Project Specific Water Quality Management Plan

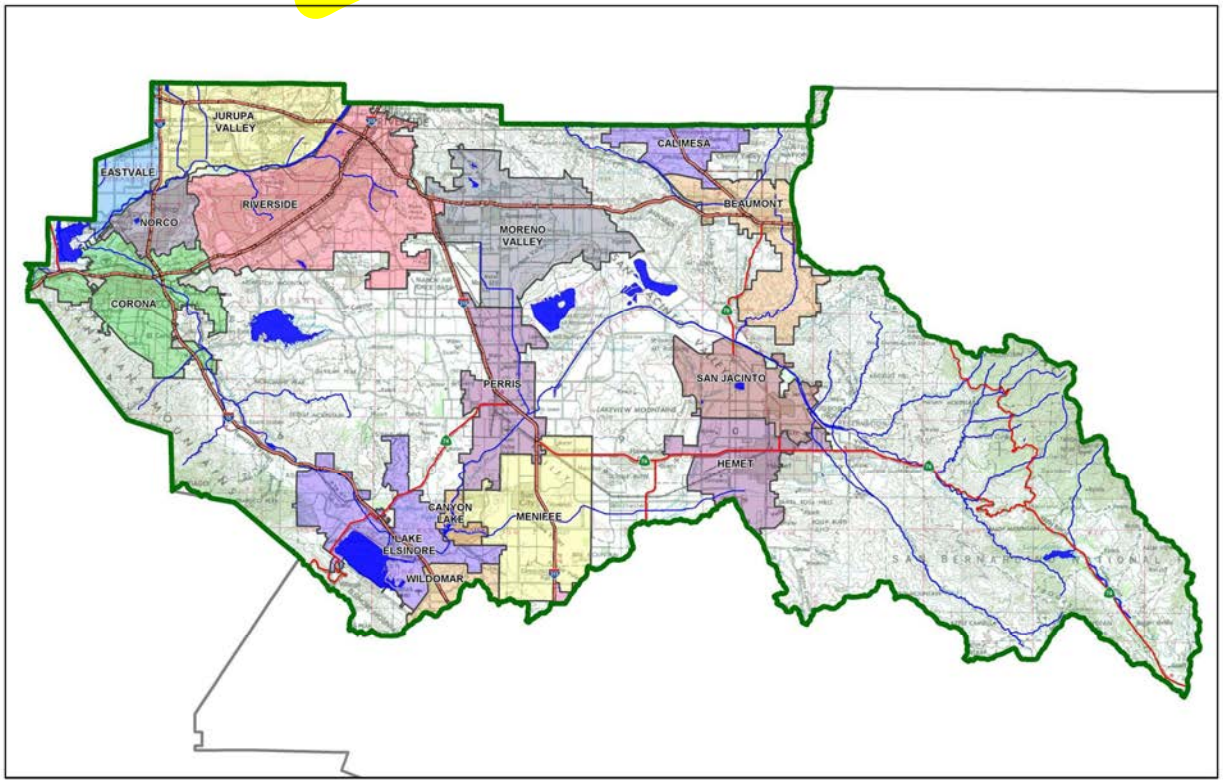
A Template for Projects located within the Santa Ana Watershed Region of Riverside County

No further comments
NV5
05/18/2023

Project Title: Beaumont Pointe

Development No: TBD

Design Review/Case No: PW2021-0824



☒ Preliminary
☐ Final

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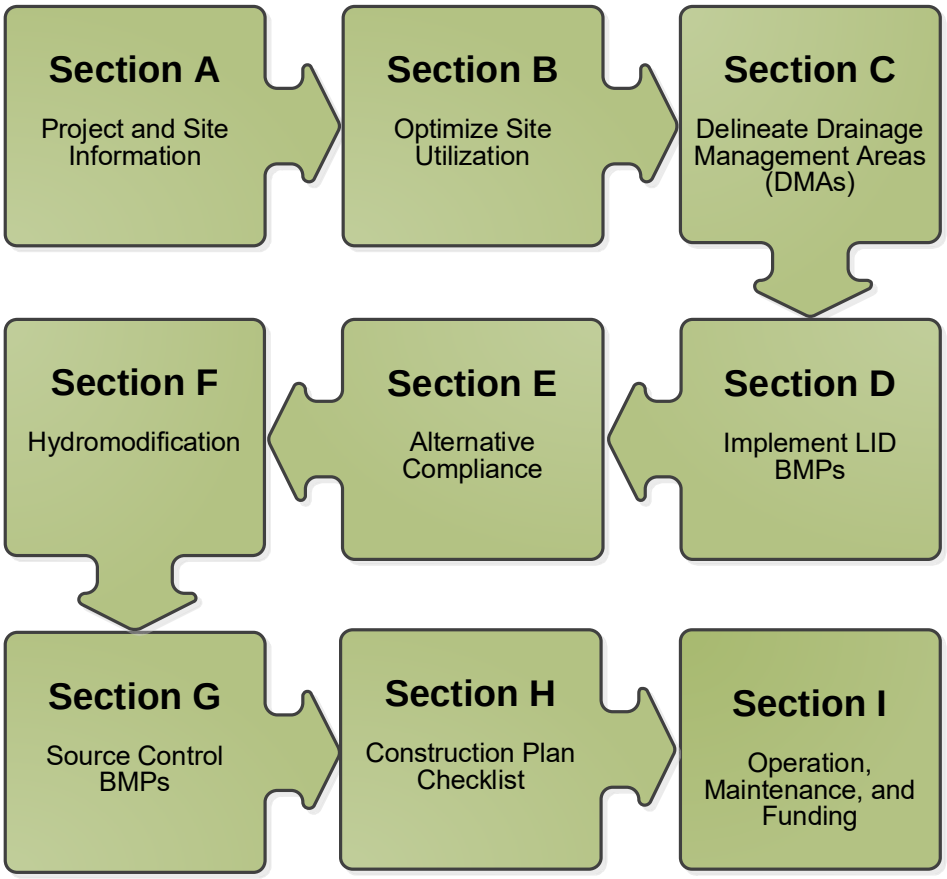
Prepared for Compliance with
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A Brief Introduction

This Project-Specific WQMP Template for the Santa Ana Region has been prepared to help guide you in documenting compliance for your project. Because this document has been designed to specifically document compliance, you will need to utilize the WQMP Guidance Document as your "how-to" manual to help guide you through this process. Both the Template and Guidance Document go hand-in-hand, and will help facilitate a well-prepared Project-Specific WQMP. Below is a flowchart for the layout of this Template that will provide the steps required to document compliance.



OWNER'S CERTIFICATION

This Project-Specific Water Quality Management Plan (WQMP) has been prepared for JRT BP 1 LLC by George Lenfestey for the Beaumont Pointe project.

This WQMP is intended to comply with the requirements of County of Riverside which includes the requirement for the preparation and implementation of a Project-Specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation and funding of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. In addition, the property owner accepts responsibility for interim operation and maintenance of Stormwater BMPs until such time as this responsibility is formally transferred to a subsequent owner. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity. The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under County of Riverside Water Quality Ordinance.

"I, the undersigned, certify under penalty of law that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

Owner's Signature	Date
Owner's Printed Name	Owner's Title/Position

PREPARER'S CERTIFICATION

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan meet the requirements of Regional Water Quality Control Board Order No. **R8-2010-0033** and any subsequent amendments thereto."

Preparer's Signature	10/23/2023 Date
George Lenfestey, P.E. Preparer's Printed Name	Principal Preparer's Title/Position

Preparer's Licensure:



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Section A: Project and Site Information

PROJECT INFORMATION	
Type of Project:	Commercial Retail
Planning Area:	N/A
Community Name:	N/A
Development Name:	Beaumont Pointe
PROJECT LOCATION	
Latitude & Longitude (DMS): Lat: 33°56'20"N, Long: 117°02'56"W	
Project Watershed and Sub-Watershed: Santa Ana River; via San Timoteo Canyon-San Timoteo Wash	
Gross Acres: 539.9 Acres	
APN(s): 422-060-002, 422-060-005, 422-060-009, 422-060-010, 422-060-016, 422-060-017, A Portion of 422-060-18, 422-060-021, 422-060-022, 422-170-005, 422-170-008, 422-170-009, 422-170-010, 422-170-010, 422-170-007, 422-170-011,	
Map Book and Page No.: PAGE: 719, GRID: G1 PAGE: 719, GRID: G2 PAGE: 719, GRID: H1 PAGE: 719, GRID: H2 PAGE: 719, GRID: J1 PAGE: 719, GRID: J2	
PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s):	CR-Commercial Retail
Proposed or Potential SIC Code(s):	1541 – General Contractors-Industrial Buildings and Warehouses
Area of Impervious Project Footprint (SF)	9,848,388 s.f.
Total Area of proposed Impervious Surfaces within the Project Footprint (SF)/or Replacement	9,848,388 s.f.
Does the project consist of offsite road improvements?	☒ Y ☐ N
Does the project propose to construct unpaved roads?	☐ Y ☒ N
Is the project part of a larger common plan of development (phased project)?	☐ Y ☒ N
EXISTING SITE CHARACTERISTICS	
Total area of existing Impervious Surfaces within the Project limits Footprint (SF)	77,180 s.f.
Is the project located within any MSHCP Criteria Cell?	☐ Y ☒ N
If so, identify the Cell number:	Not in a cell
Are there any natural hydrologic features on the project site?	☐ Y ☒ N
Is a Geotechnical Report attached?	☐ Y ☒ N
If no Geotech. Report, list the NRCS soils type(s) present on the site (A, B, C and/or D)	A, B, C, & D
What is the Water Quality Design Storm Depth for the project?	0.75 in

A.1 Maps and Site Plans

When completing your Project-Specific WQMP, include a map of the local vicinity and existing site. In addition, include all grading, drainage, landscape/plant palette and other pertinent construction plans in Appendix 2. At a minimum, your WQMP Site Plan should include the following:

- Drainage Management Areas
- Proposed Structural BMPs
- Drainage Path
- Drainage Infrastructure, Inlets, Overflows
- Source Control BMPs
- Buildings, Roof Lines, Downspouts
- Impervious Surfaces
- Standard Labeling
- BMP Locations (Lat/Long)

Use your discretion on whether or not you may need to create multiple sheets or can appropriately accommodate these features on one or two sheets. Keep in mind that the Co-Permittee plan reviewer must be able to easily analyze your project utilizing this template and its associated site plans and maps.

The Beaumont Pointe project proposes the development of a portion of the 539.9-acre vacant property into five warehouse buildings with parking and driveways, two commercial/retail parcels, and roadway improvements. The project is situated between the State Route 60 Highway (SR-60) to the north and hillsides to the south within the County of Riverside, in the southwest region of the City of Beaumont. The property currently contains a few residential structures, stables, and paved roadways. The stormwater generally flows in a northerly manner from the hillsides in the south towards the SR-60 into 16 culverts where runoff confluences with the San Timoteo Creek.

The project's improvements include drainage inlets and conveyance system, which collects onsite runoff and conveys them to stormwater treatment best management practices (BMP) basins. Once the runoff is treated, the flow will be conveyed toward their respective culverts. The project proposes four BMP extended detention basins throughout the project as infiltration basins would not be feasible due to the extensive cut and fill operations recommended by the geotechnical engineer. Bioretention basins would not be feasible because the tributary areas for the proposed basins exceed the recommended 10-acre maximum. These extended detention BMP basins are sized to provide the required treatment capacity and peak runoff mitigation.

The proposed development will be completed in three phases starting from the eastern side of the project limits:

The first phase develops planning areas 1 through 4 which encompasses drainage management areas (DMA) 16 and 17 and BMP basins 1 and 5. Planning areas (PA) 1 and 2 are designated as commercial land use and will only be mass graded per this project. These planning areas are to be developed last and will need to prepare their own final WQMPs once final development commences for these two areas. In the interim condition (mass graded condition), the mass graded pads are considered self-treating areas (no impervious area and gentle slopes) and storm drain lateral stub outs will be provided to connect the future onsite storm drain to the infrastructure storm drain system proposed by this project.

The second phase develops PA- 5 and -6 which encompasses DMAs 6 (portion) and 13 and BMP basins 2 and 3. The third phase develops PA- 7 and -8 which encompasses DMAs 1 and 6 (portion) and BMP basin 4. These planning areas are designated as industrial land use.

A.2 Identify Receiving Waters

Using Table A.1 below, list in order of upstream to downstream, the receiving waters that the project site is tributary to. Continue to fill each row with the Receiving Water's 303(d) listed impairments (if any), designated beneficial uses, and proximity, if any, to a RARE beneficial use. Include a map of the receiving waters in Appendix 1.

Table A.1 Identification of Receiving Waters

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
On-site Storm Drain System	N/A	N/A	9 Miles
San Timoteo Creek – Reach 3	None	N/A	9 Miles
San Timoteo Creek – Reach 2	None	AGR, GWR, WARM, WILD, MUN, RARE, REC1, REC2	2 Miles
San Timoteo Creek – Reach 1	None	N/A	2 Miles
Santa Ana River – Reach 5	None	SPWN, AGR	6 Miles
Santa Ana River – Reach 4	Pathogens	N/A	1 Mile
Santa Ana River – Reach 3	Copper, Lead, Pathogens, Nitrates	WILD, WARM, REC2, REC1, MUN, GWR	1 Mile
Prado Basin	Yes – Nutrients	AGR, GWR, REC1, REC2, WARM, WILD, RARE, SPWN	1 Mile
Santa Ana River – Reach 2	Metals, Indicator Bacteria	AGR, GWR, WARM, WILD, MUN, RARE, REC1, REC2	1 Mile
Santa Ana River – Reach 1	None	WARM, WILD, MUN, RARE, REC1, REC2	1 mile

AGR = Agricultural Supply; GWR = Groundwater Recharge; REC1 = Primary Contact Recreation; REC2 = Secondary Contact Recreation; WARM = Warm Freshwater Habitat; WILD = Wildlife Habitat; MUN = Municipal and Domestic Supply; RARE = Rare, Threatened, or Endangered Species; SPWN = Spawning, Reproduction and Development.

A.3 Additional Permits/Approvals required for the Project:

Table A.2 Other Applicable Permits

Agency	Permit Required	
State Department of Fish and Game, 1602 Streambed Alteration Agreement	☐ Y	☒ N
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Cert.	☐ Y	☒ N
US Army Corps of Engineers, CWA Section 404 Permit	☐ Y	☒ N
US Fish and Wildlife, Endangered Species Act Section 7 Biological Opinion	☐ Y	☒ N
Statewide Construction General Permit Coverage	☒ Y	☐ N
Statewide Industrial General Permit Coverage	☐ Y	☒ N
Western Riverside MSHCP Consistency Approval (e.g., JPR, DBESP)	☐ Y	☒ N
Other *(please list in the space below as required)* N/A	☐ Y	☒ N

If yes is answered to any of the questions above, the Co-Permittee may require proof of approval/coverage from those agencies as applicable including documentation of any associated requirements that may affect this Project-Specific WQMP.

Section B: Optimize Site Utilization (LID Principles)

Review of the information collected in Section 'A' will aid in identifying the principal constraints on site design and selection of LID BMPs as well as opportunities to reduce imperviousness and incorporate LID Principles into the site and landscape design. For example, **constraints** might include impermeable soils, high groundwater, groundwater pollution or contaminated soils, steep slopes, geotechnical instability, high-intensity land use, heavy pedestrian or vehicular traffic, utility locations or safety concerns. **Opportunities** might include existing natural areas, low areas, oddly configured or otherwise unbuildable parcels, easements and landscape amenities including open space and buffers (which can double as locations for bioretention BMPs), and differences in elevation (which can provide hydraulic head). Prepare a brief narrative for each of the site optimization strategies described below. This narrative will help you as you proceed with your LID design and explain your design decisions to others.

The 2010 Santa Ana MS4 Permit further requires that LID Retention BMPs (Infiltration Only or Harvest and Use) be used unless it can be shown that those BMPs are infeasible. Therefore, it is important that your narrative identify and justify if there are any constraints that would prevent the use of those categories of LID BMPs. Similarly, you should also note opportunities that exist which will be utilized during project design. Upon completion of identifying Constraints and Opportunities, include these on your WQMP Site plan in Appendix 1.

Consideration of "highest and best use" of the discharge should also be considered. For example, Lake Elsinore is evaporating faster than runoff from natural precipitation can recharge it. Requiring infiltration of 85% of runoff events for projects tributary to Lake Elsinore would only exacerbate current water quality problems associated with Pollutant concentration due to lake water evaporation. In cases where rainfall events have low potential to recharge Lake Elsinore (i.e. no hydraulic connection between groundwater to Lake Elsinore, or other factors), requiring infiltration of Urban Runoff from projects is counterproductive to the overall watershed goals. Project proponents, in these cases, would be allowed to discharge Urban Runoff, provided they used equally effective filtration based BMPs.

Site Optimization

The following questions are based upon Section 3.2 of the WQMP Guidance Document. Review of the WQMP Guidance Document will help you determine how best to optimize your site and subsequently identify opportunities and/or constraints, and document compliance.

Did you identify and preserve existing drainage patterns? If so, how? If not, why?

> *Yes, the undeveloped property drains to the northeast towards 16 existing Caltrans culverts under the SR-60. The developed conditions capture and discharge runoff to 4 on-site BMP basins for treatment before discharging into their respective culverts.*

Did you identify and protect existing vegetation? If so, how? If not, why?

> *Yes, the project will develop 276.4 acres of the total 539.9 acres of which the remaining area shall be reserved for open space. However, the proposed site will be planted with landscaping approved by the City of Beaumont.*

Did you identify and preserve natural infiltration capacity? If so, how? If not, why?

No, the geotechnical report has indicated that large cut and fill operations will be required for the recommended removals for this project which will adversely affect the natural infiltration capacity, however natural infiltration will be implemented within landscaped areas and undisturbed open areas.

Did you identify and minimize impervious area? If so, how? If not, why?

Yes, within the development envelope, street and sidewalk widths were minimized to the acceptable City standard. Parking lots were designed to meet the minimum required stall count for each parcel to minimize the overall parking lot size.

Did you identify and disperse runoff to adjacent pervious areas? If so, how? If not, why?

Yes, where possible, runoff from impervious areas drain towards landscaped areas and BMP basins through curb cutouts. All runoff from the commercial parcels will enter the BMP basins (Basins 1, 2, 3 & 4) for treatment and mitigation before discharging into their respective culverts. Each culvert has a natural depressed area upstream which also acts as a natural detention area.

Section C: Delineate Drainage Management Areas (DMAs)

Utilizing the procedure in Section 3.3 of the WQMP Guidance Document which discusses the methods of delineating and mapping your project site into individual DMAs, complete Table C.1 below to appropriately categorize the types of classification (e.g., Type A, Type B, etc.) per DMA for your project site. Upon completion of this table, this information will then be used to populate and tabulate the corresponding tables for their respective DMA classifications.

Table C.1 DMA Classifications

DMA Name or ID	Surface Type(s)[1][2]	Area (Sq. Ft.)	DMA Type
DMA 1	Impervious: Rooftop, Driveway, Sidewalk, & Asphalt Street Pervious: Ornamental Landscaping (Bioretention Basin)	2,388,467	Type D
DMA 6	Impervious: Rooftop, Driveway, Sidewalk, & Asphalt Street Pervious: Ornamental Landscaping (Bioretention Basin)	1,480,735	Type D
DMA 13	Impervious: Rooftop, Driveway, Sidewalk, & Asphalt Street Pervious: Ornamental Landscaping (Bioretention Basin)	3,863,902	Type D
DMA 16	Impervious: Rooftop, Driveway, Sidewalk, & Asphalt Street Pervious: Ornamental Landscaping	3,728,952	Type D
DMA 17	Impervious: Streets & Sidewalks Pervious: Ornamental Landscaping	238,170	Type D
DMA PA-1	Pervious: Undeveloped Graded Land	915,140	Type A
DMA PA-2	Pervious: Undeveloped Graded Land	92,898	Type A
Remaining Open Space	Pervious: Natural Open Space	11,132,334	Type A

[1]Reference Table 2-1 in the WQMP Guidance Document to populate this column
[2]If multi-surface provide back-up

Table C.2 Type 'A', Self-Treating Areas

DMA Name or ID	Area (Sq. Ft.)	Stabilization Type	Irrigation Type (if any)
DMA PA-1	915,140	Hydroseed	None
DMA PA-2	92,898	Hydroseed	None
Remaining Open Space	10,978,427	Hydroseed	None

Table C.3 Type 'B', Self-Retaining Areas – NOT APPLICABLE

Self-Retaining Area				Type 'C' DMAs that are draining to the Self-Retaining Area		
DMA Name/ ID	Post-project surface type	Area (square feet) [A]	Storm Depth (inches) [B]	DMA Name / ID	[C] from Table C.4 = [C]	Required Retention Depth (inches) [D]

$$[D] = [B] + \frac{[B] \cdot [C]}{[A]}$$

Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas – NOT APPLICABLE

DMA					Receiving Self-Retaining DMA		
DMA Name/ ID	Area (square feet) [A]	Post-project surface type	Impervious fraction [B]	Product [C] = [A] x [B]	DMA name /ID	Area (square feet) [D]	Ratio [C]/[D]

Table C.5 Type 'D', Areas Draining to BMPs

DMA Name or ID	BMP Name or ID
DMA 1	Extended Detention Basin 4
DMA 6	Extended Detention Basin 3
DMA 13	Extended Detention Basin 2
DMA 16	Extended Detention Basin 1
DMA 17	Bioretention Basin 5

Note: More than one drainage management area can drain to a single LID BMP, however, one drainage management area may not drain to more than one BMP.

Section D: Implement LID BMPs

D.1 Infiltration Applicability

Is there an approved downstream 'Highest and Best Use' for stormwater runoff (see discussion in Chapter 2.4.4 of the WQMP Guidance Document for further details)? ☐ Y ☒ N

If yes has been checked, Infiltration BMPs shall not be used for the site; proceed to section D.3

If no, continue working through this section to implement your LID BMPs. It is recommended that you contact your Co-Permittee to verify whether or not your project discharges to an approved downstream 'Highest and Best Use' feature.

Geotechnical Report

A Geotechnical Report or Phase I Environmental Site Assessment may be required by the Copermittee to confirm present and past site characteristics that may affect the use of Infiltration BMPs. In addition, the Co-Permittee, at their discretion, may not require a geotechnical report for small projects as described in Chapter 2 of the WQMP Guidance Document. If a geotechnical report has been prepared, include it in Appendix 3. In addition, if a Phase I Environmental Site Assessment has been prepared, include it in Appendix 4.

Is this project classified as a small project consistent with the requirements of Chapter 2 of the WQMP Guidance Document? ☐ Y ☒ N

Infiltration Feasibility

Table D.1 below is meant to provide a simple means of assessing which DMAs on your site support Infiltration BMPs and is discussed in the WQMP Guidance Document in Chapter 2.4.5. Check the appropriate box for each question and then list affected DMAs as applicable. If additional space is needed, add a row below the corresponding answer.

Table D.1 Infiltration Feasibility

Does the project site…	YES	NO
…have any DMAs with a seasonal high groundwater mark shallower than 10 feet?		X
If Yes, list affected DMAs:		
…have any DMAs located within 100 feet of a water supply well?		X
If Yes, list affected DMAs:		
…have any areas identified by the geotechnical report as posing a public safety risk where infiltration of stormwater could have a negative impact?		X
If Yes, list affected DMAs:		
…have measured in-situ infiltration rates of less than 1.6 inches / hour?		X
If Yes, list affected DMAs: *ALL,*		
…have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface?	X	
If Yes, list affected DMAs: *ALL*		
…geotechnical report identify other site-specific factors that would preclude effective and safe infiltration?		X
Describe here:		

If you answered "Yes" to any of the questions above for any DMA, Infiltration BMPs should not be used for those DMAs and you should proceed to the assessment for Harvest and Use below.

D.2 Harvest and Use Assessment

Please check what applies*:*

☐ Reclaimed water will be used for the non-potable water demands for the project.

☐Downstream water rights may be impacted by Harvest and Use as approved by the Regional Board (verify with the Copermittee).

☐The Design Capture Volume will be addressed using Infiltration Only BMPs. In such a case, Harvest and Use BMPs are still encouraged, but it would not be required if the Design Capture Volume will be infiltrated or evapotranspired.

If any of the above boxes have been checked, Harvest and Use BMPs need not be assessed for the site. If none of the above criteria applies, follow the steps below to assess the feasibility of irrigation use, toilet use and other non-potable uses (e.g., industrial use).

Irrigation Use Feasibility – NOT APPLICABLE

Complete the following steps to determine the feasibility of harvesting stormwater runoff for Irrigation Use BMPs on your site:

Step 1: Identify the total area of irrigated landscape on the site, and the type of landscaping used.

Total Area of Irrigated Landscape: 2,166,009 s.f.

Type of Landscaping (Conservation Design or Active Turf): Conservation Design

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for irrigation use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: 9,648,444 s.f.

Step 3: Cross reference the Design Storm depth for the project site (see Exhibit A of the WQMP Guidance Document) with the left column of Table 2-3 in Chapter 2 to determine the minimum area of Effective Irrigated Area per Tributary Impervious Area (EIATIA).

Enter your EIATIA factor: 1.59

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum irrigated area that would be required.

Minimum required irrigated area: 15,341,026 s.f.

Step 5: Determine if harvesting stormwater runoff for irrigation use is feasible for the project by comparing the total area of irrigated landscape (Step 1) to the minimum required irrigated area (Step 4).

Minimum required irrigated area (Step 4)	Available Irrigated Landscape (Step 1)
15,341,026 s.f.	2,166,009 s.f.

Toilet Use Feasibility – NOT APPLICABLE

Complete the following steps to determine the feasibility of harvesting stormwater runoff for toilet flushing uses on your site:

Step 1: Identify the projected total number of daily toilet users during the wet season, and account for any periodic shutdowns or other lapses in occupancy:

Projected Number of Daily Toilet Users: 250

Project Type: Industrial

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for toilet use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: 9,648,444 s.f.

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-2 in Chapter 2 to determine the minimum number or toilet users per tributary impervious acre (TUTIA).

Enter your TUTIA factor: 208

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of toilet users that would be required.

Minimum number of toilet users: 2,006,876,352

Step 5: Determine if harvesting stormwater runoff for toilet flushing use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required Toilet Users (Step 4)	Projected number of toilet users (Step 1)
2,006,876,352	*250*

Other Non-Potable Use Feasibility – NOT APPLICABLE

Are there other non-potable uses for stormwater runoff on the site (e.g. industrial use)? See Chapter 2 of the Guidance for further information. If yes, describe below. If no, write N/A.

N/A

Step 1: Identify the projected average daily non-potable demand, in gallons per day, during the wet season and accounting for any periodic shutdowns or other lapses in occupancy or operation.

Average Daily Demand: Projected Average Daily Use (gpd)

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for the identified non-potable use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: Insert Area (Acres)

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-4 in Chapter 2 to determine the minimum demand for non-potable uses per tributary impervious acre.

Enter the factor from Table 2-4: Enter Value

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of gallons per day of non-potable use that would be required.

Minimum required use: Minimum use required (gpd)

Step 5: Determine if harvesting stormwater runoff for other non-potable use is feasible for the project by comparing the projected average daily use (Step 1) to the minimum required non-potable use (Step 4).

Minimum required non-potable use (Step 4)	Projected average daily use (Step 1)
Minimum use required (gpd)	Projected Average Daily Use (gpd)

If Irrigation, Toilet and Other Use feasibility anticipated demands are less than the applicable minimum values, Harvest and Use BMPs are not required, and you should proceed to utilize LID Bioretention and Biotreatment per Section 3.4.2 of the WQMP Guidance Document.

D.3 Bioretention and Biotreatment Assessment

Other LID Bioretention and Biotreatment BMPs as described in Chapter 2.4.7 of the WQMP Guidance Document are feasible on nearly all development sites with sufficient advance planning.

Select one of the following:

☒ LID Bioretention/Biotreatment BMPs will be used for some, or all DMAs of the project as noted below in Section D.4 (note the requirements of Section 3.4.2 in the WQMP Guidance Document).

☐ A site-specific analysis demonstrating the technical infeasibility of all LID BMPs has been performed and is included in Appendix 5. If you plan to submit an analysis demonstrating the technical infeasibility of LID BMPs, request a pre-submittal meeting with the Copermittee to discuss this option. Proceed to Section E to document your alternative compliance measures.

D.4 Feasibility Assessment Summaries

From the Infiltration, Harvest and Use, Bioretention and Biotreatment Sections above, complete Table D.2 below to summarize which LID BMPs are technically feasible, and which are not, based upon the established hierarchy.

Table D.2 LID Prioritization Summary Matrix

DMA Name/ID	LID BMP Hierarchy				No LID (Alternative Compliance)
	1. Infiltration	2. Harvest and use	3. Bioretention	4. Biotreatment	
DMA 1	☐	☐	☐	☒	☐
DMA 6	☐	☐	☐	☒	☐
DMA 13	☐	☐	☐	☒	☐
DMA 16	☐	☐	☐	☒	☐
DMA 17	☐	☐	☒	☐	☐

For those DMAs where LID BMPs are not feasible, provide a brief narrative below summarizing why they are not feasible, include your technical infeasibility criteria in Appendix 5, and proceed to Section E below to document Alternative Compliance measures for those DMAs. Recall that each proposed DMA must pass through the LID BMP hierarchy before alternative compliance measures may be considered.

D.5 LID BMP Sizing

Each LID BMP must be designed to ensure that the Design Capture Volume will be addressed by the selected BMPs. First, calculate the Design Capture Volume for each LID BMP using the V_{BMP} worksheet in Appendix F of the LID BMP Design Handbook. Second, design the LID BMP to meet the required V_{BMP} using a method approved by the Copermittee. Utilize the worksheets found in the LID BMP Design Handbook or consult with your Copermittee to assist you in correctly sizing your LID BMPs. Complete Table D.3 below to document the Design Capture Volume and the Proposed Volume for each LID BMP. Provide the completed design procedure sheets for each LID BMP in Appendix 6. You may add additional rows to the table below as needed.

