Sierra Avenue, and north of La Canada Drive. The overall size of the Project Site is 917.3 acres. The Project Site is approximately 1.4 miles north of Interstate 60 (I-60) and 2.5 miles south of Interstate 10 (I-10).

Based on the currently proposed Land Use Plan dated August 5, 2021 (**Appendix A.2.**), the project will consist of a maximum of 1,697 residential dwelling units, 58 acres of light industrial development, 82 acres of business park development, a 13.4-acre school site, a 14.3-acre public park, and 541 acres of open space, water tanks and basins, and circulation. The entire project will annex into the RCSD, with the exception of PA 7, which will annex into and be served by the Jurupa Community Services District (JCSD).

B. WATER DEMAND

The area designated as the Rio Vista Specific Plan was identified in RCSD's 2020 Urban Water Management Plan with an annual water demand of approximately 2,000 acre-feet per year (AF/yr). Said demand was not based on 2015 RCSD water demand factors used elsewhere in the 2015 Water Facilities Master Plan, but rather on a water and sewer facilities report prepared by Albert A. Webb Associates on January 29, 2008, which incorporated RCSD water use assumptions current for 2008. Due to the implementation of water conservation measures starting around 2012, residential water demands have decreased since 2008.

A revised demand determination for the Rio Vista Specific Plan project, incorporating the revised proposed land use plan and updated residential water use assumptions as set forth in RCSD's 2015 Water Facilities Master Plan, is included herein as **Appendix D**. According to the calculations set forth in **Appendix D**, the maximum anticipated total water demand for the project is slightly under 1,000 AF/yr, which is considerably less than the 2,000 AF/yr estimated in previous reports. This is largely due to the use of more recent duty factors for residential development which reflect the implementation of water conservation measures.

CHAPTER III

WATER SUPPLY

CHAPTER III
WATER SUPPLY

A. GENERAL

Since RCSD potable water supply consists of groundwater, Senate Bills Nos. 221 and 610 require additional information to be included in the WSA. This chapter will address the following:

- Review of any information in the UWMP relevant to the identified water supply for the proposed project.
- Description of groundwater basins from which the proposed project will be supplied.
- Description of the amount of groundwater RCSD has the legal right to pump.
- Identification of other PWSs that receive a water supply or have existing water supply entitlements, water rights, or water service contracts to the same source of water.
- Detailed description and analysis of the amount and location of groundwater pumped by RCSD for the past five years from any groundwater basin from which the proposed project will be supplied.
- Detailed description and analysis of the amount and location of groundwater that is projected to be pumped by RCSD from any basin from which the proposed project will be supplied.
- An analysis of the sufficiency of the groundwater from the basin from which the proposed project will be supplied to meet the projected water demand associated with the project.

B. REVIEW OF ANY INFORMATION IN THE URBAN WATER MANAGEMENT PLAN RELEVANT TO THE IDENTIFIED WATER SUPPLY FOR THE PROPOSED PROJECT

RCSD's 2020 Urban Water Management Plan (UWMP), adopted 6/17/2021, addressed water resources, reliability planning, water use provisions, supply and demand comparison provisions, water demand management measures, and water recycling, and included a water shortage contingency plan. RCSD's 2020 UWMP is incorporated herein by reference.

RCSD's 2020 UWMP incorporates a specific projected annual demand of 2,000 AF/Yr for the proposed Project.

C. DESCRIPTION OF GROUNDWATER BASINS FROM WHICH THE PROPOSED PROJECT WILL BE SUPPLIED

RCSD currently has six potable and six non-potable water production wells that extract groundwater from the Riverside South Groundwater Basin. Essentially all of RCSD's service area overlies the Riverside South Groundwater Basin. Based on RCSD's Water Facilities Master Plan, future water demand (including water demand for the proposed Project) will be met by continued and increased production of groundwater from the Riverside South Groundwater Basin.

The Riverside South Groundwater Basin is that portion of the Riverside Groundwater Basin located in Riverside County (The Riverside North Groundwater Basin is that portion of the Riverside Groundwater Basin located in San Bernardino County). The Riverside Basin is located between the Chino Groundwater Basin on the northwest and the Colton Groundwater Basin on the northeast.

D. DESCRIPTION OF THE AMOUNT OF GROUNDWATER RCSD HAS THE LEGAL RIGHT TO PUMP

On March 1, 1963, Western Municipal Water District (WMWD) filed a suit for a general adjudication of water rights within the San Bernardino Basin Area. A physical settlement was completed and documents delineating the settlement were entered in the Superior Court of the State of California in and for the County of Riverside on April 17, 1969, being Judgment No. 78426 (hereafter referred to as the 1969 Judgment). The 1969 Judgment included the establishment of rights to extract water from three groundwater basins (San Bernardino, Colton, and Riverside) and provided for replenishment in the event actual extractions exceed those rights. The 1969 Judgment is included as **Appendix E**.

The 1969 Judgment required the Watermaster to determine base extraction rights and export rights based on the average annual extractions and exports which occurred over the five-year period 1959 through 1963. The Court appointed a Watermaster, composed of two persons (each representing the interests of one of the parties), to administer and enforce the provisions of the 1969 Judgment and to report annually to the Court and the parties to the litigation. Accordingly, the Watermaster prepares an annual report which provides an accounting of extractions within the noted basins.

The 1969 Judgment established principles for determining allowable extractions from the San Bernardino, Colton, and Riverside groundwater basins. According to the terms of the 1969 Judgment, WMWD and San Bernardino Valley Municipal Water District are obligated to

provide groundwater replenishment if actual extractions exceed allowable extractions; however, neither agency has ever had to provide replenishment in accordance with the 1969 Judgment. If replenishment is ever required, the costs for such replenishment will probably be allocable to the groundwater extractors, including RCSD. However, neither the Watermaster nor the Court have ever established a formula for allocating replenishment costs to groundwater extractors.

The 1969 Judgment was amended on February 24, 1992 to clarify provisions relating to the computation of the replenishment obligations and credits of the parties.

Discussions with the WMWD Watermaster indicate that replenishment would not commence until the combined credits of the Colton, Riverside North, and Riverside South groundwater basins are depleted; therefore, the following recitals from the 1969 Judgment apply to RCSD:

1. Extractions from Colton Basin Area and Riverside Basin Area in San Bernardino County for use in Riverside County

Recital VIJI (a) provides "The average annual extractions from the Colton Basin Area and that portion of the Riverside Basin Area within San Bernardino County for use outside San Bernardino Valley for the five-year period ending with 1963 are assumed to be 3,349 acre-feet (AF) and 20,191 AF, respectively, the correct figures shall be determined by the Watermaster as therein provided." The extractions were later adjusted by the Watermaster in accordance with the 1969 Judgment to 3,381 AF/yr for the Colton Groundwater Basin and 21,085 AF/yr for the Riverside North Groundwater Basin, hereinafter referred to as base rights.

Recital VIII (b) provides "Over any five-year period, there may be extracted from each such Basin Area for use outside San Bernardino Valley, without replenishment obligation, and amount equal to five times such annual average for the Basin Area; provided, however, that if extractions in any year exceed such average by more than 20%, WMWD shall provide replenishment in the following year equal to the excess extractions over such 20% peaking allowance."

The five-year limits for the Colton Groundwater Basin and the Riverside North Groundwater Basin are 16,905 AF and 105,425 AF, respectively. The one-year maximum

extraction for the Colton Groundwater Basin and the Riverside North Groundwater Basin are 4,057 AF and 25,302 AF, respectively.

The most recent Watermaster report dated August 1, 2020, which addresses extractions for calendar years 1971 through 2019, is summarized as follows:

a. Extractions from the Colton Groundwater Basin for use in Riverside County for the five-year period 2015-2019 amounted to 5,335 AF or about 32% of the 16,905 AF five-year limit. Watermaster records show that the maximum five-year extraction occurred in 1975-79 at 11,402 AF. Since 1971, annual extractions have never exceeded the 4,057 AF limit. The maximum annual extraction occurred in 1975 at 3,873 AF. Extractions for 2019 were substantially lower at 462 AF.

b. Extractions from the Riverside North Groundwater Basin for use in Riverside County for the five-year period 2015-2019 amounted to 46,298 AF, or about 44% of the 105,425 AF five-year limit. Watermaster records show that the maximum five-year extraction occurred in 1989-93 at 80,014 AF. Since 1971, annual extractions have never exceeded the 25,302 AF limit. The maximum annual extraction occurred in 1972 at 18,588 AF. Extractions for 2019 were substantially lower at 8,855 AF.

2. Extractions from the Portion of Riverside Basin Area in Riverside County Tributary to Riverside Narrows

Recital IX (a) provides "The average annual extractions from the portion of the Riverside Basin Area in Riverside County which is tributary to Riverside Narrows, for use in Riverside County, for the five-year period ending with 1963 are assumed to be 30,044 AF; the correct figures shall be determined by the Watermaster as herein provided." The extraction was later adjusted by the Watermaster in accordance with the 1969 Judgment to 29,633 AF/yr, hereinafter referred to as base rights.

Recital IX (b) provides "Over any five-year period, there may be extracted from such Basin Area, without replenishment obligation, an amount equal to five times such annual average for the Basin Area; provided, however, that if extractions in any year exceed such average

by more than 20%, WMWD shall provide replenishment in the following year equal to the excess extractions over such 20% peaking allowance."

The five-year limit for that portion of the Riverside Basin Area (Riverside South Groundwater Basin) in Riverside County which is tributary to Riverside Narrows is 148,165 AF and the one year maximum extraction is 35,560 AF.

Based on the most recent Watermaster Report dated August 1, 2020 (which addresses extractions for calendar years 1971 through 2019), extractions for the five-year period 2015-2019 amounted to 128,689 AF, or about 87% of the 148,165 AF five-year limit. Watermaster records show that maximum five-year extraction occurred in 1972-76 at 169,052 AF.

Since 1971, annual extractions exceeded the 35,560 AF single year limit during three years (1972, 1974, and 2007). The maximum annual extraction occurred in 1974 at 38,304 AF. Extractions for 2019 amounted to 26,500 AF.

The net accumulated credits for the Colton groundwater basin and the Riverside groundwater basins had reached 466,040 AF by 2014.

3. Replenishment to Offset New Exports of Water to Areas Not Tributary to Riverside Narrows

Recital X provides "Certain average annual amounts of water extracted from the San Bernardino Basin Area and the area downstream therefrom to Riverside Narrows during the five-year period ending in 1963 have been exported for use outside of the area tributary to Riverside Narrows and are assumed to be 50,667 AF annually as set forth in Table C-1 of Appendix "C"; the correct amount shall be determined by the Watermaster as herein provided." The extraction was later adjusted by the Watermaster in accordance with the 1969 Judgment to 42,535 AF/yr.

Based on the most recent Watermaster Report dated August 1, 2020, which addresses exports for calendar years 1972 through 2019, exports for 2019 amounted to 33,411 AF or about 79% of the 42,535 AF base right. Since 1971, annual exports exceeded the

42,535 AF single year limit during six years (1976, 1984, 1988, 1989, 1990, and 1991). The maximum annual export occurred in 1991 (46,606 AF).

Replenishment credits apply to extractions, rather than to exports; thus, credits are not applicable to exports of water to areas not tributary to Riverside Narrows.

Most of RCSD's water use is within areas tributary to Riverside Narrows. In 2019, RCSD exports to other areas amounted to about 686 AF. Said areas are considered to have reached ultimate development; therefore, said amounts are not expected to increase in future years.

4. Replenishment Credits and Adjustments for Quality

Recital XI (b) provides that credits against future replenishment obligations accrue for underextractions (amount extracted is less than the allowed amount), return flows from excess extractions, increased treated sewage flows, excess replenishment, conserved storm flows, and return flows from imported water use. Credits for underextractions in the Colton and Riverside Basins are considered in the aggregate. Such credits accrue on an annual basis in the Colton and Riverside Basins.

With a combined net credit of 544,221 AF (as of 2019) for the Colton, Riverside North, and the Riverside South groundwater basins, it is likely that actual extractions from the Riverside South Groundwater Basin can exceed the allowable extractions without replenishment so long as water is available and credits associated with underextractions remain.

E. IDENTIFICATION OF OTHER PUBLIC WATER SYSTEMS THAT RECEIVE A WATER SUPPLY OR HAVE EXISTING WATER SUPPLY ENTITLEMENTS, WATER RIGHTS, OR WATER SERVICE CONTRACTS TO THE SAME SOURCE OF WATER

The most recent Watermaster report dated August 1, 2020 (Volume 4) identifies five PWSs that extract water from the Riverside South Groundwater Basin. For 2019, 26,500 AF/yr was extracted from the Riverside South Groundwater Basin. Extractions by the five PWSs are summarized as follows:

Public Water System	2019 Extractions (AF/yr)
City of Riverside	16,241
Rubidoux Community Services District	4,717
City of Riverside – Gage Canal	3,629
Jurupa Community Service District	492
Eastern Municipal Water District	0
Total:	**25,079**

These five PWSs account for approximately 95% of the water extracted from the Riverside South Groundwater Basin. All of the public and private entities that extract water from the Riverside South Groundwater Basin are set forth in **Appendix F**.

F. DETAILED DESCRIPTION AND ANALYSIS OF THE AMOUNT AND LOCATION OF GROUNDWATER PUMPED BY RCSD FOR THE PAST FIVE YEARS FROM ANY GROUNDWATER BASIN FROM WHICH THE PROPOSED PROJECT WILL BE SUPPLIED

As set forth in **Section C** herein, RCSD currently has six potable and six non-potable water production wells that can extract groundwater from the Riverside South Groundwater Basin. The amount of groundwater pumped by RCSD from the Riverside South Groundwater Basin for 2015 through 2019 (based on the latest Watermaster Report) is summarized as follows:

Year	Groundwater Production (AF/yr)
2015	7,803
2016	7,329
2017	7,636
2018	5,256
2019	4,717

G. DETAILED DESCRIPTION AND ANALYSIS OF THE AMOUNT AND LOCATION OF GROUNDWATER THAT IS PROJECTED TO BE PUMPED BY RCSD FROM ANY BASIN FROM WHICH THE PROPOSED PROJECT WILL BE SUPPLIED

As set forth in **Section C**, future water demand (including water demand for the proposed project) will be met by continued and increased production of groundwater from the Riverside South Groundwater Basin. Based on data presented in RCSD's 2020 UWMP, the projected amount of groundwater to be pumped by RCSD from the Riverside South Groundwater Basin is summarized as follows:

Year	Projected Groundwater Production (rounded) (AF/yr)
2025	7,960
2030	10,686
2035	11,416
2040	12,149
2045	12,886

The projected groundwater production includes an estimated 2,000 AF/yr for the proposed project.

H. AN ANALYSIS OF THE SUFFICIENCY OF THE GROUNDWATER FROM THE BASIN FROM WHICH THE PROPOSED PROJECT WILL BE SUPPLIED TO MEET THE PROJECTED WATER DEMAND ASSOCIATED WITH THE PROJECT

In accordance with the 1969 Judgment, RCSD can extract groundwater from the Riverside South Groundwater Basin without restrictions until the combined credit of the Colton, Riverside North, and Riverside South groundwater basins are depleted. Once the available credit is depleted, WMWD will be obligated to provide groundwater replenishment. It is anticipated that the cost for replenishment will be allocated to all groundwater extractors, including RCSD.

Based on the latest Watermaster Report (dated August 1, 2020), total extractions from the Colton, Riverside North, and Riverside South Basins have increased from 31,810 AF/yr in 2015 to 35,817 AF/yr in 2019, approximately a 3% increase per year. Assuming groundwater extractions from these three groundwater basins continues to increase 3% per year, total extraction would increase to approximately 69,127 AF/yr by 2050. At this rate, it would take nearly eight years to deplete the currently available credit of 544,221 AF (a figure which continues to increase).

Even after the available credit is depleted, RCSD can continue to extract groundwater from the Riverside South Groundwater Basin; however, RCSD could be subject to payment of its share of the cost of groundwater replenishment to maintain pumping to meet future water demands.

CHAPTER IV

SUMMARY/CONCLUSIONS

CHAPTER IV
SUMMARY/CONCLUSIONS

A. PROJECT

The Project is located in the northeast quadrant of the City of Jurupa Valley, specifically west of Rubidoux Boulevard, south of the Riverside/San Bernardino county line, east of Armstrong Road and Sierra Avenue, and north of La Canada Drive. The overall size of the Project Site is 917.3 acres. The Project Site is approximately 1.4 miles north of Interstate 60 (I-60) and 2.5 miles south of Interstate 10 (I-10).