Table D.3 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	**DMA Runoff Factor**	DMA Areas x Runoff Factor	*Extended Detention Basin 4*		
DMA 1	[A]		[B]	[C]	[A] x [C]			
Impervious Areas	*2,178,051*	*Concrete, & Asphalt*	*1.0*	*0.89*	*1,942,821.5*	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
Pervious Areas	*109,081*	*Ornamental Landscaping*	*0.1*	*0.11*	*12,048.9*			
BMP Basin	*101,335*	*Ornamental Landscaping*	*0.1*	*0.11*	*11,193.3*			
	$A_T = \Sigma[A]$ **2,388,467**			$\Sigma = [D]$ 1,966,063.7		[E] **0.75**	$[F] = \frac{[D]x[E]}{12}$ 122,879	[G] 413,768

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

Table D.4 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	**DMA Runoff Factor**	DMA Areas x Runoff Factor	*Extended Detention Basin 3*		
DMA 6	[A]		[B]	[C]	[A] x [C]			
Impervious Areas	*1,097,967*	*Concrete & Asphalt*	*1.0*	*0.89*	*979,386.6*	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
Pervious Areas	*276,383*	*Ornamental Landscaping*	*0.1*	*0.11*	*30,528.7*			
BMP Basin	*106,385*	*Ornamental Landscaping*	*0.1*	*0.11*	*11,751.1*			
	$A_T = \Sigma[A]$ **1,480,735**			$\Sigma = [D]$ 1,021,666.4		[E] **0.75**	$[F] = \frac{[D]x[E]}{12}$ 63,854.2	[G] 416,420

Table D.5 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	**DMA Runoff Factor**	DMA Areas x Runoff Factor	*Extended Detention Basin 2*		
DMA 13	[A]		[B]	[C]	[A] x [C]			
Impervious Areas	*3,074,773*	*Concrete & Asphalt*	*1.0*	*0.89*	*2,742,697.5*	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
Pervious Areas	*674,044*	*Ornamental Landscaping*	*0.1*	*0.11*	*74,453.6*			
BMP Basin	*115,084*	*Ornamental Landscaping*	*0.1*	*0.11*	*12,711.9*			
	$A_T = \Sigma[A]$ 3,863,901			$\Sigma = [D]$ 2,829,863		[E] **0.75**	$[F] = \frac{[D]x[E]}{12}$ 176,866.4	[G] 489,679

Table D.6 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	**DMA Runoff Factor**	DMA Areas x Runoff Factor	*Extended Detention Basin 4*		
DMA 16	[A]		[B]	[C]	[A] x [C]			
Impervious Areas	*2,816,060*	*Concrete & Asphalt*	*1.0*	*0.89*	*2,511,925.5*	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
Pervious Areas	*801,273*	*Ornamental Landscaping*	*0.1*	*0.11*	*88,507*			
BMP Basin	*111,618*	*Ornamental Landscaping*	*0.1*	*0.11*	*12,329.1*			
	$A_T = \Sigma[A]$ **3,728,951**				Σ= [D] 2,612,761.6	[E] **0.75**	[F] = $\frac{[D]x[E]}{12}$ 163,297.6	[G] 450,891

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

Table D.7 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	**DMA Runoff Factor**	DMA Areas x Runoff Factor	*Bioretention Basin 5*		
DMA 17	[A]		[B]	[C]	[A] x [C]			
Impervious: Streets & Sidewalks	*144,682*	*Concrete & Asphalt*	*1.0*	*0.89*	*129,056.3*	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
Pervious: Ornamental Landscape	*61,102*	*Ornamental Landscaping*	*0.1*	*0.11*	*6,749.2*			
BMP Basin	*32,386*	*Ornamental Landscaping*	*0.1*	*0.11*	*3,577.3*			
	$A_T = \Sigma[A]$ **238,170**				Σ= [D] 139,382.8	[E] **0.75**	[F] = $\frac{[D]x[E]}{12}$ 8,711.4	[G] *36,191*

Section E: Alternative Compliance (LID Waiver Program)

LID BMPs are expected to be feasible on virtually all projects. Where LID BMPs have been demonstrated to be infeasible as documented in Section D, other Treatment Control BMPs must be used (subject to LID waiver approval by the Copermittee). Check one of the following Boxes:

☒ LID Principles and LID BMPs have been incorporated into the site design to fully address all Drainage Management Areas. No alternative compliance measures are required for this project and thus this Section is not required to be completed.

- *Or* -

☐ The following Drainage Management Areas are unable to be addressed using LID BMPs. A site-specific analysis demonstrating technical infeasibility of LID BMPs has been approved by the Co-Permittee and included in Appendix 5. Additionally, no downstream regional and/or sub-regional LID BMPs exist or are available for use by the project. The following alternative compliance measures on the following pages are being implemented to ensure that any pollutant loads expected to be discharged by not incorporating LID BMPs, are fully mitigated.

List DMAs here.

E.1 Identify Pollutants of Concern

Utilizing Table A.1 from Section A above which noted your project's receiving waters and their associated EPA approved 303(d) listed impairments, cross reference this information with that of your selected Priority Development Project Category in Table E.1 below. If the identified General Pollutant Categories are the same as those listed for your receiving waters, then these will be your Pollutants of Concern and the appropriate box or boxes will be checked on the last row. The purpose of this is to document compliance and to help you appropriately plan for mitigating your Pollutants of Concern in lieu of implementing LID BMPs.

Table E.1 Potential Pollutants by Land Use Type

Priority Development Project Categories and/or Project Features (check those that apply)	General Pollutant Categories							
	Bacterial Indicators	Metals	Nutrients	Pesticides	Toxic Organic Compounds	Sediments	Trash & Debris	Oil & Grease
☐ Detached Residential Development	P	N	P	P	N	P	P	P
☐ Attached Residential Development	P	N	P	P	N	P	P	P(2)
☒ Commercial/Industrial Development	P(3)	P	P(1)	P(1)	P(5)	P(1)	P	P
☐ Automotive Repair Shops	N	P	N	N	P(4, 5)	N	P	P
☐ Restaurants (>5,000 ft^2)	P	N	N	N	N	N	P	P
☒ Hillside Development (>5,000 ft2)	P	N	P	P	N	P	P	P
☒ Parking Lots (>5,000 ft^2)	P(6)	P	P(1)	P(1)	P(4)	P(1)	P	P
☐ Retail Gasoline Outlets	N	P	N	N	P	N	P	P
Project Priority Pollutant(s) of Concern	☒	☒	☒	☐	☐	☐	☐	☐

P = Potential

N = Not Potential

(1) A potential Pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected

(2) A potential Pollutant if the project includes uncovered parking areas; otherwise not expected

(3) A potential Pollutant is land use involving animal waste

(4) Specifically petroleum hydrocarbons

(5) Specifically solvents

(6) Bacterial indicators are routinely detected in pavement runoff

E.2 Stormwater Credits – NOT APPLICABLE

Projects that cannot implement LID BMPs but nevertheless implement smart growth principles are potentially eligible for Stormwater Credits. Utilize Table 3-8 within the WQMP Guidance Document to identify your Project Category and its associated Water Quality Credit. If not applicable, write N/A.

Table E.2 Water Quality Credits

Qualifying Project Categories	Credit Percentage[2]
Total Credit Percentage[1]	

[1]*Cannot Exceed 50%*
[2]*Obtain corresponding data from Table 3-8 in the WQMP Guidance Document*

E.3 Sizing Criteria – NOT APPLICABLE

After you appropriately considered Stormwater Credits for your project, utilize Table E.3 below to appropriately size them to the DCV, or Design Flow Rate, as applicable. Please reference Chapter 3.5.2 of the WQMP Guidance Document for further information.

Table E.3 Treatment Control BMP Sizing

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Area x Runoff Factor				
DMA 1	[A]		[B]	[C]	[A] x [C]				
						Design Storm Depth (in)	*Minimum Design Capture Volume or Design Flow Rate (cubic feet or cfs)*	*Total Storm Water Credit % Reduction*	*Proposed Volume or Flow on Plans (cubic feet or cfs)*
	A_T= Σ[A]				Σ= [D]	[E]	$[F] = \frac{[D]x[E]}{[G]}$	[F] X (1-[H])	[I]

[B], [C] is obtained as described in Section 2.3.1 from the WQMP Guidance Document
[E] is for Flow-Based Treatment Control BMPs [E] = .2, for Volume-Based Control Treatment BMPs, [E] obtained from Exhibit A in the WQMP Guidance Document
[G] is for Flow-Based Treatment Control BMPs [G] = 43,560, for Volume-Based Control Treatment BMPs, [G] = 12
[H] is from the Total Credit Percentage as Calculated from Table E.2 above
[I] as obtained from a design procedure sheet from the BMP manufacturer and should be included in Appendix 6

E.4 Treatment Control BMP Selection

Treatment Control BMPs typically provide proprietary treatment mechanisms to treat potential pollutants in runoff, but do not sustain significant biological processes. Treatment Control BMPs must have a removal efficiency of a medium or high effectiveness as quantified below:

- High: equal to or greater than 80% removal efficiency
- Medium: between 40% and 80% removal efficiency

Such removal efficiency documentation (e.g., studies, reports, etc.) as further discussed in Chapter 3.5.2 of the WQMP Guidance Document, must be included in Appendix 6. In addition, ensure that proposed Treatment Control BMPs are properly identified on the WQMP Site Plan in Appendix 1.

Table E.4 Treatment Control BMP Selection

Selected Treatment Control BMP Name or ID[1]	Priority Pollutant(s) of Concern to Mitigate[2]	Removal Efficiency Percentage[3]
Extended Detention Basins (5)	Nutrients	Medium
Bioretention Basin (1)	Nutrients	High

[1] Treatment Control BMPs must not be constructed within Receiving Waters. In addition, a proposed Treatment Control BMP may be listed more than once if they possess more than one qualifying pollutant removal efficiency.
[2] Cross Reference Table E.1 above to populate this column.
[3] As documented in a Co-Permittee Approved Study and provided in Appendix 6.

Section F: Hydromodification

F.1 Hydrologic Conditions of Concern (HCOC) Analysis

Once you have determined that the LID design is adequate to address water quality requirements, you will need to assess if the proposed LID Design may still create a HCOC. Review Chapters 2 and 3 (including Figure 3-7) of the WQMP Guidance Document to determine if your project must mitigate for Hydromodification impacts. If your project meets one of the following criteria which will be indicated by the check boxes below, you do not need to address Hydromodification at this time. However, if the project does not qualify for Exemptions 1, 2 or 3, then additional measures must be added to the design to comply with HCOC criteria. This is discussed in further detail below in Section F.2.

HCOC EXEMPTION 1: The Priority Development Project disturbs less than one acre. The Copermittee has the discretion to require a Project-Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, HCOC criteria do not apply.

HCOC EXEMPTION 2: The volume and time of concentration[1] of storm water runoff for the post-development condition is not significantly different from the pre-development condition for a 2-year return frequency storm (a difference of 5% or less is considered insignificant) using one of the following methods to calculate:

- Riverside County Hydrology Manual
- Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds (NRCS 1986), or derivatives thereof, such as the Santa Barbara Urban Hydrograph Method
- Other methods acceptable to the Co-Permittee

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, report results in Table F.1 below and provide your substantiated hydrologic analysis in Appendix 7.

Table F.1 Hydrologic Conditions of Concern Summary

	2 year – 24 hour		
	Pre-condition	Post-condition	% Difference
Time of Concentration			
Volume (Cubic Feet)	1,666,094	2,877,832	53.3%

[1] Time of concentration is defined as the time after the beginning of the rainfall when all portions of the drainage basin are contributing to flow at the outlet.

HCOC EXEMPTION 3: All downstream conveyance channels to an adequate sump (for example, Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River, or other lake, reservoir or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Susceptibility Maps.

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, HCOC criteria do not apply and note below which adequate sump applies to this HCOC qualifier:

F.2 HCOC Mitigation

If none of the above HCOC Exemption Criteria are applicable, HCOC criteria is considered mitigated if they meet one of the following conditions:

a. Additional LID BMPS are implemented onsite or offsite to mitigate potential erosion or habitat impacts as a result of HCOCs. This can be conducted by an evaluation of site-specific conditions utilizing accepted professional methodologies published by entities such as the California Stormwater Quality Association (CASQA), the Southern California Coastal Water Research Project (SCCRWP), or other Co-Permittee approved methodologies for site-specific HCOC analysis.

b. The project is developed consistent with an approved Watershed Action Plan that addresses HCOC in Receiving Waters.

c. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

Be sure to include all pertinent documentation used in your analysis of the items a, b or c in Appendix 7.

The TR-55 methodology was used to estimate the runoff difference between existing and proposed conditions. Calculations show that the 2-year runoff volume increases by 73.7%, therefore creating a hydrologic condition of concern.

The 2-year, 24-hour unit hydrograph was calculated for the existing and proposed conditions at the proposed point of discharge locations for the project: DMAs 100, 600, 1300 and 1600 for the existing condition and DMAs 1, 6, 13 and 16 for the proposed condition. To mitigate the hydromodification impacts, the extended detention basins proposed in this WQMP were analyzed by routing calculations to prove that the post-development 2-year peak flow is less than the pre-development. The results show that the extended detention basin capacity and outlet design (orifice sizing) meet both the water quality and hydromodification criteria. See next page for summary table:

2-Year, 24-Hour Storm Event				
Basin ID	1	2	3	4
Existing DMA	1600	1300	600	100
Proposed DMA	16	13	6	1
Existing Q (CFS)	10.14	1.78	7.67	9.00
Proposed Q (CFS)	20.62	20.80	8.18	12.73
Mitigated Q (CFS)	0.92	1.11	0.40	0.80
% Difference in Peak Flow Rate	-90.9%	-37.6%	-94.8%	-91.1%

Section G: Source Control BMPs

Source control BMPs include permanent, structural features that may be required in your project plans — such as roofs over and berms around trash and recycling areas — and Operational BMPs, such as regular sweeping and "housekeeping", that must be implemented by the site's occupant or user. The MEP standard typically requires both types of BMPs. In general, Operational BMPs cannot be substituted for a feasible and effective permanent BMP. Using the Pollutant Sources/Source Control Checklist in Appendix 8, review the following procedure to specify Source Control BMPs for your site:

1. *Identify Pollutant Source*s: Review Column 1 in the Pollutant Sources/Source Control Checklist. Check off the potential sources of Pollutants that apply to your site.

2. *Note Locations on Project-Specific WQMP Exhibit*: Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist. Show the location of each Pollutant source and each permanent Source Control BMP in your Project-Specific WQMP Exhibit located in Appendix 1.

3. *Prepare a Table and Narrative*: Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist. In the left column of Table G.1 below, list each potential source of runoff Pollutants on your site (from those that you checked in the Pollutant Sources/Source Control Checklist). In the middle column, list the corresponding permanent, Structural Source Control BMPs (from Columns 2 and 3 of the Pollutant Sources/Source Control Checklist) used to prevent Pollutants from entering runoff. Add additional narrative in this column that explains any special features, materials or methods of construction that will be used to implement these permanent, Structural Source Control BMPs.

4. *Identify Operational Source Control BMPs:* To complete your table, refer once again to the Pollutant Sources/Source Control Checklist. List in the right column of your table the Operational BMPs that should be implemented as long as the anticipated activities continue at the site. Copermittee stormwater ordinances require that applicable Source Control BMPs be implemented; the same BMPs may also be required as a condition of a use permit or other revocable Discretionary Approval for use of the site.

Table G.1 Permanent and Operational Source Control Measures

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
A. On-site storm drain inlets	Mark all inlets with the words "Only Rain Down the Storm Drain" or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify.	• Maintain and periodically repaint or replace inlet markings. • Provide stormwater pollution prevention information to new site owners, lessees, or operators. • See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
B. Interior floor drains and elevator shaft sump pumps	State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	Inspect and maintain drains to prevent blockages and overflow.
D2. Landscape/ Outdoor Pesticide Use	• Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. • Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater by following manufacturers guidelines. • Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. • Consider using pest-resistant plants, especially adjacent to hardscape. • To ensure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	• Maintain landscaping using minimum or no pesticides. • See applicable operational BMPs in "What you should know for…..Landscape and Gardening" athttp://rcflood.org/stormwater
G. Refuse areas	• State how site refuse will be handled and provide supporting detail to what is shown on plans. • State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and

		clean up spills immediately. See Fact Sheet WM-4 "Spill Prevention and Control" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
M. Loading Docks	State how discharge of pollutants to stormwater from outdoor loading/unloading will be prevented or reduced. • Cover loading dock areas or design drainage to preclude run-on and runoff • Direct connections to the MS4 from below-grade loading ducks or similar trucks are prohibited. Runoff from a below-grade loading dock may only be discharged to the MS4 when designed to use a treatment control BMP applicable to the use. • Pave loading areas with concrete instead of asphalt	• Move loaded and unloaded items indoors as soon as possible. • See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
N. Fire Sprinkler Test Water	Provide a means to drain fire sprinkler test water to the sanitary sewer.	• See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
O. Miscellaneous Drain or Wash Water or Other Sources • Rooftop equipment • Roofing, gutters, and trim.		• Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment. • Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.
P. Plazas, sidewalks, and parking lots.	The proposed development increases the impervious surface with plazas, sidewalks, and parking lots. Landscaped slopes and parking medians will be incorporated to reduce the overall impervious surface ratio. • Plazas, sidewalks, and parking lots to be constructed to minimum widths necessary, provided that public safety and a walkable environment for pedestrians are not compromised.	• Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Use absorbent to collect fluids, oil and grease and dispose of properly to prevent entry into the storm drain system. In the event wastewater is required, it is to be contained and collected without entering the storm drain system.

	• Drain impervious sidewalks and/or parking lots into adjacent landscaping and/or landscaped buffers.	

Section H: Construction Plan Checklist

Populate Table H.1 below to assist the plan checker in an expeditious review of your project. The first two columns will contain information that was prepared in previous steps, while the last column will be populated with the corresponding plan sheets. This table is to be completed with the submittal of your final Project-Specific WQMP.

Table H.1 Construction Plan Cross-reference

BMP No. or ID	BMP Identifier and Description	Corresponding Plan Sheet(s)	BMP Location (Lat/Long)
Basin 1	Extended Detention Basin sized to capture the adequate DCV	Sheet 4 Preliminary WQMP Site Plan	Lat: 33°56’32”N Long: 117°03’27”W
Basin 2	Extended Detention Basin sized to capture the adequate DCV	Sheet 3 Preliminary WQMP Site Plan	Lat: 33°56’26”N Long: 117°03’15”W
Basin 3	Extended Detention Basin sized to capture the adequate DCV	Sheet 3 Preliminary WQMP Site Plan	Lat: 33°56’15”N Long: 117°02’56”W
Basin 4	Extended Detention Basin sized to capture the adequate DCV	Sheet 2 Preliminary WQMP Site Plan	Lat: 33°56’04”N Long: 117°02’32”W
Basin 5	Bioretention Basin sized to capture the adequate DCV	Sheet 4 Preliminary WQMP Site Plan	Lat: 33°55'59"N Long: 117° 02'04"W
Future Commercial PA-1	Self Treating Area	Sheet 4 Preliminary WQMP Site Plan	Lat: 33°55'54"N Long: 117° 02'04"W
Future Commercial PA-2	Self Treating Area	Sheet 4 Preliminary WQMP Site Plan	Lat: 33°55'59"N Long: 117° 02'06"W

Note that the updated table — or Construction Plan WQMP Checklist — is only a reference tool to facilitate an easy comparison of the construction plans to your Project-Specific WQMP. Co-Permittee staff can advise you regarding the process required to propose changes to the approved Project-Specific WQMP.

Section I: Operation, Maintenance and Funding

The Copermittee will periodically verify that Stormwater BMPs on your site are maintained and continue to operate as designed. To make this possible, your Copermittee will require that you include in Appendix 9 of this Project-Specific WQMP:

1. A means to finance and implement facility maintenance in perpetuity, including replacement cost.
2. Acceptance of responsibility for maintenance from the time the BMPs are constructed until responsibility for operation and maintenance is legally transferred. A warranty covering a period following construction may also be required.
3. An outline of general maintenance requirements for the Stormwater BMPs you have selected.
4. Figures delineating and designating pervious and impervious areas, location, and type of Stormwater BMP, and tables of pervious and impervious areas served by each facility. Geo-locating the BMPs using a coordinate system of latitude and longitude is recommended to help facilitate a future statewide database system.
5. A separate list and location of self-retaining areas or areas addressed by LID Principles that do not require specialized O&M or inspections but will require typical landscape maintenance as noted in Chapter 5, pages 85-86, in the WQMP Guidance. Include a brief description of typical landscape maintenance for these areas.

Your local Co-Permittee will also require that you prepare and submit a detailed Stormwater BMP Operation and Maintenance Plan that sets forth a maintenance schedule for each of the Stormwater BMPs built on your site. An agreement assigning responsibility for maintenance and providing for inspections and certification may also be required.

Details of these requirements and instructions for preparing a Stormwater BMP Operation and Maintenance Plan are in Chapter 5 of the WQMP Guidance Document.

Maintenance Mechanism: *Private facilities, including the storm drain conveyance system, extended detention basins, bioretention basin, and all other structural BMPs, will be maintained by the Property Owner's Association, funded by a POA fee assessment, as required by the maintenance stipulations in the recorded C, C & R's for this project.*

Will the proposed BMPs be maintained by a Homeowners' Association (HOA) or Property Owners Association (POA)?

☒ Y ☐ N

Include your Operation and Maintenance Plan and Maintenance Mechanism in Appendix 9. Additionally, include all pertinent forms of educational materials for those personnel that will be maintaining the proposed BMPs within this Project-Specific WQMP in Appendix 10.

Appendix 1: Maps and Site Plans

Location Map, WQMP Site Plan and Receiving Waters Map

Beaumont Pointe
D_{85}=0.75

R 07 W | R 06 W | R 05 W | R 04 W | R 03 W | R 02 W | R 01 W | R 01 E | R 02 E | R 03 E | R 04 E | R 05 E

T 01 S | T 02 S | T 03 S | T 04 S | T 05 S | T 06 S | T 07 S | T 08 S

0.85 MiraLoma
0.61 RiversideNorth
0.54 RiversideSouth
0.68 PigeonPass
0.66 MorenoEast
0.85 Beaumont
0.88 PradoDam
0.51 Woodcrest
0.50 LakeMathews
0.68 PerrisReservoir
0.87 VistaGrandeGS
0.70 SanJacintoNWS
1.18 Idyllwild
0.58 SunCity
0.68 Winchester
0.70 ElsinoreNWS
1.11 ElCarisoStation
0.90 HurkeyCreek
0.77 WildomarLaCresta
0.52 SkinnerLake
0.65 Anza
0.77 SantaRosaPlateau
1.00 TemeculaNWS
0.64 AguangaValley

Santa Ana River Watershed
Santa Margarita Watershed

JURUPA VALLEY | EASTVALE | CORONA | NORCO | RIVERSIDE | MORENO VALLEY | CALIMESA | BEAUMONT | SAN JACINTO | PERRIS | CANYON LAKE | LAKE ELSINORE | WILDOMAR | MENIFEE | HEMET | MURRIETA | TEMECULA

06	05	04	03	02	01
07	08	09	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

N

Rain Gage Locations

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Isohyetal Map for the 85th Percentile 24 hour Storm Event

July 2011



LEGEND:

- PROPERTY BOUNDARY
- MAJOR DRAINAGE BOUNDARY
- IMPERVIOUS AREAS
- PERVIOUS/LANDSCAPING AREAS
- PROPOSED BMP BASIN
- FUTURE COMMERCIAL / SELF-TREATING AREA
- REMAINDER PARCEL/NATURAL SELF-TREATING AREAS

BEAUMONT POINTE
PRELIMINARY WATER QUALITY MANAGEMENT SITE PLAN
INDEX MAP

PROACTIVE ENGINEERING CONSULTANTS WEST,INC.
25109 JEFFERSON AVE. Suite 200
MURRIETA, CA 92562
951.200.6645

SHEET: 1 OF 4

100' 0 100' 200' 300'
SCALE: 1"=100'

PRELIMINARY WQMP SUMMARY

	DMA 1	DMA 6
TOTAL IMPERVIOUS AREA (SF)	2,178,051	1,097,967
TOTAL PERVIOUS AREA (SF)	210,416	382,768
TOTAL AREA (AC)	54.83	33.99
BASIN ID	BMP BASIN 4	BMP BASIN 3
BMP BASIN TYPE	EXTENDED DETENTION BASIN	EXTENDED DETENTION BASIN
REQUIRED VBMP (CF)	122,879	63,854
TOTAL BASIN CAPACITY (CF)	413,768	416,420
BMP LOCATION	LAT: 33°56'04'N LONG: 117°02'32"W	LAT: 33°56'15'N LONG: 117°02'56"W

NOT A PART

NOT A PART

PROPERTY BOUNDARY

NOT A PART

DMA 1
54.83 ACRES

STORM DRAIN OUTLET STRUCTURE

STORMWATER TREATMENT BASIN No. 4

STORM DRAIN OUTLET STRUCTURE

STORM DRAIN OUTLET STRUCTURE

BMP BASIN CALIBRATED INLET STRUCTURE

INDUSTRIAL WAY

STORM DRAIN OUTLET STRUCTURE

DMA 6
33.99 ACRES

STORMWATER TREATMENT BASIN No. 3

BMP BASIN CALIBRATED INLET STRUCTURE

STORM DRAIN OUTLET STRUCTURE

STORM DRAIN OUTLET STRUCTURE

NOT A PART

NOT A PART

PROPERTY BOUNDARY

NOT A PART

NOT A PART

LEGEND:

- PROPERTY BOUNDARY
- MAJOR DRAINAGE BOUNDARY
- IMPERVIOUS AREA
- PERVIOUS AREA
- PROPOSED BMP BASIN
- FUTURE COMMERCIAL / SELF-TREATING AREA
- REMAINDER PARCEL/NATURAL SELF-TREATING AREAS
- PROPOSED STORM DRAIN WITH FLOW DIRECTION
- PROPOSED FLOW DIRECTION
- PROPOSED CATCH BASIN WITH "ONLY RAIN IN THE DRAIN" STENCIL
- PROPOSED TRASH ENCLOSURES
- PROPOSED OUTLET STRUCTURE
- PROPOSED INLET STRUCTURE
- CONCRETE LOADING AREA

BEAUMONT POINTE
PRELIMINARY WATER QUALITY MANAGEMENT SITE PLAN
DMAS 1 & 6

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
25109 JEFFERSON AVE. SUITE 200
MURRIETA, CA 92562
951-200-6845

SHEET: 2 OF 4

100' 0 100' 200' 300'
SCALE: 1"=100'

PRELIMINARY WQMP SUMMARY

	DMA 13
TOTAL IMPERVIOUS AREA (SF)	3,074,773
TOTAL PERVIOUS AREA (SF)	789,128
TOTAL AREA (AC)	88.70
BASIN ID	BMP BASIN 2
BMP BASIN TYPE	EXTENDED DETENTION BASIN
REQUIRED VBMP (CF)	176,866
TOTAL BASIN CAPACITY (CF)	489,679
BMP LOCATION	LAT: 33°56'26'N LONG: 117°03'15"W

INDUSTRIAL WAY

4TH STREET

NOT A PART

NOT A PART

PROPERTY BOUNDARY

PROPERTY BOUNDARY

BMP BASIN CALIBRATED INLET STRUCTURE

STORM DRAIN OUTLET STRUCTURE

BMP BASIN CALIBRATED INLET STRUCTURE

STORM DRAIN OUTLET STRUCTURE

STORM DRAIN OUTLET STRUCTURE

BMP BASIN CALIBRATED INLET STRUCTURE

STORM DRAIN OUTLET STRUCTURE

STORM DRAIN OUTLET STRUCTURE

DMA 13
88.72 ACRES

STORMWATER TREATMENT BASIN No. 2

STORMWATER TREATMENT BASIN No. 1

LEGEND:

- PROPERTY BOUNDARY
- MAJOR DRAINAGE BOUNDARY
- IMPERVIOUS AREA
- PERVIOUS AREA
- PROPOSED BMP BASIN
- FUTURE COMMERCIAL / SELF-TREATING AREA
- REMAINDER PARCEL/NATURAL SELF-TREATING AREAS
- PROPOSED STORM DRAIN WITH FLOW DIRECTION
- PROPOSED FLOW DIRECTION
- PROPOSED CATCH BASIN WITH "ONLY RAIN IN THE DRAIN" STENCIL
- PROPOSED TRASH ENCLOSURES
- PROPOSED OUTLET STRUCTURE
- PROPOSED INLET STRUCTURE
- CONCRETE LOADING AREA

100' 0 100' 200' 300'
SCALE: 1"=100'

BEAUMONT POINTE
PRELIMINARY WATER QUALITY MANAGEMENT SITE PLAN
DMAS 13

PROACTIVE ENGINEERING CONSULTANTS WEST,INC.
TOWER JEFFERSON BLVD. SUITE 200
RIVERSIDE, CA. 92502
951-200-8845

PRELIMINARY WQMP SUMMARY

	DMA 16	DMA 17	FUTURE COMMERCIAL PA-1	FUTURE COMMERCIAL PA-2
TOTAL IMPERVIOUS AREA (SF)	2,816,060	144,682	0	0
TOTAL PERVIOUS AREA (SF)	912,891	93,488	915,140	92,898
TOTAL AREA (AC)	85.60	5.47	21.01	2.13
BASIN ID	BMP BASIN 1	BMP BASIN 6	TEMP. BMP BASIN A1	TEMP. BMP BASIN A2
BMP BASIN TYPE	EXTENDED DETENTION BASIN	BIORETENETION BASIN	SELF-TREATING AREA	SELF TREATING AREA
REQUIRED VBMP (CF)	163,298	8,711	15,999	1,624
TOTAL BASIN CAPACITY (CF)	450,891	36,191	16,035	1,629
BMP LOCATION	LAT: 33°56'32'N LONG: 117°03'27"W	LAT: 33°55'59'N LONG: 117°02'04"W	LAT: 33°55'54'N LONG: 117°02'04"W	LAT: 33°55'59'N LONG: 117°02'06"W

BMP BASIN CALIBRATED INLET STRUCTURE

STORM DRAIN OUTLET STRUCTURE

STORMWATER TREATMENT BASIN No. 1

NOT A PART

INDUSTRIAL WAY

NOT A PART

DMA PA-2
2.13 ACRES
NOTE: PERMANENT BMP BASIN PER FUTURE SITE PLAN AND SEPARATE FINAL WQMP

DMA 16
85.60 ACRES

4TH STREET

STORM DRAIN OUTLET STRUCTURE

BMP BASIN CALIBRATED INLET STRUCTURE

STORMWATER TREATMENT BASIN No. 5

TEMPORARY 48" RISER PER FUTURE GRADING PLAN

ENTERTAINMENT AVE

TEMPORARY 48" RISER PER FUTURE GRADING PLAN

JACKRABBIT TRAIL

DMA 17
5.47 ACRES

DMA PA-1
21.01 ACRES
NOTE: PERMANENT BMP BASIN PER FUTURE SITE PLAN AND SEPARATE FINAL WQMP

NOT A PART

LEGEND:

- PROPERTY BOUNDARY
- MAJOR DRAINAGE BOUNDARY
- IMPERVIOUS AREA
- PERVIOUS AREA
- PROPOSED BMP BASIN
- FUTURE COMMERCIAL / SELF-TREATING AREA
- REMAINDER PARCEL/NATURAL SELF-TREATING AREAS
- PROPOSED STORM DRAIN WITH FLOW DIRECTION
- PROPOSED FLOW DIRECTION
- PROPOSED CATCH BASIN WITH "ONLY RAIN IN THE DRAIN" STENCIL
- PROPOSED TRASH ENCLOSURES
- PROPOSED OUTLET STRUCTURE
- PROPOSED INLET STRUCTURE
- CONCRETE LOADING AREA

SCALE: 1"=100'

BEAUMONT POINTE
PRELIMINARY WATER QUALITY MANAGEMENT SITE PLAN
DMAS 16, 17, PA-1, & PA-2

PROACTIVE ENGINEERING CONSULTANTS WEST,INC.
25109 JEFFERSON AVE. SUITE 210
MURRIETA, CA. 92562
951-200-6815

BEAUMONT POINTE
DRAINAGE PATH EXHIBIT

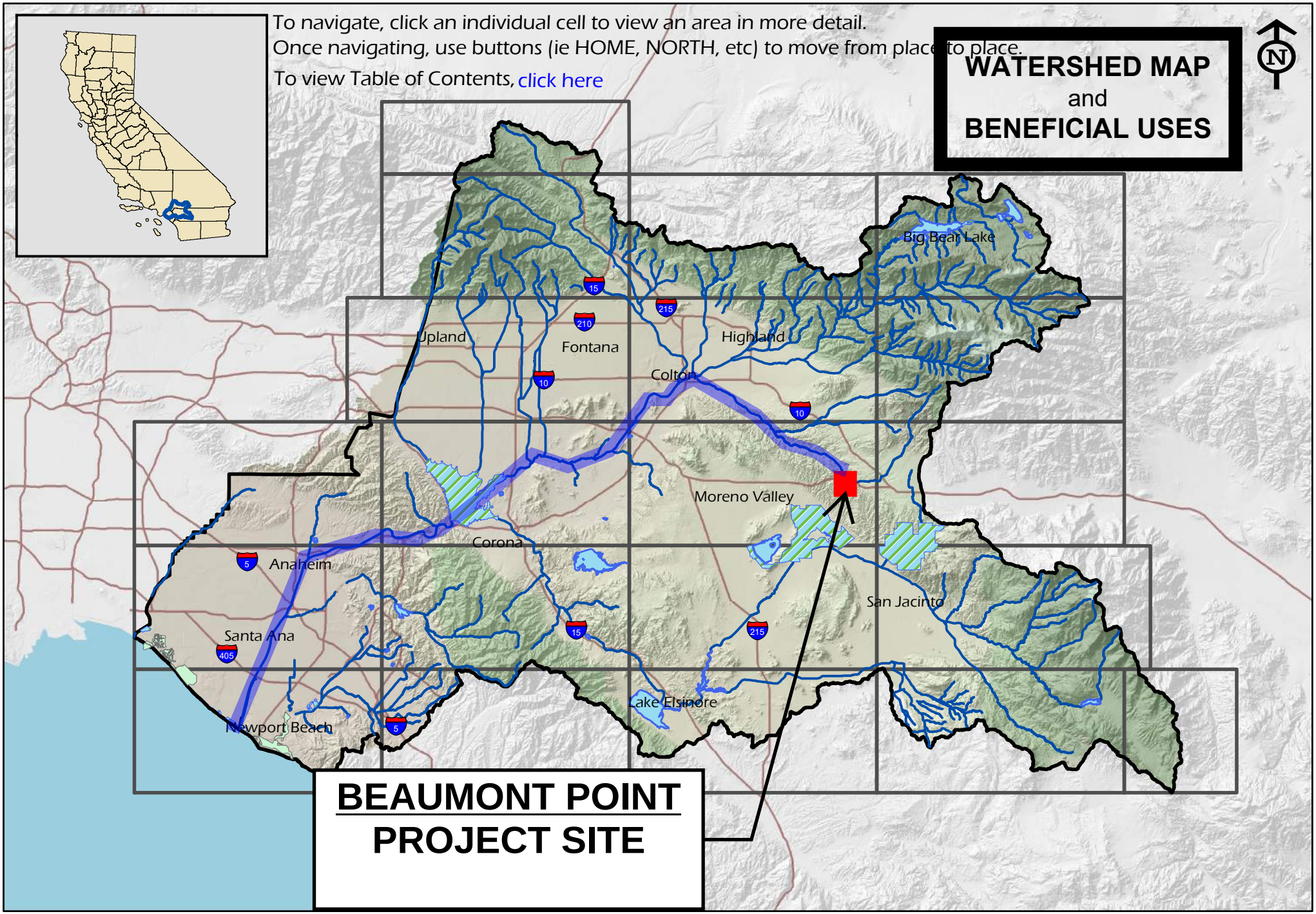


Regional Water Quality Control Board
Region 8 Basin Plan map - Beneficial Uses

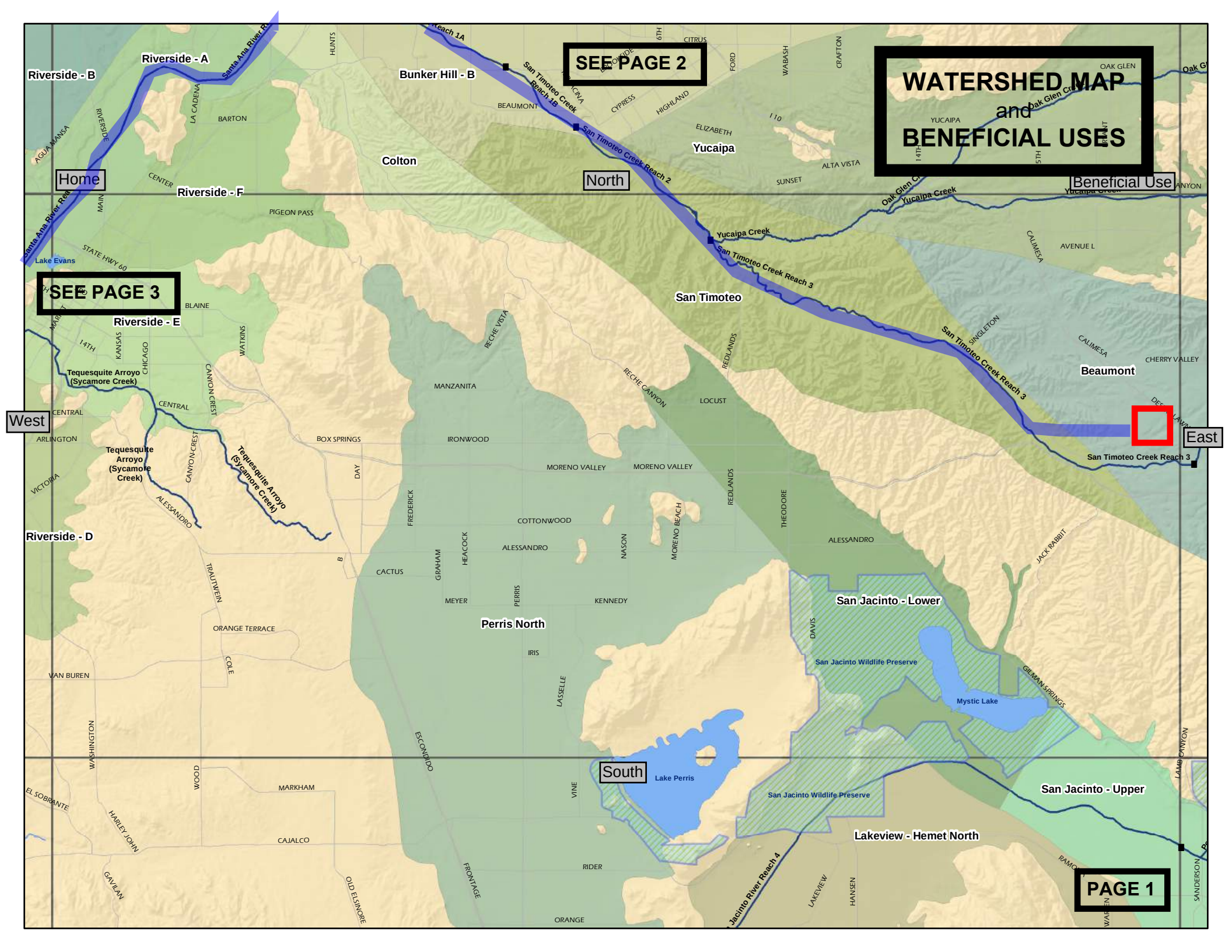
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Once navigating, use buttons (ie HOME, NORTH, etc) to move from place to place.

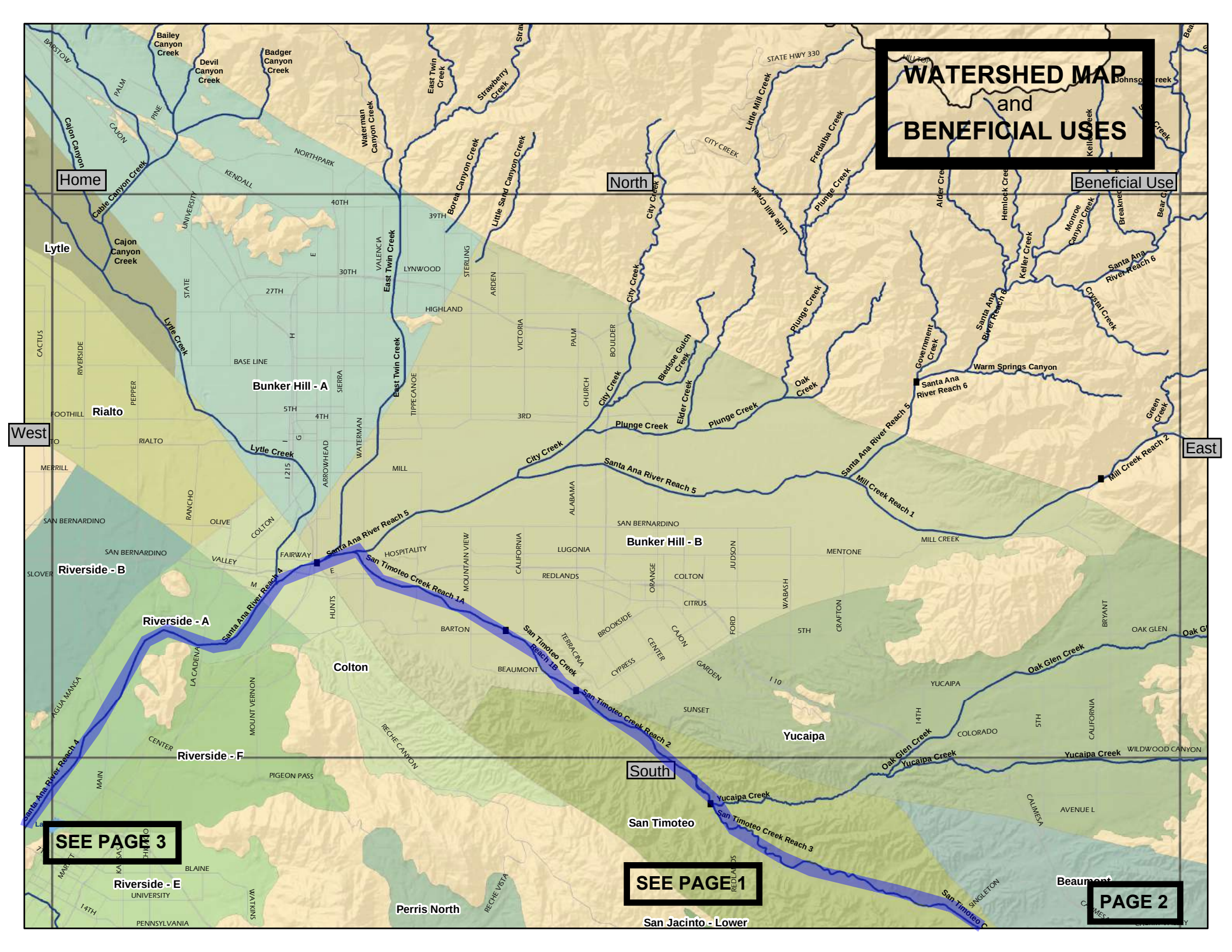
To view Table of Contents, click here

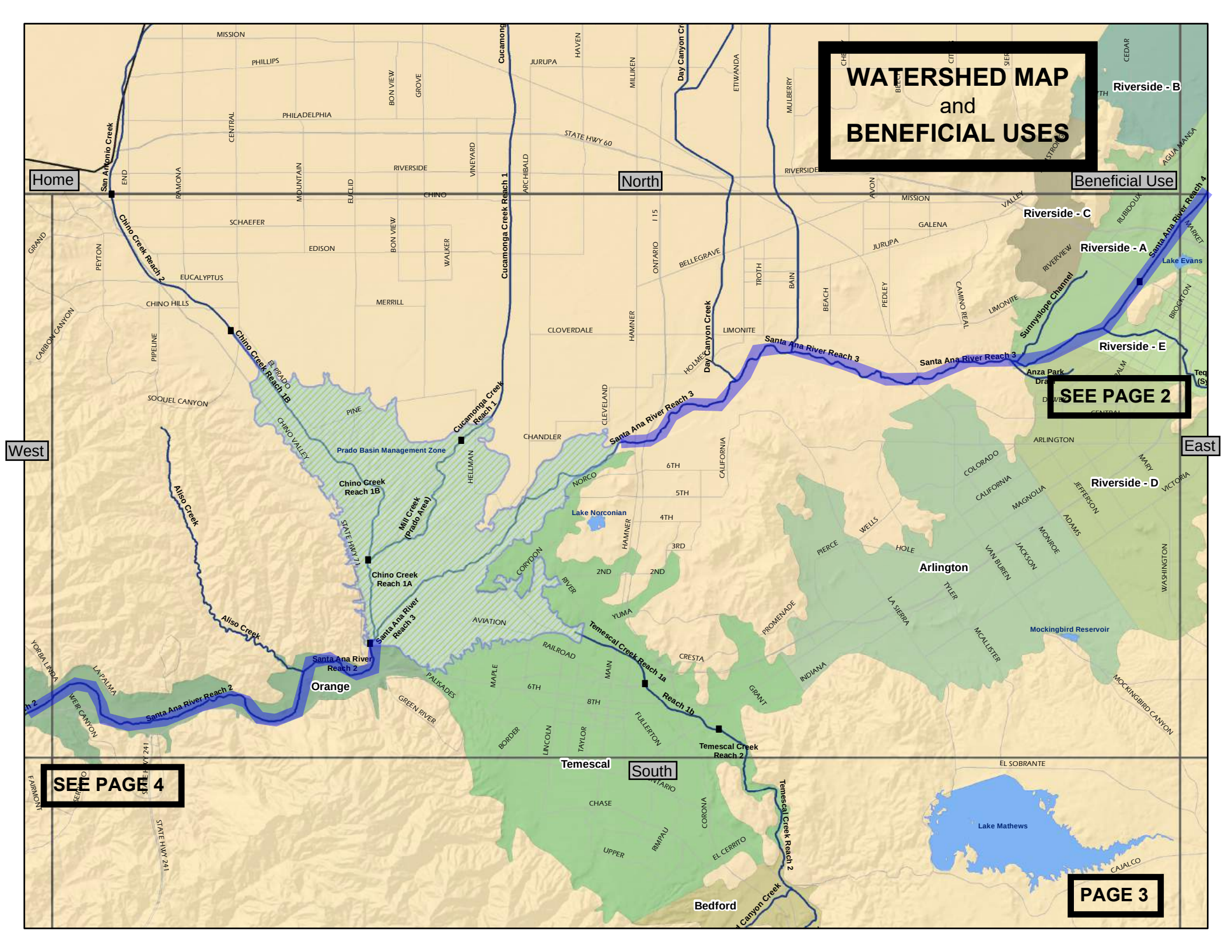
WATERSHED MAP
and
BENEFICIAL USES

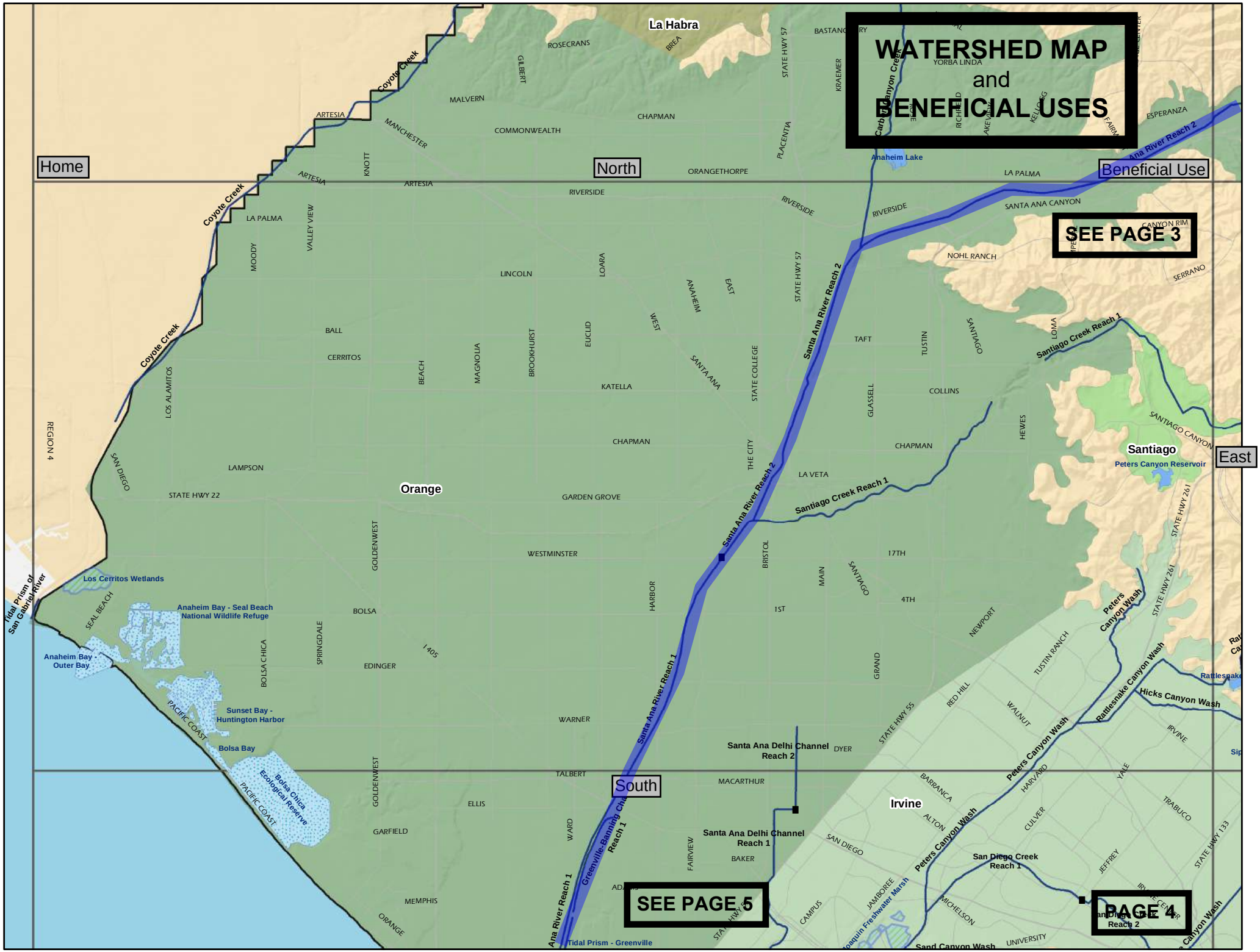


BEAUMONT POINT
PROJECT SITE


WATERSHED MAP
and
BENEFICIAL USES
SEE PAGE 2
SEE PAGE 3
PAGE 1
Home
North
South
West
East
Beneficial Use
Riverside - A
Riverside - B
Riverside - D
Riverside - E
Riverside - F
Bunker Hill - B
Santa Ana River Reach 1A
San Timoteo Creek Reach 1B
San Timoteo Creek Reach 2
San Timoteo Creek Reach 3
San Timoteo Creek Reach 4
Yucaipa Creek
Tequesquite Arroyo (Sycamore Creek)
Colton
Yucaipa
San Timoteo
Beaumont
Perris North
San Jacinto - Lower
San Jacinto - Upper
Lakeview - Hemet North
San Jacinto Wildlife Preserve
Mystic Lake
Lake Perris
Lake Evans
BEAUMONT
YUCAIPA
OAK GLEN
BARTON
PIGEON PASS
BLAINE
MANZANITA
LOCUST
IRONWOOD
BOX SPRINGS
MORENO VALLEY
COTTONWOOD
ALESSANDRO
CACTUS
MEYER
KENNEDY
IRIS
ORANGE TERRACE
VAN BUREN
MARKHAM
CAJALCO
RIDER
ORANGE
ARLINGTON
CENTRAL
ALTA VISTA
SUNSET
CHERRY VALLEY
CALIMESA
AVENUE L
ELIZABETH
CITRUS
CYPRESS
HIGHLAND
CRAFTON
WABASH
FORD
OAK GLEN
I 10
I 215
14TH
5TH
BRANT
CENTER
MAIN
RIVERSIDE
LA CADENA
AGUA MANSA
HUNTS
STATE HWY 60
KANSAS
CHICAGO
WATKINS
CANYON CREST
RECHE VISTA
RECHE CANYON
REDLANDS
SINGLETON
DAY
FREDERICK
HEACOCK
GRAHAM
NASON
MORENO BEACH
THEODORE
JACK RABBIT
PERRIS
LASSELLE
DAVIS
GILMAN SPRINGS
LAMB CANYON
SANDERSON
TRAUTWEIN
COLE
WASHINGTON
WOOD
VICTORIA
ALESSANDRO
EL SOBRANTE
HARLEY JOHN
GAVILAN
OLD ELSINORE
ESCONDIDO
VINE
FRONTAGE
LAKEVIEW
HANSEN
RAMONA
WARREN


WATERSHED MAP
and
BENEFICIAL USES
Home
North
Beneficial Use
West
East
South
Lytle
Rialto
Bunker Hill - A
Bunker Hill - B
Riverside - A
Riverside - B
Riverside - E
Riverside - F
Colton
Perris North
San Timoteo
San Jacinto - Lower
Yucaipa
Beaumont
Bailey Canyon Creek
Devil Canyon Creek
Badger Canyon Creek
Waterman Canyon Creek
East Twin Creek
Strawberry Creek
Borea Canyon Creek
Little Sand Canyon Creek
Little Mill Creek
Fredalba Creek
Plunge Creek
City Creek
Alder Creek
Hemlock Creek
Keller Creek
Monroe Canyon Creek
Breakneck Creek
Bear Creek
Santa Ana River Reach 6
Crystal Creek
Warm Springs Canyon
Government Creek
Oak Creek
Biedsoe Gulch Creek
Elder Creek
Green Creek
Mill Creek Reach 2
Mill Creek Reach 1
Santa Ana River Reach 5
Cajon Canyon Creek
Cable Canyon Creek
Lytle Creek
Santa Ana River Reach 4
San Timoteo Creek Reach 1A
San Timoteo Creek Reach 1B
San Timoteo Creek Reach 2
San Timoteo Creek Reach 3
Oak Glen Creek
Yucaipa Creek
SEE PAGE 3
SEE PAGE 1
PAGE 2


WATERSHED MAP
and
BENEFICIAL USES
Home
North
Beneficial Use
West
East
South
Riverside - A
Riverside - B
Riverside - C
Riverside - D
Riverside - E
SEE PAGE 2
SEE PAGE 4
PAGE 3
San Antonio Creek
Chino Creek Reach 2
Chino Creek Reach 1B
Chino Creek Reach 1A
Cucamonga Creek Reach 1
Day Canyon Creek
Santa Ana River Reach 4
Santa Ana River Reach 3
Santa Ana River Reach 2
Sunnyslope Channel
Aliso Creek
Mill Creek (Prado Area)
Temescal Creek Reach 1a
Reach 1b
Temescal Creek Reach 2
Prado Basin Management Zone
Lake Norconian
Lake Evans
Mockingbird Reservoir
Lake Mathews
Arlington
Orange
Temescal
Bedford
MISSION
PHILLIPS
PHILADELPHIA
STATE HWY 60
RIVERSIDE
CHINO
SCHAEFER
EDISON
EUCALYPTUS
CHINO HILLS
MERRILL
CLOVERDALE
JURUPA
GALENA
MISSION
ARLINGTON
CHANDLER
NORCO
AVIATION
YUMA
CRESTA
CHASE
EL SOBRANTE
SOQUEL CANYON
CARBON CANYON
PIPELINE
PEYTON
GRAND
CENTRAL
MOUNTAIN
EUCLID
RAMONA
END
BON VIEW
GROVE
VINEYARD
ARCHIBALD
HAVEN
MILLIKEN
ETIWANDA
MULBERRY
ONTARIO
BELLEGRAVE
HAMNER
CLEVELAND
HELLMAN
CORDON
RIVER
CALIFORNIA
WELLS
PIERCE
HOLE
COLORADO
MAGNOLIA
JEFFERSON
ADAMS
MONROE
JACKSON
VAN BUREN
TYLER
LA SIERRA
PROMENADE
MCALLISTER
INDIANA
MOCKINGBIRD CANYON
WASHINGTON
MARY
VICTORIA
RIVERVIEW
CAMINO REAL
LIMONITE
PEDLEY
BEACH
BAIN
TROTH
RUBIDOUX
BROCKTON
MARKET
AGUA MANSA
CEDAR
6TH
5TH
4TH
3RD
2ND
RAILROAD
MAIN
MAPLE
PALISADES
GREEN RIVER
WEIR CANYON
LAPALMA
YORBA LINDA
FULLERTON
BORDER
LINCOLN
TAYLOR
GRANT
8TH
CORONA
EL CERRITO
RIMPAU
UPPER
FAIRMONT
STATE HWY 241
PINE
CHINO VALLEY
EL PRADO


WATERSHED MAP
and
BENEFICIAL USES
Home
North
Beneficial Use
East
South
SEE PAGE 3
SEE PAGE 5
PAGE 4
La Habra
Orange
Irvine
Santiago
Coyote Creek
Santa Ana River Reach 2
Santa Ana River Reach 1
Santiago Creek Reach 1
Santa Ana Delhi Channel Reach 2
Santa Ana Delhi Channel Reach 1
Greenville-Banning Channel Reach 1
Peters Canyon Wash
Rattlesnake Canyon Wash
Hicks Canyon Wash
San Diego Creek Reach 1
Anaheim Lake
Peters Canyon Reservoir
Los Cerritos Wetlands
Anaheim Bay - Seal Beach National Wildlife Refuge
Anaheim Bay - Outer Bay
Sunset Bay - Huntington Harbor
Bolsa Bay
Bolsa Chica Ecological Reserve
Tidal Prism of San Gabriel River
Tidal Prism - Greenville
San Joaquin Freshwater Marsh
ROSECRANS
BREA
MALVERN
CHAPMAN
COMMONWEALTH
ARTESIA
MANCHESTER
GILBERT
KNOTT
VALLEY VIEW
MOODY
LA PALMA
ORANGETHORPE
RIVERSIDE
LINCOLN
LOARA
BALL
CERRITOS
BEACH
MAGNOLIA
BROOKHURST
EUCLID
WEST
ANAHEIM
EAST
STATE COLLEGE
KATELLA
LOS ALAMITOS
REGION 4
SAN DIEGO
LAMPSON
STATE HWY 22
GOLDENWEST
WESTMINSTER
HARBOR
BOLSA
SEAL BEACH
BOLSA CHICA
SPRINGDALE
1405
EDINGER
WARNER
TALBERT
ELLIS
GARFIELD
MEMPHIS
ORANGE
WARD
FAIRVIEW
BAKER
ADAMS
STATE HWY 55
PACIFIC COAST
STATE HWY 57
PLACENTIA
KRAEMER
YORBA LINDA
BASTANCHURY
CARBON CANYON CREEK
ESPERANZA
NOHL RANCH
CANYON RIM
SERRANO
SANTIAGO
LOMA
TAFT
TUSTIN
COLLINS
GLASSELL
HEWES
SANTIAGO CANYON
THE CITY
BRISTOL
MAIN
17TH
4TH
1ST
LA VETA
GRAND
NEWPORT
RED HILL
TUSTIN RANCH
WALNUT
IRVINE
DYER
MACARTHUR
BARRANCA
HARVARD
YALE
ALTON
CULVER
TRABUCO
JEFFREY
STATE HWY 133
STATE HWY 261
JAMBOREE
CAMPUS
MICHELSON
UNIVERSITY
SAND CANYON WASH


WATERSHED MAP
and
BENEFICIAL USES
SEE PAGE 4
PAGE 5
Home
North
Beneficial Use
East
Orange
Irvine
Anaheim Bay - Seal Beach National Wildlife Refuge
Anaheim Bay - Outer Bay
Sunset Bay - Huntington Harbor
Bolsa Bay
Bolsa Chica Ecological Reserve
Huntington Beach Wetlands
Santa Ana River Salt Marsh
Newport Slough
Upper Newport Bay
Lower Newport Bay
Tidal Prism - Santa Ana River
Tidal Prism - Greenville Banning Channel
Tidal Prism - Santa Ana Delhi Channel
Santa Ana River Reach 1
Greenville-Banning Channel Reach 1
Santa Ana Delhi Channel Reach 2
Santa Ana Delhi Channel Reach 1
San Diego Creek Reach 1
San Diego Creek Reach 2
Peters Canyon Wash
San Joaquin Freshwater Marsh
Sand Canyon Wash
Sand Canyon Reservoir
Bonita Creek
Laguna Canyon Wash
Bee Canyon Wash
Borrego Canyon
San Diego Creek Reach 2
PACIFIC OCEAN
BOLSA
EDINGER
WARNER
TALBERT
MACARTHUR
GARFIELD
ELLIS
ADAMS
BAKER
FAIRVIEW
WARD
PLACENTIA
HARBOR
BEACH
GOLDENWEST
SPRINGDALE
BOLSA CHICA
MAGNOLIA
BROOKHURST
EUCLID
1405
1ST
4TH
MAIN
BRISTOL
GRAND
NEWPORT
BARRANCA
ALTON
SAN DIEGO
IRVINE CENTER
TRABUCO
JEFFREY
CULVER
CAMPUS
JAMBOREE
SANTA ANA
UNIVERSITY
HARVARD
YALE
STATE HWY 133
EASTBLUFF
TURTLE ROCK
SANTIAGO
19TH
17TH
SUPERIOR
COAST
CLIFF
DOVER
BALBOA
BAYSIDE
FORD
SAN MIGUEL
BONITA CANYON
STATE HWY 73
MARGUERITE
PACIFIC COAST
ORANGE
SEAL BEACH

		PROC	X
6	Riverside - B (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X
6	Riverside - F (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X
6	San Timoteo (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X
6	San Timoteo Creek Reach 1A	AGR	I
		MUN	+
		REC1	I
		REC2	I
		WARM	I
		WILD	I
6	San Timoteo Creek Reach 1B	MUN	+
		AGR	I
		GWR	I
		REC1	I
		REC2	I
		WARM	I
		WILD	I
6	San Timoteo Creek Reach 2	GWR	X
		MUN	+
		REC1	X
		REC2	X
		WARM	X
		WILD	X
6	Santa Ana River Reach 4	WARM	X
		WILD	X
		GWR	X
		MUN	+
		RARE	X
		REC1	X
		REC2	X
		SPWN	X
6	Santa Ana River Reach 5	AGR	X

7	Yucaipa (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X

Cell	Waterbody or GW Mgmt Zone Name	Beneficial Use	Beneficial Use Value
8	Anaheim Lake	GWR	X
		MUN	+
		REC1	X
		REC2	X
		WARM	X
		WILD	X
8	Carbon Canyon Creek	GWR	X
		MUN	X
		RARE	X
		REC1	X
		REC2	X
		WARM	X
		WILD	X
8	Coyote Creek	MUN	X
		WARM	X
		WILD	X
		REC1	X
		REC2	X
8	La Habra (GW Mgmt Zone)	MUN	X
		AGR	X
8	Orange (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X
8	Santa Ana River Reach 2	WARM	X
		WILD	X
		MUN	+
		RARE	X
		REC1	X
		REC2	X
		AGR	X
		GWR	X

Return to map cell 8

Beneficial Use definitions can be found in the Basin Plan.