The project will consist of a maximum of 1,697 residential dwelling units, 58 acres of light industrial development, 82 acres of business park development, a 13.4-acre school site, a 14.3-acre public park, and 541 acres of open space, water tanks and basins, and circulation. **The water demand for the proposed project is currently estimated to be less than 1,000 AF/yr.**

B. PROJECTED ANNUAL WATER PRODUCTION REQUIREMENTS

Projected annual water production requirements for RCSD as set forth in RCSD's 2020 UWMP are summarized as follows:

Year	Projected Groundwater Production (rounded) (AF/yr)
2025	7,960
2030	10,686
2035	11,416
2040	12,149
2045	12,886

The area designated as the Rio Vista Specific Plan was identified in RCSD's 2020 UWMP with an annual water demand of approximately 2,000 AF/yr, which exceeds the currently estimated demand calculated herein according to the currently proposed Land Use Plan. Therefore, the water demand estimated for the current Rio Vista Specific Plan was included, with a significant margin of safety, in RCSD's 2020 UWMP.

C. WATER SUPPLY

RCSD's current and future water supply will consist of groundwater extracted from the Riverside South Groundwater Basin.

As a result of the 1969 Judgment, RCSD can extract groundwater from the Riverside South Groundwater Basin without restrictions until the combined credit of the Colton, Riverside North, and Riverside South Groundwater Basins are depleted. Once the available credit is depleted, WMWD will be obligated to provide groundwater replenishment. It is anticipated that the cost of the replenishment will be allocated to all groundwater extractors, including RCSD.

Based on the latest Watermaster Report (dated August 1, 2020), total extractions from the Colton, Riverside North, and Riverside South Basins have increased from 31,810 AF/yr in 2015 to 35,817 AF/yr in 2019, approximately a 3% increase per year. Assuming groundwater extractions from these three groundwater basins continues to increase 3% per year, total extraction would increase to approximately 69,127 AF/yr by 2050. At this rate, it would take nearly eight years to deplete the currently available credit of 544,221 AF (a figure which continues to increase).

Even after the available credit is depleted, RCSD can continue to extract groundwater from the Riverside South Groundwater Basin; however, RCSD could be subject to payment of its share of the cost of groundwater replenishment to maintain pumping to meet future water demand.

D. CONCLUSION

As a result of the 1969 Judgment, RCSD is guaranteed a sufficient water supply from the Riverside South Groundwater Basin to meet current and future water demands, including the demands of the proposed Project.

APPENDIX A1

CITY OF JURUPA VALLEY
REQUEST FOR
WATER SUPPLY ASSESSMENT

City of Jurupa Valley

Lorena Barajas Mayor, Chris Barajas Mayor Pro Tem,
Leslie Altamirano, Council Member, Brian Berkson, Council Member, Guillermo Silva, Council Member

April 6, 2021

Rubidoux Community Services District
Ted Beckwith, Director of Engineering
3590 Rubidoux Blvd.
Jurupa Valley, CA 92509

Sent via email: tbeckwith@rcsd.org

SUBJECT: REQUEST FOR WATER SUPPLY ASSESSMENT FOR THE RIO VISTA SPECIFIC PROJECT (CITY CASE NO. MA16045)

Dear Mr. Beckwith,

The City of Jurupa Valley is the Lead Agency pursuant to the California Environmental Quality Act (CEQA), for the Environmental Impact Report (EIR) that is being prepared for the Rio Vista Specific Plan project. Because of the size and scope of the project, the City will need to comply with the water supply assessment requirements of the State Water Code (Section 10910-10915), pursuant to State CEQA Guidelines Section 15155 (a) (1))G). Therefore, the City is requesting a water supply assessment from the Rubidoux Community Services District to determine the District's ability to meet the water demands of the proposed project. The attached information is intended to aid the District in the preparation of the requested water supply assessment.

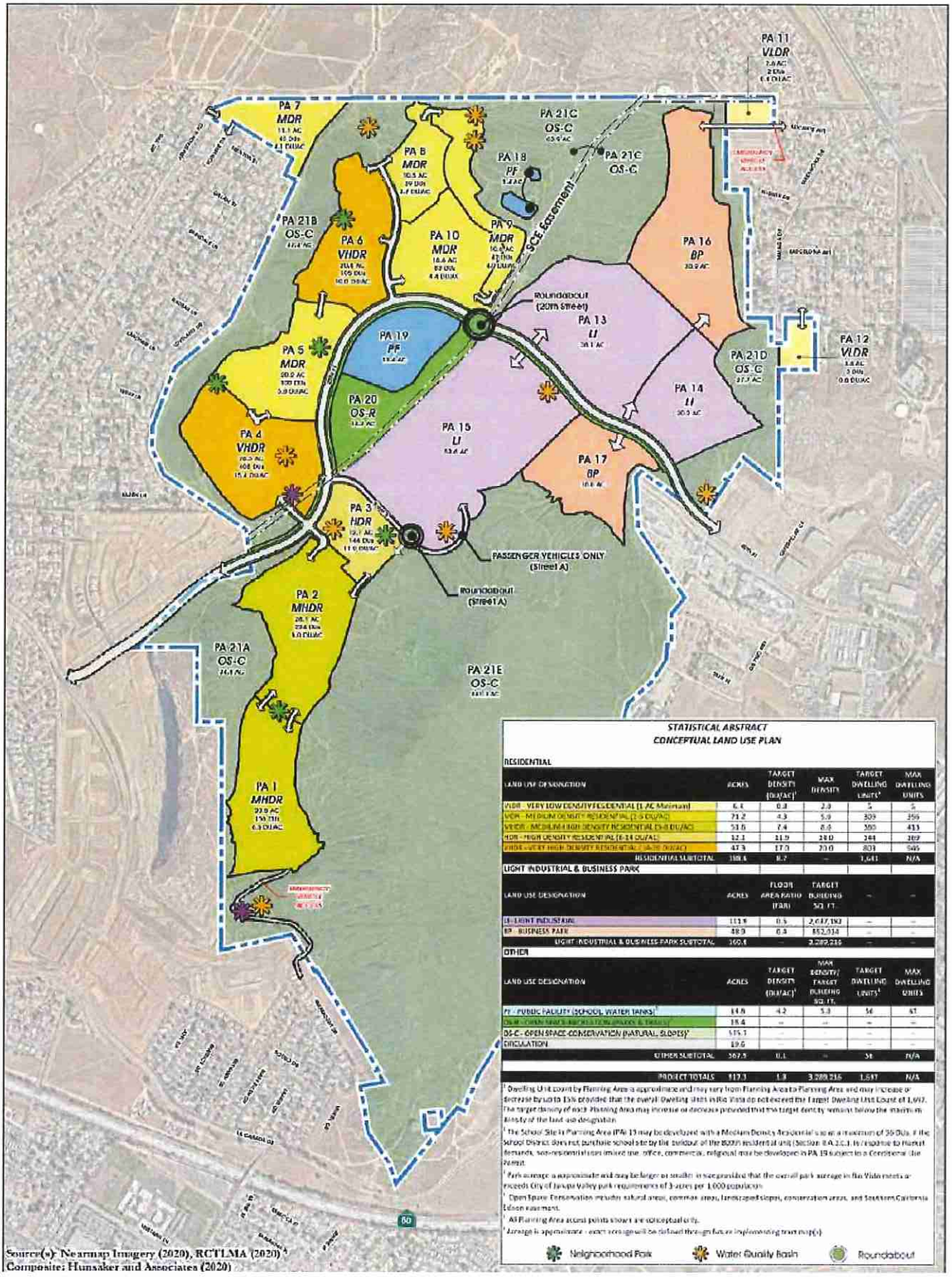
If you have any questions or need additional information, please don't hesitate to contact me by email at jpechous@jurupavalley.org or by phone at 951-332-6464.

Sincerely,

Jim Pechous, Principal Planner

Attachments:
Land Use Plan
Land Use Summary Table

Land Use Plan



STATISTICAL ABSTRACT
CONCEPTUAL LAND USE PLAN

RESIDENTIAL

LAND USE DESIGNATION	ACRES	TARGET DENSITY (DU/AC)[1]	MAX DENSITY	TARGET DWELLING UNITS[1]	MAX DWELLING UNITS
VLDR - VERY LOW DENSITY RESIDENTIAL (1 AC Minimum)	6.4	0.8	2.0	5	5
LDR - MEDIUM DENSITY RESIDENTIAL (2-5 DU/AC)	71.2	4.3	5.0	309	356
MDR - MEDIUM HIGH DENSITY RESIDENTIAL (5-8 DU/AC)	53.6	7.4	8.0	393	413
HDR - HIGH DENSITY RESIDENTIAL (8-14 DU/AC)	32.1	11.9	14.0	344	369
VHDR - VERY HIGH DENSITY RESIDENTIAL (14-20 DU/AC)	47.9	17.0	20.0	801	945
RESIDENTIAL SUBTOTAL	188.6	8.7	–	1,641	N/A

LIGHT INDUSTRIAL & BUSINESS PARK

LAND USE DESIGNATION	ACRES	FLOOR AREA RATIO (FAR)	TARGET BUILDING SQ. FT.	–	–
LI - LIGHT INDUSTRIAL	113.9	0.5	2,437,192	–	–
BP - BUSINESS PARK	48.9	0.4	852,034	–	–
LIGHT INDUSTRIAL & BUSINESS PARK SUBTOTAL	162.8	–	3,289,226	–	–

OTHER

LAND USE DESIGNATION	ACRES	TARGET DENSITY (DU/AC)[1]	MAX DENSITY/ TARGET BUILDING SQ. FT.	TARGET DWELLING UNITS[1]	MAX DWELLING UNITS
PF - PUBLIC FACILITY (SCHOOL, WATER TANKS)[3]	14.6	4.2	5.3	56	67
OS-R - OPEN SPACE-RECREATION (PARKS & TRAILS)[4]	18.4	–	–	–	–
OS-C - OPEN SPACE-CONSERVATION (NATURAL, SLOPES)[5]	575.1	–	–	–	–
CIRCULATION	89.6	–	–	–	–
OTHER SUBTOTAL	367.5	0.1	–	56	N/A
PROJECT TOTALS	917.1	1.8	3,289,226	1,697	N/A

[1] Dwelling Unit count by Planning Area is approximate and may vary from Planning Area to Planning Area and may increase or decrease by up to 15% provided that the overall Dwelling Units in the Vista do not exceed the Target Dwelling Unit Count of 1,697. The target density of each Planning Area may increase or decrease provided that the target density remains below the maximum density of the land use designation.

[2] The School Site in Planning Area (PA) 19 may be developed with a Medium Density Residential use at a maximum of 39 DUs if the School District does not purchase school site by the earliest of the 800th residential unit (Section 8.A.2.c.). In response to market demands, non-residential uses (mixed use, office, commercial, religious) may be developed in PA 19 subject to a Conditional Use Permit.

[3] Park acreage is approximate and may be larger or smaller in size provided that the overall park acreage in the Vista meets or exceeds City of Temecula Valley park requirements of 3 acres per 1,000 population.

[4] Open Space-Conservation includes natural areas, common areas, landscaped slopes, conservation areas, and Southern California Edison easement.

[5] All Planning Area access points shown are conceptual only.

[6] Acreage is approximate - exact acreages will be defined through future implementing tract map(s).

Neighborhood Park Water Quality Basin Roundabout

Land Use Table

RESIDENTIAL						
PA	**LAND USE**	**ACRES**	**TARGET DUs[1]**	**MAXIMUM DUs**	**TARGET DENSITY[1]**	**DENSITY RANGE[1]**
1	Medium-High Density Residential (MHDR)	23.5	156	188	6.6	5.0 – 8.0
2	Medium-High Density Residential (MHDR)	28.1	224	225	8.0	5.0 – 8.0
3	High Density Residential (HDR)	12.1	144	169	11.9	8.0 - 14.0
4	Very High Density Residential (VHDR)	26.5	408	530	15.4	14.0 - 20.0
5	Medium Density Residential (MDR)	20.2	100	101	5.0	2.0 - 5.0
6	Very High Density Residential (VHDR)	20.8	395	416	19.0	14.0 - 20.0
7	Medium Density Residential (MDR)	11.1	45	56	4.1	2.0 - 5.0
8	Medium Density Residential (MDR)	10.5	39	53	3.7	2.0 - 5.0
9	Medium Density Residential (MDR)	10.6	42	53	4.0	2.0 - 5.0
10	Medium Density Residential (MDR)	18.8	83	94	4.4	2.0 - 5.0
11	Very Low Density Residential	2.6	2	2	0.8	2.0
12	Very Low Density Residential	3.8	3	3	0.8	2.0
	RESIDENTIAL SUBTOTAL	**188.6**	**1,641**	**N/A**	**8.7**	--

LIGHT INDUSTRIAL & BUSINESS PARK				
PA	**LAND USE**	**ACRES**	**MAXIMUM BUILDING SQ. FT**	**FLOOR AREA RATIO**
13	Light Industrial (LI)	38.1	2,437,182	0.5
14	Light Industrial (LI)	20.2		
15	Light Industrial (LI)	53.6		
16	Business Park (BP)	30.9	852,034	0.4
17	Business Park (BP)	18.0		
	LIGHT INDUSTRIAL & BUSINESS PARK SUBTOTAL	**160.8**	**3,289,216**	--

OTHER						
PA	**LAND USE**	**ACRES**	**TARGET DUs[1]**	**MAXIMUM DUs**	**TARGET DENSITY[1]**	**DENSITY RANGE[1]**
18	Public Facility – Water Tanks (PF)	1.4	--	--	--	--
19	Public Facility – School (PF)	13.4	56	67	4.2	5.0
20	Community Park (OS-R)	14.3	--	--	--	--

Land Use Table cont.

21A	Open Space (Natural, Slope)	34.8	--	--	--	--
21B	Open Space (Natural, Slope)	47.4	--	--	--	--
21C	Open Space (Natural, Slope)	63.9	--	--	--	--
21D	Open Space (Natural, Slope)	27.7	--	--	--	--
21E	Open Space (Natural, Slope)	341.3	--	--	--	--
	Expanded Parkway (Trails) (OS-R)	4.1	--	--	--	--
	Circulation	19.6	--	--	--	--
	OTHER SUBTOTAL	**567.9**	**56**	**N/A**	**0.1**	--
		ACRES	**TARGET DUs[1]**	**MAXIMUM DUs**	**TARGET DENSITY[1]**	**DENSITY RANGE[1]**
	PROJECT TOTALS	**917.3**	**1,697**	**1,956**	**1.8**	--
	OVERALL MAXIMUM BUILDING SQUARE FOOTAGE	**3,289,216 s.f.**				

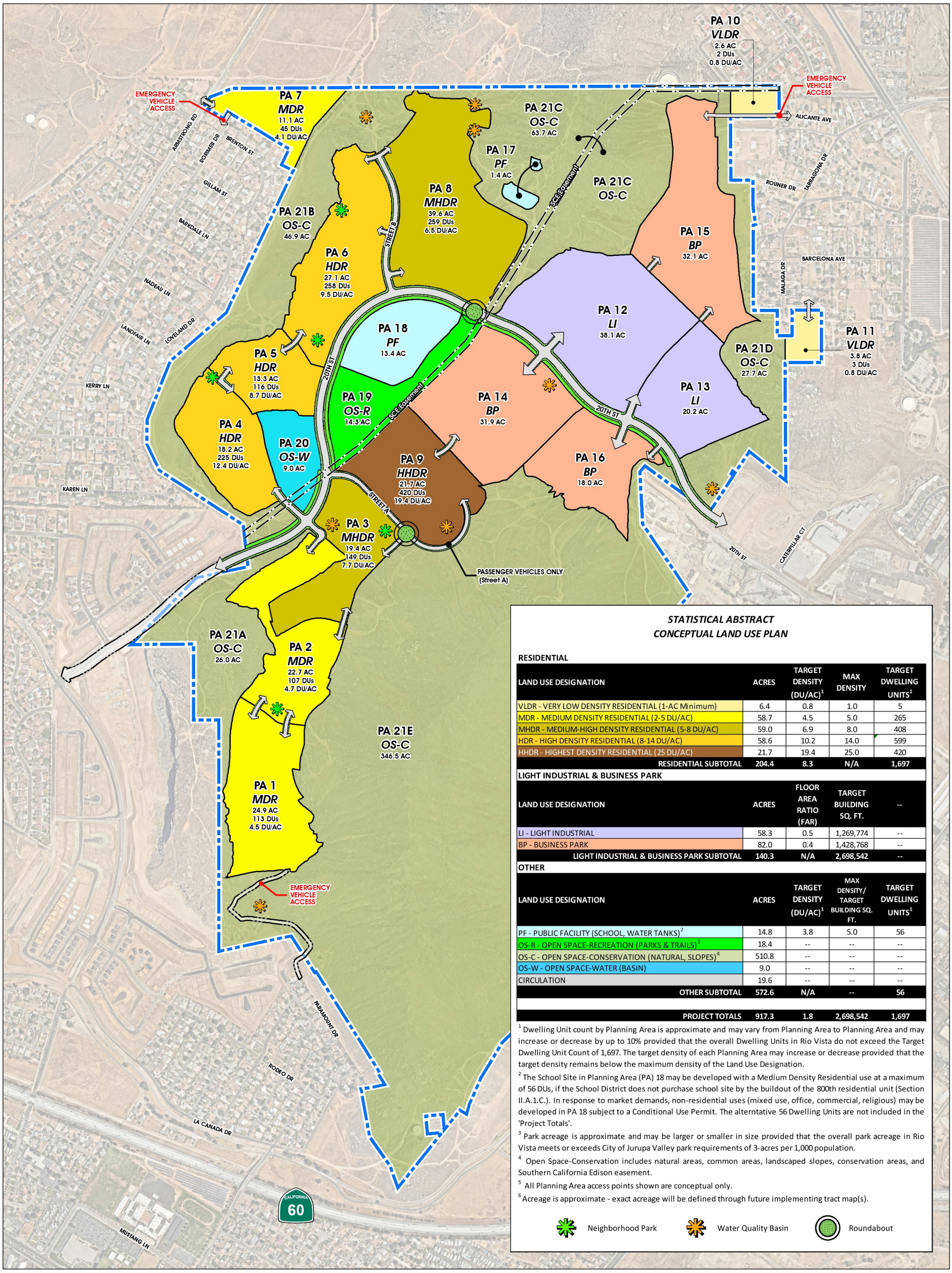
Notes:

1. Dwelling Unit count by Planning Area (PA) is approximate and may vary from PA to PA and may increase or decrease by up to 15% provided that the overall Dwelling Units in RIO VISTA do not exceed the Target 1,697 Dwelling Units. The target density of each Planning Area may increase or decrease provided that the target density remains below the maximum density of the land use designation.
2. The potential School Site in PA 19 may be developed with a Medium Density Residential use with a target of 56 DUs, if the School District does not purchase school site by the buildout of the 800th residential unit (Section II.A.1.C.). In response to market demands, non-residential uses (mixed use, office, commercial, religious) may be developed in PA 19 subject to a Conditional Use Permit.
3. Park acreage is approximate and may be larger or smaller provided that the overall park acreage in RIO VISTA meets or exceeds City of Jurupa Valley park requirements of 3-acres per 1,000 population.
4. Open Space-Conservation includes natural areas, common areas, landscaped slopes, conservation areas, and Southern California Edison easement.
5. Acreage is approximate - exact acreage will be defined through future implementing tract map(s).