Beneficial Use Values key:

X = Existing Beneficial Use

I = Intermittent Beneficial Use

U = Rec1/REC2 not attainable uses as determined by UAA

+ = Excepted from MUN

9	Riverside - A (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X
9	Riverside - C (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X
9	Riverside - D (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X
9	Riverside - E (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X
9	San Sevaine Creek	MUN	I
		REC1	I
		REC2	I
		WILD	I
		COLD	I
		GWR	I
9	Santa Ana River Reach 2	GWR	X
		AGR	X
		REC2	X
		REC1	X
		RARE	X
		MUN	+
		WILD	X
		WARM	X
9	Santa Ana River Reach 3	AGR	X
		GWR	X
		MUN	+
		RARE	X
		REC1	X
		REC2	X
		SPWN	X
		WARM	X
		WILD	X
9	Santa Ana River Reach 4	MUN	+
		GWR	X

		SPWN	X
		REC2	X
		REC1	X
		RARE	X
		WILD	X
		WARM	X
9	Sunnyslope Channel	MUN	X
		RARE	X
		REC1	X
		REC2	X
		SPWN	X
		WARM	X
		WILD	X
9	Temescal	MUN	X
		AGR	X
		IND	X
		PROC	X
9	Temescal Creek Reach 1A	MUN	+
		REC1	U
		REC2	X
		WARM	X
		WILD	X
9	Temescal Creek Reach 1B	MUN	+
		REC1	U
		REC2	U
		WARM	X
		WILD	X
9	Temescal Creek Reach 2	AGR	X
		GWR	X
		IND	X
		WILD	X
		MUN	+
		REC1	X
		REC2	X
		WARM	X
9	Tequesquite Arroyo (Sycamore Creek)	GWR	X
		MUN	+
		WILD	X
		REC1	X
		REC2	X
		SPWN	X

		PROC	X
10	San Timoteo Creek Reach 2	GWR	X
		WILD	X
		WARM	X
		REC2	X
		REC1	X
		MUN	+
10	San Timoteo Creek Reach 3	GWR	X
		MUN	+
		REC1	X
		REC2	X
		WARM	X
		WILD	X
10	Santa Ana River Reach 4	WARM	X
		WILD	X
		RARE	X
		REC1	X
		REC2	X
		SPWN	X
		GWR	X
		MUN	+
10	Tequesquite Arroyo (Sycamore Creek)	WARM	X
		WARM	X
		SPWN	X
		SPWN	X
		REC2	X
		REC2	X
		REC1	X
		REC1	X
		WILD	X
		WILD	X
		MUN	+
		MUN	+
		GWR	X
		GWR	X
10	Yucaipa (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X
10	Yucaipa Creek	GWR	I
		MUN	I

REC1	I
REC2	I
WARM	I
WILD	I

Cell	Waterbody or GW Mgmt Zone Name	Beneficial Use	Beneficial Use Value
11	Beaumont (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X
11	Little San Gorgonio Creek	REC1	X
		MUN	X
		GWR	X
		WILD	X
		REC2	X
		COLD	X
11	Potrero Creek	MUN	I
		AGR	I
		GWR	I
		REC1	I
		REC2	I
		WARM	I
		WILD	I
11	San Jacinto Wildlife Preserve	BIOL	X
		WARM	X
		REC2	X
		REC1	X
		RARE	X
		WILD	X
		MUN	+
11	San Timoteo Creek Reach 3	WILD	X
		WARM	X
		REC2	X
		REC1	X
		MUN	+
		GWR	X
11	Yucaipa (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
		PROC	X

Return to map cell 11

Beneficial Use definitions can be found in the Basin Plan.

Beneficial Use Values key:
X = Existing Beneficial Use
I = Intermittent Beneficial Use
U = Rec1/REC2 not attainable uses as determined by UAA
+ = Excepted from MUN

		REC2	X
		WARM	X
		WILD	X
12	Peters Canyon Wash	REC2	I
		WARM	I
		WILD	I
		GWR	I
		MUN	+
		REC1	I
12	Rattlesnake Canyon Wash	WILD	I
		GWR	I
		MUN	+
		REC1	I
		REC2	I
		WARM	I
12	Santa Ana River Reach 1	REC1	X
		REC2	X
		WARM	I
		WILD	I
		MUN	+
12	Santa Ana River Reach 2	AGR	X
		GWR	X
		WARM	X
		WILD	X
		MUN	+
		RARE	X
		REC1	X
		REC2	X
12	Santa Ana-Delhi Channel Reach 2	MUN	+
		REC1	U
		REC2	X
		WARM	X
		WILD	X
12	Santiago (GW Mgmt Zone)	MUN	X
		AGR	X
		IND	X
12	Santiago Creek Reach 1	GWR	X
		WILD	X
		MUN	X
		REC1	X
		REC2	X

		WILD	X
16	San Diego Creek Reach 2	GWR	I
		MUN	+
		REC1	I
		REC2	I
		WARM	I
		WILD	I
16	San Joaquin Freshwater Marsh	MUN	+
		REC1	X
		REC2	X
		WARM	X
		BIOL	X
		WILD	X
		RARE	X
16	Sand Canyon Reservoir	MUN	+
		AGR	X
		REC1	X
		REC2	X
		WARM	X
		WILD	X
16	Sand Canyon Wash	GWR	I
		MUN	+
		RARE	I
		REC1	I
		REC2	I
		WARM	I
		WILD	I
16	Santa Ana River Reach 1	MUN	+
		WILD	I
		WARM	I
		REC2	X
		REC1	X
16	Santa Ana River Salt Marsh	MUN	+
		REC1	X
		REC2	X
		BIOL	X
		WILD	X
		RARE	X
		MAR	X
		EST	X
16	Santa Ana-Delhi Channel Reach 1	MUN	+

Appendix 2: Construction Plans

Grading and Drainage Plans

REVISIONS		
NO.	BY	DESCRIPTION

VESTING TENTATIVE PARCEL MAP NO. 38161

IN THE CITY OF BEAUMONT, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

BEING A SUBDIVISION OF A PORTION SECTIONS 1, 2 AND 12, T.3 S., R.2 W., S.B.M.

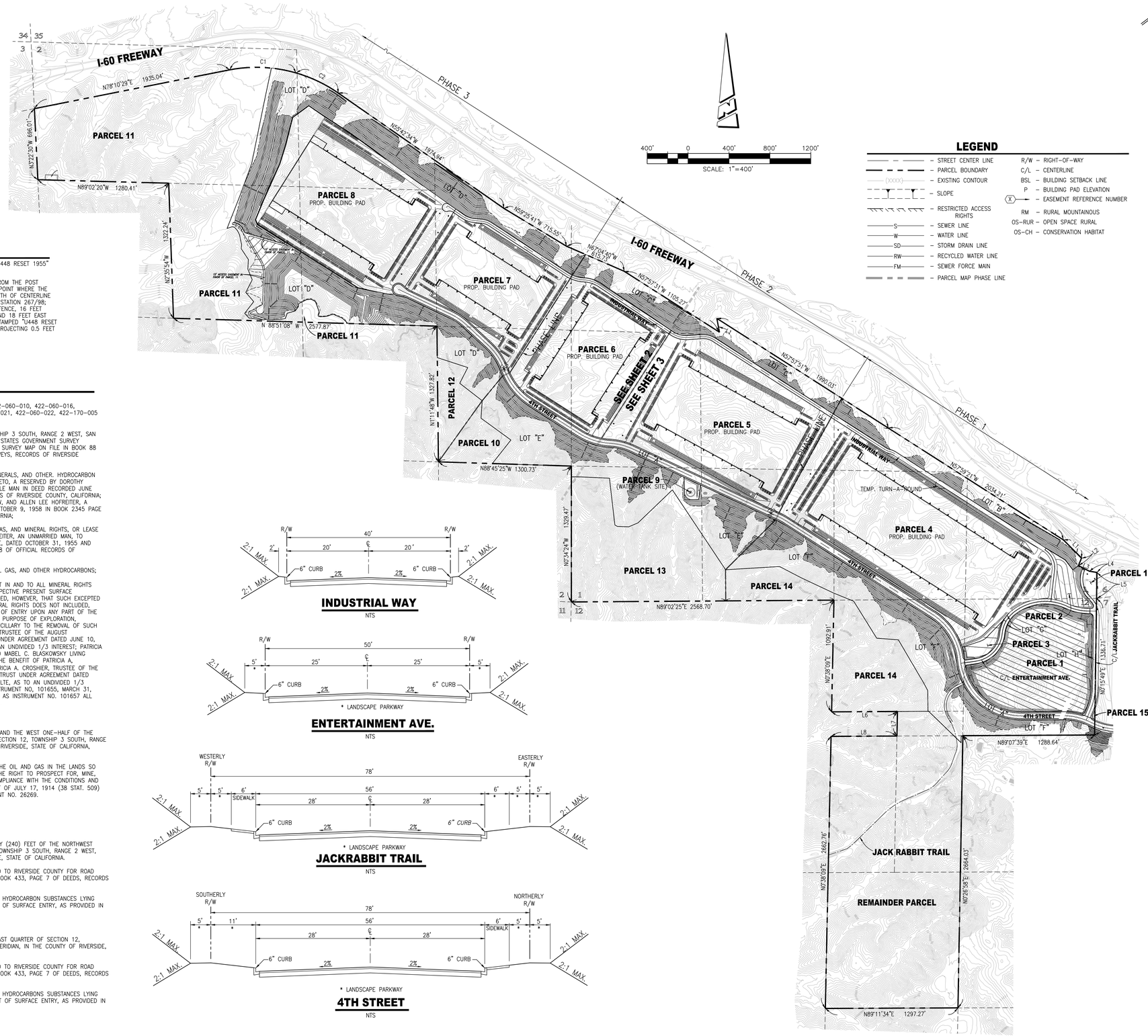
AUGUST 2021

CURVE DATA

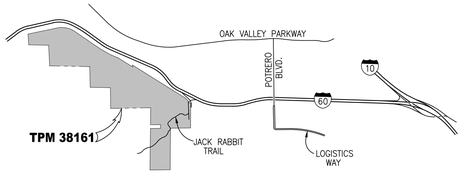
C1 Δ=27°23'02" R=1400.52' L=669.36'
C2 Δ=18°46'42" R=1398.19' L=458.25'

LINE DATA

L1	N45°31'23"W	249.8'
L2	N21°27'50"E	80.31'
L3	N63°29'39"W	119.14'
L4	N80°54'14"W	76.1'
L5	N0°16'14"E	253.63'
L6	N11°14'01"W	137.38'
L7	N89°07'39"E	643.93'
L8	N89°07'39"E	644.32'



400' 0 400' 800' 1200'
SCALE: 1"=400'



VICINITY MAP
N.T.S.

LEGEND

- STREET CENTER LINE
- PARCEL BOUNDARY
- EXISTING CONTOUR
- SLOPE
- RESTRICTED ACCESS RIGHTS
- S — SEWER LINE
- W — WATER LINE
- SD — STORM DRAIN LINE
- RW — RECYCLED WATER LINE
- FM — SEWER FORCE MAIN
- PARCEL MAP PHASE LINE

R/W – RIGHT-OF-WAY
C/L – CENTERLINE
BSL – BUILDING SETBACK LINE
P – BUILDING PAD ELEVATION
X – EASEMENT REFERENCE NUMBER
RM – RURAL MOUNTAINOUS
OS-RUR – OPEN SPACE RURAL
OS-CH – CONSERVATION HABITAT

BENCHMARK:

NATIONAL GEODETIC SURVEY BENCHMARK NO. "U 448 RESET 1955"
ELEV. 2448.129' (NGVD '29) DATE: 1955

2.4 MILES WESTERLY ALONG U.S. HIGHWAY 60 FROM THE POST OFFICE AT BEAUMONT, RIVERSIDE COUNTY, AT A POINT WHERE THE HIGHWAY PASSES THROUGH A CUT, 97 FEET NORTH OF CENTERLINE OF THE HIGHWAY OPPOSITE HIGHWAY ENGINEERS STATION 267/98; 16 FEET SOUTH OF THE NORTH RIGHT-OFOWAY FENCE, 16 FEET WEST OF THE RIGHT-OF-WAY FENCE CORNER, AND 18 FEET EAST OF POWER POLE #82663E, A STANDARD DISK, STAMPED "U448 RESET 1955" AND SET IN TOP OF A CONCRETE POST PROJECTING 0.5 FEET ABOVE GROUND.

TOPOGRAPHY SOURCE

THIENES ENGINEERING
14349 FIRESTONE BLVD.
LA MIRADA, CA 90638
PH. (714) 521-4811

SURVEY NOTES:

BOUNDARY DATA SHOWN HEREIN, IS PER ALTA SURVEY PREPARED BY THIENES ENGINEERING DATED 4/15/2019 (J.N. 3752)

GENERAL INFORMATION

1. DATE OF MAP PREPARATION: AUGUST 2021
2. GROSS AREA: 622.5 ACRES
3. EXISTING LAND USE: VACANT
4. PROPOSED LAND USE: GENERAL COMMERCIAL/INDUSTRIAL/CONSERVATION/RECREATION
5. PROPOSED ZONING: BEAUMONT PONTE SPECIFIC PLAN (SP)
6. ADJACENT LAND USES:
   WEST: OS-CH, OS-RUR
   SOUTH: OS-RUR, OS
   NORTH: RM
   EAST: RM, OS
7. SCHOOL: BEAUMONT & SAN JACINTO UNIFIED SCHOOL DISTRICT
8. PROPOSED WATER SERVICE WILL BE PROVIDED BY BEAUMONT CHERRY VALLEY WATER DIST.
9. POLICE AND FIRE SERVICES WILL BE PROVIDED BY THE CITY OF BEAUMONT
10. PROPOSED SEWER SERVICE W ILL BE PROVIDED BY THE CITY OF BEAUMONT
11. ALL UTILITIES SHALL BE UNDERGROUND:
    GAS ..... SOUTHERN CALIFORNIA GAS COMPANY
    ELECTRIC ..... SOUTHERN CALIFORNIA EDISON COMPANY
    TELEPHONE ..... FRONTIER
    CABLE TV ..... SPECTRUM
    SEWER ..... CITY OF BEAUMONT
    WATER ..... BEAUMONT CHERRY VALLEY WATER DISTRICT
    STORM DRAIN ..... RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, CITY OF BEAUMONT
12. THOMAS GUIDE: MAP PAGE 719, GRID H2, AND PAGE 720, GRID B2
13. FINAL PARCEL MAP TO BE RECORDED IN THREE PHASES AS FOLLOWS:
    PHASE 1: PARCEL MAP: PARCELS 1-4, 14, 15, 16 REMAINDER PARCEL, LOTS "B", "F", "G", AND PORTION OF "LOT A"
    PHASE 2: PARCEL MAP: PARCELS 5, 6, 9, 13, AND LOTS "C", "E", AND PORTION OF "LOT A"
    PHASE 3: PARCEL MAP: PARCELS 7, 8, 11, 12, AND LOT "D", "E", LOT "D" AND PORTION OF "LOT A"
    * NOTE: TEMPORARY TURN-A-ROUNDS WILL BE DEDICATED AND CONSTRUCTED AS NEEDED TO ADDRESS PARCEL MAP PHASING. PUBLIC ROAD UTILITY EASEMENT WILL ALSO BE DEDICATED ON FINAL PARCEL MAPS TO AS REQUIRED.
14. CONTOUR INTERVAL: 10'
15. STREETS WILL BE CONSTRUCTED PER CITY OF BEAUMONT STANDARDS.
16. ALL DIMENSIONS SHOWN HEREIN ARE APPROXIMATE.
17. PARCEL MAP WILL BE RECORDED IN THREE (3) PHASES

PARCEL SUMMARY TABLE

PARCEL/LOT	AREA	PROP. LAND USE
1	23.50 AC. GR.	GENERAL COMMERCIAL
2	3.15 AC. GR.	GENERAL COMMERCIAL
3	1.66 AC. GR.	INDUSTRIAL
4	65.24 AC. GR.	INDUSTRIAL
5	50.49 AC. NET *	INDUSTRIAL
6	32.55 AC. NET *	INDUSTRIAL
7	28.96 AC. NET *	INDUSTRIAL
8	46.35 AC. NET	INDUSTRIAL
9	0.60 AC. NET	WATER TANK SITE
10	4.64 AC. NET	CONSERVATION
11	70.43 AC. NET	CONSERVATION
12	5.50 AC. NET	CONSERVATION
13	30.97 AC. NET	CONSERVATION
14	22.64 AC. NET	CONSERVATION
15	0.03 AC. NET	GENERAL COMMERCIAL
16	0.74 AC. NET	GENERAL COMMERCIAL
REMAINDER PARCEL	81.30 AC. GR.	CONSERVATION AREA
LOT "A"	15.25 AC.	4TH ST. R/W DEDICATION
LOT "B"	10.39 AC.	RECREATION/CONSERVATION
LOT "C"	12.81 AC.	RECREATION/CONSERVATION
LOT "D"	54.50 AC.	RECREATION/CONSERVATION
LOT "E"	29.44 AC.	RECREATION/CONSERVATION
LOT "F"	30.17 AC.	RECREATION/CONSERVATION
LOT "G"	–	ENTERTAINMENT WAY EASEMENT
LOT "H"	1.22 AC.	R/W DEDICATION

TOTAL MAP ACREAGE: 622.5 GROSS ACRES
* INCLUDES INDUSTRIAL WAY R/W

LEGAL DESCRIPTION:

PARCEL 1:
(APN: 422-060-002, 422-060-005, 422-060-009, 422-060-010, 422-060-016, 422-060-017, A PORTION OF 422-060-018, 422-060-021, 422-060-022, 422-170-005 AND 422-170-008)

ALL THOSE PORTIONS OF SECTIONS 1, 2 AND 12, TOWNSHIP 3 SOUTH, RANGE 2 WEST, SAN BERNARDINO BASE AND MERIDIAN, ACCORDING TO UNITED STATES GOVERNMENT SURVEY THEREOF, LYING WITHIN THE BOUNDARIES OF RECORD OF SURVEY MAP ON FILE IN BOOK 88 PAGES 87 THROUGH 90 INCLUSIVE OF RECORDS OF SURVEYS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA;

EXCEPT VARIOUS INTERESTS IN AND TO ALL OIL, GAS, MINERALS, AND OTHER HYDROCARBON SUBSTANCES, TOGETHER WITH APPURTENANT RIGHTS THERETO, A RESERVED BY DOROTHY HOFREITER, A WIDOW, AND ALLEN LEE HOFREITER, A SINGLE MAN IN DEED RECORDED JUNE 12, 1956 IN BOOK 1926 PAGE 194 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; AND AS RESERVED BY DOROTHY LEE HOFREITER, A WIDOW, AND ALLEN LEE HOFREITER, A MARRIED MAN, MOTHER AND SON, IN DEED RECORDED OCTOBER 9, 1958 IN BOOK 2345 PAGE 170 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA;

ALSO EXCEPTING THEREFROM 55 PERCENT OF ALL OIL, GAS, AND MINERAL RIGHTS, OR LEASE OF SAME, AS RESERVED IN DEED FROM ALLEN LEE HOFREITER, AN UNMARRIED MAN, TO THADDEUS KALETA AND MARY KALETA, HUSBAND AND WIFE, DATED OCTOBER 31, 1955 AND RECORDED DECEMBER 14, 1955 IN BOOK 1833 PAGE 468 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA;

ALSO EXCEPTING THEREFROM ALL OIL, MINERALS, NATURAL GAS, AND OTHER HYDROCARBONS;

ALSO EXCEPTING THEREFROM AN UNDIVIDED 1/2 INTEREST IN AND TO ALL MINERAL RIGHTS LYING AND BEING MORE THAN 500 FEET BELOW THE RESPECTIVE PRESENT SURFACE ELEVATIONS OF THE ABOVE DESCRIBED PROPERTY, PROVIDED, HOWEVER, THAT SUCH EXCEPTED OWNERSHIP OF SUCH « INTEREST IN AND TO SUCH MINERAL RIGHTS DOES NOT INCLUDED, AND SHALL NOT BE CONSTRUED TO INCLUDE, ANY RIGHT OF ENTRY UPON ANY PART OF THE SURFACE OF THE HEREIN DESCRIBED PROPERTY FOR THE PURPOSE OF EXPLORATION, DEVELOPMENT, DRILLING, STORAGE, OR OTHER ACTIVITY ANCILLARY TO THE REMOVAL OF SUCH MINERAL RIGHT, AS RESERVED BY PATRICIA A CROSHIER, TRUSTEE OF THE AUGUST BLASKOWSKY AND MABEL C. BLASKOWSKY LIVING TRUST UNDER AGREEMENT DATED JUNE 10, 1980, FOR THE BENEFIT OF DOLORES J. WELCH, AS TO AN UNDIVIDED 1/3 INTEREST; PATRICIA A. CROSHIER, TRUSTEE OF THE AUGUST BLASKOWSKY AND MABEL C. BLASKOWSKY LIVING TRUST UNDER AGREEMENT DATED JUNE 10, 1980, FOR THE BENEFIT OF PATRICIA A. CROSHIER, AS TO AN UNDIVIDED 1/3 INTEREST; AND PATRICIA A. CROSHIER, TRUSTEE OF THE AUGUST BLASKOWSKY AND MABEL C BLASKOWSKY LIVING TRUST UNDER AGREEMENT DATED JUNE 10, 1980, FOR THE BENEFIT OF EILEEN R. OVERNOLTE, AS TO AN UNDIVIDED 1/3 INTEREST BY DEEDS RECORDED MARCH 31, 1989 AS INSTRUMENT NO, 101655, MARCH 31, 1989 AS INSTRUMENT NO. 101656 AND MARCH 31, 1989 AS INSTRUMENT NO. 101657 ALL OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

PARCEL 2:
(APN 422-170-009 AND 422-170-010)

THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER, AND THE WEST ONE-HALF OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 2 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING AND RESERVING TO THE UNITED STATES ALL THE OIL AND GAS IN THE LANDS SO PATENTED AND TO IT, OR PERSONS AUTHORIZED BY IT, THE RIGHT TO PROSPECT FOR, MINE, AND REMOVE SUCH DEPOSITS FROM THE SAME UPON COMPLIANCE WITH THE CONDITIONS AND SUBJECT TO THE PROVISIONS AND LIMITATION OF THE ACT OF JULY 17, 1914 (38 STAT. 509) AS RESERVED RECORDED MARCH 15, 1963 AS INSTRUMENT NO. 26269.

PARCEL 3:
(APN 422-170-007 AND 422-170-011)

PARCEL 3A:

THE EAST ONE HALF OF THE SOUTH TWO HUNDRED FORTY (240) FEET OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER IN SECTION 12, TOWNSHIP 3 SOUTH, RANGE 2 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

EXCEPTING THEREFROM THAT PORTION THEREOF CONVEYED TO RIVERSIDE COUNTY FOR ROAD PURPOSES, BY DEED RECORDED OCTOBER 29, 1915 IN BOOK 433, PAGE 7 OF DEEDS, RECORDS OF SAID COUNTY.

EXCEPT THEREFROM ALL OIL, GAS, MINERALS, AND OTHER HYDROCARBON SUBSTANCES LYING BELOW THE SURFACE OF SAID LAND, BUT WITH NO RIGHT OF SURFACE ENTRY, AS PROVIDED IN PATENT.

PARCEL 3B:

THE EAST OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 2 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

EXCEPTING THEREFROM THAT PORTION THEREOF CONVEYED TO RIVERSIDE COUNTY FOR ROAD PURPOSES, BY DEED RECORDED OCTOBER 29, 1915 IN BOOK 433, PAGE 7 OF DEEDS, RECORDS OF SAID COUNTY.

EXCEPT THEREFROM ALL OIL, GAS, MINERALS, AND OTHER HYDROCARBONS SUBSTANCES LYING BELOW THE SURFACE OF SAID LAND, BUT WITH THE RIGHT OF SURFACE ENTRY, AS PROVIDED IN PATENT.

INDUSTRIAL WAY
NTS

* LANDSCAPE PARKWAY

ENTERTAINMENT AVE.
NTS

* LANDSCAPE PARKWAY

JACKRABBIT TRAIL
NTS

* LANDSCAPE PARKWAY

4TH STREET
NTS

OWNER/DEVELOPER

JRT BP 1, LLC
18032 LEMON DRIVE-SUITE 367
YORBA LINDA, CA 92886
CONTACT: MICHAEL MASTERSON
PH: 714-299-8549

ENGINEER / REPRESENTATIVE

PROACTIVE ENGINEERING CONSULTANTS WEST,INC.
25109 JEFFERSON AVE.SUITE 200
MURRIETA, CA 92562
951-200-6840

VESTING TENTATIVE PARCEL MAP NO. 38161

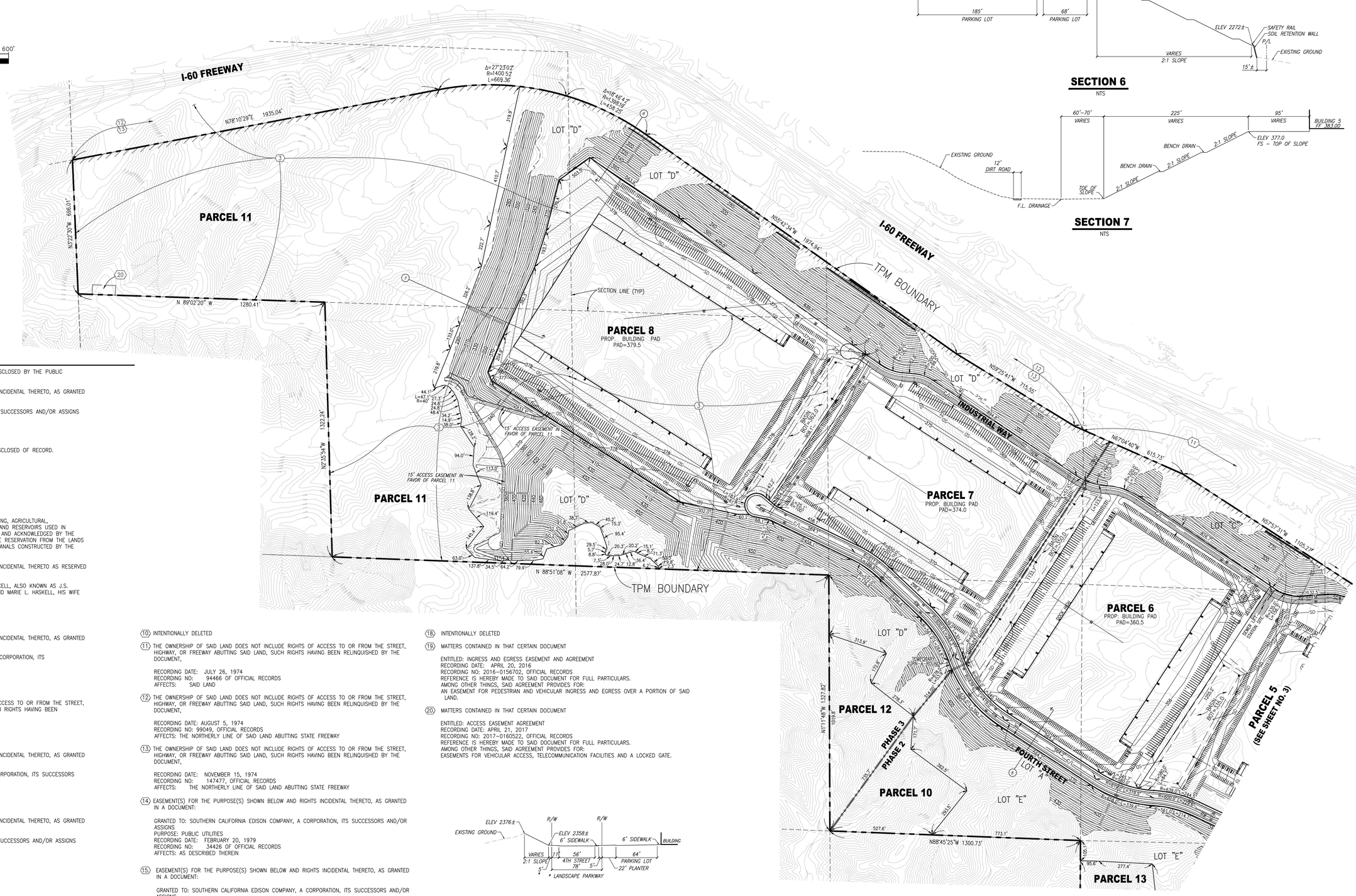
IN THE CITY OF BEAUMONT, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

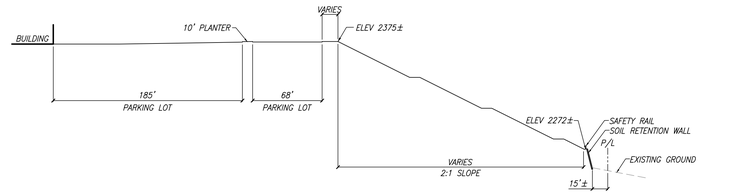
BEING A SUBDIVISION OF A PORTION SECTIONS 1, 2 AND 12, T.3 S., R.2 W., S.B.M.

AUGUST 2021

200' 0 200' 400' 600'

SCALE: 1"=200'





SECTION 6

NTS

SECTION 7

NTS

EXISTING EASEMENT NOTES

(1) WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.

(2) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: PACIFIC TELEPHONE AND TELEGRAPH COMPANY, ITS SUCCESSORS AND/OR ASSIGNS
PURPOSE: POLE LINES
RECORDING DATE: DECEMBER 30, 1910
RECORDING NO: IN BOOK 326, PAGE 4, DEEDS
AFFECTS: SAID LAND

THE EXACT LOCATION AND EXTENT OF SAID EASEMENT IS NOT DISCLOSED OF RECORD.

(3) RESERVATIONS CONTAINED IN THE PATENT

FROM: THE UNITED STATES OF AMERICA
TO: CHARLES E. BROCKMAN
RECORDING DATE: FEBRUARY 24, 1920
RECORDING NO: IN BOOK 8, PAGE 69, PATENTS

WHICH AMONG OTHER THINGS RECITES AS FOLLOWS:

SUBJECT TO ANY VESTED AND ACCRUED WATER RIGHTS FOR MINING, AGRICULTURAL, MANUFACTURING, OR OTHER PURPOSES AND RIGHTS TO DITCHES AND RESERVOIRS USED IN CONNECTION WITH SUCH WATER RIGHTS, AS MAY BE RECOGNIZED AND ACKNOWLEDGED BY THE LOCAL CUSTOMS, LAWS AND DECISIONS OF THE COURTS, AND THE RESERVATION FROM THE LANDS HEREBY GRANTED, A RIGHT OF WAY THEREON FOR DITCHES OR CANALS CONSTRUCTED BY THE AUTHORITY OF THE UNITED STATES.

(4) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS RESERVED IN A DOCUMENT;

RESERVED BY: GERTRUDE I. SINGLETON, A WIDOW, JAMES S. HASKELL, ALSO KNOWN AS J.S. HASKELL AND ANNA E. HASKELL, HIS WIFE, LEWIS W. HASKELL AND MARIE L. HASKELL, HIS WIFE AND HAYDEN KELSEY HASKELL AND DOROTHY HASKELL
PURPOSE: INGRESS AND EGRESS SAN TIMOTEO WASH
RECORDING DATE: JUNE 16, 1937
RECORDING NO: BOOK 325, PAGE 452 OF OFFICIAL RECORDS
AFFECTS: LOTS 1 AND 2 OF SECTION 2

(5) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY, LTD., A CORPORATION, ITS SUCCESSORS AND/OR ASSIGNS
PURPOSE: POLE LINES
RECORDING DATE: MAY 28, 1949
RECORDING NO: IN BOOK 1080, PAGE 231, OFFICIAL RECORDS
AFFECTS: AS DESCRIBED THEREIN

(6) THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY THE DOCUMENT,

RECORDING DATE: DECEMBER 24, 1957
RECORDING NO: IN BOOK 2197, PAGE 227, OFFICIAL RECORDS
AFFECTS: SAID LAND ABUTTING STATE HIGHWAY

(7) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: CALIFORNIA WATER AND TELEPHONE COMPANY, A CORPORATION, ITS SUCCESSORS AND/OR ASSIGNS
PURPOSE: PUBLIC UTILITIES
RECORDING DATE: MAY 18, 1959
RECORDING NO: 42712, OFFICIAL RECORDS
AFFECTS: AS DESCRIBED THEREIN

(8) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: CALIFORNIA ELECTRIC POWER COMPANY, ITS SUCCESSORS AND/OR ASSIGNS
PURPOSE: INGRESS AND PUBLIC UTILITIES
RECORDING DATE: JULY 29, 1960
RECORDING NO: 67256, OFFICIAL RECORDS
AFFECTS: AS DESCRIBED THEREIN

(9) RESERVATIONS CONTAINED IN THE PATENT

FROM: THE UNITED STATES OF AMERICA
RECORDING DATE: MARCH 15, 1963
RECORDING NO: 26269 OF OFFICIAL RECORDS

WHICH AMONG OTHER THINGS RECITES AS FOLLOWS:

SUBJECT TO ANY VESTED AND ACCRUED WATER RIGHTS FOR MINING, AGRICULTURAL, MANUFACTURING, OR OTHER PURPOSES AND RIGHTS TO DITCHES AND RESERVOIRS USED IN CONNECTION WITH SUCH WATER RIGHTS, AS MAY BE RECOGNIZED AND ACKNOWLEDGED BY THE LOCAL CUSTOMS, LAWS AND DECISIONS OF THE COURTS, AND THE RESERVATION FROM THE LANDS HEREBY GRANTED, A RIGHT OF WAY THEREON FOR DITCHES OR CANALS CONSTRUCTED BY THE AUTHORITY OF THE UNITED STATES.

(10) INTENTIONALLY DELETED

(11) THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY THE DOCUMENT,

RECORDING DATE: JULY 26, 1974
RECORDING NO: 94466 OF OFFICIAL RECORDS
AFFECTS: SAID LAND

(12) THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY THE DOCUMENT,

RECORDING DATE: AUGUST 5, 1974
RECORDING NO: 99049, OFFICIAL RECORDS
AFFECTS: THE NORTHERLY LINE OF SAID LAND ABUTTING STATE FREEWAY

(13) THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY THE DOCUMENT,

RECORDING DATE: NOVEMBER 15, 1974
RECORDING NO: 147477, OFFICIAL RECORDS
AFFECTS: THE NORTHERLY LINE OF SAID LAND ABUTTING STATE FREEWAY

(14) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION, ITS SUCCESSORS AND/OR ASSIGNS
PURPOSE: PUBLIC UTILITIES
RECORDING DATE: FEBRUARY 20, 1979
RECORDING NO: 34426 OF OFFICIAL RECORDS
AFFECTS: AS DESCRIBED THEREIN

(15) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION, ITS SUCCESSORS AND/OR ASSIGNS
PURPOSE: PUBLIC UTILITIES
RECORDING DATE: FEBRUARY 28, 1979
RECORDING NO: 40584 OF OFFICIAL RECORDS
AFFECTS: AS DESCRIBED THEREIN

(16) INTENTIONALLY DELETED

(17) THE EFFECT OF A DOCUMENT ENTITLED "RESOLUTION NO. 92-235 TERMINATION OF MAINTENANCE OF JACK RABBIT TRAIL, "RECORDED AUGUST 3, 1992 AS INSTRUMENT NO. 286237 OF OFFICIAL RECORDS.

(18) INTENTIONALLY DELETED

(19) MATTERS CONTAINED IN THAT CERTAIN DOCUMENT

ENTITLED: INGRESS AND EGRESS EASEMENT AND AGREEMENT
RECORDING DATE: APRIL 20, 2016
RECORDING NO: 2016-0156702, OFFICIAL RECORDS
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
AMONG OTHER THINGS, SAID AGREEMENT PROVIDES FOR:
AN EASEMENT FOR PEDESTRIAN AND VEHICULAR INGRESS AND EGRESS OVER A PORTION OF SAID LAND.

(20) MATTERS CONTAINED IN THAT CERTAIN DOCUMENT

ENTITLED: ACCESS EASEMENT AGREEMENT
RECORDING DATE: APRIL 21, 2017
RECORDING NO: 2017-0160522, OFFICIAL RECORDS
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
AMONG OTHER THINGS, SAID AGREEMENT PROVIDES FOR:
EASEMENTS FOR VEHICULAR ACCESS, TELECOMMUNICATION FACILITIES AND A LOCKED GATE.

SECTION 5

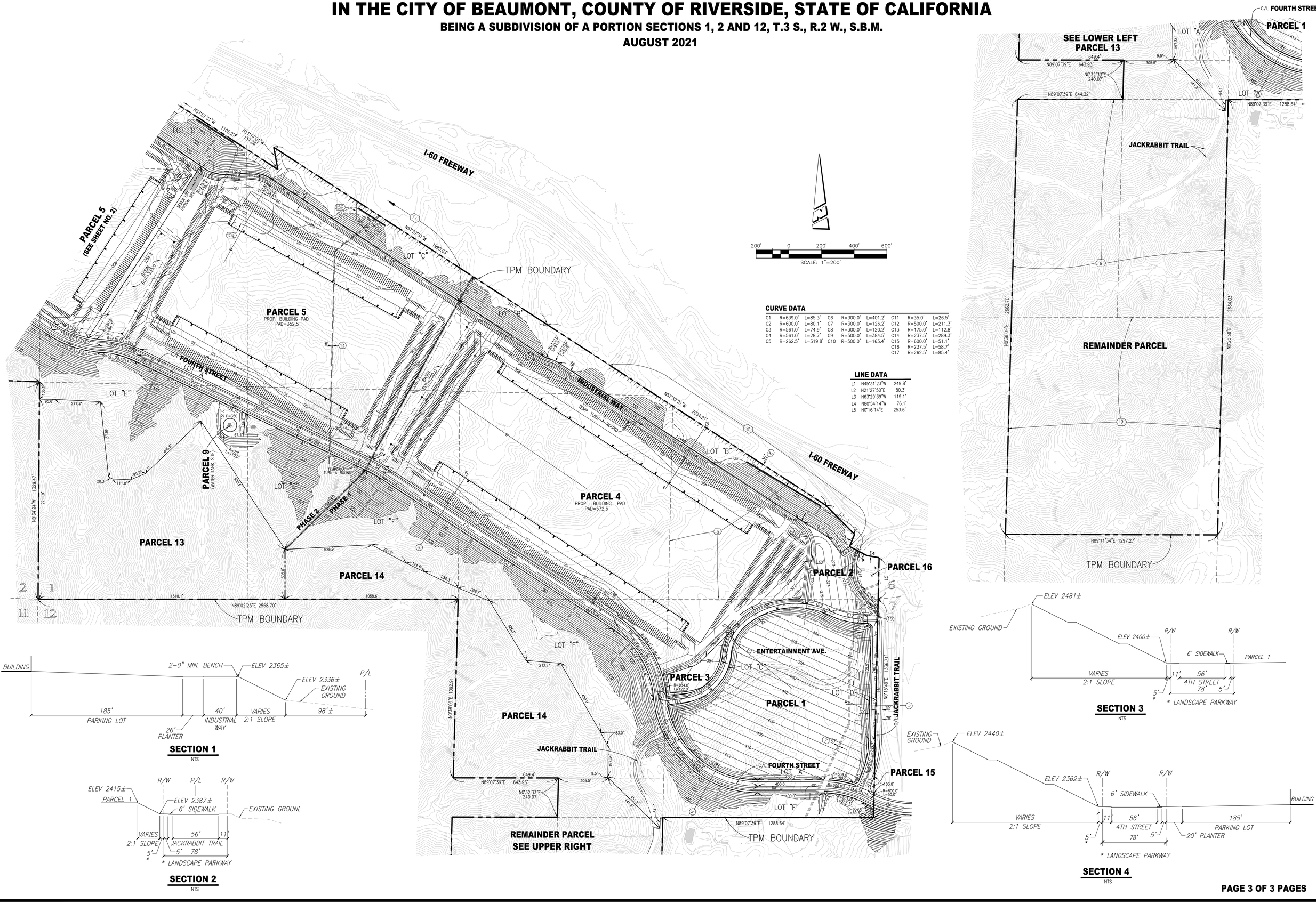
NTS

VESTING TENTATIVE PARCEL MAP NO. 38161

IN THE CITY OF BEAUMONT, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

BEING A SUBDIVISION OF A PORTION SECTIONS 1, 2 AND 12, T.3 S., R.2 W., S.B.M.

AUGUST 2021



CURVE DATA

C1	R=639.0'	L=85.3'	C6	R=300.0'	L=401.2'	C11	R=35.0'	L=26.5'
C2	R=600.0'	L=80.1'	C7	R=300.0'	L=126.2'	C12	R=500.0'	L=211.3'
C3	R=561.0'	L=74.9'	C8	R=300.0'	L=120.2'	C13	R=175.0'	L=112.8'
C4	R=561.0'	L=28.7'	C9	R=500.0'	L=384.5'	C14	R=237.5'	L=289.3'
C5	R=262.5'	L=319.8'	C10	R=500.0'	L=163.4'	C15	R=600.0'	L=51.1'
						C16	R=237.5'	L=58.7'
						C17	R=262.5'	L=85.4'

LINE DATA

L1	N45°31'23"W	249.8'
L2	N21°27'50"E	80.3'
L3	N63°29'39"W	119.1'
L4	N80°54'14"W	76.1'
L5	N0°16'14"E	253.6'

SECTION 1
NTS

SECTION 2
NTS

SECTION 3
NTS

SECTION 4
NTS

Appendix 3: Soils Information

Geotechnical Study and Other Infiltration Testing Data



Revised Preliminary Geotechnical Feasibility Investigation, Beaumont Pointe Specific Plan, 539.9 Acre Industrial/Commercial Development, Jackrabbit Trail, Beaumont Area, Riverside County, California.

PN: 18060-01
July 23, 2021

KCG KLING Consulting Group, Inc.

KCG KLING Consulting Group, Inc.

July 23, 2021 PN 18060-01

Mr. Michael Masterson
JRT BP 1 LLC
18032 Lemon Drive, Suite 367
Yorba Linda, Ca. 92866

Subject: **Revised** Preliminary Geotechnical Feasibility Investigation, **Beaumont Pointe Specific Plan**, 539.9 Acre Industrial/Commercial Development, Jackrabbit Trail, Beaumont Area, Riverside County, California.

Dear Mr. Masterson:

In accordance with your request and authorization, Kling Consultant Group, Inc. has conducted a Preliminary Geotechnical Feasibility Investigation for the proposed subject development as presented on the 150-scale "Conceptual Grading Plans", prepared by Thienes Engineering, dated June 4, 2019. This plan was used as our base map during our limited geotechnical feasibility evaluation and constitutes our Geotechnical Map (Plate 1 and Plate 2). This report presents our findings from subsurface exploration, laboratory testing of selected soil samples, geotechnical analyses, and review of previous relevant reports, along with our conclusions and preliminary recommendations.

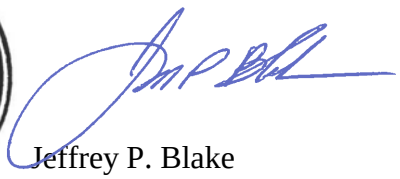
Kling Consulting Group, Inc. appreciates this opportunity to be of service to you on this project. Should you have any questions regarding the content of this report, please do not hesitate to contact our office at your earliest convenience.

Sincerely,

KLING CONSULTING GROUP, INC.









Henry F. Kling
Principal Geotechnical Engineer
GE 2205
Expires 3/31/22

Jeffrey P. Blake
Associate Engineering Geologist
CEG 2248
Expires 10/31/21

JPB:HFK:

Dist.: (3) Addressee one via PDF
Phil Cyburt- PDF
Nicole Morse - PDF
Michael Canfield - PDF

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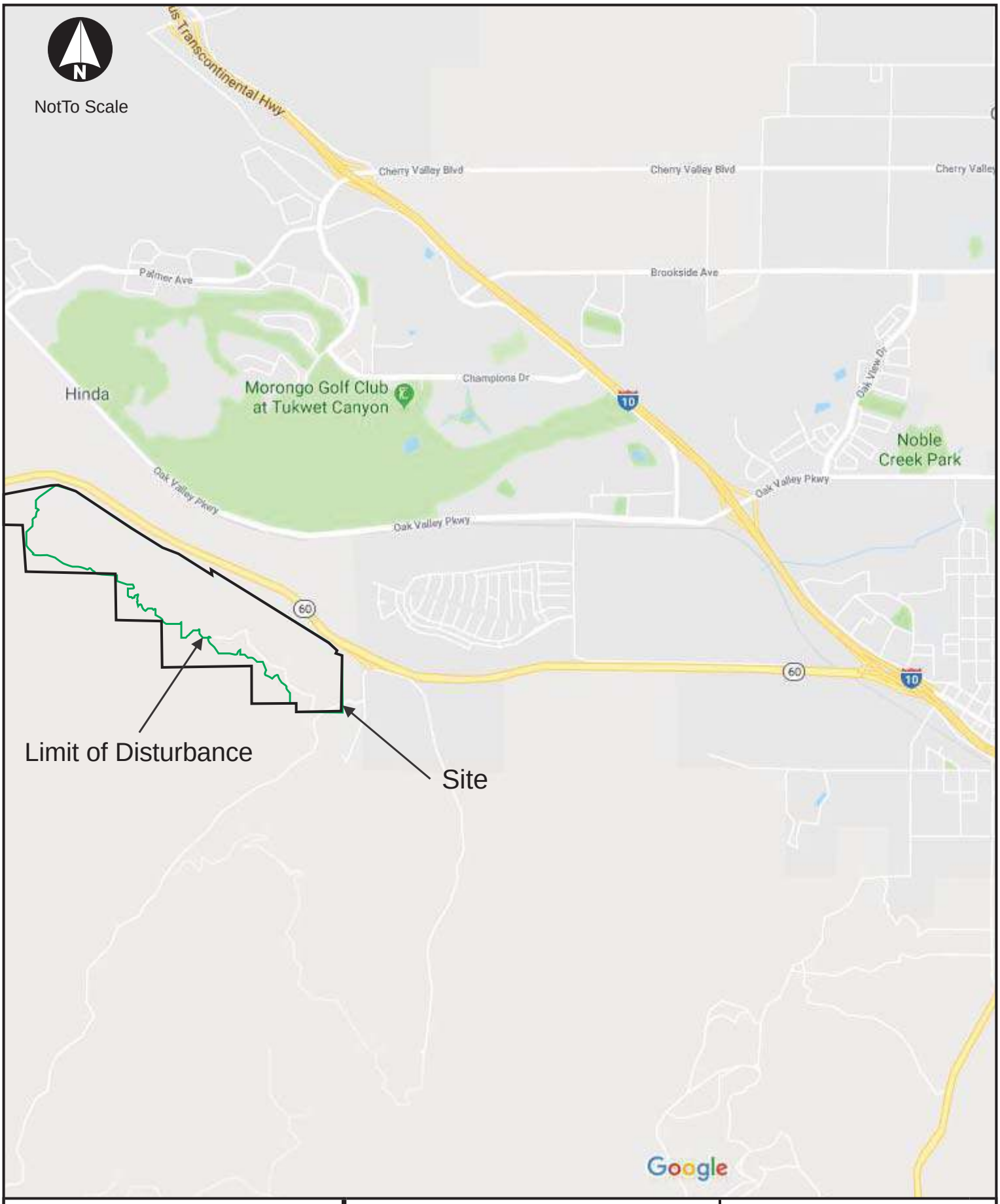
Figure 1	-	**Site Location Map**
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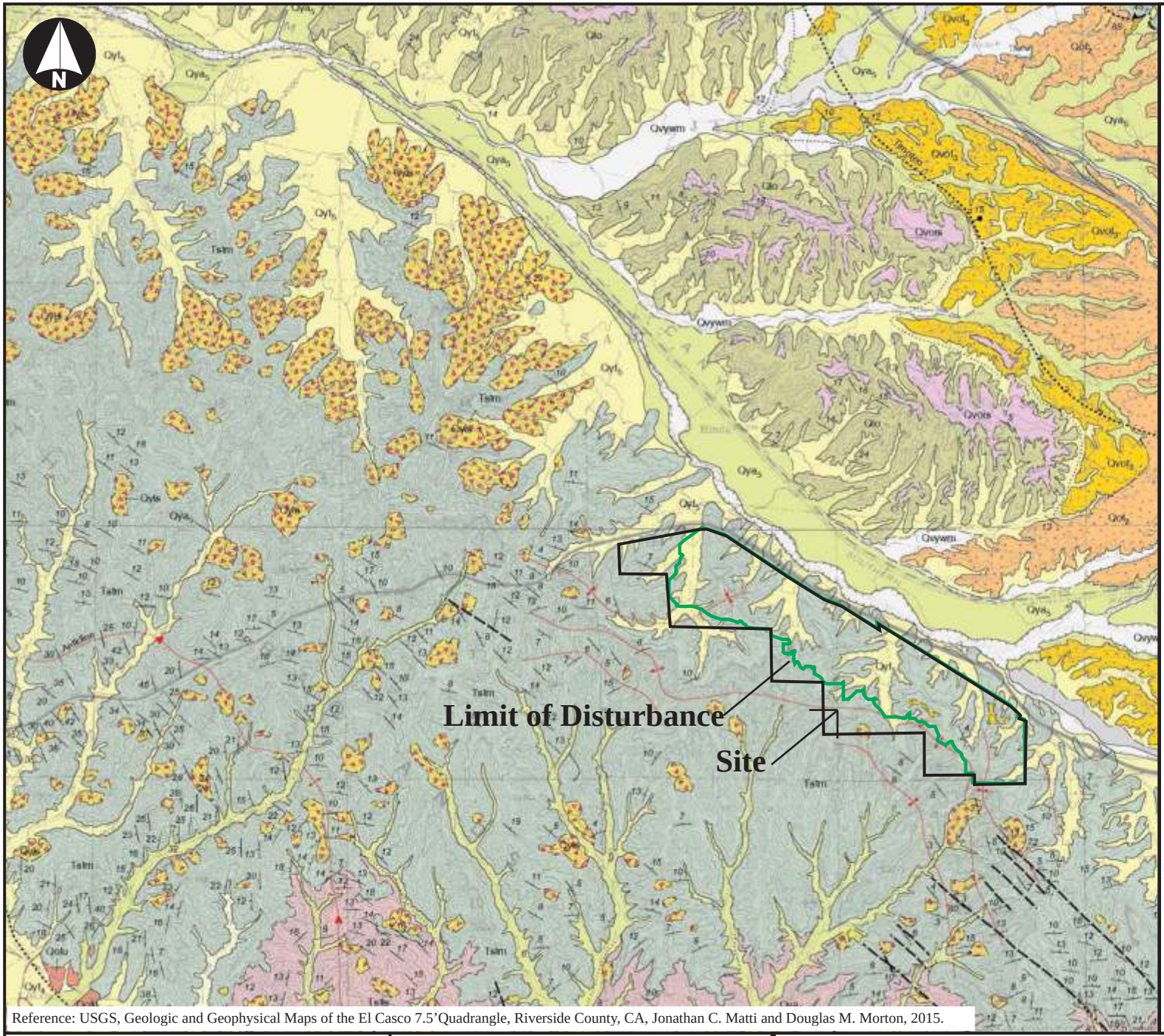
Plates 1 and 2	-	**Geotechnical Maps**
Plate 3	-	**Geotechnical Cross Sections**



KCG KLING Consulting Group, Inc.

Site Location Map
Beaumont Pointe Specific Plan
Beaumont, CA

Figure:	**1**
PN:	**18060-01**
Date:	**July 23, 2021**



Reference: USGS, Geologic and Geophysical Maps of the El Casco 7.5'Quadrangle, Riverside County, CA, Jonathan C. Matti and Douglas M. Morton, 2015.

Legend:

VeryYoung Surficial Materials:

- Qvywm — Very young wash deposits, modern

Young Surficial Materials:

- Qyas — Young axial-valley deposits, unit 5 (uppermost Holocene)
- Qyfs — Young alluvial fan deposits, unit 5 (uppermost Holocene)
- Qyf4 — Young alluvial fan deposits, unit 4 (upper Holocene)
- Qyf3 — Young alluvial fan deposits, unit 3 (middle Holocene)
- Young landslide deposits (Holocene and uppermost Pleistocene)

Old Surficial Deposits:

- Qof2 — Old alluvial fan deposits, unit 2 (upper to middle Pleistocene)
- Qof1 — Old alluvial fan deposits, unit 1 (upper to middle Pleistocene)
- Qofu — Old alluvial fan deposits, undifferentiated (upper to middle Pleistocene)

Very Old Surficial Deposits:

- Qvos — Very old residuum and (or) pedogenic soil (middle to lower Pleistocene)
- Qvof3 — Very old alluvial fan deposits, unit 3 (middle Pleistocene)

Cenozoic Sedimentary Materials:

- Qlo — Sedimentary deposits of Live Oak Canyon (Pleistocene)
- Tstm — SanTimoteo formation, middle member (upper and middle Pliocene)
- Tsts — SanTimoteo formation, sandstone unit (lower Pliocene)

Explanation of Map Symbols:

- **Contact:** separates geologic map units; solid where accurate, dashed where inaccurate, dotted where concealed.
- **Contact:** separates terraced alluvial units where younger unit is incised into older unit.
- **Fault:** Solid where accurate, dashed where inaccurate, dotted where concealed by mapped unit, queried where existence uncertain. Hachures indicate scarp with hachures on down-dropped block. Paired arrows show relative movement. Single arrow indicates direction and amount of fault-plane dip. Bar and ball on down-thrown block.
- **Fault:** interpreted from seismic imaging; no locational accuracy implied.
- Anticline, showing plunge direction
- Syncline, showing plunge direction
- 50 — Strike and dip of sedimentary layering, inclined

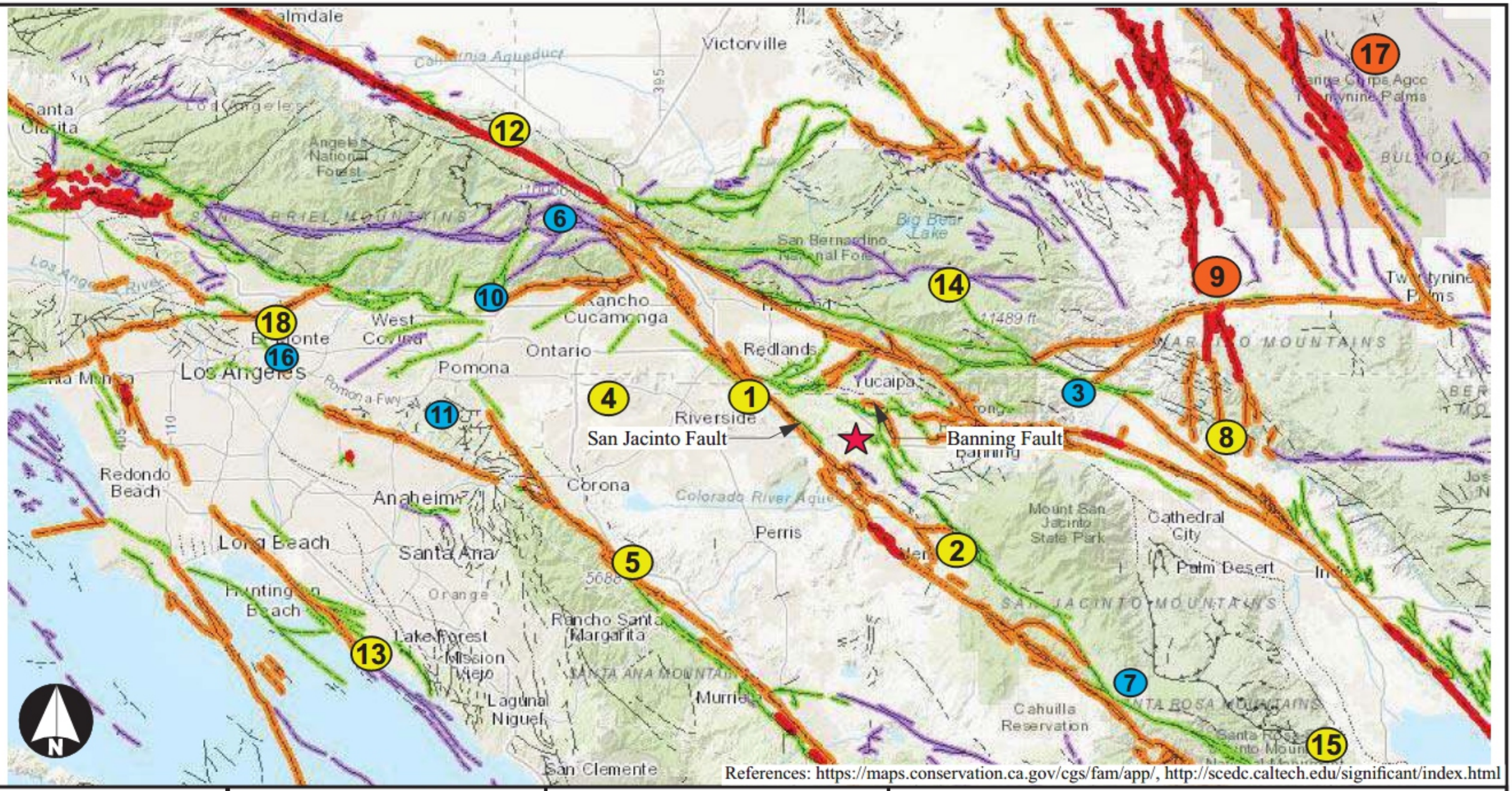
0 2000 4000

Scale: 1"= 2000'

KCG KLING Consulting Group, Inc.

Regional Geology Map:
Beaumont Pointe Specific Plan
Beaumont, CA

Figure: 2
PN: 18060-01
Date: July 23, 2021



References: https://maps.conservation.ca.gov/cgs/fam/app/, http://scedc.caltech.edu/significant/index.html

Legend:

Site Location

Earthquake Epicenters:

- M 5.0 to 5.9
- M 6.0 to 6.9
- M 7.0 to 7.9

Historic Earthquake Events:

1) North San Jacinto, 1923	M 6.3	
2) San Jacinto, 1918	M 6.8	
3) North Palm Springs, 1986	M 5.6	
4) Greater LosAngelesArea, 1858	M 6.0	
5) Elsinore, 1910	M 6.0	
6) Lytle Creek, 1970	M 5.2	
7)WhiteWash, 1980	M 5.5	
8) JoshuaTree, 1992	M 6.1	
9) Landers, 1992	M 7.3	
10) Upland Earthquake, 1990	M 5.4	
11) Chino Hills, 2008	M 5.4	
12) Southern CaliforniaArea, 1812	M 6.9	
13) Long Beach, 1933	M 6.4	
14) Big Bear, 1992	M 6.4	
15) Southern CaliforniaArea, 1890	M 6.8	
16)Whittier Narrows, 1987	M 5.9	
17) Hector Mine, 1999	M 7.1	
18) Greater LosAngelesArea, 1855	M 6.0	

Fault Activity levels:
Red: Latest Quaternary ~200 years
Orange: Holocene ~11,700 years
Green: Middle to Late Quaternary < 700,000 Years
Purple: Undifferentiated Quaternary 1.6 million years.

Scale:

0 20 40 miles

KCG KLING Consulting Group, Inc.

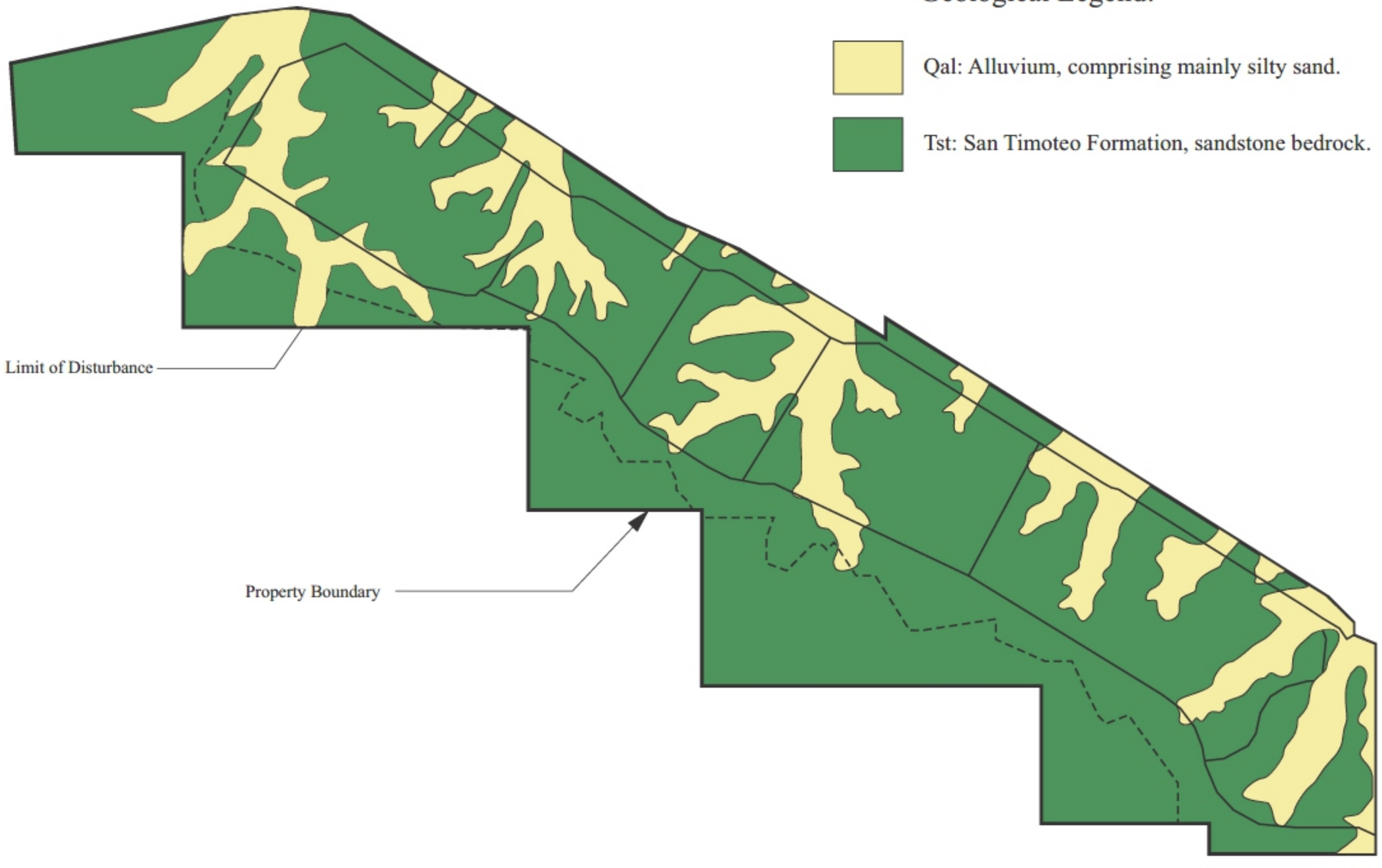
Regional Fault and Seismicity Map
Beaumont Pointe Specific Plan
Beaumont, CA

Figure: 3
PN 18060-01
Date: July 23, 2021

Geological Legend:

Qal: Alluvium, comprising mainly silty sand.