APPENDIX A2

REVISED PROPOSED LAND USE PLAN (LUP) 8/5/2021

RIOVISTA



STATISTICAL ABSTRACT
CONCEPTUAL LAND USE PLAN

RESIDENTIAL

LAND USE DESIGNATION	ACRES	TARGET DENSITY (DU/AC)[1]	MAX DENSITY	TARGET DWELLING UNITS[1]
VLDR - VERY LOW DENSITY RESIDENTIAL (1-AC Minimum)	6.4	0.8	1.0	5
MDR - MEDIUM DENSITY RESIDENTIAL (2-5 DU/AC)	58.7	4.5	5.0	265
MHDR - MEDIUM-HIGH DENSITY RESIDENTIAL (5-8 DU/AC)	59.0	6.9	8.0	408
HDR - HIGH DENSITY RESIDENTIAL (8-14 DU/AC)	58.6	10.2	14.0	599
HHDR - HIGHEST DENSITY RESIDENTIAL (25 DU/AC)	21.7	19.4	25.0	420
RESIDENTIAL SUBTOTAL	**204.4**	**8.3**	**N/A**	**1,697**

LIGHT INDUSTRIAL & BUSINESS PARK

LAND USE DESIGNATION	ACRES	FLOOR AREA RATIO (FAR)	TARGET BUILDING SQ. FT.	--
LI - LIGHT INDUSTRIAL	58.3	0.5	1,269,774	--
BP - BUSINESS PARK	82.0	0.4	1,428,768	--
LIGHT INDUSTRIAL & BUSINESS PARK SUBTOTAL	**140.3**	**N/A**	**2,698,542**	**--**

OTHER

LAND USE DESIGNATION	ACRES	TARGET DENSITY (DU/AC)[1]	MAX DENSITY / TARGET BUILDING SQ. FT.	TARGET DWELLING UNITS[1]
PF - PUBLIC FACILITY (SCHOOL, WATER TANKS)[2]	14.8	3.8	5.0	56
OS-R - OPEN SPACE-RECREATION (PARKS & TRAILS)[3]	18.4	--	--	--
OS-C - OPEN SPACE-CONSERVATION (NATURAL, SLOPES)[4]	510.8	--	--	--
OS-W - OPEN SPACE-WATER (BASIN)	9.0	--	--	--
CIRCULATION	19.6	--	--	--
OTHER SUBTOTAL	**572.6**	**N/A**	**--**	**56**
PROJECT TOTALS	**917.3**	**1.8**	**2,698,542**	**1,697**

[1] Dwelling Unit count by Planning Area is approximate and may vary from Planning Area to Planning Area and may increase or decrease by up to 10% provided that the overall Dwelling Units in Rio Vista do not exceed the Target Dwelling Unit Count of 1,697. The target density of each Planning Area may increase or decrease provided that the target density remains below the maximum density of the Land Use Designation.

[2] The School Site in Planning Area (PA) 18 may be developed with a Medium Density Residential use at a maximum of 56 DUs, if the School District does not purchase school site by the buildout of the 800th residential unit (Section II.A.1.C.). In response to market demands, non-residential uses (mixed use, office, commercial, religious) may be developed in PA 18 subject to a Conditional Use Permit. The alterntative 56 Dwelling Units are not included in the 'Project Totals'.

[3] Park acreage is approximate and may be larger or smaller in size provided that the overall park acreage in Rio Vista meets or exceeds City of Jurupa Valley park requirements of 3-acres per 1,000 population.

[4] Open Space-Conservation includes natural areas, common areas, landscaped slopes, conservation areas, and Southern California Edison easement.

[5] All Planning Area access points shown are conceptual only.

[6] Acreage is approximate - exact acreage will be defined through future implementing tract map(s).

Neighborhood Park Water Quality Basin Roundabout

Source(s): Nearmap Imagery (2020), RCTLMA (2020)
Composite: Hunsaker and Associates (07-22-2021)

0 225 450 900 Feet

Rio Vista Specific Plan Land Use Plan

SP 16001

Job #: 471-004
Date: August 5, 2021

APPENDIX B

CALIFORNIA GOVERNMENT CODE SECTION 66473.7
(SENATE BILL NO. 221 AS AMENDED)

State of California

GOVERNMENT CODE

Section 66473.7

66473.7. (a) For the purposes of this section, the following definitions apply:

(1) "Subdivision" means a proposed residential development of more than 500 dwelling units, except that for a public water system that has fewer than 5,000 service connections, "subdivision" means any proposed residential development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections.

(2) "Sufficient water supply" means the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining "sufficient water supply," all of the following factors shall be considered:

(A) The availability of water supplies over a historical record of at least 20 years.

(B) The applicability of an urban water shortage contingency analysis prepared pursuant to Section 10632 of the Water Code that includes actions to be undertaken by the public water system in response to water supply shortages.

(C) The reduction in water supply allocated to a specific water use sector pursuant to a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with Section 354 of the Water Code.

(D) The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements, to the extent that these water supplies meet the criteria of subdivision (d).

(E) If a proposed subdivision relies in whole or in part on groundwater, the following factors:

(i) For a basin for which a court or the State Water Resources Control Board has adjudicated the rights to pump groundwater, the order or decree adopted by the court or the State Water Resources Control Board.

(ii) For a basin that has not been adjudicated, as follows:

(I) For a basin designated as high- or medium-priority pursuant to Section 10722.4 of the Water Code, the most recently adopted or revised adopted groundwater sustainability plan or approved alternative. If there is no adopted groundwater sustainability plan or approved alternative, information as to whether the Department

of Water Resources has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue.

(II) For a basin designated as low- or very low priority pursuant to Section 10722.4 of the Water Code, information as to whether the Department of Water Resources has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue.

(3) "Public water system" means the water supplier that is, or may become as a result of servicing the subdivision included in a tentative map pursuant to subdivision (b), a public water system, as defined in Section 10912 of the Water Code, that may supply water for a subdivision.

(b) (1) The legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove the tentative map, shall include as a condition in any tentative map that includes a subdivision a requirement that a sufficient water supply shall be available. Proof of the availability of a sufficient water supply shall be requested by the subdivision applicant or local agency, at the discretion of the local agency, and shall be based on written verification from the applicable public water system within 90 days of a request.

(2) If the public water system fails to deliver the written verification as required by this section, the local agency or any other interested party may seek a writ of mandamus to compel the public water system to comply.

(3) If the written verification provided by the applicable public water system indicates that the public water system is unable to provide a sufficient water supply that will meet the projected demand associated with the proposed subdivision, then the local agency may make a finding, after consideration of the written verification by the applicable public water system, that additional water supplies not accounted for by the public water system are, or will be, available prior to completion of the subdivision that will satisfy the requirements of this section. This finding shall be made on the record and supported by substantial evidence.

(4) If the written verification is not provided by the public water system, notwithstanding the local agency or other interested party securing a writ of mandamus to compel compliance with this section, then the local agency may make a finding that sufficient water supplies are, or will be, available prior to completion of the subdivision that will satisfy the requirements of this section. This finding shall be made on the record and supported by substantial evidence.

(c) The applicable public water system's written verification of its ability or inability to provide a sufficient water supply that will meet the projected demand associated with the proposed subdivision as required by subdivision (b) shall be supported by substantial evidence. The substantial evidence may include, but is not limited to, any of the following:

(1) The public water system's most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610) of Division 6 of the Water Code.

(2) A water supply assessment that was completed pursuant to Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code.

(3) A groundwater sustainability plan adopted or alternative approved pursuant to Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code.

(4) Other information relating to the sufficiency of the water supply that contains analytical information that is substantially similar to the assessment required by Section 10635 of the Water Code.

(d) When the written verification pursuant to subdivision (b) relies on projected water supplies that are not currently available to the public water system, to provide a sufficient water supply to the subdivision, the written verification as to those projected water supplies shall be based on all of the following elements, to the extent each is applicable:

(1) Written contracts or other proof of valid rights to the identified water supply that identify the terms and conditions under which the water will be available to serve the proposed subdivision.

(2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body.

(3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply.

(4) Any necessary regulatory approvals that are required in order to be able to convey or deliver a sufficient water supply to the subdivision.

(e) If there is no public water system, the local agency shall make a written finding of sufficient water supply based on the evidentiary requirements of subdivisions (c) and (d) and identify the mechanism for providing water to the subdivision.

(f) In making any findings or determinations under this section, a local agency, or designated advisory agency, may work in conjunction with the project applicant and the public water system to secure water supplies sufficient to satisfy the demands of the proposed subdivision. If the local agency secures water supplies pursuant to this subdivision, which supplies are acceptable to and approved by the governing body of the public water system as suitable for delivery to customers, it shall work in conjunction with the public water system to implement a plan to deliver that water supply to satisfy the long-term demands of the proposed subdivision.

(g) The written verification prepared under this section shall also include a description, to the extent that data is reasonably available based on published records maintained by federal and state agencies, and public records of local agencies, of the reasonably foreseeable impacts of the proposed subdivision on the availability of water resources for agricultural and industrial uses within the public water system's service area that are not currently receiving water from the public water system but are utilizing the same sources of water. To the extent that those reasonably foreseeable impacts have previously been evaluated in a document prepared pursuant to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) or the National Environmental Policy Act (Public Law 91-190) for the proposed subdivision, the public water system may utilize that information in preparing the written verification.

(h) Where a water supply for a proposed subdivision includes groundwater, the public water system serving the proposed subdivision shall evaluate, based on substantial evidence, the extent to which it or the landowner has the right to extract the additional groundwater needed to supply the proposed subdivision. Nothing in this subdivision is intended to modify state law with regard to groundwater rights.

(i) This section shall not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low-income households.

(j) The determinations made pursuant to this section shall be consistent with the obligation of a public water system to grant a priority for the provision of available and future water resources or services to proposed housing developments that help meet the city's or county's share of the regional housing needs for lower income households, pursuant to Section 65589.7.

(k) The County of San Diego shall be deemed to comply with this section if the Office of Planning and Research determines that all of the following conditions have been met:

(1) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C as approved by the voters of the County of San Diego in November 1988, which required the development of a regional growth management plan and directed the establishment of a regional planning and growth management review board.

(2) Each public water system, as defined in Section 10912 of the Water Code, within the County of San Diego has adopted an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) of the Water Code.

(3) The approval or conditional approval of tentative maps for subdivisions, as defined in this section, by the County of San Diego and the cities within the county requires written communications to be made by the public water system to the city or county, in a format and with content that is substantially similar to the requirements contained in this section, with regard to the availability of a sufficient water supply, or the reliance on projected water supplies to provide a sufficient water supply, for a proposed subdivision.

(*l*) Nothing in this section shall preclude the legislative body of a city or county, or the designated advisory agency, at the request of the applicant, from making the determinations required in this section earlier than required pursuant to subdivision (b).

(m) Nothing in this section shall be construed to create a right or entitlement to water service or any specific level of water service.

(n) Nothing in this section is intended to change existing law concerning a public water system's obligation to provide water service to its existing customers or to any potential future customers.

(o) Any action challenging the sufficiency of the public water system's written verification of a sufficient water supply shall be governed by Section 66499.37.

(Amended by Stats. 2016, Ch. 594, Sec. 1. (SB 1262) Effective January 1, 2017.)

APPENDIX C

CALIFORNIA WATER CODE SECTION 10910
(SENATE BILL NO. 610, AS AMENDED)

State of California

WATER CODE

Section 10910

10910. (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system whose service area includes the project site and any water system adjacent to the project site that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined in Section 10912, that may supply water for the project. If the city or county is not able to identify any public water system that may supply water for the project, the city or county shall prepare the water assessment required by this part after consulting with any entity serving domestic water supplies whose service area includes the project site, the local agency formation commission, and any public water system adjacent to the project site.

(c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

(3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

(d) (1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contractholders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:

(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

(2) (A) A description of any groundwater basin or basins from which the proposed project will be supplied.

(B) For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city

or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree.

(C) For a basin that has not been adjudicated that is a basin designated as high- or medium-priority pursuant to Section 10722.4, information regarding the following:

(i) Whether the department has identified the basin as being subject to critical conditions of overdraft pursuant to Section 12924.

(ii) If a groundwater sustainability agency has adopted a groundwater sustainability plan or has an approved alternative, a copy of that alternative or plan.

(D) For a basin that has not been adjudicated that is a basin designated as low- or very low priority pursuant to Section 10722.4, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water supply assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by subparagraph (D) of paragraph (4) of subdivision (b) of Section 10631.

(g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

(2) Prior to the expiration of the 90-day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water

system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.

(3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water supply assessment.

(h) Notwithstanding any other provision of this part, if a project has been the subject of a water supply assessment that complies with the requirements of this part, no additional water supply assessment shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:

(1) Changes in the project that result in a substantial increase in water demand for the project.

(2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.

(3) Significant new information becomes available that was not known and could not have been known at the time when the assessment was prepared.

(i) For the purposes of this section, hauled water is not considered as a source of water.

(Amended by Stats. 2018, Ch. 15, Sec. 19. (AB 1668) Effective January 1, 2019.)