Tst: San Timoteo Formation, sandstone bedrock.



Notes:

Scale: 1":1200'

KCG KLING Consulting Group, Inc.

Client:
Beaumont Pointe Specific Plan

Address:
Jackrabbit Trail,
Beaumont, California

Geology Map

Drawn: S.W	**Date:** July 23, 2021
P/N: 18060-01	**Figure:** 4

1. INTRODUCTION

In accordance with your request and authorization, Kling Consulting Group, Inc. (KCG) has conducted a Feasibility Level Geotechnical Investigation for the proposed approximately 539.9 acre commercial/industrial park development in Beaumont, California. It is our understanding that the current development concept generally includes the proposed grading of five large super pads for five large warehouse type buildings and a commercial area, along with associated access roads, perimeter slopes, and related improvements, including a sewer lift station, and stormwater/water quality detention basin areas. The purpose of this geotechnical feasibility evaluation was to perform limited subsurface exploration along with laboratory testing to evaluate the overall geotechnical site conditions to support the proposed project conceptual design (Reference 18), as well as a review of a previous geotechnical evaluation previously performed at the site in 1989 by Leighton (Reference 14), and to prepare this Preliminary Geotechnical Feasibility Evaluation.

The 150-scale conceptual grading plans prepared by Thienes Engineering dated June 4, 2019 (Reference 18) were utilized as a base map for our Geotechnical Map (**Plate 1 and 2**).

1.1 Site Description and History

The proposed industrial/commercial development is an approximately 539.9-acre site located in the western portion of the City of Beaumont in Riverside County (**Figure 1**) and includes multiple contiguous parcels. The irregular shaped property is generally bounded to the south and west, by open land, along with existing industrial development immediately to the east, and to the north by Highway 60. Access to the site is via a frontage road west of the Highway 60 and Jack Rabbit Trail road intersection.

The site is situated along the northeasterly edge of an accumulation of sedimentary deposits that form an extensive hillside area known as "The Badlands". The subject site is characterized by rugged steep ridges and hillsides with narrow canyons that are generally situated on the southwest portion of the site and relatively gentle ridges and broad canyons/valleys on the northwest portion of the site. A roughly northwest trending drainage divide directs drainage to the north into San Timoteo Canyon and south through the badlands into San Jacinto Valley. Elevations range from approximately 2,230 feet mean sea level (msl) in the northwest portion of the site to approximately 2,510 feet (msl) in the southeast. Bedrock exposures at the surface are relatively limited with most exposures visible along existing dirt road cuts.

The site is generally undisturbed and includes a network of dirt roads and trails. The paved Jack Rabbit Trail road crosses the southeastern portion of the property. A residential property is located partially on the southeastern portion of the overall property to the south and east of Jack Rabbit Trail Road. The residential property is occupied by a main residence, multiple ancillary structures and related improvements. No subsurface exploration was performed in this area of the overall property. An above ground electric power pole transmission line easement parallels the northern property boundary. Reportedly 2 to 3 water wells are located on the site and we observed one well in the northern portion of the site. Reportedly, a gas pipeline alignment traverses the site in the extreme northwest corner of the site. Vegetation across the site is generally sparse to locally very dense, with a variety of grasses, brush and scattered trees.

Low-lying relatively flat portions of this parcel are understood to have been used for grazing and agricultural purposes in the past, various barbed wire fences generally separate this parcel from neighboring parcels.

1.2 Previous Geotechnical Evaluation/Investigations

A geotechnical evaluation and subsequent addendum report was performed by Leighton and Associates, Inc. for the subject site in 1989 (Leighton, 1989, reference 14).The evaluation was reviewed as part of our scope of work and is summarized below:

The report dated April 28, 1989, and subsequent addendum dated May 8, 1989 was prepared to assess geotechnical conditions as related to future development. No subsurface exploration or laboratory testing was performed as part of the geotechnical evaluation. The report summarized overall geotechnical conditions based on review of aerial photographs, review and research of geology, and surface geologic reconnaissance mapping. The report listed principle geotechnical constraints that could affect development along with possible mitigation measures which may be utilized. Leighton's report did not appear to list any geotechnical constraints that would preclude future development. Leighton recommended a comprehensive geotechnical investigation be performed to properly assess geotechnical site conditions, including seismic ground shaking and secondary phenomena, presence of onsite faulting, slope stability, and expansive soil potential to provide appropriate recommendations/corrective measures as necessary.

1.3 Proposed Development

The current approximate 150-scale Conceptual Grading Plan (Reference 18), prepared by Thienes Engineering, dated June 4, 2019, indicates the property is comprised of multiple parcels to be developed for commercial/industrial purposes. Based on a Land Use Plan- Beaumont Pointe Specific Plan, dated February 17, 2021, and a conceptual site plan dated October 6, 2019, by Herdman Architecture and Design, it is our understanding that five warehouse buildings ranging from approximately 612,120 square feet to 1,425,559 square feet are planned. A commercial pad area is also planned. Graded pads will be created to accommodate the future large warehouse structures. Three Phases of construction are being considered with one to two buildings per Phase. A primary access road is proposed which will be extended from 4th Street to the east.

No grading plans are available. No estimates of cut and fill earthwork quantities are indicated on the conceptual grading plan provided. However, it is our understanding that based on preliminary earthwork volume analysis the project is estimated at approximately 12 million cubic yards of cut and fill earthwork in three phases. It is currently unknown how much import/export is required for each phase of grading.

Relatively deep cuts and fills are anticipated in some areas of the site in order to achieve grades for the proposed pads and primary access road alignment. Perimeter slopes are planned of variable height. We understand that cut slopes may be up to approximately 125 feet in height, and fill slopes up to approximately 150 feet. Cut slopes up to approximately 125 feet in height are proposed along the southern edges of the project and fill slopes up to approximately 150 feet or in height are proposed along the northern and southern edges of the project. Cuts up to approximately 125 feet and fills up to approximately 145 feet are anticipated to accommodate the proposed grading. The proposed grading will likely also result in cut/fill transitions within the building pad areas, with some areas transitioning abruptly from cut to deep fills where ridges and canyon drainages exist.

A primary paved access road is planned for the site and appears the access road will connect to the western extension of 4th Street, immediately east of the subject project. A secondary/emergency access drive is planned off of Jackrabbit Trail. Access to the proposed subject site is from Jack Rabbit Trail near the northeast corner of the site.

1.4 Purpose and Scope of Work

Our scope of services has been performed in general accordance with our Work Authorization and Agreement dated February 6, 2019 and authorized May 16, 2019. The purpose of our geotechnical investigation was to assess the geologic and engineering characteristics of the alluvial soils and bedrock materials as well as general geotechnical conditions of the site relative to the proposed site

development and future site improvements for feasibility purposes. Our subsurface field exploration was performed on June 24, 2019 and June 26, 2019 and July 8, 2019 and July 9, 2019.

The scope of the work undertaken for this investigation included the following tasks:

§ Notification and coordination with Underground Service Alert (USA) to mark and identify buried utilities;

§ Communication with the design team members, as necessary, to facilitate the development concept;

§ Coordination with a grading contractor for pioneering of access roads to help facilitate drill rig access;

§ A review of available pertinent geotechnical literature and publications (Appendix A) with respect to soils, geology, local and regional seismicity, faulting, groundwater, and liquefaction potential.

§ Limited site geologic mapping and reconnaissance to map the areal distribution of earth units and significance of surficial features, as compiled from available documentation, literature, aerial photographs and reviewed reports.

§ Drilling and logging of ten (10) hollow-stem auger borings to depths of approximately 51.5 feet below the existing ground surface. Bulk and drive samples were obtained from the borings and delivered to our laboratory for testing and evaluation;

§ Excavation and logging of eight (8) backhoe test-pits to depths ranging from 6 to 16 feet. Bulk and drive samples were obtained for testing in our laboratory;

§ Laboratory testing on select soil samples including moisture/density determinations, Maximum density, sieve analysis, direct shear, consolidation, hydro-collapse potential;

§ Preparation of geotechnical cross-sections;

§ Preparation of a site Geotechnical Map (150-scale) illustrating the locations of subsurface investigation, site geology, and cross-section locations;

§ Preliminary geotechnical analysis and evaluation of the compiled field and laboratory test data and information with respect to the current proposed Site Plan Concept;

§ Preparation of this Preliminary Geotechnical Feasibility report. The accompanying report incorporates data from our limited geotechnical evaluation and presents a description of our preliminary findings, conclusions and recommendations relative to the current site development concept.

2. GEOLOGIC FINDINGS

2.1 Regional Geology

The subject site is located within the Peninsular Ranges geomorphic province of southern California. This area lies along the southern boundary of the San Timoteo River Valley and is located within the western San Jacinto Mountains. This area is commonly known as the San Timoteo Badlands.

The site lies within the San Jacinto Fault block, which is comprised of weathered and eroded pre-Cenozoic metamorphic and granitic basement rocks, as well as Plio-Pleistocene aged sedimentary bedrock of the San Timoteo Formation. The San Jacinto Block is bordered by the Banning Fault on the north, and by the San Jacinto Fault on the south. Both the San Jacinto Fault and the Banning Fault are considered to belong to the seismically active San Andreas Fault System. The site is comprised primarily of relatively soft to locally hard San Timoteo Formation bedrock, as well as younger alluvium and older alluvium. The sediments composing the San Timoteo Formation were derived from eroded pre-Cenozoic units. The younger alluvium and older alluvium were derived from the pre-Cenozoic basement rocks as well as the San Timoteo Formation. Regional Geology of the site vicinity is presented on **Figure 2.**

2.2 Site Geology

Geologic units encountered during our subsurface investigation of the subject site included surficial soils and bedrock. The surficial soils include undocumented man-made fills, topsoil/slopewash/colluvium, and alluvium (Qal). The bedrock unit consists of the San Timoteo Formation (Tst). These materials are described in more detail below. Subsurface exploration boring logs and trench logs are presented in **Appendix B**, while results of laboratory testing on soil and bedrock samples obtained from the current investigation are presented in **Appendix C.** The distribution of geologic units and investigation activities are illustrated on the 150-scale **Geotechnical Map, Plates 1 and 2**.

2.2.1 Surficial Soils

2.2.1.1. Undocumented Artificial Fill

Undocumented artificial fill is locally present at the subject site and is typically associated with past site improvements such as development of the Jackrabbit Road through the drainage area near the southeastern portion of the site and a what appears to be a former borrow area along the east side of a ridge in the southeast portion of the site. Artificial fill materials would also be anticipated to be present in any of the existing utility easements on the subject site. These fill materials appear to be typically derived from onsite soils and are estimated to be between one and ten feet thick. In general, these fills are not considered suitable for support of additional fill placement or structures. However, the proposed grading for the site is anticipated to remove the majority of undocumented fill associated with the improvements and remedial removals will remove and reprocess undocumented fill materials in the lower portions of the site. Undocumented fill materials are not illustrated on any of the Geotechnical Maps.

2.2.1.2. Topsoil/Slopewash/Colluvium

Colluvium, topsoil, and slopewash materials are considered interchangeable designations for the purposes of this report and are typically referred to herein as "colluvium." These materials were observed locally mantling natural slopes untouched by prior mining or grading activities as well as (rarely) observed beneath undocumented fill materials. Topsoil and colluvial materials are a result of weathering processes of the underlying bedrock materials. These materials were typically observed to be less than approximately 3 feet thick but do vary in thickness locally up to approximately 8 feet as observed in KTP-3, and were not considered a mapable unit on the attached Geotechnical Maps. These materials were generally observed to consist of sandy clay and silty sand and were damp to moist. These materials also ranged from very loose to loose and soft to stiff and contained plant roots, root hairs, and were porous.

2.2.1.3. Alluvium (Qal)

Holocene alluvial fan deposits (Qal/Qyf_5) were observed during our exploratory drilling in the canyon and drainage areas. Holocene aged Younger alluvium was encountered overlying Pleistocene aged older alluvium (alluvial fan) deposits in eight of our exploratory borings. As encountered in our exploratory borings alluvium generally consisted of silty sand with minor interbeds of sandy silt, clayey sand or sandy clay and traces of fine to coarse gravel. The younger alluvial deposits are locally porous, generally dry to moist, and loose to medium dense in the upper 7.5 feet to 30 feet and slightly porous; dry to wet, and medium dense to dense below. Older alluvium was encountered underlying the Younger alluvium at depths of approximately 15 to 50 feet in Borings KB-1 through KB-4, and KB-6 through KB-8 and generally consisted of dense to very dense silty sand, silty sands with gravel, very stiff to hard sandy and clayey silt and sandy clays which were damp to moist. Younger alluvium appears to be 50 feet thick to greater than 51.5 feet thick in the north-central and northwest drainage/canyon area of the site, as observed in borings KB-5, KB-9 and KB-10 (Appendix B). The results of the laboratory analyses for dry density and moisture contents of the alluvium encountered on site are found on the boring logs (Appendix B). Laboratory testing indicates that the younger alluvium on-site exhibits a collapse potential of essentially zero to as much as 4-1/2 percent (Appendix C), which is respectively considered slight to moderate.

2.2.2 Bedrock Unit

2.2.2.1. San Timoteo Formation (Tst)

Pliocene aged San Timoteo Formation (Tst) bedrock was observed during our investigation predominantly in the hillside areas and presumed to underlie the alluvial deposits at depth. The San Timoteo Formation has previously been mapped within the region by Dibblee (Reference 8) and Matti, et al (Reference 15), and at the site vicinity by Kling Consulting Group (References 12 and 13). Within the site, the San Timoteo Formation is composed of laminated and cross-bedded, to massively bedded arkosic and lithic sandstones, as well as some conglomerates, claystones and siltstones. The San Timoteo Formation is typically dry to damp. The San Timoteo Formation ranged from dense to very dense and stiff to hard where encountered during this study. The upper, approximately 5 feet of the San Timoteo Formation bedrock was moderately to heavily weathered where encountered in the recent site investigation.

2.3 Geologic Structure

Based on our experience within the site, site vicinity, geologic mapping and review of geologic and geotechnical literature for the region, the geologic structure reflects folded and warped bedding as exhibited by generally northwest trending anticlines and synclines mapped across the site and site vicinity. Typically, bedding within the San Timoteo Formation (Tst) bedrock is northerly dipping with some southerly dips. Bedding was measured during our field reconnaissance mapping and subsurface exploration dipping approximately 3 degrees to 19 degrees to the southwest and southeast. Locally bedding was also measured dipping approximately 20 degrees to the northeast.

Jointing within the San Timoteo Formation bedrock where observed was generally steeply inclined and generally trending northerly to northwesterly with steep dips to the west-southwest and east-northeast. Clay layers and seams are locally present within the San Timoteo Formation and were observed in several of the exploratory trenches/test pits.

Several northwest striking inactive faults have been mapped in the vicinity of the site and observed on the adjacent Hidden Canyon project to the east. No faulting was evident during our field mapping and exploration.

No evidence of recent active faulting was observed at the site during the course of this investigation and is not documented in our review of the available geologic and geotechnical literature of the site.

2.4 Groundwater

Groundwater was encountered during field subsurface exploration in two of our borings within the low-lying drainage areas in the northern-northwest portion of the site. Groundwater was encountered at approximately 40 feet below the ground surface (bgs) in Boring KB-5 and 48 feet below the ground surface (bgs) in Boring KB-7. It should be noted that variations in groundwater may result from fluctuations in the ground surface topography, subsurface stratification, rainfall, irrigation, and other factors that may not be evident at the time of our subsurface exploration.

2.5 Seismic Design Code Provisions

Presented below are the site seismic parameters utilizing geologic, seismic and geotechnical data gathered for the site. All structures should be designed for earthquake induced strong ground motions in accordance with the 2016 CBC procedures utilizing the following parameters:

Site Class (Soil Profile)	D
Latitude, Longitude	33.9390°, -117.0481°
Short Period Spectral Acceleration, Ss:	1.804
1-Second Period Spectral Acceleration, S1:	0.794
Site Coefficient, Fa:	1.0
Site Coefficient, Fv:	1.5
Maximum Considered Earthquake Spectral Response Acceleration, S_{MS}:	1.804
Maximum Considered Earthquake Spectral Response Acceleration, S_{M1}:	1.191
Design Spectral Response Acceleration, SDS:	1.203
Design Spectral Response Acceleration, SD1:	0.794
Site Modified Peak Ground Acceleration, PGA_m	0.705
Seismic Design Category	E

2.6 Faulting and Seismicity

2.6.1 Faulting

No evidence of active faulting was observed on-site during our site exploration. Maps reviewed during our investigation did not indicate the presence of active faulting at the site and no County Fault Hazard Zones are located within the subject site or adjacent properties per the Riverside County TLMA GIS website as indicated in Appendix A. Additionally, the site is not located within an Alquist-Priolo Earthquake Fault Hazard Zone (References 4 and 10). However, the Southern California region is seismically active with faults capable of producing seismic shaking at the site.

The Regional Fault and Seismicity Map (**Figure 3**) illustrates the spatial relationship between the subject property and the geographic locations of known historical earthquakes and active faults in the Southern California region.

It is anticipated that the site will periodically experience ground acceleration as a result of exposure to moderate to large magnitude earthquakes occurring on nearby and distant faults. Additionally, active "blind thrust faults" (faults which lack surface expression, commonly associated with fold belts and compressional deformation) or other potentially active sources (currently not zoned) may be capable of generating earthquakes. Blind thrust faults were responsible for both the 1987 Whittier Narrows (M5.9) and the 1994 Northridge (M6.7) earthquakes.

We have performed a computer aided search of known active and potentially active faults within a 50-mile (80-km) radius of the site and have researched the available geologic literature to determine the maximum magnitude earthquakes that may be expected to be generated on each fault. The site is located on the USGS El Casco, California 7.5 minute Quadrangle map, with the approximate center of the site being at latitude 33.9390°N and longitude 117.0481°W. Table 1 below, summarizes 12 of the known active and potentially active faults, which, in our opinion, may have the greatest impact on the site. Selection of these faults was based on the proximity of the fault to the site, and the potential of the fault to generate moderate to large ground motion at the site.

Table 1 was generated from information provided on the USGS online resource (USGS, 2008, National Seismic Hazards Maps, Source Parameters, Reference 19), with the approximate center of the site being at latitude 33.9390°N and longitude 117.0481°W. It is our opinion that the most significant faults that may affect the site are the San Jacinto and the San Andreas Fault systems during an earthquake event along those faults.

Table 1
Major Significant Faults in the Project Site Vicinity

Fault Name	Approximate Distance from Site [Miles (km)]	Maximum Event (Moment Magnitude), Mw
San Jacinto- San Jacinto Valley	3.4(5.4)	7.9
S. San Andreas – San Bernardino	9.3 (15.0)	8.1
Pinto Mountain	20.3 (32.7)	7.3
Elsinore-Glenn Ivy	25.1 (40.4)	6.9
Elsinore- W+ Glenn Ivy	25.1 (38.7)	7.3
Cleghorn	25.4 (40.9)	6.8
Elsinore – Glenn Ivy+Temecula+J+CM	25.6 (41.2)	7.4
Elsinore – Temecula+Julian	26.2 (42.2)	7.5
Cucamonga	28.1 (45.2)	6.7
North Frontal (West)	29.0 (46.7)	7.2
Helendale – S. Lockhardt	29.7 (47.8)	7.4
Chino-Alt 2	30.8 (49.6)	6.8

2.6.2 Historical Earthquakes

A computer search of major historical significant earthquakes that have occurred within a 62-mile (100 km) radius of the site from 1800 through 2019 has been performed. Our search was limited to those earthquakes with magnitudes greater than M5. Table 2 below was generated using information provided by the USGS, and the Southern California Earthquake Data center.

(http://scedc.caltech.edu/significant/chronindex.html, https://earthquake.usgs.gov/earthquakes/map/).

The Regional Fault and Seismicity Map, **Figure 3**, presents the location of major faults and historical earthquake events relative to the subject site. The major historical earthquakes determined by those resources are tabulated below on Table 2:

Table 2
Historical Earthquakes

Earthquake Name/Location	**Date**	**Magnitude (Mw)**	**Approximate Distance (miles)**
North San Jacinto	7/22/1923	6.3	12
San Jacinto	4/21/1918	6.8	16
North Palm Springs	7/8/1986	5.6	25
Greater Los Angeles Area	12/16/1858	6.0	26
Elsinore	5/15/1910	6.0	26.5
Lytle Creek	9/12/1970	5.2	37
White Wash	2/25/1980	5.5	38
Joshua Tree	4/22/1992	6.1	39
Landers	6/28/1992	7.3	40
1990 Upland Earthquake	2/28/1990	5.4	40
Chino Hills	7/29/2008	5.4	41
Southern California Area	12/8/1812	6.9	46
Long Beach	3/10/1933	6.4	54
Big Bear	6/28/1992	6.4	57
Southern California Area	2/9/1890	6.8	57
Whittier Narrows	10/1/1987	5.9	59
Hector Mine	12/16/1999	7.1	60.5
Greater Los Angeles Area	7/11/1855	6.0	62

The historical earthquake that likely had the most significant impact on the project site occurred in 1923, approximately 12 miles northwest of the site, located on a fault known as the San Jacinto Fault and the San Jacinto earthquake. This earthquake had an estimated magnitude of 6.8 (USGS/SCEDC).

The closest fault to the subject site is the San Jacinto Fault located approximately three miles from the site. The estimated site modified peak ground acceleration (PGA_M) is 0.705g as generated from information provided on the USGS online resource (USGS, 2008, National Seismic Hazards Maps, Source Parameters, Reference 15).

2.7 Other Geologic Hazards

2.7.1 Liquefaction

The site is not located within a State of California Seismic Hazard Zone (California Geologic Survey (CGS)/California Department of Conservation) indicating a susceptibility for liquefaction potential. Information available in the County of Riverside Safety Element December, 2015, (Reference 7) indicates that portions of the site may have "very low" to "low" potential for liquefaction and information available on the Riverside County Mapping and Spatial Data Portal, GIS data, March 15, 2018 (Reference 16) indicates that portions of the site are in "Zone 109" and may have a "moderate" susceptibility to liquefaction.

Portions of the site appear to be susceptible to relatively minor amounts of liquefaction settlement. The magnitudes of seismic–induced liquefaction settlement appear to be relatively minor and somewhat localized, occurring generally below depths of 40 feet where groundwater was encountered in two (2) of our borings.

The total earthquake-induced liquefaction settlement potential was calculated using the LiquefyPro software. Our evaluation was based on the site class and adjusted peak ground acceleration of 0.705g, as presented in the **Seismic Design Parameters Table** above, and a probabilistic 2,475 year modal magnitude of 8.1. Our analysis indicates the estimated settlement due to earthquake-induced liquefaction settlement is approximately 0.00 inches to approximately 1 inch. Differential settlements are estimated to be negligible to approximately a little over 0.5 inches over a distance of 50 feet. Due to the lack of a shallow static groundwater level and the materials encountered underlying the site overall relatively dense and stiff nature, the materials are not considered to be susceptible to significant amounts of liquefaction induced seismic settlement. With the proposed fill depths and loads imposed from the fill, liquefaction is considered to be negligible.

The potential for lateral spreading is low based on our analysis and information which indicates that the site is not considered susceptible to significant amounts of liquefaction induced settlement as discussed above. Additionally, there are no free slopes adjacent to the project. The results of our analysis are included herein in **Appendix D–Seismic Settlement Analysis.**

2.7.2 Seismically Induced Dry Settlement

The total earthquake-induced dry sand settlement potential was calculated using the LiquefyPro software. Our evaluation was based on the site class and adjusted peak ground acceleration of 0.705g, as presented in the Seismic Design Parameters Table above, and a probabilistic 2,475 year modal magnitude of 8.1. Total earthquake-induced dry sand settlement was calculated using Boulanger and Idriss (2014) analysis method and theSPTblowcounts from our borings. Our analysis indicates the estimated settlement due to earthquake-induced dry settlement ranges from approximately 0.6 inches to 4.6 inches. Differential settlements are estimated to range from approximately a little over 0.25-inches to 3.0 inches over a distance of 50 feet. The majority of the seismic induced dry settlement occurs in the upper 10 to 30 feet within the younger alluvial materials. The majority of the alluvium that is potentially susceptible to seismic induced dry settlement would be removed during remedial earthwork and in our opinion would also be subject to additional settlement during construction due to fill loads, which would reduce the settlement significantly. The older alluvial materials underlying the younger alluvium at the site are overall relatively dense and the dry settlement potential is considered relatively minor to negligible within the Older Alluvial materials. Results of our analysis are included herein (**Appendix D**).

2.7.3 Seismically Induced Slope Instability/Landslides

The site is not mapped within a State of California designated Hazard Zone for Slope Instability. Information available in the County of Riverside Safety Element, December, 2015, (Reference 7) indicates that portions of the site may have "low" to "moderate" susceptibility for seismic induced slope instability. The potential for seismic induced slope instability is considered in section 3.2 of this report.

2.7.4 Tsunamis and Seiches

The site is not located near any ocean or landlocked bodies of water; therefore we do not consider Tsunamis or sieches to be a potential hazard to the project.

2.8 Flooding

According to the Federal Emergency Management Agency (FEMA), the subject site is located within an area of minimal flood Hazard- Zone X (Reference 9). It is our understanding the overall subject site will be elevated by proposed design grading to be situated well above local drainage courses. As such, the risk for flooding of the site is considered relatively low.

3. GEOTECHNICAL ENGINEERING ANALYSIS

The results of our geotechnical engineering analysis performed during our investigation are discussed and presented below.

3.1 Laboratory Testing

In order to perform the geotechnical analysis considered necessary for this project, soil mechanics laboratory testing was performed on selected soil samples obtained from the exploratory borings. The laboratory tests performed included moisture/density determinations, maximum density, sieve analysis, direct shear, consolidation, collapse potential and classification tests. Consolidation-related (dry) and hydro-collapse potential (wet) was evaluated along with the time-rate of settlement. Direct shear tests were performed on both relatively undisturbed ring samples as well as samples remolded to 90 percent relative compaction to represent both in-situ and fill conditions. The consolidation and hydro-collapse testing was performed on relatively undisturbed in-situ soil samples (natural soil deposits) in order to determine the long-term settlement deformation in response to the proposed fill loading. The exploratory boring and test pit logs for exploration conducted during this investigation is presented within Appendix B. test-pit logs. Laboratory test results are presented in Appendix C.

3.2 Slope Stability

3.2.1 Deep Seated Slope Stability

Approximate 2:1 (horizontal to vertical) cut and fill slopes of variable height are proposed throughout the site. Deep seated slope stability analysis was performed on selected geologic cross-sections considered representative of the various proposed conceptual slope configurations. The computer program Slide version 8.0 by Roc Science was employed for slope stability calculations. The sections assigned for stability analysis included both proposed fill and cut slopes. Stability analyses were conducted utilizing conventional limit equilibrium methodologies for both force and moment equilibrium. The results of our analysis are presented below and summarized in **Appendix E**. The locations of the cross sections are presented on **Plates 1 and 2** and the cross sections presented on **Plate 3**.

Samples collected on-site were tested and the soil strength parameters utilized for analysis are presented in the table below. Direct shear strength parameters utilized were based on laboratory testing and our past and recent experience with similar materials on projects in the site vicinity.

Soil Strength Parameters

Material Type	Unit Weight, γ [pcf]	Cohesion, c [psf]	Friction Angle, φ [degrees]
Artificial Fill (Af)	125	150	31
Alluvium (Qal)	120	100	29
San Timoteo Formation (Tst-Bedrock)	130	550	33

Stability analyses were conducted on the geologic cross sections indicated in the table below. Each cross section was analyzed for both static and pseudostatic conditions with a horizontal acceleration coefficient "K" of 0.15. Results of the analysis are presented below. Minimum factors of safety of 1.5 and 1.1 are considered acceptable for static and pseudostatic conditions respectively. Proposed 2:1 fill slopes and 2:1 cut slopes are considered grossly stable in the absence of adverse geologic conditions.

Slope Stability Analysis

Cross Section	Factor of Safety	
	Static	Pseudostatic (Seismic)
A - A'	2.18	1.53
B- B'	2.36	1.67
C - C'	2.26	1.59
D - D'	1.63	1.13

The results of detailed stability analyses summarized above are presented in **Appendix E**.

3.2.2 Surficial Slope Stability

Proposed 2:1 fill and cut slopes analyzed resulted in a factor of safety against surficial failure greater than 1.5 and are therefore considered surficially stable. Our analysis is summarized in **Appendix E**.

3.3 Erosion Potential

Fill slopes constructed with granular materials derived from on-site sandstone bedrock may be susceptible to erosion.

Bedrock units include the San Timoteo Formation (Tst) and the surficial units include undocumented artificial fill, colluvium (Qcol), and alluvium (Qal) Bedrock encountered during this investigation was moderately hard to hard and is considered to be slightly to moderately erodible. In general, surficial soils encountered are typically granular and appear to be readily erodible as evidenced by their soft to loose state and localized erosion gullies.

The erosion potential of cut slopes exposing on-site bedrock materials may range from low to medium depending on the bedrock materials exposed on the cut slope, as well as the orientation of bedding and joint planes within the slope. In general, cut slopes exposing well-indurated and/or cemented sandstones should have a low to moderate susceptibly to erosion. Friable, poorly cemented, sandstones should have a moderate to high erosion susceptibility.