APPENDIX D

DETERMINATION OF WATER DEMAND FOR RIO VISTA SPECIFIC PLAN PROJECT

WATER DEMAND DETERMINATION									
RESIDENTIAL									
PA	**LAND USE**	**ACRES [5]**	**TARGET DUs [1]**	**MAXIMUM DUs**	**TARGET DENSITY [1]**	**MAX DENSITY [1]**	**DUTY FACTOR [6] (AF/yr/DU)**	**TARGET ANNUAL USE (AF/yr)**	**MAXIMUM ANNUAL USE (AF/yr)**
1	Medium Density Residential (MDR)	24.9	113	125	4.5	5	0.6	67.80	74.70
2	Medium Density Residential (MDR)	22.7	107	114	4.7	5	0.6	64.20	68.10
3	Medium-High Density Residential (MHDR)	19.4	149	155	7.7	8	0.4	59.60	62.08
4	High Density Residential (HDR)	18.2	225	255	12.4	14	0.3	67.50	76.44
5	High Density Residential (HDR)	13.3	116	186	8.7	14	0.3	34.80	55.86
6	High Density Residential (HDR)	27.1	258	379	9.5	14	0.2	51.60	75.88
7	Medium Density Residential (MDR)	11.1	45	56	4.1	5	0.6	27.00	33.30
8	Medium-High Density Residential (MHDR)	39.6	259	317	6.5	8	0.4	103.60	126.72
9	Highest Density Residential (HHDR)	21.7	420	543	19.4	25	0.2	84.00	108.50
10	Very Low Density Residential (VLDR)	2.6	2	3	0.8	1	0.6	1.20	1.56
11	Very Low Density Residential (VLDR)	3.8	3	4	0.8	1	0.6	1.80	2.28
RESIDENTIAL SUBTOTAL		**204.4**	**1,697**	**2,135**	**---**	**--**	**--**	**563.10**	**685.42**
LIGHT INDUSTRIAL AND BUSINESS PARK									
PA	**LAND USE**	**ACRES [5]**	**TARGET BUILDING (SQUARE FEET (SF))**		**FLOOR AREA RATIO**		**DUTY FACTOR [6] (AF/yr/Ac)**	**TARGET ANNUAL USE (AF/yr)**	**MAXIMUM ANNUAL USE (AF/yr)**
12	Light Industrial (LI)	38.1	1,269,774		0.5		2.2	83.82	83.82
13	Light Industrial (LI)	20.2					2.2	44.44	44.44
14	Business Park (BP)	31.9	1,428,768		0.4		1.1	35.09	35.09
15	Business Park (BP)	32.1					1.1	35.31	35.31
16	Business Park (BP)	18.0					1.1	19.8	19.8
LIGHT INDUSTRIAL AND BUSINESS PARK SUBTOTAL		**140.3**	**3,289,216**		**--**		**--**	**218.46**	**218.46**

WATER DEMAND DETERMINATION									
OTHER									
PA	LAND USE	ACRES [5]	TARGET DUs [1]	MAXIMUM DUs	TARGET DENSITY [1]	DENSITY RANGE [1]	DUTY FACTOR [7] (AF/yr/Ac)	TARGET ANNUAL USE (AF/yr)	MAXIMUM ANNUAL USE (AF/yr)
17	Public Facility – Water Tanks (PF)	1.4	--	--	--	--	1.68	2.4	2.4
18	Public Facility – School (PF) [2]	13.4	56	56	3.8	--	2	26.8	33.6
19	Community Park (OS-R) [3]	14.3	--	--	--	--	1.68	24.0	24.0
20	Open Space – Water (Basin) (OS-W)	9.0	--	--	--	--	0	0.0	0.0
21A	Open Space (OS-C) [4]	26.0	--	--	--	--	0	0.0	0.0
21B	Open Space (OS-C) [4]	46.9	--	--	--	--	0	0.0	0.0
21C	Open Space (OS-C) [4]	63.7	--	--	--	--	0	0.0	0.0
21D	Open Space (OS-C) [4]	27.7	--	--	--	--	0	0.0	0.0
21E	Open Space (OS-C) [4]	346.5	--	--	--	--	0	0.0	0.0
	Circulation	19.6	--	--	--	--	0	0.0	0.0
	OTHER SUBTOTAL	**567.9**	**56**	**N/A**	**0.1**	**--**	**--**	**53.2**	**60.0**

WATER DEMAND DETERMINATION								
	ACRES	TARGET DUs [1]	MAXIMUM DUs	TARGET DENSITY [1]	DENSITY RANGE [1]	--	TARGET ANNUAL USE (AF/yr)	MAXIMUM ANNUAL USE (AF/yr)
PROJECT TOTALS	**917.3**	**1,697**	**1,956**	**1.8**	**--**	**--**	**834.74**	**963.86**

NOTES:

(1) Dwelling Unit (DU) count by Planning Area (PA) is approximate and may vary from PA to PA and may increase or decrease by up to 15% provided that the overall DUs in RIO VISTA do not exceed the Target 1,697 DUs. The target density of each PA may increase or decrease provided that the target density remains below the maximum density of the land use designation.

(2) The potential School Site in PA 19 may be developed with a Medium Density Residential use with a maximum of 56 DUs, if the School District does not purchase school site by the buildout of the 800th residential unit (Section II.A.1.C.). In response to market demands, non-residential uses (mixed use, office, commercial, religious) may be developed in PA 19 subject to a Conditional Use Permit.

(3) Park acreage is approximate and may be larger or smaller provided that the overall park acreage in RIO VISTA meets or exceeds City of Jurupa Valley park requirements of 3-acres per 1,000 population.

(4) Open Space - Conservation includes natural areas, common areas, landscaped slopes, conservation areas, and Southern California Edison easement.

(5) Acreage is approximate - exact acreage will be defined through future implementing tract map(s).

(6) Duty Factor based on duty factors set forth in RCSD 2015 Water Facilities Master Plan.

(7) Duty Factor based on duty factors set forth in "Rio Vista Development - Updated Water and Sewer Facilities Report," by Albert A. Webb Associates (2008).

APPENDIX E

SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE COUNTY OF RIVERSIDE
JUDGMENT 78426
(1969 JUDGMENT)

FILED
RIVERSIDE COUNTY
APR 17 1969
DONALD [illegible], Clerk
By [illegible] Deputy

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF RIVERSIDE

WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY, a municipal water district; CITY OF RIVERSIDE, a municipal corporation; THE GAGE CANAL COMPANY, a corporation; AGUA MANSA WATER COMPANY, a corporation, MEEKS & DALEY WATER COMPANY, a corporation; RIVERSIDE HIGHLAND WATER COMPANY, a corporation, and THE REGENTS OF THE UNIVERSITY OF CALIFORNIA,

Plaintiffs,

-vs-

(A) EAST SAN BERNARDINO COUNTY WATER DISTRICT, et al.,

Defendants

No. 754726

JUDGMENT

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APPENDIX A -- Map showing San Bernardino Basin Area, Colton Basin Area, and Riverside Basin Area situated within San Bernardino County; Riverside Basin Area within Riverside County; Bunker Hill Dike; Riverside Narrows; and

Boundaries of San Bernardino Valley Municipal Water District & Western Municipal Water District of Riverside County

APPENDIX B -- Extractions by Plaintiffs from San Bernardino Basin Area.

APPENDIX C -- Exports for Use on Lands not Tributary to Riverside Narrows

APPENDIX D -- Miscellaneous Data

RECITALS

(a) Complaint. The complaint in this action was filed by certain parties exporting water from the area defined herein as the San Bernardino Basin Area for use within Western, and sought a general adjudication of water rights.

(b) Orange County Water District Action. Subsequently the Orange County Water District filed an action for the adjudication of the water rights of substantially all water users in the area tributary to Prado Dam in the Santa Ana River Watershed. A decree of physical solution has been entered in such action whereby individual water users were dismissed, and San Bernardino Valley and Western assumed responsibility for the deliveries of certain flows at Riverside Narrows and Prado respectively.

(c) Physical Solution. The Judgment herein will further implement the physical solution in the Orange County Water District action, as well as determine the rights of the hereinafter named Plaintiffs to extract water from the San Bernardino Basin Area, and provide for replenishment of the area above Riverside Narrows. Such Judgment is fair and equitable, in the best interests of the parties, and in furtherance of the water policy of the State. San Bernardino Valley has the statutory power and resources to effectuate this Judgment and accordingly the other defendants may be dismissed.

(d) Stipulation. The parties named herein through their respective counsel have proposed and filed a written stipulation agreeing to the making and entry of this Judgment. By reason of such stipulation, and good cause appearing

therefor,

IT IS HEREBY ORDERED, ADJUDGED AND DECREED as follows:

I

ACTIVE PARTIES

(a) The parties to this Judgment are as follows:

(1) Plaintiff Western Municipal Water District of Riverside County, a California municipal water district, herein often called "Western", appearing and acting pursuant to Section 71751 of the Water Code;

(2) Plaintiff City of Riverside, a municipal corporation;

(3) Plaintiffs Riverside Highland Water Company, Agua Mansa Water Company and Meeks & Daley Water Company, each of which is a mutual water company and a California corporation;

(4) Plaintiff The Regents of the University of California, a California public corporation;

(5) Defendant San Bernardino Valley Municipal Water District, a California municipal water district, herein often called "San Bernardino Valley", appearing and acting pursuant to Section 71751 of the Water Code;

(b) This Judgment shall inure to the benefit of, and be binding upon, the successors and assigns of the parties.

II

DISMISSED PARTIES

All parties other than those named in the preceding Paragraph I are dismissed without prejudice.

III

PRIOR JUDGMENTS

(a) The Judgment dated and entered on May 13, 1959, in that certain action filed in the Superior Court of the State of California in and for the County of San Bernardino, entitled and numbered "San Bernardino Valley Water Conservation District, a State Agency, Plaintiff v. Riverside Water Company, a corporation, et al., Defendants", No. 97031, is superseded effective January 1, 1971, and for so long as this Judgment remains in effect as to any party hereto that was a party to that action, and as to any party hereto that is a successor in interest to the rights determined in that action.

(b) The Judgment dated June 23, 1965, and entered on April 21, 1966, in that certain action filed in the Superior Court of the State of California in and for the County of San Bernardino entitled and numbered "San Bernardino Valley Water Conservation District, a State Agency, Plaintiff, v. Riverside Water Company, a corporation, et al., Defendants," No. 111614, is superseded effective January 1, 1971, and for so long as this Judgment remains in effect as to any party hereto that was a party to that action, and as to any party hereto that is a successor in interest to any rights determined in that action.

(c) As used in this Paragraph III only, "party" includes any person or entity which stipulates with the parties hereto to accept this Judgment.

IV

DEFINITIONS

The following ground water basins and tributary areas are situated within the Santa Ana River watershed upstream from Riverside Narrows and are tributary thereto, and their approximate locations and boundaries for purposes of this Judgment are shown upon the map attached hereto as Appendix "A": San Bernardino Basin Area (the area above Bunker Hill Dike, but excluding certain mountainous regions and the Yucaipa, San Timoteo, Oak Glen and Beaumont Basins); Colton Basin Area, Riverside Basin Area within San Bernardino County, and Riverside Basin Area within Riverside County.

As used herein the following terms shall have the meanings herein set forth:

(a) Bunker Hill Dike - The San Jacinto Fault, located approximately as shown on Appendix "A", and forming the principal downstream boundary of the San Bernardino Basin Area.

(b) Riverside Narrows - That bedrock narrows in the Santa Ana River indicated on Appendix "A".

(c) Extractions - Any form of the verb or noun shall include pumping, diverting, taking or withdrawing water, either surface or subsurface, by any means whatsoever, except extractions for hydroelectric generation to the extent that such flows are returned to the stream, and except for diversions for replenishment.

(d) Natural Precipitation - Precipitation which falls naturally in the Santa Ana River watershed.

(e) Imported Water - Water brought into the Santa Ana River watershed from sources of origin outside such watershed.

(f) Replenishment - Artificial recharge of the ground water body achieved through the spreading or retention of water for the purpose of causing it to percolate and join the underlying ground water body, or injection of water into the ground water resources by means of wells; provided that as used with reference to any obligation of Western to replenish the Riverside Basin Area in Riverside County, the term replenishment shall include any water caused to be delivered by Western for which credit is received by San Bernardino Valley against its obligation under the Orange County Judgment to provide base flow at Riverside Narrows.

(g) Safe Yield - Safe yield is that maximum average annual amount of water that could be extracted from the surface and subsurface water resources of an area over a period of time sufficiently long to represent or approximate long-time mean climatological conditions, with a given areal pattern of extractions, under a particular set of physical conditions or structures as such affect the net recharge to the ground water body, and with a given amount of usable underground storage capacity, without resulting in long-term, progressive lowering of ground water levels or other undesirable result. In determining the operational criteria to avoid such adverse results, consideration shall be given to maintenance of adequate ground water quality, subsurface outflow, costs of pumping, and other relevant factors.

The amount of safe yield is dependent in part upon the amount of water which can be stored in and used from the ground water reservoir over a period of normal water supply under a given set of conditions. Safe yield is thus related to factors which influence or control ground water recharge, and

to the amount of storage space available to carry over recharge occurring in years of above average supply to years of deficient supply. Recharge, in turn, depends on the available surface water supply and the factors influencing the percolation of that supply to the water table.

Safe yield shall be determined in part through the evaluation of the average net groundwater recharge which would occur if the culture of the safe yield year had existed over a period of normal native supply.

(h) Natural Safe Yield - That portion of the safe yield of the San Bernardino Basin Area which could be derived solely from natural precipitation in the absence of imported water and the return flows therefrom, and without contributions from new conservation. If in the future any natural runoff tributary to the San Bernardino Basin Area is diverted away from that Basin Area so that it is not included in the calculation of natural safe yield, any replacement made thereof by San Bernardino Valley or entities within it from imported water shall be included in such calculation.

(i) New Conservation - Any increase in replenishment from natural precipitation which results from operation of works and facilities not now in existence, other than those works installed and operations which may be initiated to offset losses caused by increased flood control channelization.

(j) Year - A calendar year from January 1 through December 31. The term "annual" shall refer to the same period of time.

(k) Orange County Judgment - The final judgment in Orange County Water District v. City of Chino, et al., Orange County Superior Court No. 117628, as it may from time to

time be modified.

(l) Return Flow - That portion of the water applied for use in any particular ground water basin which subsequently reaches the ground water body in that basin.

(m) Five Year Period - a period of five consecutive years.

V

EXTRACTIONS FROM THE SAN BERNARDINO BASIN AREA

(a) For Use by Plaintiffs. The average annual extractions from the San Bernardino Basin Area delivered for use in each service area by each Plaintiff for the five year period ending with 1963 are hereby determined to be as set forth in Table B-1 of Appendix "B". The amount for each such Plaintiff delivered for use in each service area as set forth in Table B-1 shall be designated, for purposes of this Judgment, as its "base right" for such service area.

(b) For Use by Others. The total actual average annual extractions from the San Bernardino Basin Area by entities other than Plaintiffs for use within San Bernardino County for the five year period ending with 1963 are assumed to be 165,407 acre feet; the correct figure shall be determined by the Watermaster as herein provided.

VI

SAN BERNARDINO BASIN AREA RIGHTS AND REPLENISHMENT

(a) Determination of Natural Safe Yield. The natural safe yield of the San Bernardino Basin Area shall be computed by the Watermaster, reported to and determined initially by supplemental order of this Court, and thereafter

shall be subject to the continuing jurisdiction thereof.

(b) Annual Adjusted Rights of Plaintiffs.

1. The annual "adjusted right" of each Plaintiff to extract water from the San Bernardino Basin Area for use in each service area designated in Table B-1 shall be equal to the sum of the following:

(a) its base right for such service area, until the natural safe yield of the San Bernardino Basin Area is determined, and thereafter its percentage of such natural safe yield determined by the methods used in Table B-2; and (b) an equal percentage for each service area of any new conservation, provided the conditions of the subparagraph 2 below have been met.

2. In order that the annual adjusted right of each such Plaintiff shall include its same respective percentage of any new conservation, such Plaintiff shall pay its proportionate share of the costs thereof. Each Plaintiff shall have the right to participate in new conservation projects, under procedures to be determined by the Watermaster for notice to Plaintiffs of the planned construction of such projects. With respect to any new conservation brought about by Federal installations, the term "costs" as used herein shall refer to any local share required to be paid in connection with such project. Each Plaintiff shall make its payment at times satisfactory to the constructing agency, and new conservation shall be credited to any participating Plaintiff as such conservation is effected.

3. In any five year period, each Plaintiff shall have the right to extract from the San Bernardino Basin Area for use in each service area designated in Table B-1 an amount of water equal to five times its adjusted right for such service area; provided, however, that extractions by each Plaintiff in any year in any service area shall not exceed such Plaintiff's adjusted right for that service area by more than 30 percent.

4. If the natural safe yield of the San Bernardino Basin Area has not been determined by January 1, 1972, the initial determination thereof shall be retroactive to that date and the rights of the Plaintiffs, and the replenishment obligation of San Bernardino Valley as hereinafter set forth, shall be adjusted as of such date. Any excess extractions by Plaintiffs shall be charged against their respective adjusted rights over the next five year period, or in the alternative, Plaintiffs may pay to San Bernardino Valley the full cost of any replenishment which it has provided as replenishment for such excess extractions. Any obligation upon San Bernardino Valley to provide additional replenishment, by virtue of such retroactive determination of natural safe yield, may also be discharged over such next five year period.

5. Plaintiffs and each of them and their agents and assigns are enjoined from extracting any more water from the San Bernardino Basin Area than is permitted under this Judgment. Changes in place

of use of any such water from one service area to another shall not be made without the prior approval of Court upon a finding of compliance with Paragraph XV(b) of this Judgment. So long as San Bernardino Valley is in compliance with all its obligations hereunder, and Plaintiffs are allowed to extract the water provided for in this Judgment, Plaintiffs are further enjoined from bringing any action to limit the water extracted from the San Bernardino Basin Area for use within San Bernardino Valley.

6. Nothing in this Judgment shall prevent future agreements between San Bernardino Valley and Western under which additional extractions may be made from the San Bernardino Basin Area, subject to the availability of imported water not required by San Bernardino Valley, and subject to payment satisfactory to San Bernardino Valley for replenishment required to compensate for such additional extractions.