3.4 Surface Drainage

Surficial drainage of the proposed development could significantly affect strength and compression characteristics of the proposed engineered fills, as well as the on-site bedrock materials. Maintenance of positive drainage from proposed roadways, building pad areas and slopes is paramount to the long-term performance of the site improvements, especially erosion on slopes. Recommendations for surface drainage are included in Section 5.6 below.

3.5 Rippability

The degree of rippability of bedrock material is, in general, dependent upon several factors which include the lithology of the bedrock, the geologic structure, the degree of weathering, as well as the type of earth moving equipment employed.

Difficult excavation could be encountered locally within the San Timoteo Formation (Tst). In general, the upper 15 to 30 feet of bedrock in natural areas has been affected by long-term weathering processes and should exhibit easier excavation characteristics above those depths. Local indurated or very hard zones could exist, which would make excavation difficult by conventional means, which may require special techniques including the use of single shank rippers, rock breakers mounted to excavators, etc.

Although not anticipated, in the event that non-rippable materials are encountered and blasting is required, a qualified, experienced licensed blasting contractor should perform the blasting using current and professionally accepted methods, products, and procedures to maximize safety during blasting operations in accordance with applicable laws and ordinances. The contractor would be responsible for all required permits, blasting procedures, safety, methodology, pre-blast monitoring, monitoring during blasting and post-blast monitoring, including appropriate pre-blast, blast and post-blast warning signals.

The blasting contractor should incorporate procedures that protect personal safety, property, and produce blast rock of appropriate sizes, make sure the blast will prevent/minimize production of flyrock and air blast hazards, minimize peak particle velocities, and minimize overblasting. Oversize materials generated from excavations and/or blasting can be used as fill (Section 5.3) and placed in accordance with oversize material placement (Section 5.8) as recommended in General Earthwork and Grading Specifications presented in Appendix F.

3.6 Fill Suitability

Materials generated from the excavation of undocumented fill, alluvium (Qal) and bedrock units San Timoteo Formation (Tst) are considered suitable for use as engineered fill, provided they are free of deleterious materials such as trash or organics.

3.7 Settlement Potential

The existing alluvium materials (Qal) have been evaluated on a preliminary basis for settlement. Loose younger alluvium should be removed as recommended in Section 5.3. Relatively competent alluvium can be left in place within the canyons beneath the proposed building pads and beneath proposed design fills of the site beneath proposed fill slopes of variable heights and configurations.

Based on our preliminary analyses, the amount of settlement varies from slight to severe. It should be understood that the amount of estimated consolidation-related and hydro-collapse settlement are generally independent of one another and therefore should be combined when evaluating the total amount of settlement. On the other hand, much of the normal consolidation-related settlement should occur as the new engineered fill is placed. This settlement should occur immediately upon fill placement and continue until grading is complete. We expect the majority of the predicted settlement to have occurred by the end of grading. However, in order to monitor the settlement, we recommend that settlement monuments be established in strategic locations along the northerly fill slopes. These monuments should be read periodically and the results evaluated by the geotechnical consultant prior to site improvements constructed within those areas.

3.8 Expansion Potential

The onsite geologic formations are comprised of mostly sandstone, which generates soils that are generally sandy and therefore low in expansion potential; however, siltstone/clay layers subject to excavation would produce clayey soils, which would be expansive. Minor amounts of siltstone exists onsite that if placed at pad grade would produce moderately expansive soils. Expansion potential of the soils exposed at finished grade should be evaluated at the completion of grading.

3.9 Preliminary Earthwork Shrinkage and Bulking

The volume change of excavated on-site materials upon excavation and placement as engineered fill will vary with bedrock/soil type, location and compactive effort. However, the overall earthwork shrinkage/bulking and subsidence of the onsite soils may be approximated by the following parameters:

§ San Timoteo (Tst)	5% bulking
§ Alluvium (Qal)	15% shrinkage
§ Alluvium (Qal)	1.0 feet subsidence (average)

4. CONCLUSIONS

The following preliminary conclusions are based on our review of the available geotechnical data as well as the results of our field investigation, laboratory testing and engineering analysis. It is our opinion that the subject property investigated herein is considered geotechnically suitable and feasible for the development of proposed improvements discussed above, provided that the recommendations presented herein are implemented during further design, grading, and construction. If the recommendations in this report are incorporated into design and construction of the project, the proposed grading should not adversely affect adjoining sites.

- Generally, undocumented fill, topsoil/colluvium and younger alluvium on site are considered potentially compressible and prone to settlement and portions of the younger alluvium prone to hydrocollapse. Alluvium left in place may support proposed fills provided the recommendations discussed in Section 5 are incorporated into grading operations and site development/design;

- Alluvial soils are subject to settlement upon loading by proposed fill soils and the majority of the settlement is expected to occur during grading and within a few months thereafter. However, as a precaution, we are recommending that surface monuments be installed at strategic locations along the top of slopes and pad areas of the project;

- Stability analyses indicate that the design cut and fill slopes are grossly stable under static and pseudostatic conditions, and generally should not be subject to earthquake induced failures or excessive deformation under seismic conditions in the absence of adverse geologic conditions and provided the recommendations in this report are implemented. Stability calculations are included in Appendix E. Supplemental subsurface exploration is recommended, see Section 5.1;

- Site soils subject to earthwork operations are generally sandstone and sandy alluvium. Fill materials derived from these types of materials will typically exhibit a very low to low expansion potential. However, a limited amount of siltstone and clay onsite could

generate moderately expansive soil at finished surface and should be evaluated at the completion of grading;

- Fill soils derived from sandstone should be rippable and generally suitable for use as fill materials, provided they are free of vegetation, debris and over-sized cobbles and/or boulders. Deeper cuts of bedrock materials may locally be difficult to excavate by conventional methods and may generate oversize rocks. Local indurated or very hard zones could exist, which would make excavation difficult by conventional means, which may require special techniques including the use of single shank rippers, rock breakers mounted to excavators, etc. Blasting is not anticipated, however, oversize materials generated from excavations and/or blasting can be used as fill (Section 5.3 and 5.8) and placed in accordance with oversize material placement as recommended in General Earthwork and Grading Specifications presented in Appendix F.

- No active faulting is known to exist at the site and the risk of surface fault rupture is considered to be very low. However, the project site lies within a region of historical seismicity and will likely be subject to seismic shaking in the future;

- Groundwater was encountered at depth during the subsurface investigation in two (2) of our borings, KB-5 and KB-7, at depths of approximately 40 and 48 feet below the ground surface, within the low-lying canyon drainage areas located along the northerly edge of the site. Groundwater levels are not expected to have an impact on the project;

- The younger alluvium is also subject to minor amounts of liquefaction settlement of less than 1-inch at depths of 40 feet, which is not considered as significant. With the proposed fill depths and loads imposed from the fill, the materials would be subject to additional settlement during construction, and in our opinion, reduce the seismic induced settlement potential for liquefaction. Therefore, liquefaction is considered to be negligible. The upper portion of the younger alluvium is subject to seismic-induced dry settlement, which would occur primarily in the upper 10 to 30 feet. The maximum seismic induced settlement that could occur would be on the order of approximately 0.6-inches to 4.6 inches. The majority of the alluvium that is potentially susceptible to seismic induced dry settlement would be removed during remedial earthwork and in our opinion would also be subject to additional settlement during construction due to fill loads, which would reduce the settlement significantly;

- Preliminary remedial grading recommendations include leaving alluvium in place within the canyons. It is considered prudent to place survey settlement monuments at selected locations where alluvium has been left in place, deep fill areas and over cut/ fill transition areas.

5. RECOMMENDATIONS

Geotechnical recommendations presented below are based on our understanding of the intended site use and the preliminary geotechnical information gathered and analyzed to

date for feasibility purposes. Recommendations contained herein are preliminary in that they would be subject to modifications based on additional subsurface exploration to further characterize the site conditions and refine the recommendations, specifically, the alluvial removal and over-excavation requirements intended to reduce the differential settlement that could be experienced at finished pad grades, based on development of detailed rough grading plans.

5.1 Supplemental Subsurface Exploration

Our preliminary geotechnical investigation is a feasibility level study, we recommend that a supplemental geotechnical investigation be performed that includes additional large and small diameter borings to further characterize site conditions when detailed grading plans are available and prior to final design and construction to supplement and check that the subsurface conditions are consistent with our findings, conclusions and our preliminary recommendations. Recommendations would be updated as warranted.

5.2 General Earthwork and Grading

Grading should be performed in accordance with the General Earthwork and Grading Specifications presented in Appendix F, unless specifically amended below, and should also conform to applicable governing agency requirements. Prior to commencement of grading operations, all vegetation, organic topsoil, and man-made structures (i.e., tanks, pipes, fences, etc.) should be cleared and disposed of off-site. Areas receiving fill should be scarified about 6 to 12 inches deep and/or over-excavated, moisture-conditioned to at least two percent above optimum moisture content, and compacted to a minimum of 90 percent relative compaction for areas to receive new fills up to 50 vertical feet and 95 percent for areas to receive greater than 50 feet of fill. All earthwork and grading operations should be performed under the observation and testing of the geotechnical consultant.

5.3 Fill Placement and Compaction

5.3.1 Fill Lifts

Fill material shall be placed in near-horizontal layers not exceeding 8 inches in loose thickness. Should abundant cobbles or rocks up to 12-inches in diameter be exposed, fill lift thicknesses could be increased to this dimension. Rocks greater than 12 inches should be collected and placed as over-sized material. Each fill layer should be spread evenly and should be thoroughly mixed during spreading to attain uniformity of material and moisture in each layer.

5.3.2 Fill Moisture

Fill layers at moisture contents less than optimum shall be watered and mixed; and fill layers shall be aerated by scarification or shall be blended with drier material. Moisture-conditioning and mixing of fill layers shall continue until the fill material is uniformly processed at a minimum of two percent above optimum moisture content.

5.3.3 Fill Compaction

After each layer has been evenly spread, moisture-conditioned, to a minimum of two percentage points above optimum moisture content and mixed, it shall be uniformly compacted to not less than 90 percent for fills up to 50 feet in depth, and 95 percent for fills greater than 50 feet in depth, of the maximum dry density. Compaction equipment shall be adequately sized and shall be either specifically designed for soil compaction or of proven reliability, to efficiently achieve the specified degree of compaction.

5.4 Remedial Grading

Preliminary remedial grading recommended for this project is based on the findings and conclusions generated during this limited feasibility level geotechnical investigation of the site, and with the expectations and specifications of the client based on the ultimate site development. As such, the remedial grading recommendations presented herein are based on preliminary site-specific project development and site conditions. Undocumented fill and surficial topsoil and colluvium should be completely removed and recompacted during remedial earthwork. Remedial removals of the alluvium could range from approximately 7.5 feet to 30 feet below existing grades or greater and 3 to 5 feet for the San Timoteo Formation bedrock.

5.4.1 Over-excavation Along Cut/Fill Transitions

In order to minimize the potential for differential settlement, proposed cut-fill transition lots should be overexcavated a minimum of three feet below design finish pad grades. In general, and on a preliminary basis, lots with steep fill transitions should be overexcavated 1/3 of the maximum depth of fill in the shallower fill portions of the pad (Appendix F-GD3).

5.4.2 Over-excavation of Cut Areas

In order to limit the fill differential between cut and fill, and to provide a more uniform foundation pad for the proposed improvements, proposed cut areas are recommended to be over-excavated prior to placing fill. In general, the over-excavation of the cut area should be at least 3 feet below design finish pad grades.

5.5 Manufactured Slopes

All design slopes should be constructed in accordance with City of Beaumont, County of Riverside requirements along with recommendations contained herein. Keyway backcuts, if any, greater than 5 feet in height should not be made steeper than a 2:1 slope gradient unless approved by the geotechnical consultant. Vertical benches with a minimum height of 4 feet should be established for all fills placed on ground sloping steeper than 5:1 (horizontal:vertical). Keyways should be constructed as depicted in the Grading Details (Appendix F) or as determined by the geotechnical field representative during grading. Slope maintenance guidelines are provided in Appendix M.

5.5.1 Slope Stabilization and Buttresses

Each fill slope stabilization, if any, should be provided with a subdrainage system as outlined in Appendix L. Keyways should be a minimum of 3 feet deep and a minimum of 15 feet wide, or half the slope height (whichever is greater). The locations of slope stabilization and buttress keyway dimensions should be evaluated and confirmed during grading.

All keyways and backcuts for proposed slope stabilization, if any, should be observed by the geotechnical consultant during grading. Keyway dimensions may be modified based on the actual geotechnical conditions encountered during grading. Stabilization and buttress fills should be provided with backdrains constructed in accordance with the specifications contained in Appendix G and applicable City of Beaumont or County of Riverside grading ordinances.

5.5.2 Fill Slopes

All fill slopes should be provided with a fill key excavated to a minimum depth of 3 feet into bedrock, or into alluvial materials after removals have been conducted, as determined by the geotechnical consultant during grading. Slopes higher than 30 feet should be provided with a keyway that has a minimum width of one-half the slope height and a depth of at least 3 feet into bedrock, or competent materials as determined by the geotechnical consultant during grading. Larger keyways may be required depending on slope height and soil conditions encountered beneath the proposed fill slopes. Vertical benches with a minimum height of 4 feet should be established for all fills placed on ground sloping steeper than 5:1. Oversize or cohesionless sandy material should not be utilized near the slope face. Fill slopes should be constructed of well-blended mixtures of sands, silts and clays where possible. Where considered necessary, fill slopes should be provided with backdrains constructed in accordance with the specifications contained in Appendix F and applicable City of Beaumont or County of Riverside grading ordinances.

5.5.3 Cut Slopes

In general, cut slopes proposed in the Timoteo Formation are considered stable when cut to design gradients of 2:1 horizontal to vertical, in the absence of adverse geologic conditions.

All cut slopes should be geologically mapped during grading. Cut slopes found during grading to expose adverse geologic structure should be provided with replacement stability fills constructed in accordance with the specifications presented herein and in Appendix F. Furthermore, cut slopes exposing earth materials that are susceptible to erosion should be constructed as replacement fill slopes. Keyway backcuts greater than 5 feet in height should not be made steeper than a 2:1 slope gradient. Stabilization fills should be provided with backdrains constructed in accordance with the specifications contained in Appendix F and applicable City of Beaumont and County of Riverside grading ordinances.

5.5.4 Cut/Fill Transition Slopes

In general, slopes that will have a cut/fill transition and bedrock/alluvium transitions can be cut to grade. However, where the resulting fill would be too thin, we would recommend replacement. Where bedrock/alluvium transitions occur, they should be evaluated in the field for suitability, and be treated with a replacement slope with keyways and drains as determined by the geotechnical consultant.

5.6 Surface Drainage

Appropriate surface drainage measures should be provided by the civil engineer, including terrace drains, surface gradients, and suitable non-erosive collection devices in accordance with the 2016 California Building Code and City of Beaumont regulations. Surface drainage should never be allowed to flow toward or over the top of slopes.

Consideration for the eventual settlement of the canyon areas should also be taken into account while designing local drainage. Currently, the site plan sheet flows across the entire site. However, it may be necessary to consider designing local low spots with area drains over the main canyon.

5.7 Subdrainage

Canyon fills and stabilization fills will require appropriate subdrain installation in accordance with the recommendations described in Appendix F, or as modified by the geotechnical consultant during grading. Subdrains should be installed in canyon bottoms with tributary drainages installed after the overexcavation of unsuitable soil materials, prior to the placement of compacted fills. Subdrainage should also be provided for any significant seepage encountered during grading. The necessity and locations of subdrains should be evaluated upon review of more detailed grading plans.

5.8 Oversized Rock Materials

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 12 inches, shall not be buried or placed in fills, unless the location, materials, and disposal methods are specifically recommended by the geotechnical consultant.

Any oversized materials, with a maximum dimension of 36-inches, generated during excavation that cannot be broken down to less than 12 inches nominal size should be disposed off-site or placed within a rock windrow as illustrated on Detail GD-5 in Appendix F. Oversize material shall not be placed within 10 feet vertically or within 20 feet horizontally of any finished surface, unless specifically recommended by the geotechnical consultant during grading. Oversized disposal operations shall be such that nesting of oversize material does not occur, and such that the oversize material is completely surrounded by compacted or densified fill.

Individual rocks with a maximum dimension of 36-inches to 72-inches may be disposed of within fill areas under the direction of the geotechnical consultant on a case by case basis. Individual oversized rock disposal operations shall be such that the oversize material is completely surrounded by compacted or densified fill. Individual oversize material shall not be placed within 20 feet vertically or within 20 feet horizontally of any finished surface, unless specifically recommended by the geotechnical consultant during grading.

5.9 Deep Fill Areas/Settlement Monitoring

Based upon our understanding of proposed concept grading, fills on the order of 145 feet deep (design grading) are planned. Engineered fills deeper than 50 feet should incorporate a minimum relative compaction of 95 percent, and a moisture content of at least two percentage points above optimum moisture content. Compaction requirements may be revised based on hydrocollapse testing conducted while fill is being placed. A settlement monitoring program should be implemented consisting of the surveying of surface monuments to monitor settlement of alluvial soils left in-place and/or proposed fills deeper than 50 feet.

Survey monument readings for both deep fill areas and for fill over natural ground (Qal) should be conducted following the completion of fill placement. These areas would preliminarily include the fill slopes along the north edge of the site and over the main north-south trending canyons/drainages under the proposed building pads. Survey monument locations should be selected by the geotechnical consultant. Construction of the monuments may be completed by the contractor or the geotechnical consultant in accordance with our grading details SM-2 and SM-3 (Appendix F). Survey readings should be taken weekly for the first month and on a monthly basis thereafter until vertical movement of the fill mass achieve 90 percent of primary compression, begin secondary compression or the estimated remaining settlement is less than one inch. Construction of proposed structures

should not commence until approved by the geotechnical consultant based on the results of the settlement monitoring.

The survey bench marks used for the monitoring should be confirmed with the geotechnical consultant prior to initial readings being performed. Based on our analyses, it is estimated that primary consolidation settlement would require from a few months to a year following the completion of fill placement provided all recommendations presented herein have been implemented. It should also be remembered that the site improvements will need to be designed for a maximum tolerance deflection ratio (for differential settlement) with an estimated total settlement that is expected to occur in the deep canyons and fill areas. A portion of this settlement is also expected to occur during grading.

5.10 Preliminary Foundation Recommendations

All foundation criteria are considered minimum requirements that may be superseded by more stringent requirements from the architect, structural engineer, or governing agencies.

The following preliminary geotechnical design parameters are provided for the design of proposed foundations for the proposed buildings. The proposed buildings may be supported by continuous and square pad footings utilizing an allowable bearing pressure of 2000 pounds per square foot. The width of the continuous footings should be a minimum of 15 inches and embedded to a minimum depth of 18 inches below the lowest adjacent grade. For square pad footings, it is recommended that the width be at least 24 inches embedded a minimum of 18 inches below the lowest adjacent grade. Bearing pressures may be increased by 250 pounds per square foot per additional foot of width or depth to a maximum allowable bearing pressure of 2,500 pounds per square foot. A coefficient of friction of 0.40 may be used, along with a passive lateral resistance of 250 pounds per square foot per foot of embedment. Footings should bear on at least two feet of compacted fill.

If normal code requirements are used for seismic design, the allowable bearing value and coefficient of friction may be increased by 1/3 for short duration loads, such as the effect of wind or seismic forces.

If any utility lines are within a 1:1 (horizontal: vertical) projection from the bottom of a footing, they may be within the influence zone of the proposed footing load. If this condition exists, the proposed footing should be deepened so that the utility is outside the zone of influence; the utility line could also be relocated or encased with concrete slurry. These conditions should be evaluated on a case by case basis.

5.11 Retaining Walls

General guidelines are provided below for low retaining walls up to ten feet in retained height.

For preliminary purposes, retaining walls should be designed to resist an equivalent fluid pressure of 40 pounds per cubic foot for level backfill and 55 pounds per cubic foot for 2:1 sloping backfill. Backfill materials should consist of granular material (S.E. $\geq$ 30) and drainage systems should be installed as shown on retaining wall details in Appendix F. Please note that drainage recommendations are provided only as a means to create a drained condition behind proposed retaining walls. Surface drains should not be connected to retaining wall sub-drainage. These drains are not intended as a means of waterproofing. If moisture or salt deposition is not desired, or if stone facing, stucco, or paint is to be applied to the wall outer surface, the wall should be provided with suitable waterproofing. The waterproofing system for the wall should be designed by a qualified waterproofing consultant. Any waterproofing or drainage system damaged by soil placement and compaction efforts should be repaired prior to completion of backfilling.

Foundations for proposed retaining and perimeter (non-retaining) walls which are to be founded into compacted fill materials may be designed utilizing an allowable bearing pressure as presented above for conventional foundations.

5.12 Sulfate Potential

Based on the soluble sulfate test results at this time, the on-site soils possess a sulfate exposure that is considered "Class S0". For preliminary purposes, concrete should be designed in accordance with ACI 318, Section 19 Table 3.1.1, utilizing "Class S0" sulfate exposure.

5.13 Corrosion Potential

Laboratory testing on surficial deposits within the subject site has preliminarily indicated the soil is "highly-corrosive" to ferrous metals when the soil is saturated, as per Caltrans guidelines.

5.14 Preliminary Pavement Design

For "preliminary" design, parameters are provided below. Laboratory R-Value test results indicated R-Values ranging from 13 to 41 on surficial soils tested. We have assumed an R-Value of 25 for preliminary design purposes and to account for soil variability. Additional R-Value testing should be performed on subgrade soils at the completion of rough grading to confirm final structural pavement sections. The selection of actual traffic index should be the purview of the project civil or traffic engineer.

Preliminary Pavement Section Design

R-Value	Traffic Index	Multiple Layered	
		Asphalt Concrete (inches)	Aggregate Base* (inches)
25	4.0	3.0	5.0
25	5.0	3.0	6.0
25	6.0	3.0	9.0
25	7.0	4.0	11.0

*Aggregate base material should consist of Class 2 aggregate base materials or Crushed Miscellaneous Base (CMB).

5.15 Temporary Excavations

Temporary excavations and trench walls to a depth of four feet may be made vertically without shoring, subject to verification of safety by the contractor. Deeper excavations should be no steeper than 1.5:1 (horizontal to vertical) or braced or shored in accordance with CAL OSHA standards and guidelines. The contractor is assumed responsible for maintaining safety at the jobsite. All excavation work should be in compliance with current CAL OSHA standards. Under no circumstances should excavations be made deeper than four feet or below groundwater without shoring, bracing or laying-back, in accordance with CAL OSHA standards and guidelines. No surcharge loads should be allowed within five feet from the top of the cuts.

Existing utility lines, roadways and other easements/right-of-ways may be impacted by the temporary excavations may require shoring to obtain the full depth of the excavation.

5.16 Grading Plan Review

Our office should review the 40-scale grading plans, produced in the future. Grading plan review will be necessary to verify that our recommendations in this report remain relevant and to provide updated geotechnical recommendations specific to the plans as necessary.

5.17 Geotechnical Testing and Observation

Geotechnical observation and testing should be conducted during the following stages of grading:

- Upon the completion of clearing and grubbing;
- During all phases of grading, including benching, backcut and key excavation, cut slope excavation, remedial removals of surficial soils, backdrain/subdrain/filter material installation and engineered fill placement;
- During Settlement Monument placement;
- During roadway subgrade preparation and compaction of roadway aggregate base;
- When any unusual conditions are encountered during grading.

6. PROFESSIONAL LIMITATIONS

Geotechnical services are provided by KCG in accordance with generally accepted professional engineering and geologic practice in the area where these services are to be rendered. Client acknowledges that the present standard in the engineering and geologic and environmental profession does not include a guarantee of perfection and, except as expressly set forth in the conditions above, no warranty, expressed or implied, is extended by KCG.

All excavations used for subsurface exploration were backfilled prior to leaving the site. As with any backfill, consolidation and subsidence may result in depression of the excavation area and a potentially hazardous condition. The client and/or owner of the property are hereby advised to periodically examine the excavation areas, and if necessary backfill any resulting depressions. KCG shall not be responsible for injury or damage resulting from subsidence of backfill.

Geotechnical reports are based on the project description and proposed scope of work as described in the proposal. Our conclusions and recommendations are based on the results of the field, laboratory, and office studies, combined with an interpolation and extrapolation of soil conditions as described in the report. The results reflect our geotechnical interpretation of the limited direct evidence obtained. Our conclusions and recommendations are made contingent upon the opportunity for KCG to continue to provide geotechnical services beyond the scope in the proposal to include all geotechnical services. If parties other than KCG are engaged to provide such services, they must be notified that they will be required to assume complete responsibility for the geotechnical work of the project by concurring with the recommendations in our report or providing alternate recommendations.

All locations of borings, limits of fill, contacts, elevations, etc., are represented herein to the best of our abilities. The approximate locations depicted on all plates and figures are based upon available control as provided in the field by others. Where no information was provided by others, locations were approximated using limited measuring methods and crude instrumentation. We do not verify the locations or elevations reported herein as accurate in survey or void of error. KCG assumes no responsibility for any future costs associated with errors in the area of survey.

It is the reader's responsibility to verify the correct interpretation and intention of the recommendations presented herein. KCG assumes no responsibility for misunderstandings or improper interpretations that result in unsatisfactory or unsafe work products. It is the reader's further responsibility to acquire copies of any supplemental reports, addenda or responses to public agency reviews that may supersede recommendations in this report.

APPENDIX A

REFERENCES

APPENDIX A

REFERENCES

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APPENDIX A

REFERENCES
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APPENDIX B

EXPLORATORY LOGS

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-1**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/25/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2348.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
					@ Surface - TOPSOIL			
					Younger Alluvium (Qa):			
					@ 0.5 feet - Sandy SILT (ML) olive-brown, some mica grains, damp.			
2345		3 3 5	9	105	**@ 2.5 feet - SAME:** medium stiff.		DS	
	5	2 2 3	10	102	**@ 5.0 feet - SAME:** some calcium carbonate.			
2340		3 4 5	12	111	**@ 7.5 feet - SAME:** trace clay.			
	10	2 4 4	10	103	**@ 10.0 feet - SAME**		CN	
2335								
	15	14 22 37	6	124	**Older Alluvium (Qoa):** **@ 15.0 feet - Silty SAND (SM):** grey-brown, fine to medium-grained, some mica grains, little quartz grains, little feldspar grains, damp, dense.		CN	
2330								
	20	24 26 34			**@ 20.0 feet - SAME:** trace gravel up to 3/4".			
2325								
	25	23 34 50/4"	11	117	**@ 25.0 feet - SAME:** large vein of calcium carbonate, trace gravel up to 1/4", very dense.			
2320								

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LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-1**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/25/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2348.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
				21 34 44			@ **30.0 feet - Silty SAND (SM):** light grey-brown, fine-grained, some mica grains, some quartz grains, damp, very dense.			
2315										
	35			21 50/3"	28	99	@ **35.0 feet - Silty SAND (SM):** grey-brown, fine to medium-grained, some mica grains, little gravel up to 1.0", trace clay, moist, very dense.			@ 35.0 feet - thin clay layer at the top of the sample.
2310										
	40			24 50/5"			@ **40.0 feet - Sandy SILT (ML):** olive, trace clay, moist, hard.			
2305										
	45			27 50/3"	19	101	@ **45.0 feet - Sandy SILT (ML):** grey-brown, some mica grains, trace clay, some orange staining, moist, hard.			
2300										
	50			15 37 50			@ **50.0 feet - SAME:** no clay, no staining.			
							Total Depth: 51.5 feet. No groundwater. No caving. Hole backfilled on 6/25/2019.			

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LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-2**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/25/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2343.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
					@ Surface - TOPSOIL			
					Younger Alluvium (Qa):			
					@ 0.5 feet - Sandy SILT (ML): olive-brown, trace clay, trace rootlets, moist.			
2340		2 2 2	9	101	**@ 2.5 feet - SAME:** medium stiff.		EI	
	5	2 3 5	8	107	**@ 5.0 feet - SAME:** trace mica grains, trace coarse sand, no roots.			
2335		3 3 4	11	104	**@ 7.5 feet - SAME**			
	10	3 3 5	11	107	**@ 10.0 feet - SAME:** trace gravel up to 1/4".		CN	
2330								
	15	4 4 5	11	107	**@ 15.0 feet - SAME**			
2325								
	20	3 5 7			**@ 20.0 feet - SAME:** no gravel, stiff.			
2320								
	25	6 7 8	10	110	**@ 25.0 feet - Silty SAND (SM):** brown, fine to medium-grained, little mica grains, few quartz grains, moist, medium dense.		CN	
2315								

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LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-2**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/25/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2343.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
				2 3 4			@ **30.0 feet - <u>Sandy SILT (ML):</u>** olive-brown, trace medium and coarse sand, moist, medium stiff.			
2310										
	35			5 5 8	12	110	@ **35.0 feet - SAME:** trace calcium carbonate, stiff.		CN	
2305										
	40			8 15 29			**<u>Older Allluvium (Qoa):</u>** @ **40.0 feet - SAME:** some calcium carbonate, few mica grains, hard.			
2300										
	45			32 50/3"	11	111	@ **45.0 feet - <u>SILT (ML):</u>** brown, some mica grains, trace calcium carbonate, trace orange staining, moist, hard.			
2295										
	50			29 50/6"			@ **50.0 feet - <u>Silty SAND (SM):</u>** grey-brown, fine to coarse-grained, some mica grains, trace granitic gravel up to 3/4", damp, very dense.			
							Total Depth: 51.0 feet. No groundwater. No caving. Hole backfilled on 6/25/2019.			

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LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-3**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/24/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2334.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
					@ Surface - TOPSOIL			
					Younger Alluvium (Qa):			
					@ 0.5 feet - Sandy SILT (ML): olive-brown, some mica grains, some calcium carbonate, trace rootlets, damp.			
		2 3 3	10	96	**@ 2.5 feet - SAME:** medium stiff.		EI	
2330	5	3 2 4	14	104	**@ 5.0 feet - SAME:** trace gravel up to 1/8", moist.			
		6 8 8	5	114	**@ 7.5 feet - Silty SAND (SM):** olive-brown, fine to coarse-grained, some gravel up to 1/4", some mica grains, moist, medium dense.		GS	
2325	10	8 7 8	6	111	**@ 10.0 feet - SAME**		CN	
2320	15	10 10 11	11	104	**@ 15.0 feet - SAME:** some gravel up to 1.0".		GS	
2315	20	10 7 7			**@ 20.0 feet - SAME:** some gravel up to 1/2".			
2310	25	8 10 14	6	109	**@ 25.0 feet - SAME**			
2305								

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KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-3**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/24/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2334.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
				7 13 22			@ **30.0 feet - Silty fine SAND (SM):** grey-brown, fine-grained, some mica grains, moist, dense.			
2300										
	35			50/6"	11	106	**Older Alluvium (Qoa):** @ **35.0 feet - SAME:** very dense.			
2295										
	40			22 50/3"			@ **40.0 feet - SAME:** olive.			
2290										
	45			23 50/3"	16	105	@ **45.0 feet - SAME:** grey-brown.			
2285										
	50			34 50/4"			@ **50.0 feet - SAME**			
							Total depth: 50.9 feet. No groundwater. No caving. Hole backfilled on 6/24/2019.			