(c) San Bernardino Valley Replenishment. San Bernardino Valley shall provide imported water for replenishment of the San Bernardino Basin Area at least equal to the amount by which extractions therefrom for use within San Bernardino County exceed during any five year period the sum of: (a) five times the total average annual extractions determined under Paragraph V(b) hereof, adjusted as may be required by the natural safe yield of the San Bernardino Basin Area; and (b) any new conservation to which users within San Bernardino Valley are entitled. Such replenishment shall be

supplied in the year following any five year period; provided that during the first five year period, San Bernardino Valley shall supply annual amounts on account of its obligations hereunder, and such amounts shall be not less than fifty percent of the gross amount of excess extractions in the previous year.

1. Against its replenishment obligation over any five year period San Bernardino Valley shall receive credit for that portion of such excess extractions that returns to the ground water of the San Bernardino Basin Area.

2. San Bernardino Valley shall also receive credit against any future replenishment obligations for all replenishment which it provides in excess of that required herein, and for any amounts which may be extracted without replenishment obligation, which in fact are not extracted.

(d) In this subparagraph (d), "person" and "entity" mean only those persons and entities, and their successors in interest, which have stipulated with the parties to this Judgment within six months after its entry to accept this Judgment.

San Bernardino Valley agrees that the base rights of persons or entities other than Plaintiffs to extract water from the San Bernardino Basin Area for use within San Bernardino Valley will be determined by the average annual quantity extracted by such person or entity during the five year period ending with 1963. After the natural safe yield of the San Bernardino Basin Area is determined hereunder, such

base rights will be adjusted to such natural safe yield; the adjusted right of each such person or entity shall be that percentage of natural safe yield as determined hereunder from time to time which the unadjusted right of such person or entity is of the amount determined under Paragraph V(b).

San Bernardino Valley further agrees that in the event the right to extract water of any of such persons or entities in the San Bernardino Basin Area is adjudicated and legal restrictions placed on such extractions which prevent extracting of water by said persons or entities in an amount equal to their base rights, or after natural safe yield is determined, their adjusted rights, San Bernardino Valley will furnish to such persons or entities or recharge the ground water resources in the area of extraction for their benefit with imported water, without direct charge to such persons or entities therefor, so that the base rights, or adjusted rights, as the case may be, may be taken by the person or entity.

Under the provisions hereof relating to furnishing of such water by San Bernardino Valley, such persons or entities shall be entitled to extract in addition to their base rights or adjusted rights any quantities of water spread for repumping in their area of extractions, which has been delivered to them by a mutual water company under base rights or adjusted base rights included by the Watermaster under the provisions of Paragraph V (b) hereof. Extractions must be made within three years of spreading to so qualify.

VII

WATER DISCHARGED ACROSS THE BUNKER HILL DIKE

San Bernardino Valley shall keep in force an agreement with the City of San Bernardino that the present annual quantity of municipal sewage effluent discharged across Bunker Hill Dike, assumed for all purposes herein to be 16,000 acre feet annually, shall be committed to the discharge of the downstream obligations imposed on San Bernardino Valley under this Judgment or under the Orange County Judgment, and that such effluent shall comply with the requirements of the Santa Ana River Basin Regional Water Quality Control Board in effect December 31, 1968.

VIII

EXTRACTIONS FROM COLTON BASIN AREA AND RIVERSIDE BASIN AREA IN SAN BERNARDINO COUNTY.

(a) The average annual extractions from the Colton Basin Area and that portion of the Riverside Basin Area within San Bernardino County, for use outside San Bernardino Valley, for the five year period ending with 1963 are assumed to be 3,349 acre feet and 20,191 acre feet, respectively; the correct figures shall be determined by the Watermaster as herein provided.

(b) Over any five year period, there may be extracted from each such Basin Area for use outside San Bernardino Valley, without replenishment obligation, an amount equal to five times such annual average for the Basin Area; provided, however, that if extractions in any year exceed such average by more than 20 percent, Western shall provide replenishment in the following year equal to the excess

extractions over such 20 percent peaking allowance.

(c). To the extent that extractions from each such Basin Area for use outside San Bernardino Valley exceed the amounts specified in the next preceding Paragraph (b), Western shall provide replenishment. Except for any extractions in excess of the 20 percent peaking allowance, such replenishment shall be supplied in the year following any five year period, and shall not be from reclaimed water produced within San Bernardino Valley. Such replenishment shall also be of a quality at least equal to the water extracted from the Basin Area being recharged; provided, that water from the State Water Project shall be deemed to be of acceptable quality. Replenishment shall be supplied to the Basin Area from which any excess extractions have occurred and in the vicinity of the place of the excess extractions to the extent required to preclude influence on the water level in the three wells below designated; provided that discharge of imported water into the Santa Ana River or Warm Creek from a connection on the State Aqueduct near the confluence thereof, if released in accordance with a schedule approved by the Watermaster to achieve compliance with the objectives of this Judgment, shall satisfy any obligation of Western to provide replenishment in the Colton Basin Area, or that portion of the Riverside Basin Area in San Bernardino County, or the Riverside Basin Area in Riverside County.

(d) Extractions from the Colton Basin Area and that portion of the Riverside Basin Area within San Bernardino County, for use within San Bernardino Valley, shall not be limited. However, except for any required replenishment by Western, San Bernardino Valley shall provide the water to maintain the static water levels in the area, as determined by wells numbered

1S 4W 21 Q3, 1S 4W 29 H1, and 1S 4W 29 Q1 at an average level no lower than that which existed in the Fall season of 1963. Such 1963 average water level is hereby determined to be 822.04 feet above sea level. In future years, the level shall be computed by averaging the lowest static water levels in each of the three wells occurring at or about the same time of the year, provided that no measurements will be used which reflect the undue influence of pumping in nearby wells, or in the three wells, or pumping from the Riverside Basin in Riverside County in excess of that determined pursuant to Paragraph IX(a) hereof.

(e) Extractions by Plaintiffs from the Colton Basin Area and the portion of the Riverside Basin Area in San Bernardino County may be transferred to the San Bernardino Basin Area if the level specified in Paragraph (d) above is not maintained, but only to the extent necessary to restore such 1963 average water level, provided that Western is not in default in any of its replenishment obligations. San Bernardino Valley shall be required to replenish the San Bernardino Basin Area in an amount equal to any extractions so transferred. San Bernardino Valley shall be relieved of responsibility toward the maintenance of such 1963 average water level to the extent that Plaintiffs have physical facilities available to accommodate such transfers of extractions, and insofar as such transfers can be legally accomplished.

(f) The Colton Basin Area and the portion of the Riverside Basin Area in San Bernardino County constitute a major source of water supply for lands and inhabitants in both San Bernardino Valley and Western, and the parties hereto have a mutual interest in the maintenance of water quality in these Basin Areas and in the preservation of such supply. If

the water quality in such Areas, as monitored by the City of Riverside wells along the river, falls below the Objectives set therefor by the Santa Ana River Basin Regional Water Quality Control Board, the Court shall have jurisdiction to modify the obligations of San Bernardino Valley to include, in addition to its obligation to maintain the average 1963 water level, reasonable provisions for the maintenance of such water quality.

(g) The primary objectives of Paragraph VIII and related provisions are to allow maximum flexibility to San Bernardino Valley in the operation of a coordinated replenishment and management program, both above and below Bunker Hill Dike; to protect San Bernardino Valley against increased extractions in the area between Bunker Hill Dike and Riverside Narrows, which without adequate provision for replenishment might adversely affect base flow at Riverside Narrows, for which it is responsible under the Orange County Judgment; and to protect the area as a major source of ground water supply available to satisfy the historic extractions therefrom for use within Western, without regard to the method of operation which may be adopted by San Bernardino Valley for the San Bernardino Basin Area, and without regard to the effect of such operation upon the historic supply to the area below Bunker Hill Dike.

If these provisions should prove either inequitable or unworkable, the Court upon the application of any party hereto shall retain jurisdiction to modify this Judgment so as to regulate the area between Bunker Hill Dike and Riverside Narrows on a safe yield basis; provided that under such method of operation, (1) base rights shall be determined on the basis of total average annual extractions for use within San Bernardino Valley and Western, respectively, for the five year period ending

with 1963; (2) such base rights for use in both Districts shall be subject to whatever adjustment may be required by the safe yield of the area, and in the aggregate shall not be exceeded unless replenishment therefor is provided; (3) in calculating safe yield, the outflow from the area at Riverside Narrows shall be determined insofar as practical by the base flow obligations imposed on San Bernardino Valley under the Orange County Judgment; and (4) San Bernardino Valley shall be required to provide replenishment for any deficiency between the actual outflow and the outflow obligation across Bunker Hill Dike as established by safe yield analysis using the base period of 1934 through 1960.

IX

EXTRACTIONS FROM THE PORTION OF RIVERSIDE BASIN AREA IN RIVERSIDE COUNTY WHICH IS TRIBUTARY TO RIVERSIDE NARROWS.

(a) The average annual extractions from the portion of the Riverside Basin Area in Riverside County which is tributary to Riverside Narrows, for use in Riverside County, for the five year period ending with 1963 are assumed to be 30,044 acre feet; the correct figures shall be determined by the Watermaster as herein provided.

(b) Over any five year period, there may be extracted from such Basin Area, without replenishment obligation, an amount equal to five times such annual average for the Basin Area; provided, however, that if extractions in any year exceed such average by more than 20 percent, Western shall provide replenishment in the following year equal to the excess extractions over such 20 percent peaking allowance.

(c) To the extent that extractions from such Basin Area exceed the amounts specified in the next preceding

Paragraph (b), Western shall provide replenishment. Except for any extractions in excess of the 20 percent peaking allowance, such replenishment shall be supplied in the year following any five year period, and shall be provided at or above Riverside Narrows.

(d) Western shall also provide such replenishment to offset any reduction in return flow now contributing to the base flow at Riverside Narrows, which reduction in return flow results from the conversion of agricultural uses of water within Western to domestic or other uses connected to sewage or waste disposal systems, the effluent from which is not tributary to the rising water at Riverside Narrows.

X

REPLENISHMENT TO OFFSET NEW EXPORTS OF WATER TO AREAS NOT TRIBUTARY TO RIVERSIDE NARROWS.

Certain average annual amounts of water extracted from the San Bernardino Basin Area and the area downstream therefrom to Riverside Narrows during the five year period ending in 1963 have been exported for use outside of the area tributary to Riverside Narrows and are assumed to be 50,667 acre feet annually as set forth in Table C-1 of Appendix "C"; the correct amount shall be determined by the Watermaster as herein provided. Western shall be obligated to provide replenishment at or above Riverside Narrows for any increase over such exports by Western or entities within it from such areas for use within areas not tributary to Riverside Narrows. San Bernardino Valley shall be obligated to provide replenishment for any increase over the exports from San Bernardino Valley for use in any area not within Western nor tributary to Riverside Narrows as set forth in Table C-2 of

Appendix "C", such amounts being subject to correction by the Watermaster, or for any exports from the San Bernardino Basin Area for use in the Yucaipa, San Timoteo, Oak Glen and Beaumont Basins.

XI

REPLENISHMENT CREDITS AND ADJUSTMENT FOR QUALITY

(a) All replenishment provided by Western under Paragraph IX and all credits received against such replenishment obligation shall be subject to the same adjustments for water quality applicable to base flow at Riverside Narrows, as set forth in the Orange County Judgment.

(b) Western shall receive credit against its replenishment obligations incurred under this Judgment for the following:

1. As against its replenishment obligation under Paragraph VIII, any return flow to the Colton Basin Area or the portion of the Riverside Basin Area within San Bernardino County, respectively, resulting from any excess extractions therefrom; and as against its replenishment obligation under Paragraph IX, any return flow to the portion of the Riverside Basin Area in Riverside County, which contributes to the base flow at Riverside Narrows, resulting from any excess extractions therefrom, or from the Riverside Basin Area in San Bernardino County, or from the Colton Basin Area.

2. Subject to adjustment under Paragraph (a) hereof, any increase over the present amounts of sewage effluent discharged from

treatment plants within Riverside County which are tributary to Riverside Narrows, and which results from the use of imported water.

3. Any replenishment which may be provided in excess of that required; any amounts which hereunder are allowed to be extracted from the Colton and Riverside Basin Areas without replenishment obligation by Western, and which in fact are not extracted; any storm flows conserved between Bunker Hill Dike and Riverside Narrows by works financed solely by Western, or entities within it, which would not otherwise contribute to base flow at Riverside Narrows; and any return flow from imported water used in Riverside County which contributes to base flow at Riverside Narrows; provided, however, that such use of the underground storage capacity in each of the above situations does not adversely affect San Bernardino Valley in the discharge of its obligations at Riverside Narrows under the Orange County Judgment, nor interfere with the accomplishment by San Bernardino Valley of the primary objectives of Paragraph VIII, as stated in Subdivision (g).

(c) The replenishment obligations of Western under this Judgment shall not apply during such times as amounts of base flow at Riverside Narrows and the amounts of water stored in the ground water resources below Bunker Hill Dike and tributary to the maintenance of such flow are found by Order of the Court to be sufficient to satisfy any obligation which San Bernardino Valley may have under this Judgment, or under the

Orange County Judgment, and if the Court further finds by Order that during such times any such increase in pumping, changes in use or exports would not adversely affect San Bernardino Valley in the future.

(d) The replenishment obligations of San Bernardino Valley under Paragraph X of this Judgment for increase in exports from the Colton and Riverside Basin Areas within San Bernardino Valley below the Bunker Hill Dike shall not apply during such times as the amounts of water in the ground water resources of such area are found by Order of the Court to be sufficient to satisfy the obligations which San Bernardino Valley may have to Plaintiffs under this Judgment, and if the Court further finds by Order that during such times any such increases in exports would not adversely affect Plaintiffs in the future.

XII

CONVEYANCE OF WATER BY SAN BERNARDINO VALLEY TO RIVERSIDE NARROWS.

If San Bernardino Valley determines that it will convey reclaimed sewage effluent, or other water, to or near Riverside Narrows, to meet its obligations under this or the Orange County Judgment, the City of Riverside shall make available to San Bernardino Valley for that purpose any unused capacity in the former Riverside Water Company canal, and the Washington and Monroe Street storm drains, without cost except for any alterations or capital improvements which may be required, or any additional maintenance and operation costs which may result. The use of those facilities shall be subject to the requirements of the Santa Ana River Basin Regional Water Quality Control Board and of the State Health Department, and compliance

therewith shall be San Bernardino Valley's responsibility.

XIII

WATERMASTER

(a) This Judgment and the instructions and subsequent orders of this Court shall be administered and enforced by a Watermaster. The parties hereto shall make such measurements and furnish such information as the Watermaster may reasonably require, and the Watermaster may verify such measurements and information and obtain additional measurements and information as the Watermaster may deem appropriate.

(b) The Watermaster shall consist of a committee of two persons. San Bernardino Valley and Western shall each have the right to nominate one of such persons. Each such nomination shall be made in writing, served upon the other parties to this Judgment, and filed in Court. Such person shall be appointed by and serve at the pleasure of and until further order of this Court. If either Western or San Bernardino Valley shall at any time nominate a substitute appointee in place of the last appointee to represent it, such appointee shall be appointed by the Court in place of such last appointee.

(c) Appendix "D" to this Judgment contains some of the data which have been used in preparation of this Judgment, and shall be utilized by the Watermaster in connection with any questions of interpretation.

(d) Each and every finding and determination of the Watermaster shall be made in writing certified to be by unanimous action of both members of the Watermaster committee. In the event of failure or inability of such Watermaster Committee to reach agreement, the Watermaster committee may determine to submit the dispute to a third person to be selected

by them, or if they are unable to agree on a selection, to be selected by the Court, in which case the decision of the third person shall be binding on the parties; otherwise the fact, issue, or determination in question shall forthwith be certified to this Court by the Watermaster, and after due notice to the parties and opportunity for hearing, said matter shall be determined by order of this Court, which may refer the matter for prior recommendation to the State Water Resources Control Board. Such order of the Court shall be a determination by the Watermaster within the meaning of this Judgment.

(e) The Watermaster shall report to the Court and to each party hereto in writing not more than seven (7) months after the end of each year, or within such other time as the Court may fix, on each determination made by it pursuant to this Judgment, and such other items as the parties may mutually request or the Watermaster may deem to be appropriate. All of the books and records of the Watermaster which are used in the preparation of, or are relevant to, such reported data, determinations and reports shall be open to inspection by the parties hereto. At the request of any party this Court will establish a procedure for the filing and hearing of objections to the Watermaster's report.

(f) The fees, compensation and expenses of each person on the Watermaster shall be borne by the District which nominated such person. All other Watermaster service costs and expenses shall be borne by San Bernardino Valley and Western equally.

(g) The Watermaster shall initially compute and report to the Court the natural safe yield of the San Bernardino Basin Area, said computation to be based upon the cultural

conditions equivalent to those existing during the five calendar year period ending with 1963.

(h) The Watermaster shall as soon as practical determine the correct figures for Paragraphs V(b), VI(b)1, VIII(a), IX(a) and X, as the basis for an appropriate supplemental order of this Court.

XIV

CONTINUING JURISDICTION OF THE COURT

(a) The Court hereby reserves continuing jurisdiction of the subject matter and parties to this Judgment, and upon application of any party, or upon its own motion, may review and redetermine, among other things, the following matters and any matters incident thereto:

1. The hydrologic condition of any one or all of the separate basins described in this Judgment in order to determine from time to time the safe yield of the San Bernardino Basin Area.

2. The desirability of appointing a different Watermaster or a permanent neutral member of the Watermaster, or of changing or more clearly defining the duties of the Watermaster.

3. The desirability of providing for increases or decreases in the extraction of any particular party because of emergency requirements or in order that such party may secure its proportionate share of its rights as determined herein.

4. The adjusted rights of the Plaintiffs as required to comply with the provisions hereof with respect to changes in the natural safe yield of the San Bernardino Basin

Area. If such changes occur, the Court shall adjudge that the adjusted rights and replenishment obligations of each party shall be changed proportionately to the respective base rights.

5. Conforming the obligations of San Bernardino Valley under this Judgment to the terms of any new judgment hereafter entered adjudicating the water rights within San Bernardino Valley, if inconsistencies of the two judgments impose hardship on San Bernardino Valley.

6. Adjusting the figures in Paragraphs V(b), VI(b) 1, VIII(a) IX(a), and X, to conform to determination by the Watermaster.

7. Credit allowed for return flow in the San Bernardino Basin Area if water levels therein drop to the point of causing undue hardship upon any party.

8. Other matters not herein specifically set forth which might occur in the future and which would be of benefit to the parties in the utilization of the surface and ground water supply described in this Judgment, and not inconsistent with the respective rights of the parties as herein established and determined.

(b) Any party may apply to the Court under its continuing jurisdiction for any appropriate modification of this Judgment if its presently available sources of imported water are exhausted and it is unable to obtain additional supplies of imported water at a reasonable cost, or if there is any substantial delay in the delivery of imported water through the State Water Project.

XV

SAVING CLAUSES

(a) Nothing in this Judgment precludes San Bernardino Valley, Western, or any other party from exercising such rights as it may have or obtain under law to spread, store underground and recapture imported water, provided that any such use of the underground storage capacity of the San Bernardino Basin Area by Western or any entity within it shall not interfere with any replenishment program of the Basin Area.

(b) Changes in the place and kind of water use, and in the transfer of rights to the use of water, may be made in the absence of injury to others or prejudice to the obligations of either San Bernardino Valley or Western under Judgment or the Orange County Judgment.

(c) If any Plaintiff shall desire to transfer all or any of its water rights to extract water within San Bernardino Valley to a person, firm, or corporation, public or private, who or which is not then bound by this Judgment, such Plaintiff shall as a condition to being discharged as hereinafter provided cause such transferee to appear in this action and file a valid and effective express assumption of the obligations imposed upon such Plaintiff under this Judgment as to such transferred water rights. Such appearance and assumption of obligation shall include the filing of a designation of the address to which shall be mailed all notices, requests, objections, reports and other papers permitted or required by the terms of this Judgment.

If any Plaintiff shall have transferred all of its said water rights and each transferee not theretofore bound by this Judgment as a Plaintiff shall have appeared in this action

and filed a valid and effective express assumption of the obligations imposed upon such Plaintiff under this Judgment as to such transferred water rights, such transferring Plaintiff shall thereupon be discharged from all obligations hereunder. If any Plaintiff shall cease to own any rights in and to the wate supply declared herein and shall have caused the appearance and assumption provided for in the third preceding sentence with respect to each voluntary transfer, then upon application to this Court and after notice and hearing such Plaintiff shall thereupon be relieved and discharged from all further obligations hereunder. Any such discharge of any Plaintiff hereunder shall not impair the aggregate rights of defendant San Bernardino Valley or the responsibility hereunder of the remaining Plaintiffs or any of the successors.

(d) Non-use of any right to take water as provided herein shall not result in any loss of the right. San Bernardino Valley does not guarantee any of the rights set out herein for Western and the other Plaintiffs as against the claims of third parties not bound hereby. If Western or the other Plaintiffs herein should be prevented by acts of third parties within San Bernardino County from extracting the amounts of water allowed them by this Judgment, they shall have the right to apply to this Court for any appropriate relief, including vacation of this Judgment, in which latter case all parties shall be restored to their status prior to this Judgment insofar as possible.

(e) Any replenishment obligation imposed hereunder on San Bernardino Valley may be deferred until imported water first is available to San Bernardino Valley under its contract with the California Department of Water Resources and the

obligation so accumulated may be discharged in five approximately equal annual installments thereafter.

(f) No agreement has been reached concerning the method by which the cost of providing replenishment will be financed, and no provision of this Judgment, nor its failure to contain any provision, shall be construed to reflect any agreement relating to the taxation or assessment of extractions.

XVI

EFFECTIVE DATE

The provisions of Paragraphs III and V to XII of this Judgment shall be in effect from and after January 1, 1971; the remaining provisions are in effect immediately.

XVII

COSTS

No party shall recover its costs herein as against any other party.

THE CLERK WILL ENTER THIS JUDGMENT FORTHWITH.

DATED: April 17, 1969

ENTERED

APR 17 1969

JUDGE OF THE SUPERIOR COURT

JUDGMENT BOOK 124 PG 42

APPENDIX B
TABLE B-1

EXTRACTIONS BY PLAINTIFFS FROM THE SAN BERNARDINO BASIN AREA FOR AVERAGE OF 5-YEAR PERIOD ENDING WITH 1963

(All Values in Acre Feet)
Classified According to Service Area

Plaintiff	Total Extractions in San Bernardino Basin Area	Delivery to San Bernardino Basin Area	Delivery to Colton Basin Area & Riverside Basin Area in San Bernardino County	Delivery to Areas Outside San Bernardino Valley
City of Riverside (including those rights acquired as successor to the Riverside Water Company and The Gage Canal Company)	53,448	1462	1260	50,726
Riverside High-Land Water Company	4,399	0	2509	1,890
Agua Mansa Water Company, and Meeks & Daley Water Company	8,026	0	326	7,700
The Regents of the University of California	581	0	0	581
Total	66,454	1,462	4,095	60,897

APPENDIX B
TABLE B-2

PLAINTIFFS' PERCENTAGES OF BASE RIGHT TO TOTAL PRODUCTION FROM SAN BERNARDINO VALLEY BASIN AREA,
231,861 Acre Feet Annually,
For 5-Year Average Ending With 1963
Classified According to Service Area

Plaintiff	Delivery to San Bernardino Basin Area	Delivery to Colton Basin Area & Riverside Basin Area in San Bernardino County	Delivery to Areas Outside San Bernardino Valley
City of Riverside (including those rights acquired as successor to the Riverside Water Company and The Gage Canal Company)	.630	.543	21.878
Riverside Highland Water Company		1.082	0.815
Aqua Mansa Water Company, and Meeks & Daley Water Company		.141	3.321
The Regents of the University of California			0.250
Total	.630	1.766	26.264

APPENDIX C
TABLE C-1

EXTRACTIONS FOR USE WITHIN WESTERN
FROM
THE SAN BERNARDINO BASIN AREA, COLTON BASIN AREA,
AND THE RIVERSIDE BASIN AREA
FOR USE ON LANDS THAT ARE NOT TRIBUTARY
TO THE RIVERSIDE NARROWS FOR
AVERAGE OF FIVE-YEAR PERIOD ENDING IN 1963

Extractor	Five-Year Average Ac. Ft.
City of Riverside, including Irrigation Division water extracted by Gage Canal Co. and former Riverside Water Co.	30,657
Meeks & Daley Water Co., Agua Mansa Water Co., and Temescal Water Co., including water received from City of Riverside	13,731
Extractions delivered by West Riverside Canal received from Twin Buttes Water Co., La Sierra Water Co., Agua Mansa Water Co., Selazar Water Co., West Riverside 350" Water Co., and Jurupa Water Co.	5,712
Rubidoux Community Services District	531
Jurupa Hills Water Co.	36
TOTAL	50,667

APPENDIX D
TABLE D-1

EXTRACTIONS FROM SAN BERNARDINO BASIN AREA
FOR THE AVERAGE OF FIVE-YEAR PERIOD ENDING WITH 1963
FOR USE WITHIN SAN BERNARDINO COUNTY

(ALL VALUES IN ACRE FEET)

Basin	Five Year Avg. 1959-63
Beaumont	10,064
Big Bear	1,171
Borea Canyon	91
Bunker Hill	181,600
City Creek	337
Cook Canyon	197
Devil Canyon	3,326
Devil Creek	42
Lower Cajon	2,090
Little San Creek	15
Lytle	29,364
Mill Creek	11,084
Oak Glen	935
Plunge Creek	1,265
Santa Ana	1,790
Strawberry Creek	291
San Timoteo	2,272
Waterman Canyon	367
Yucaipa	13,837
Upper Basin Total	260,139
Less: Beaumont	
Oak Glen	
San Timoteo	27,107
Yucaipa	
Subtotal	233,032
Less Big Bear	1,171
Subtotal	231,861
Less extractions for use outside San Bernardino County	60,897
Extractions from San Bernardino for use in San Bernardino County	170,964

APPENDIX D
TABLE D-2

EXTRACTIONS FROM
COLTON BASIN AREA FOR AVERAGE OF
FIVE-YEAR PERIOD ENDING WITH 1963
BY SAN BERNARDINO AND RIVERSIDE COUNTY ENTITIES
FOR USE WITHIN EACH COUNTY

(VALUES IN ACRE FEET)

Extractor	Place of Use		Total
	San Bernardino Co.	Riverside Co.	
San Bernardino County Entities	8,480	0	8,480
Riverside County Entities	147	3,349	3,496
TOTAL EXTRACTIONS	8,627	3,349	11,976

APPENDIX D
TABLE D-3

EXTRACTIONS FROM
RIVERSIDE BASIN AREA IN SAN BERNARDINO COUNTY
FOR AVERAGE FIVE-YEAR PERIOD ENDING WITH 1963
BY SAN BERNARDINO AND RIVERSIDE COUNTY ENTITIES
FOR USE WITHIN EACH COUNTY

(VALUES IN ACRE FEET)

Extractor	Place of Use		Total
	San Bernardino Co.	Riverside Co.	
San Bernardino County Entities	9,582	0	9,582
Riverside County Entities	3,929	20,191	24,120
TOTAL EXTRACTIONS	13,511	20,191	33,702

APPENDIX D
TABLE D-4

EXTRACTIONS FROM
SAN BERNARDINO BASIN AREA, COLTON BASIN AREA
AND RIVERSIDE BASIN AREA USED WITHIN
RIVERSIDE COUNTY FOR THE AVERAGE
FIVE-YEAR PERIOD ENDING WITH 1963

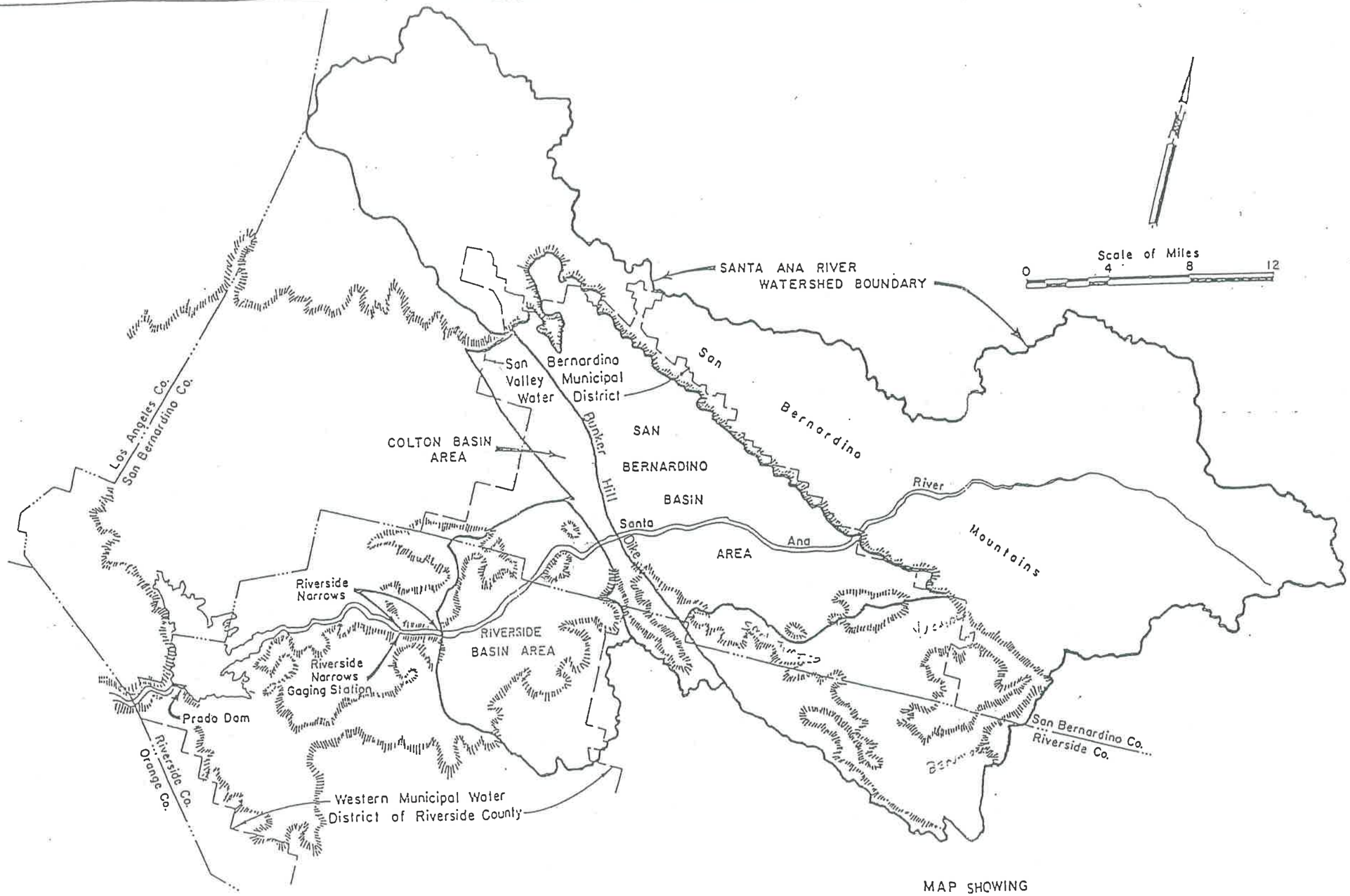
(ALL VALUES IN ACRE FEET)

Basin	Five-Year Average
San Bernardino Basin Area	60,897
Colton Basin Area	3,349
Riverside Basin Area in San Bernardino County	20,191
Riverside Basin Area in Riverside County	30,044
TOTAL	114,481

APPENDIX D
TABLE D-5

IRRIGATED ACREAGE IN RIVERSIDE BASIN AREA IN RIVERSIDE COUNTY PRESENTLY TRIBUTARY TO RIVERSIDE NARROWS WHICH UPON CONVERSION TO URBAN USES REQUIRING SEWAGE DISPOSAL THROUGH THE RIVERSIDE TREATMENT PLANT WILL BE DISCHARGED TO THE RIVER BELOW RIVERSIDE NARROWS

Entity Serving Acreage	Acres
Gage Canal	1,752
Alta Mesa Water Co.	65
East Riverside Water Co.	926
Riverside Highland Water Company	1,173
TOTAL	3,916



MAP SHOWING

SAN BERNARDINO BASIN AREA, COLTON BASIN AREA, AND RIVERSIDE BASIN AREA SITUATED WITHIN SAN BERNARDINO COUNTY; RIVERSIDE BASIN AREA WITHIN RIVERSIDE COUNTY; BUNKER HILL DIKE; RIVERSIDE NARROWS; AND BOUNDARIES OF SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT & WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY.

APPENDIX F

VERIFIED 2019 EXTRACTIONS
FOR
RIVERSIDE SOUTH GROUNDWATER BASIN

WESTERN - SAN BERNARDINO WATERMASTER
TABLE 3A
VERIFIED EXTRACTION, SUMMARY - FILED AND NON-FILED
RIVERSIDE BASIN AREA WITHIN RIVERSIDE COUNTY

	BASE YEARS						CALENDAR YEAR EXTRACTIONS					
OWNER	1959	1960	1961	1962	1963	AVG	2015	2016	2017	2018	2019	AVG
AGUA MANSA PROPERTIES, INC	121	151	134	0	0	81	-	-	-	-	-	0
ALAMO WATER COMPANY	79	100	132	163	149	125	23	23	20	20	22	22
AMERICAN TEXTILE MAINTENANCE	30	34	38	35	31	34	1	1	1	1	1	1
BANK OF AMERICA N.T.&S.A.	90	90	90	90	94	91	-	-	-	-	-	0
BOX SPRINGS MUTUAL WATER COMPANY	526	503	547	497	470	509	266	262	265	259	120	234
BURNS F L AND LAURA	0	0	0	0	0	0	-	-	-	-	-	0
CALIF BAPTIST UNIVERSITY	-	-	-	-	-	0	0	0	0	0	0	0
CANYON CREST COUNTRY CLUB	-	-	-	-	-	0	50	50	50	50	0	40
CARPENTER COMPANY	118	247	420	300	300	277	-	-	-	-	-	0
CITIZENS NATIONAL COMPANY	0	33	33	33	33	26	-	-	-	-	-	0
CRESTMORE HEIGHTS MUTUAL WATER COMPANY	67	63	65	61	58	63	-	-	-	-	-	0
EASTERN MUNICIPAL WATER DISTRICT	3	1	0	0	0	1	-	-	-	-	-	0
FLABOB AIRPORT, LLC	5	5	5	5	5	5	0	0	0	0	0	0
GROSS, DALE P	0	0	0	0	0	0	-	-	-	-	-	0
GRUBBS, V W	45	40	51	38	39	43	-	-	-	-	-	0
HEYMING, FRANK & LUCY	-	-	-	-	-	0	13	13	0	5	2	7
HIGH GROVE VILLAGE	220	198	210	250	439	263	0	0	0	0	0	0
HUNTER ENGINEERING COMPANY	0	0	0	31	188	44	-	-	-	-	-	0
JOHNSON, TRUMAN	274	218	252	191	254	238	-	-	-	-	-	0
JURUPA COMMMUNITY SERVICES DISTRICT	1,003	1,068	1,056	1,146	1,414	1,137	464	473	503	516	492	490
LA CASA CONTENTA MOTEL	0	0	0	0	0	0	-	-	-	-	-	0
MADISON, ERIN	1,167	1,485	1,196	991	1,443	1,256	-	-	-	-	-	0
MARTIN, KENNETH ALLAN	0	0	0	0	0	0	-	-	-	-	-	0
MASTERCRAFT HOMES	987	987	987	987	987	987	-	-	-	-	-	0
MICHAEL, C.	354	354	354	354	354	354	-	-	-	-	-	0
MIPO CORP, DBA MISSION	73	73	73	73	73	73	-	-	-	-	-	0
PEDLEY LAND COMPANY LLC	-	-	-	-	-	0	475	468	485	450	464	468
PROPERTY ACQUISITION COMPANY	140	136	143	139	141	140	-	-	-	-	-	0
RIVERSIDE CEMENT COMPANY	1,067	1,080	2,702	2,434	2,205	1,898	31	30	30	1	1	19
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	-	-	-	-	-	0	0	0	0	0	0	0
RIVERSIDE COUNTY PARKS DEPARTMENT	2,240	2,240	2,240	2,240	2,240	2,240	486	254	254	0	254	250
RIVERSIDE HIGHLAND WATER CO	0	0	0	1,393	1,381	555	43	81	124	158	204	122
RIVERSIDE INDUSTRIAL PARK	315	315	224	209	174	247	-	-	-	-	-	0
RIVERSIDE THOROUGHBRED FARM	-	-	-	-	90	18	-	-	-	-	-	0
RIVERSIDE UNIFIED SCHOOL DISTRICT	-	-	-	-	-	0	3	18	19	29	19	18
RIVERSIDE, CITY OF	12,696	15,979	16,531	13,302	11,104	13,922	9,414	11,881	12,915	15,531	16,241	13,196
RIVERSIDE, CITY OF-GAGE CANAL	3,057	2,987	3,236	2,017	2,171	2,694	4,262	3,899	4,167	3,988	3,629	3,989
RIVINO WATER COMPANY	297	211	187	477	372	309	-	-	-	-	-	0
ROCKY R RANCH	45	24	6	6	5	17	-	-	-	-	-	0
ROOS CHARLES E	0	200	0	0	0	40	-	-	-	-	-	0
ROSS SAM	0	0	0	0	0	0	-	-	-	-	-	0
RUBIDOUX C.S.D.	1,006	1,112	1,389	1,179	1,219	1,181	7,803	7,329	7,636	5,256	4,717	6,548
SCHWAB A M	110	88	42	11	12	53	-	-	-	-	-	0
SCOPE CORPORATION	116	90	135	199	100	128	-	-	-	-	-	0
STOKER GEORGE	158	165	159	165	134	156	-	-	-	-	-	0

AS OF 7/23/2020 10:31 AM

WESTERN - SAN BERNARDINO WATERMASTER
TABLE 3A
VERIFIED EXTRACTION, SUMMARY - FILED AND NON-FILED
RIVERSIDE BASIN AREA WITHIN RIVERSIDE COUNTY

	BASE YEARS						CALENDAR YEAR EXTRACTIONS					
OWNER	1959	1960	1961	1962	1963	AVG	2015	2016	2017	2018	2019	AVG
TAYLOR WALTER & BARBARA	0	0	0	30	15	9	-	-	-	-	-	0
UNIVERSAL FOREST PRODUCTS	-	-	-	-	-	0	0	0	0	0	0	0
UNIVERSITY OF CALIFORNIA, REGENTS OF	131	283	370	94	227	221	0	0	0	0	0	0
VICTORIA COUNTRY CLUB	0	0	0	0	0	0	275	392	355	345	345	342
VON KANEL ALFRED	83	87	94	94	78	87	-	-	-	-	-	0
WATERMAN ALLEN H	25	33	16	0	0	15	-	-	-	-	-	0
WHITE SULPHUR SPRINGS POOL	49	53	54	44	40	48	-	-	-	-	-	0
WIGHT MRS CHARLES H	76	0	0	0	0	15	-	-	-	-	-	0
ZINKE VERA	53	37	47	20	18	35	-	-	-	-	-	0
TOTALS FOR 154 WELLS	26,826	30,770	33,218	29,298	28,057	29,634	23,609	25,174	26,824	26,609	26,511	25,745

AS OF 7/23/2020 10:31 AM

Appendix L:
Wildfire Supporting Information

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Environment | Planning | Development Solutions, Inc.

Date:	March 29, 2023
Prepared by:	Meghan Macias, TE; Hashem Basrawi
To:	City of Jurupa Valley
Site:	Rio Vista Specific Plan
Subject:	**Evacuation Analysis for the Rio Vista Specific Plan Project**

This memo provides an evaluation analysis for the proposed Rio Vista Specific Plan Project (SP; proposed SP) in the event of a fire or other emergency. The analysis is based on an assumption of the number of vehicles that would evacuate and the capacity of the intersections providing egress from the project. The proposed SP is the development of the approximately 917.3-acre Specific Plan Area, located south of the San Bernardino County boundary, west of Rubidoux Boulevard, north of SR-60, and east of Armstrong Road in the City of Jurupa Valley. The SP site is currently vacant. The SP proposes to include the following uses:

- up to 1,133 single family detached homes
- up to 144 single family attached homes
- up to 420 multi-family units
- an elementary school with up to 620 students
- a middle school with up to 330 students
- up to 18.4 acres of public park
- a technical college with up to 13,000 total students and 10,000 daily on-site students
- up to 559,310 square feet (SF) of Business Park
- and up to 1,269,774 SF of industrial uses

Access to the SP area site would be primarily provided along 20th Street at Rubidoux Boulevard to the east and Sierra Avenue to the west, with one driveway along Armstrong Road. Truck access will be limited to the Rubidoux Boulevard/20th Street access. The location of the SP is shown in Figure 1 - Project Location, and the SP site plan is shown in Figure 2 – Project (Specific Plan) Site Plan. Project circulation and access, as well as egress intersections are shown on Figure 2.

Emergency Responders Access

Two 24-foot wide emergency vehicle access (EVA) will be provided at the northwest, northeast, and south ends of the project. The EVAs will be available to emergency vehicles trying to access the project during an emergency. Vehicle evacuation points will be gated with a knox box rapid entry system (i.e., a secure emergency access program that allows firefighters and police to rapidly open access gates as shown in Figure 3) at the following two locations corresponding to the two EVAs:

1. Northeast end of project site at Alicante Avenue
2. South end of project site at Paramount Drive

In addition, a separate EVA will be located at the northwest end of project site at Rorimer Street for Planning Area 7 which consists of 45 homes and has a separate ingress/egress driveway as well as a separate EVA. It is to be noted that EVAs are only to be accessed by emergency responders; furthermore, residents would not have the ability to access EVAs.

Figure 1: Project Location

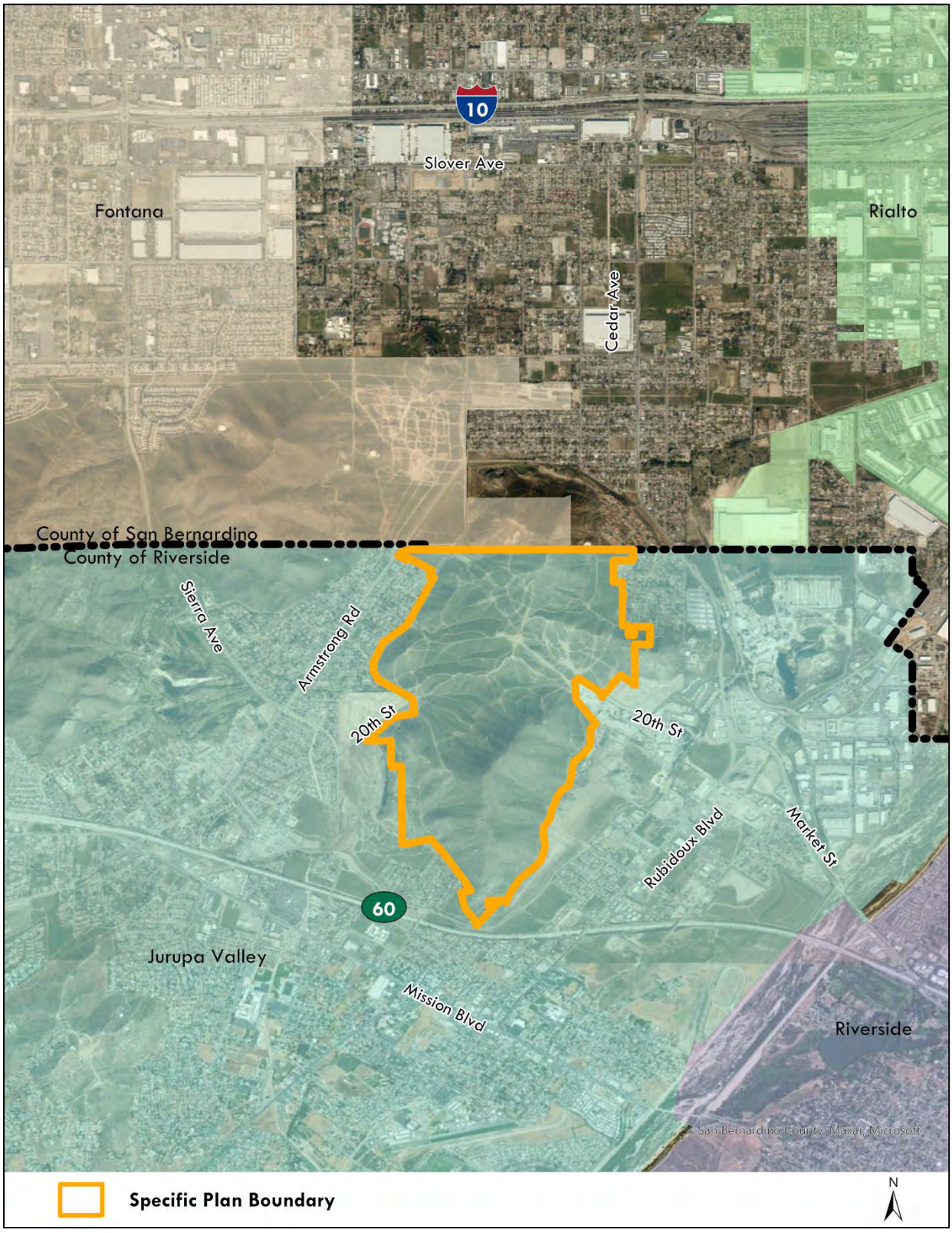


Figure 2: Project (Specific Plan) Site Plan

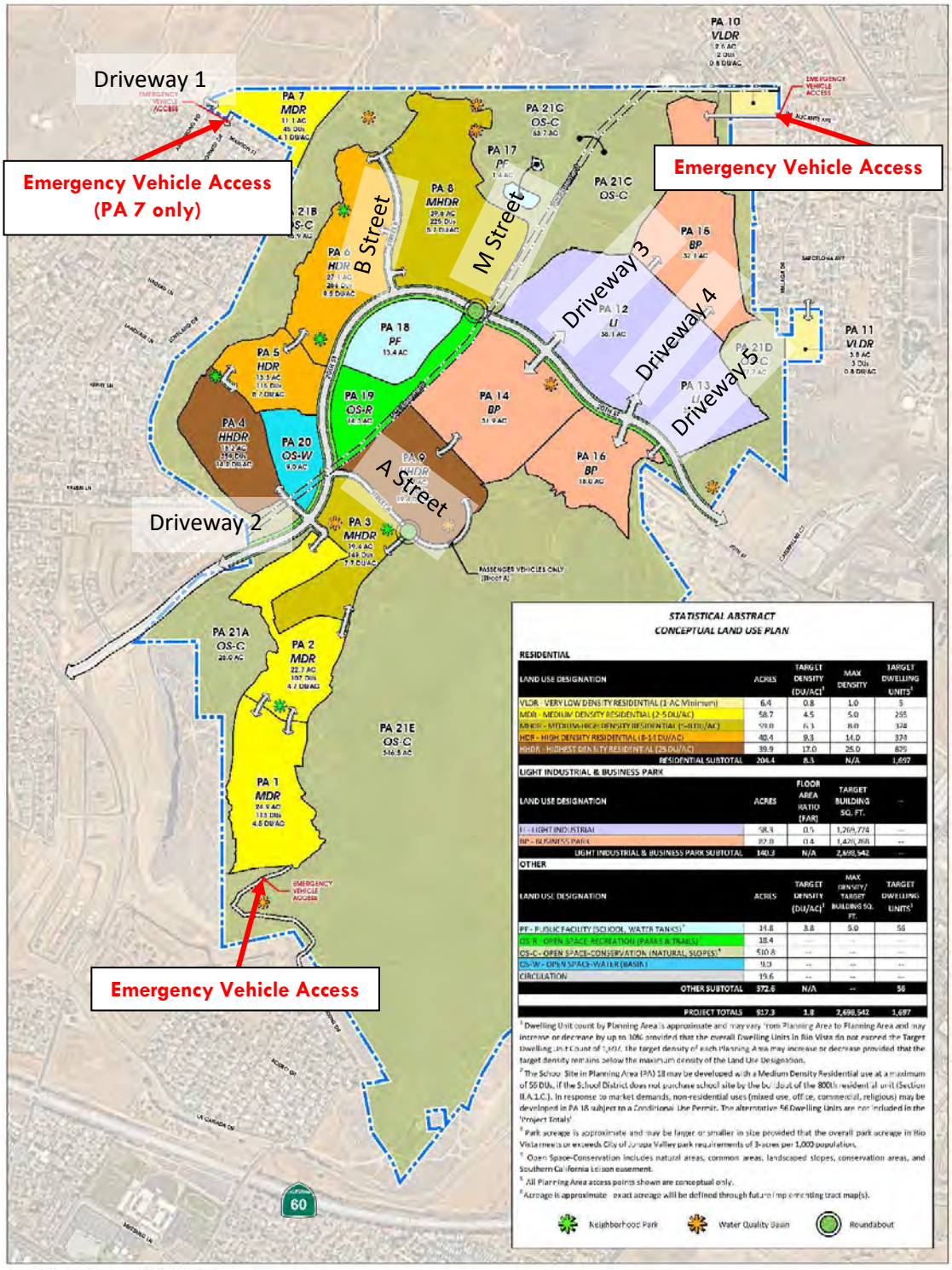


Figure 3: Knox Emergency Gate Access Template



Source: Knoxbox.com

Emergency Responders Capacity

In case of an emergency, the local agency that would provide the project site with fire protection would be the Riverside County Fire Department since the County of Riverside, through its cooperative agreement with Cal Fire, provides the City of Jurupa Valley with fire protection, hazardous materials mitigation, technical rescue response, fire marshal, emergency medical services, public service assists, and disaster preparedness and response. It is to be noted that the City of Jurupa Valley is a contract city with the Riverside County Sheriff's Department; the personnel assigned to Jurupa Valley operate out of the Jurupa Valley Station. Table 1 shows the four fire stations located in the City of Jurupa Valley which are shown in distance ascending order (closest to farthest distance from project site).

Table 1: Fire Stations in the City of Jurupa Valley

Fire Station		Address	Phone Number	Approximate Distance to Project Site (miles)
1.	Rubidoux Fire Station #38	5721 Mission Boulevard Jurupa Valley, CA 92509	951-683-4561	1.1
2	West Riverside #18	7545 Mission Boulevard Jurupa Valley, CA 92509	951-685-5260	2.2
3	Pedley Station #16	9270 Limonite Avenue Jurupa Valley, CA 92509	951-685-6382	5.8
4	Glen Avon Station #17	10500 San Sevaine Way Jurupa Valley, CA 91752	951-685-5109	6.2

The Riverside County Fire Department Station that would provide service to the proposed project is the Rubidoux Fire Station #38, located at 5721 Mission Boulevard. This station is equipped with one Type 1 Engine which is used primarily for structural firefighting and initial Emergency Medical Service (EMS) response and is staffed by three personnel, 24 hours per day.

Evacuation Vehicle Volumes (Occupation Phase)

All employment assumptions for the previously described uses were based on the Rio Vista Specific Plan Amendment Vehicle Miles Traveled (VMT) Analysis (Urban Crossroads, 2023). The following assumptions were made for conditions during an evacuation on a typical weekday:

- Residential Dwelling Units: Two vehicles per dwelling unit would be exiting the site. This is a worst-case assumption, as it is possible that many residents might not be home when an evacuation is ordered and would therefore not be evacuating.
- Elementary and Middle Schools: Assuming schools would be in session, students would be transported on buses. In addition, 90 employees were assumed to be onsite.
- Public Park: The most conservative daily volume as per the project's trip generation (i.e., for a public park) was utilized as the outbound volume (i.e., 14 vehicles).
- Technical College: 300 employees and 65% of students were assumed to be on campus since not all students would be on-campus simultaneously during either peak hour.
- Business Park: 700 employees were assumed to be onsite.
- Industrial Uses: 1,059 employees were assumed to be onsite.

If an evacuation is required on weekends, the elementary and middle schools, technical college, and business park would be underutilized or vacant., While more residents would be expected to be home, the analysis already conservatively analyzes all homes evacuating during the peak hours of a weekday. Therefore, the

weekday analysis would provide the worst-case scenario. Table 2 shows the outbound evacuation volumes during a typical weekday when all of the uses would be in operation.

Table 2: Project Outbound Volumes During an Emergency Evacuation

Land Use	Units		Outbound Volume	Assumptions
Scenario: Weekday Evacuation				
Residential Dwelling Units	1,697	DU	3,394	Two vehicles per household. This is worst-case as many residents would be away at work.
Elementary School	620	Students	17	School would evacuate using buses at a rate of 72 students per bus. (Includes PCE factor of 2.0 for busses).
Middle School	330	Students	9	School would evacuate using buses at a rate of 72 students per bus. (Includes PCE factor of 2.0 for busses).
Elementary + Middle School Employees	90	Employees	90	1 car per employee.
Public Park	18.4	Acre	14	Most conservative daily volume per the project's trip generation included in the TIA.
Technical College	10,000	Students	6,500	65% was assumed for the students on campus.
	300	Employees	300	1 car per employee.
Business Park	700	Employees	700	1 car per employee.
Industrial	1,059	Employees	1,059	1 car per employee.
Total			12,083	

The number of vehicles that can exit the site will be limited by the roadway network accessing the project. A roadway lane has a capacity of approximately 1,600 to 1,900 vehicles per hour, depending on the design, terrain and other features. However, the number of vehicles that can evacuate the Rio Vista community will be limited by the intersections providing access to the project. Therefore, it would be unreasonable to assume that up to 1,900 vehicles per hour could exit the site from each roadway. To determine the outbound capacity at each major roadway of an intersection, the Highway Capacity Manual (HCM) calculation worksheets provided in the project traffic impact analysis were examined. The HCM methodology calculates the saturation flow rate[1] and capacity[2] for each movement of each intersection. The capacity of the outbound movements from Rio Vista were used to calculate the maximum number of vehicles that can exit the site per hour.

Tables 3 and 4 show the outbound hourly capacity at each location in addition to outbound vehicle volumes which include Opening Year Plus Cumulative volumes as well as the project's volumes during AM and PM peak hours. A Passenger Car Equivalent (PCE) factor of 2.0 was added to bus trips to account for the fact that buses utilize more roadway capacity due to their size, reduced maneuverability and slower acceleration.

[1] According to the Highway Capacity Manual, 7th Edition, the saturation flow rate is defined as the flow rate per lane at which vehicles can pass through a signalized intersection. This is the maximum flow rate per hour assuming no conflicting movements.

[2] Vehicle capacity is the maximum number of vehicles that can pass a given point during a specified period under prevailing roadway, traffic, and control conditions. This assumes that there is no influence from downstream traffic operation, such as queues backing into the analysis point.

The outbound vehicle volumes of existing surrounding uses were also added and are shown in Table 5. The outbound evacuation volumes from the project site are shown in Figure 4.

Table 3 assumes Scenario 1, which assumes that the existing two outbound lanes would be utilized on 20th Street to get on Rubidoux Boulevard; similarly, the existing two outbound lanes would be utilized on 20th Street to get on Sierra Avenue. Scenario 1 is the as-is condition of Rubidoux Boulevard and 20th Street as well as Sierra Avenue and 20th Street.

Table 4 assumes Scenario 2, which assumes that three outbound lanes would be utilized on 20th Street to get on Rubidoux Boulevard; similarly, three outbound lanes would be utilized on 20th Street to get on Sierra Avenue. In a fire event or other emergency, Scenario 2 would be possible if the local law enforcement agency (i.e., Riverside County Sheriff's Department) or Riverside County Fire Department restricted one of the inbound lanes and allowed it to be used by the evacuating outbound traffic to provide a rapid evacuation and facilitate efficiency.

Table 3: Scenario 1 Outbound Hourly Capacity and Volume

Intersection		Roadway	Roadway Capacity (VPH)[1]	Outbound Vehicle Volumes								
				Opening Year Plus Cumulative Projects		Project					Total	Total
				AM Pk Hr[2]	PM Pk Hr[3]	Residential	School/Park	BP/Industrial	Technical School	Total	AM Pk Hr[2]	PM Pk Hr[3]
1.	Armstrong Dr/Driveway 1	Armstrong Dr	300	0	0	90	0	0	0	90	90	90
2.	Rubidoux Blvd/Market St	Rubidoux Blvd	3,600	516	504	1,629	0	1,759	3,400	6,788	7,304	7,292
3.	Sierra Ave/20th St	Sierra Ave	2,900	77	99	1,867	116	0	3,400	5,383	5,460	5,482
											12,854	12,864

[1] Vehicles Per Hour

[2] AM Peak Hour

[3] PM Peak Hour

Table 4: Scenario 2 Outbound Hourly Capacity and Volume

Intersection		Roadway	Roadway Capacity (VPH)[1]	Outbound Vehicle Volumes								
				Opening Year Plus Cumulative Projects		Project					Total	Total
				AM Pk Hr[2]	PM Pk Hr[3]	Residential	School/Park	BP/Industrial	Technical School	Total	AM Pk Hr[2]	PM Pk Hr[3]
1.	Armstrong Dr/Driveway 1	Armstrong Dr	300	0	0	90	0	0	0	90	90	90
2.	Rubidoux Blvd/Market St	Rubidoux Blvd	5,400	516	504	1,629	0	1,759	3,400	6,788	7,304	7,292
3.	Sierra Ave/20th St	Sierra Ave	4,350	77	99	1,867	116	0	3,400	5,383	5,460	5,482
											12,854	12,864

[1] Vehicles Per Hour

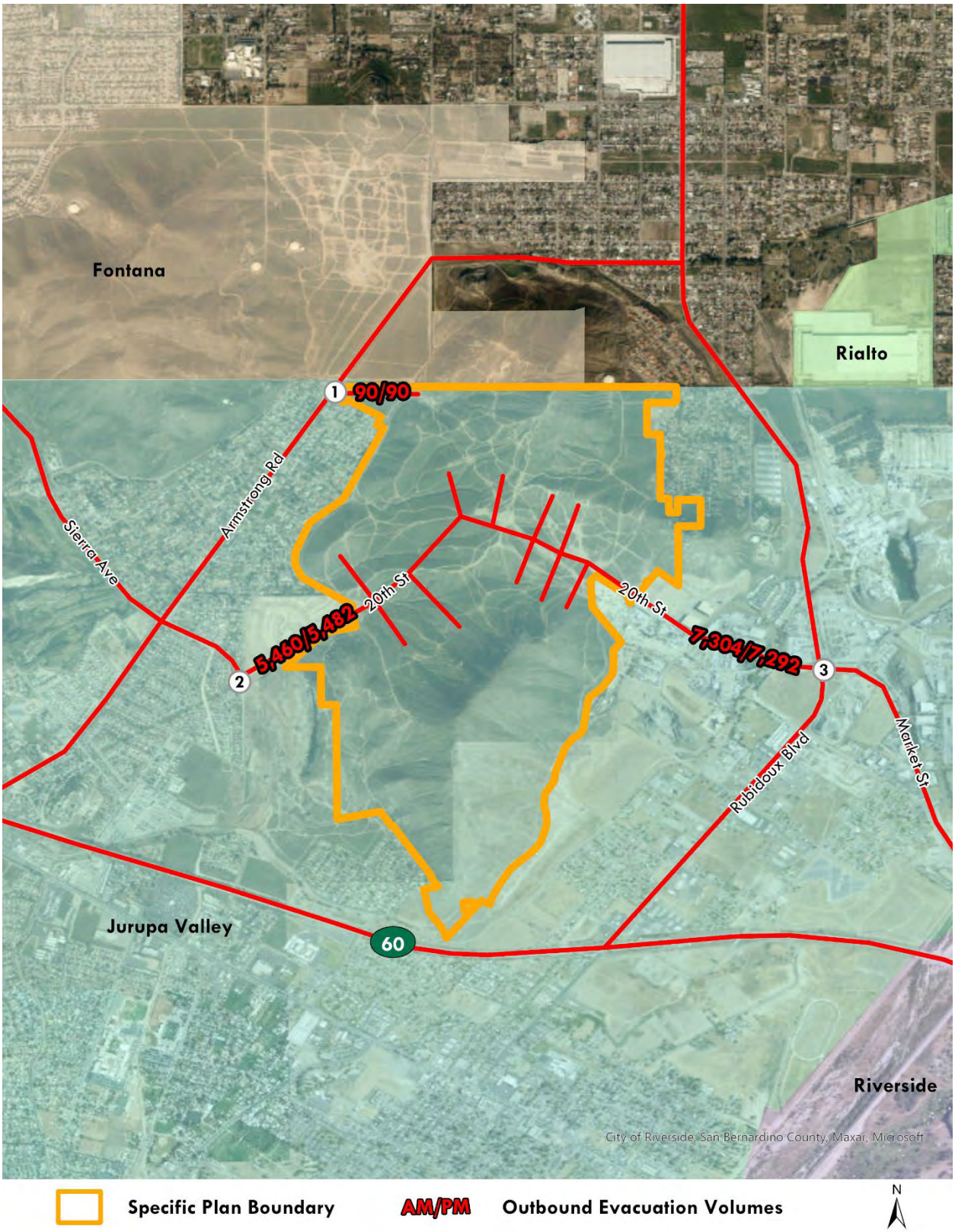
[2] AM Peak Hour

[3] PM Peak Hour

Table 5: Existing Surrounding Uses Outbound Evacuation Volumes

Intersection		Existing Surrounding Uses Outbound Vehicle Volumes
1.	Armstrong Dr/Driveway 1	362
2.	Rubidoux Blvd/Market St	516
3.	Sierra Ave/20th St	116

Figure 4: Outbound Evacuation Route and Volumes



Time for Evacuation

The time to evacuate was calculated based on the outbound hourly capacities and volumes and is shown in Tables 6 and 7. The analysis was conducted for both Scenarios 1 and 2. As stated previously, Scenario 1 assumes that the existing two outbound lanes would be utilized and scenario 2 assumes that three outbound lanes would be utilized.

As shown in Table 6, Scenario 1 would take approximately 1 hour and 30 minutes for traffic to evacuate on Armstrong Drive, 2 hours and 10 minutes for traffic to evacuate on Rubidoux Drive, 1 hour and 55 minutes for traffic to evacuate on Sierra Avenue.

As shown in Table 7, Scenario 2 would take approximately 1 hour and 30 minutes for traffic to evacuate on Armstrong Drive, 1 hour and 27 minutes for traffic to evacuate on Rubidoux Drive, 1 hour and 17 minutes for traffic to evacuate on Sierra Avenue.

Table 6: Scenario 1 Time to Evacuate

Intersection		Roadway	Roadway Capacity (VPH)[1]	Total Outbound Vehicle Volume		Time to Evacuate (Minutes)		Time to Evacuate (Hours)	
				AM Pk Hr[2]	PM Pk Hr[3]	AM Pk Hr[2]	PM Pk Hr[3]	AM Pk Hr[2]	PM Pk Hr[3]
1.	Armstrong Dr/Driveway 1	Armstrong Dr	300	452	452	90	90	1.51	1.51
2.	Rubidoux Blvd/Market St	Rubidoux Blvd	3,600	7,820	7,808	130	130	2.17	2.17
3.	Sierra Ave/20th St	Sierra Ave	2,900	5,576	5,598	115	116	1.92	1.93

[1] Vehicles Per Hour
[2] AM Peak Hour
[3] PM Peak Hour

Table 7: Scenario 2 Time to Evacuate

Intersection		Roadway	Roadway Capacity (VPH)[1]	Total Outbound Vehicle Volume		Time to Evacuate (Minutes)		Time to Evacuate (Hours)	
				AM Pk Hr[2]	PM Pk Hr[3]	AM Pk Hr[2]	PM Pk Hr[3]	AM Pk Hr[2]	PM Pk Hr[3]
1.	Armstrong Dr/Driveway 1	Armstrong Dr	300	452	452	90	90	1.51	1.51
2.	Rubidoux Blvd/Market St	Rubidoux Blvd	5,400	7,820	7,808	87	87	1.45	1.45
3.	Sierra Ave/20th St	Sierra Ave	4,350	5,576	5,598	77	77	1.28	1.29

[1] Vehicles Per Hour
[2] AM Peak Hour
[3] PM Peak Hour

Conclusion

The Rio Vista SP would allow the evacuation of all residents, employees, and students in under two and a half hours in Scenario 1 and approximately one and a half hour in Scenario 2. Additionally, there are two emergency access points that allow emergency vehicles to access the north and south ends of the specific plan. Therefore, the specific plan would not constitute a significant hazard to the residents, workers, and students during an emergency situation.

Importantly, both scenarios assume no advanced notice of a fire or other emergency is provided. In reality, as fires grow intensity, notice is sent out to residences in harm's way to begin evacuating and some residents would leave the area. Others may want to stay longer but ultimately would leave if the conditions worsen. Additionally, the capacities utilized are based on normal operation of the traffic signal. In an evacuation situation, the signal timing can be overridden by the local agency, or emergency management personnel

may manually direct traffic at critical intersections which would change the capacity of the intersection. Therefore, the stated timeframes are expected to be significantly less than analyzed.

Evacuation Vehicle Volumes (Construction Phase)

During the construction phase of the project, there would be 13,663 daily worker vehicles and 5,271 daily vendor vehicles onsite (based on the proposed project's CalEEMod model run for the building construction phase). A PCE factor of 2.0 was added to vendor truck trips to account for the fact that vendor trucks utilize more roadway capacity due to their size, reduced maneuverability and slower acceleration. The estimated number of workers that would be onsite simultaneously was calculated through dividing the total PCE vehicle trip volume by half (as each employee constitutes a minimum of two trips, one to the site to start their shift and one leaving the site after their shift) and utilizing a conservative rate of 90% of the PCE vehicle volume. Therefore, a maximum of 10,893 PCE vehicles would evacuate from the site during construction. The construction phase vehicle evacuation volume (i.e., 10,893) is less than the occupation phase vehicle evacuation volume (i.e., 12,083); therefore, the conclusions based on the operational evacuation analysis would also cover the construction evacuation analysis.

CAL FIRE/Riverside Unit Strategic Fire Plan

The CAL FIRE/Riverside Unit Strategic Fire Plan was developed in May 2022 to describe the Riverside Unit's preparedness and firefighting capabilities, identify collaboration with all County stakeholders, identify Values at Risk, discuss Pre-Fire management strategies, and articulate Pre-fire Management tactics. One of the fire plan's objectives is to develop an Evacuation Plan that could be referred to in-case of a fire emergency hazard. In addition, the fire plan states that the Mountain Area Safety Taskforce (MAST) and the Mountain Communities Fire Safe Council's (MCFSC) Community Wildfire Protection Program (CWPP) are currently being reviewed and updated. It's to be noted the Rio Vista project evacuation plan should be assessed with reference to the evacuation and wildfire plans that will be developed in the future.

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