HS BA TP 18060-01, JACK RABBIT TRAIL.GPJ Kling Consulting Group, Inc. 7/26/19

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-4**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/24/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2308.0**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
					@ Surface - TOPSOIL			
					Younger Alluvium (Qa):			
					@ 0.5 feet - Sandy SILT (ML): grey-brown, trace calcium carbonate, trace rootlets, damp.			
2305		3 5 6	5	101	**@ 2.5 feet - SAME:** medium stiff.		DS	
	5	4 5 5	8	108	**@ 5.0 feet - SAME:** moist.			
2300		4 4 7	8	106	**@ 7.5 feet - SAME**			
	10	5 5 9	8	109	**@ 10.0 feet - SAME:** some calcium carbonate.			
2295								
	15	8 9 11	6	110	**@ 15.0 feet - Silty SAND (SM):** brown, fine to medium-grained, some mica grains, damp, medium dense.		CN	
2290								
	20	3 7 8			**@ 20.0 feet - Silty fine SAND (SM):** olive-brown, fine-grained, some mica grains, moist, medium dense.			
2285								
	25	5 8 9	7	107	**@ 25.0 feet - Silty SAND (SM):** olive-brown, fine to medium-grained, some mica grains, some quartz grains, moist, medium dense.		CN	
2280								

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-4**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/24/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2308.0**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
2275	35			9 10 11			@ **30.0 feet - Silty gravelly SAND (SM):** olive-brown, fine to coarse-grained, gravel up to 1/2", some mica grains, some quartz grains, moist, medium dense.			
2270	40			6 7 7	12	107	@ **35.0 feet - SAME:** gravel up to 1/4", trace feldspar grains.			
2265	45			11 11 12			@ **40.0 feet - SAME:** trace clay.			
2260	50			7 15 13	4	114	@ **45.0 feet - Gravelly silty SAND (SP):** grey-brown, fine to coarse-grained, gravel up to 1/2", some mica grains, some quartz grains, damp, medium dense.			
				14 50/6"			**Older Alluvium (Qoa):** @ **50.0 feet - Silty fine SAND (ML):** olive, some calcium carbonate veins, some mica grains, moist, very hard.			

Total depth: 51.0 feet.
No groundwater.
No caving.
Hole backfilled on 6/24/2019.

HS BA TP 18060-01, JACK RABBIT TRAIL.GPJ Kling Consulting Group, Inc. 7/26/19

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-5**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/24/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2261.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
2260	0				**@ Surface - TOPSOIL**			
					Younger Alluvium (Qa):			
					@ 0.5 feet - Sandy SILT (ML): brown, some calcium carbonate, little rootlets, damp.			
		4 3 4	6	99	**@ 2.5 feet - SAME:** medium stiff.		EI	
2255	5	3 3 3	10	98	**@ 5.0 feet - SAME:** moist.			
		1 2 4	9	99	**@ 7.5 feet - SAME:** trace gravel up to 1/4".			
2250	10	7 8 9	5	100	**@ 10.0 feet - Sandy CLAY (CL):** brown, some calcium carbonate, little rootlets, damp, stiff.		CN AL	
2245	15	10 11 11	5	117	**@ 15.0 feet - SAME:** trace calcium carbonate, damp, very stiff.			
2240	20	6 6 9			**@ 20.0 feet - SAME:** stiff.			
2235	25	10 12 12	3	115	**@ 25.0 feet - Silty clayey SAND (SM):** brown, fine to coarse-grained, some gravel up to 1/2", trace mica grains, damp, medium dense.		CN	

HS BA TP 18060-01, JACK RABBIT TRAIL.GPJ Kling Consulting Group, Inc. 7/26/19

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-5**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/24/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2261.0**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
2230				4 10 14			**@ 30.0 feet - Silty SAND (SM):** brown, fine to coarse-grained, some gravel up to 3/4", little mica grains, moist, medium dense.			
2225	35			6 6 10	15	109	**@ 35.0 feet - Silty SAND (SM):** olive-brown, fine to medium-grained, trace clay, trace mica grains, moist, medium dense.			
2220	40			9 15 19			▽ **@ 40.0 feet - Silty SAND (SM):** grey-brown, fine to coarse-grained, some mica grains, some gravel up to 1/4", moist, dense.			
2215	45			2 7 11	16	113	▼ **@ 45.0 feet - Clayey SAND (SC):** olive-brown, fine to medium-grained, some mica grains, wet, stiff.			
2210	50			6 8 10			**@ 50.0 feet - Silty SAND (SM):** brown, fine to coarse-grained, some mica grains, trace clay, wet, medium dense.			

Total depth: 51.5 feet.
Groundwater encountered at 40.0 feet.
No caving.
Hole backfilled on 6/24/2019.

HS BA TP 18060-01, JACK RABBIT TRAIL.GPJ Kling Consulting Group, Inc. 7/26/19

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-6**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/24/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2276.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
2275					**@ Surface - TOPSOIL**			
					Younger Alluvium (Qa):			
					@ 0.5 feet - Sandy SILT (ML): brown, trace mica grains, trace rootlets, moist.			
		2 1 2	11	96	**@ 2.5 feet - SAME:** medium stiff.		DS	
	5	2 2 3	11	102	**@ 5.0 feet - SAME**			
2270								
		3 4 6	9	110	**@ 7.5 feet - Silty SAND (SM):** olive-brown, fine-grained, some mica grains, trace clay, moist, loose.		GS	
	10	3 4 6	12	106	**@ 10.0 feet - Silty SAND (SM):** olive-brown, fine to coarse-grained, some mica grains, moist, loose.			
2265								
	15	14 17 24	11	112	**@ 15.0 feet - Silty gravelly SAND (SM):** brown, fine to coarse-grained, some feldspar grains, some mica grains, moist, dense.		CN	
2260								
	20	9 11 14			**@ 20.0 feet - Sandy SILT (ML):** brown, some mica grains, trace quartz grains, moist, very stiff.			
2255								
	25	25 50	4	114	**Older Alluvium (Qoa):** **@ 25.0 feet - Gravelly silty SAND (SP):** light brown, fine to coarse-grained, gravel up to 1.0", damp, very dense.		CN	
2250								

HS BA TP 18060-01, JACK RABBIT TRAIL.GPJ Kling Consulting Group, Inc. 7/26/19

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-6**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/24/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2276.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
2245				20 50			@ **30.0 feet - SAME:** trace quartz grains, moist.			
2240	35			9 41 50/3"	20	111	@ **35.0 feet - <u>Silty sandy CLAY (CL)</u>:** olive, some orange staining, moist, hard.			
2235	40			20 30 50			@ **40.0 feet - <u>Silty fine SAND (ML)</u>:** olive-brown, some mica grains, moist, hard.			
2230	45			37 50/3"	11	141	@ **45.0 feet - <u>Silty SAND (SM)</u>:** brown, fine to medium-grained, some mica grains, trace clay, moist, very dense.			
	50			50			@ **50.0 feet - SAME:** fine-grained, no clay.			@ 50.0 feet - Poor recovery
							Total depth: 50.5 feet. No groundwater No caving. Hole backfilled on 6/24/2019.			

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-7**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/26/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2238.0**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
					@ Surface - TOPSOIL			
					Younger Alluvium (Qa):			
					@ 0.5 feet - SILT (ML): olive-brown, trace mica grains, trace rootlets, moist.			
2235		2 2 4	11	99	**@ 2.5 feet - SAME:** medium stiff.			
	5	4 4 5	12	106	**@ 5.0 feet - SAME:** few calcium carbonate stringers.			
2230		4 4 6	11	106	**@ 7.5 feet - SAME:** few mica grains, no rootlets.			
	10	3 3 5	13	112	**@ 10.0 feet - Sandy SILT (ML):** olive-brown, little mica grains, trace calcium carbonate, moist, medium stiff.			
2225								
	15	3 3 3	12	106	**@ 15.0 feet - SAME:** trace clay.		CN	
2220								
	20	2 2 4			**@ 20.0 feet - Sandy SILT (ML):** brown, few mica grains, trace clay, moist, medium stiff.			
2215								
	25	4 4 6	12	116	**@ 25.0 feet - SAME:** little mica grains, trace gravel up to 1/4".			
2210								

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-7**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/26/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2238.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
				9 8 7			@ **30.0 feet - Sandy SILT (ML):** olive-brown, little quartz grains, trace quartz gravel up to 3/4", trace clay, moist, stiff.			
2205	35			6 6 8	15	113	@ **35.0 feet - Sandy SILT (ML):** olive-brown, little mica grains, few clay, moist, stiff.		CN	
2200	40			4 6 10			@ **40.0 feet - Silty CLAY (CL):** grey-brown, few mica grains, moist, very stiff.			
2195	45			14 24 41	16	120	**Older Alluvium (Qoa):** @ **45.0 feet - Clayey sandy SILT (ML):** olive, fine sand, few mica grains, moist, hard.			
2190	50			12 14 20			@ **50.0 feet - SAME**			
							Total depth: 51.5 feet. Groundwater encountered at 48.0 feet. No caving. Hole backfilled on 6/26/2019.			

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-8**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/26/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2295.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
					@ Surface - TOPSOIL			
					Younger Alluvium (Qa):			
					@ 0.5 feet - Sandy SILT (ML): grey-brown, fine to medium sand, trace gravel up to 1/4", damp.			
		3 3 4	8	104	**@ 2.5 feet - SAME:** medium stiff.			
2290	5	3 4 5	9	110	**@ 5.0 feet - Sandy SILT (ML):** grey-brown, few calcium carbonate stringers, trace mica grains, trace clay, moist, medium stiff.			
		3 4 5	10	110	**@ 7.5 feet - SAME**			
2285	10	4 4 5	11	107	**@ 10.0 feet - Sandy SILT (ML):** olive-brown, few calcium carbonate stringers, trace mica grains, trace clay, moist, medium stiff.			
2280	15	4 4 5	8	105	**@ 15.0 feet - SAME**		CN	
2275	20	4 4 4			**@ 20.0 feet - SAME:** trace gravel up to 3/4", no calcium carbonate.			
2270	25	4 8 8	11	115	**@ 25.0 feet - SAME:** damp, stiff.		CN	

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-8**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/26/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2295.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
		8 8 7			**@ 30.0 feet - Silty fine SAND (SM):** brown, fine-grained, trace mica grains, trace gravel up to 1/8", moist, medium dense.			
2260	35	7 10 12	5	114	**@ 35.0 feet - Silty gravelly SAND (SP):** grey-brown, fine to medium-grained, gravel up to 1/4", moist, medium dense.		GS	
2255	40	4 4 6			**@ 40.0 feet - Sandy SILT (ML):** olive-brown, fine to medium sand, moist, stiff.		AL	
2250	45	18 31 50/3"	5	110	**Older Alluvium (Qoa):** **@ 45.0 feet - Silty SAND (SM):** grey-brown, fine to coarse-grained, few quartz grains, damp, very dense.			
2245	50	50			**@ 50.0 feet - SAME**			
					Total depth: 50.5 feet. No groundwater. No caving. Hole backfilled on 6/26/2019.			

HS BA TP 18060-01, JACK RABBIT TRAIL.GPJ Kling Consulting Group, Inc. 7/26/19

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-9**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/26/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2239.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
					@ Surface - TOPSOIL			
					Younger Alluvium (Qa):			
					@ 0.5 feet - Sandy SILT (ML): brown, few quartz grains, few mica grains, damp.			
		3 4 6	9	109	**@ 2.5 feet - SAME:** medium stiff.		DS	
2235	5	3 4 5	12	101	**@ 5.0 feet - Sandy SILT (ML):** olive-brown, few calcium carbonate stringers, few mica grains, moist, medium stiff.			
2230	10	4 5 8	10	110	**@ 7.5 feet - SAME:** little calcium carbonate, few gravel up to 1/2", stiff.			
		6 8 9	7	98	**@ 10.0 feet - SILT (ML):** brown, some calcium carbonate, damp, stiff.		CN	
2225	15	10 17 17	5	117	**@ 15.0 feet - Sandy SILT (ML):** brown, trace feldspar grains, damp, very stiff.		CN	
2220	20	6 5 11			**@ 20.0 feet - Sandy SILT (ML):** olive-brown, little quartz grains, little feldspar grains, trace granitic gravel up to 3/4", moist, very stiff.			
2215	25	7 7 7	4	114	**@ 25.0 feet - SAME:** brown, gravel up to 1/2", little mica grains, stiff.			
2210								

HS BA TP 18060-01, JACK RABBIT TRAIL.GPJ Kling Consulting Group, Inc. 7/26/19

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-9**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/26/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2239.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
				3 4 4			@ **30.0 feet - Sandy SILT (ML):** olive-brown, moist, medium stiff.			
2205										
	35			5 6 9	9	111	@ **35.0 feet - SAME:** trace clay, stiff.		CN	
2200										
	40			3 4 5			@ **40.0 feet - Silty SAND (SM):** brown, fine-grained with trace medium sand, trace mica grains, moist, loose.			
2195										
	45			6 6 9	10	109	@ **45.0 feet - SAME:** trace gravel up to 1/4", medium dense.			
2190										
	50			9 20 27			**Older Alluvium (Qoa):** @ **50.0 feet - Silty SAND (SM):** olive-brown, fine to coarse-grained, trace gravel up to 1/2", trace mica grains, trace quartz grains, moist, dense.			

Total depth: 51.5 feet.
No groundwater.
No caving.
Hole backfilled on 6/26/2019.

HS BA TP 18060-01, JACK RABBIT TRAIL.GPJ Kling Consulting Group, Inc. 7/26/19

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-10**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/26/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2258.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
					@ Surface - TOPSOIL			
					Younger Alluvium (Qa):			
					@ 0.5 feet - Sandy SILT (ML): olive-brown, trace clay, trace mica grains, moist.			
2255		2 7 6	9	80	**@ 2.5 feet - SAME:** stiff.		EI	
	5	3 3 3	14	106	**@ 5.0 feet - Sandy SILT (ML):** olive-brown, few calcium carbonate stringers, few mica grains, trace clay, moist, medium stiff.			
2250		3 3 5	12	104	**@ 7.5 feet - SAME**			
	10	2 3 5	16	102	**@ 10.0 feet - SAME**			
2245								
	15	4 5 8	6	104	**@ 15.0 feet - Silty SAND (SM):** brown, fine to coarse-grained, few mica grains, damp, medium dense.		CN	
2240								
	20	5 6 4			**@ 20.0 feet - SAME:** trace gravel up to 1/4", loose.			
2235								
	25	5 5 7	10	100	**@ 25.0 feet - Silty SAND (SM):** brown, fine-grained with trace medium and coarse sand, some mica grains, damp, loose.		CN	
2230								

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KB-10**
Project Number:	**18060-01**	Driller:	**Cal Pac Drilling**
Date Drilled:	**6/26/19**	Drill Type:	**Hollow Stem**
Logged By:	**DKL**	Hammer Wt. / Drop:	**140lb / 30in**
		Ground Elev. [ft]:	**2258.0**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
2225				9 13 9			**@ 30.0 feet - Silty SAND (SM):** grey-brown, fine to medium-grained with few coarse sand, little mica grains, few gravel up to 3/4", damp, medium dense.			
	35			7 9 16	8	106	**@ 35.0 feet - Silty gravelly SAND (SP):** grey-brown, fine to coarse-grained, gravel up to 1/2", some quartz grains, little feldspar grains, little mica grains, damp, medium dense.			
2220										
	40			17 20 14			**@ 40.0 feet - SAME:** gravel up to 1.0", dense.			
2215										
	45			7 9 9	8	108	**@ 45.0 feet - Silty fine SAND (SM):** olive-brown, fine-grained, trace gravel up to 1/4", trace quartz grains, trace mica grains, moist, medium dense.			
2210										
	50			3 5 5			**@ 50.0 feet - SAME:** loose.			
							Total depth: 51.5 feet. No groundwater. No caving. Hole backfilled on 6/26/2019.			

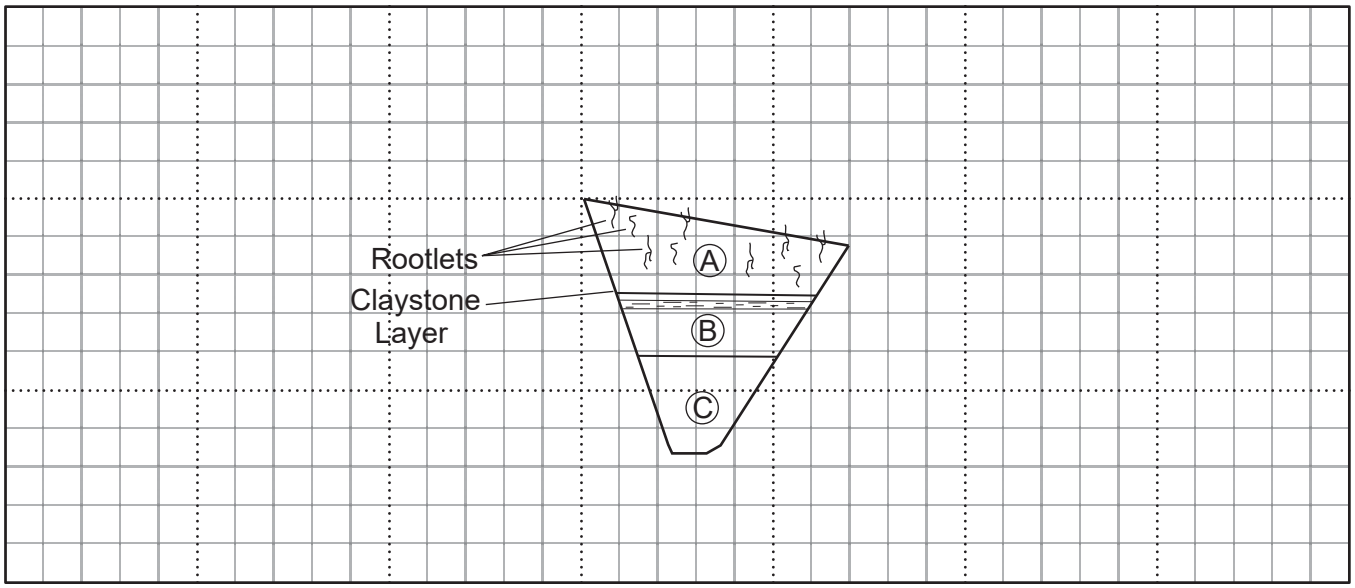
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LOG OF EXPLORATORY TEST PIT

Project:	**Jack Rabbit trenches**	Test Pit No.:	**TP-1**
Project Number:	**18060-01**	Contractor:	**Bob Turner**
Date Drilled:	**7/8/19**	Backhoe:	**John Deere 410K**
Logged By:	**DKL**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	Geologic Notes	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests
0							**(A)** **@ Surface - TOPSOIL**		
							(B)<u>San Timoteo Formation (Tst):</u> **@ 2.0 feet - <u>SILTSTONE:</u>** olive-grey, severely weathered, closely fractured, weak, one 3" interbedded layer of polished claystone, calcium carbonate-rich, trace rootlets.		
5							**(C)** **@ 4.0 feet - <u>SILTSTONE:</u>** olive, severely weathered, moderately fractured, weak, some calicum carbonate.		
							Total depth: 6.0 feet No groundwater. No caving. Trench backfilled with spoils on 7/8/2019.		



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Scale: H 5 [ft]
V 5 [ft]

Pit Orientation: N 79 W
Natural Slope Angle: ~10

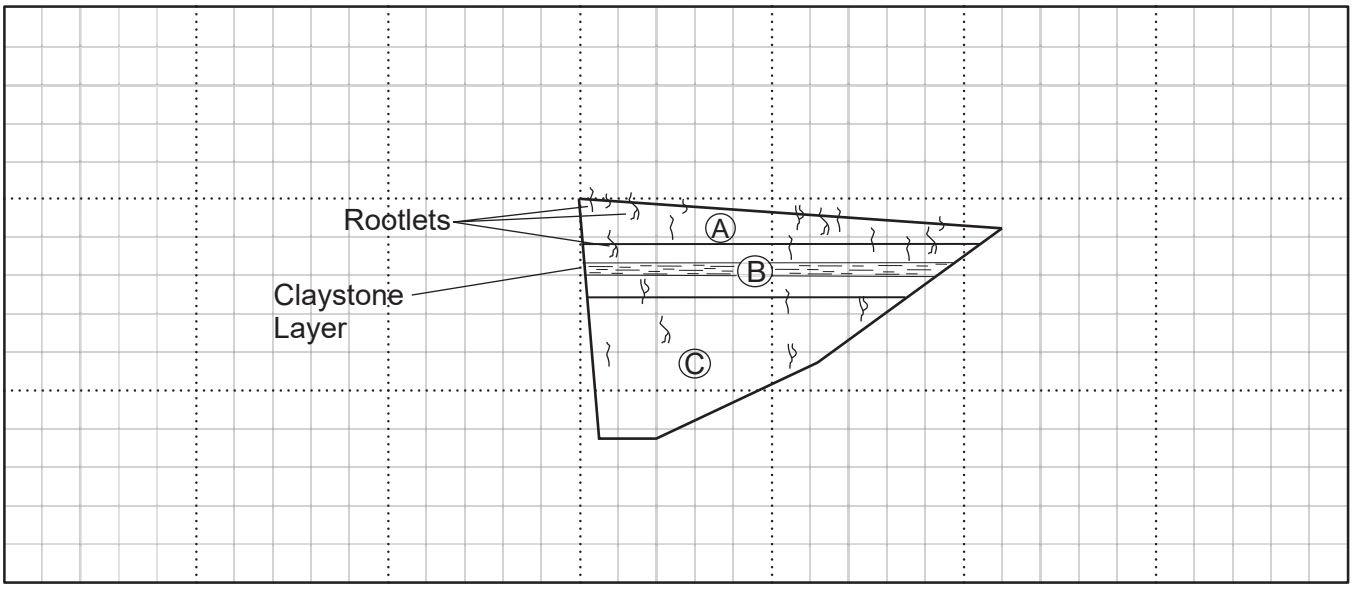
B - Bedding Plane
J - Joint
C - Contact
F - Fault
S - Shear

LOG OF EXPLORATORY TEST PIT

Project:	**Jack Rabbit trenches**	Test Pit No.:	**TP-2**
Project Number:	**18060-01**	Contractor:	**Bob Turner**
Date Drilled:	**7/8/19**	Backhoe:	**John Deere 410K**
Logged By:	**DKL**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	Geologic Notes	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests
							(A) **@ Surface - TOPSOIL**		
							(B)<u>San Timoteo Formation (Tst):</u> **@ 1.0 foot - <u>Clayey SILTSTONE:</u>** olive-brown, severely weathered, closely fractured, weak, calcium carbonate-rich, some rootlets. **(C)** **@ 2.5 feet - <u>Sandy SILTSTONE:</u>** olive-brown, severely weathered, closely fractured, weak, calcium carbonate-rich, trace rootlets.		
5			11	108			Total depth: 6.0 feet. No groundwater. No caving. Trench backfilled with spoils on 7/8/2019.		AL CN



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Scale: H 5 [ft]
V 5 [ft]

Pit Orientation: N 49 E
Natural Slope Angle: ~4

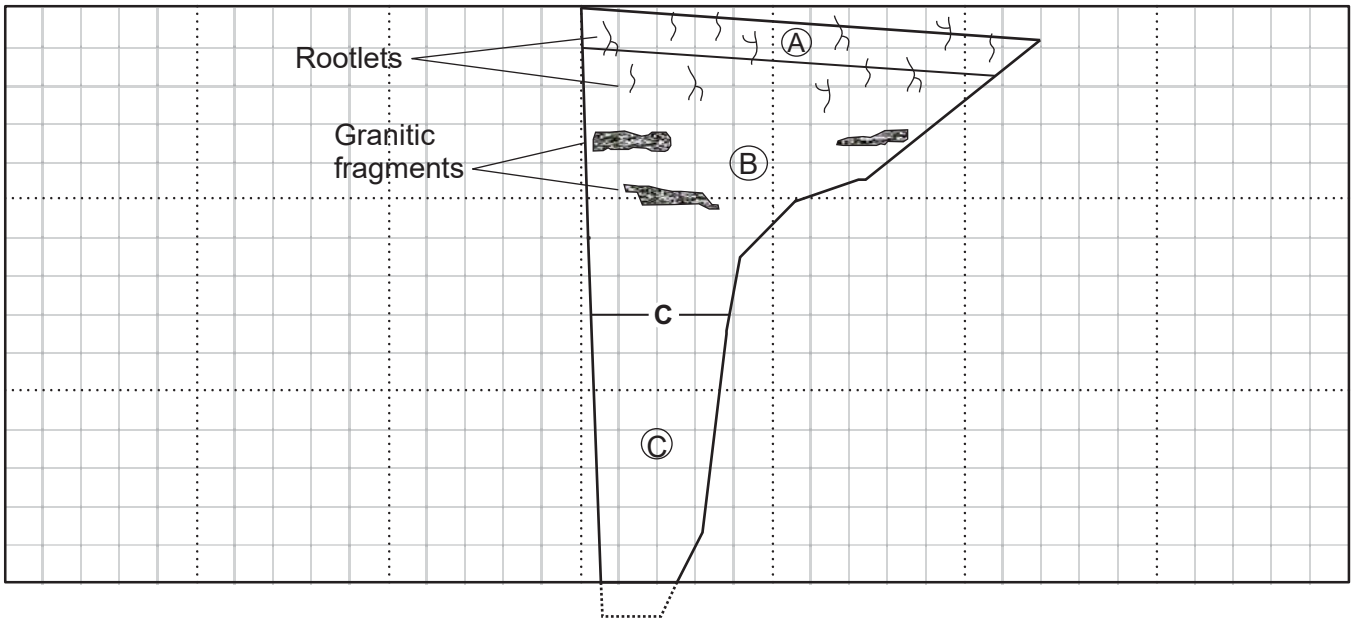
B - Bedding Plane
J - Joint
C - Contact
F - Fault
S - Shear

LOG OF EXPLORATORY TEST PIT

Project:	**Jack Rabbit trenches**	Test Pit No.:	**TP-3**
Project Number:	**18060-01**	Contractor:	**Bob Turner**
Date Drilled:	**7/8/19**	Backhoe:	**John Deere 410K**
Logged By:	**DKL**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	Geologic Notes	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests
5				12	114		**(A)** **@ Surface - TOPSOIL** **(B)Colluvium (Col):** **@ 1.0 foot - Silty gravelly SAND (SM):** brown, fine to coarse-grained, gravel up to 1.0", some calcium carbonate, trace granitic fragments, porous, moist.		DS RV
10							**(C)San Timoteo Formation (Tst):** **@ 8.0 feet - Silty SANDSTONE:** brown, fine-grained, severely weathered, moderately fractured, weak, some calcium carbonate.		
15							Total depth: 16.0 feet. No groundwater. No caving. Trench backfilled with spoils on 7/8/2019.		



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Scale: H 5 [ft]
V 5 [ft]

Pit Orientation: N 42 W
Natural Slope Angle: ~4

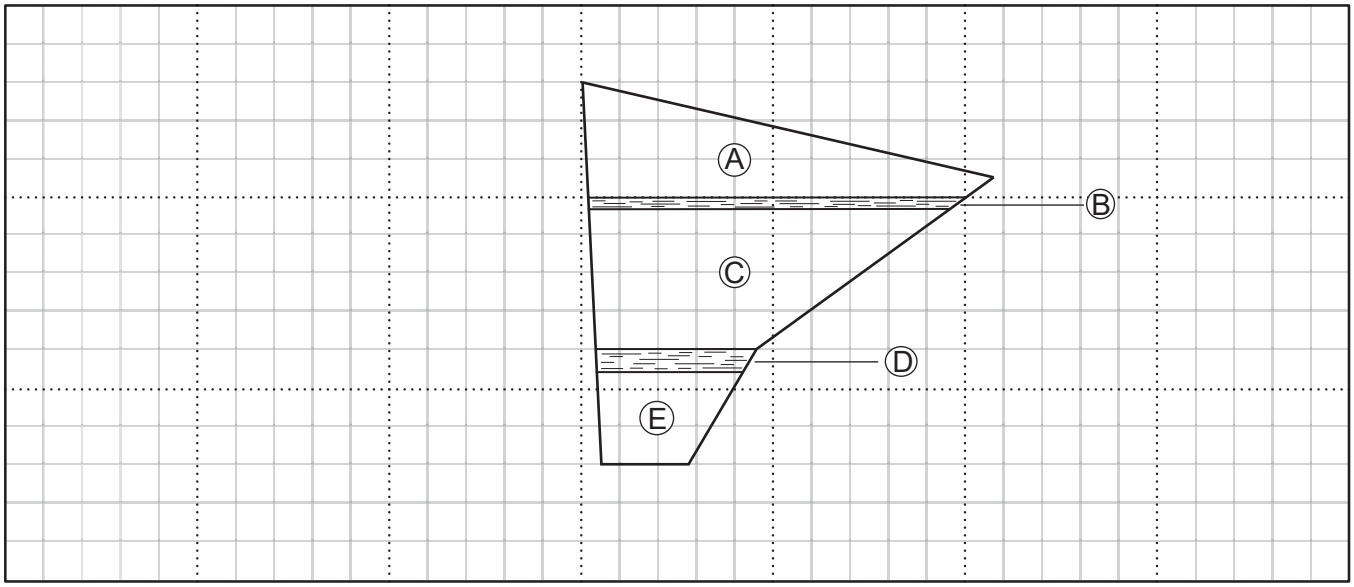
B - Bedding Plane
J - Joint
C - Contact
F - Fault
S - Shear

LOG OF EXPLORATORY TEST PIT

Project:	**Jack Rabbit trenches**	Test Pit No.:	**TP-4**
Project Number:	**18060-01**	Contractor:	**Bob Turner**
Date Drilled:	**7/8/19**	Backhoe:	**John Deere 410K**
Logged By:	**DKL**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	Geologic Notes	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests
5				21	106	@ 3.0 feet - B: N 55 W, 8 SW	**(A)San Timoteo Formation (Tst):** **@ Surface - SILTSTONE:** light brown, severely weathered, moderately fractured, weak, calcium carbonate-rich. **(B)** **@ 3.0 feet - CLAY Layer:** dark olive-brown, severely weathered, closely fractured, weak, highly polished, sheared, oxidized, slightly plastic. **(C)** **@ 3.3 feet - Sandy SILTSTONE:** grey-brown, severely weathered, closely fractured, weak, calcium carbonate-rich. **(D)** **@ 7.0 feet - CLAY Layer:** dark olive-brown, severely weathered, closely fractured, weak, highly polished, sheared, oxidized, medium plasticity. **(E)** **@ 7.6 feet - Clayey sandy SILTSTONE:** dark brown, severely weathered, moderately fractured, moderately strong. Total depth: 10.0 feet. No groundwater. No caving. Trench backfilled with spoils on 7/8/2019.		
10									



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Scale: H 5 [ft]
V 5 [ft]

Pit Orientation: N 57 W
Natural Slope Angle: ~13

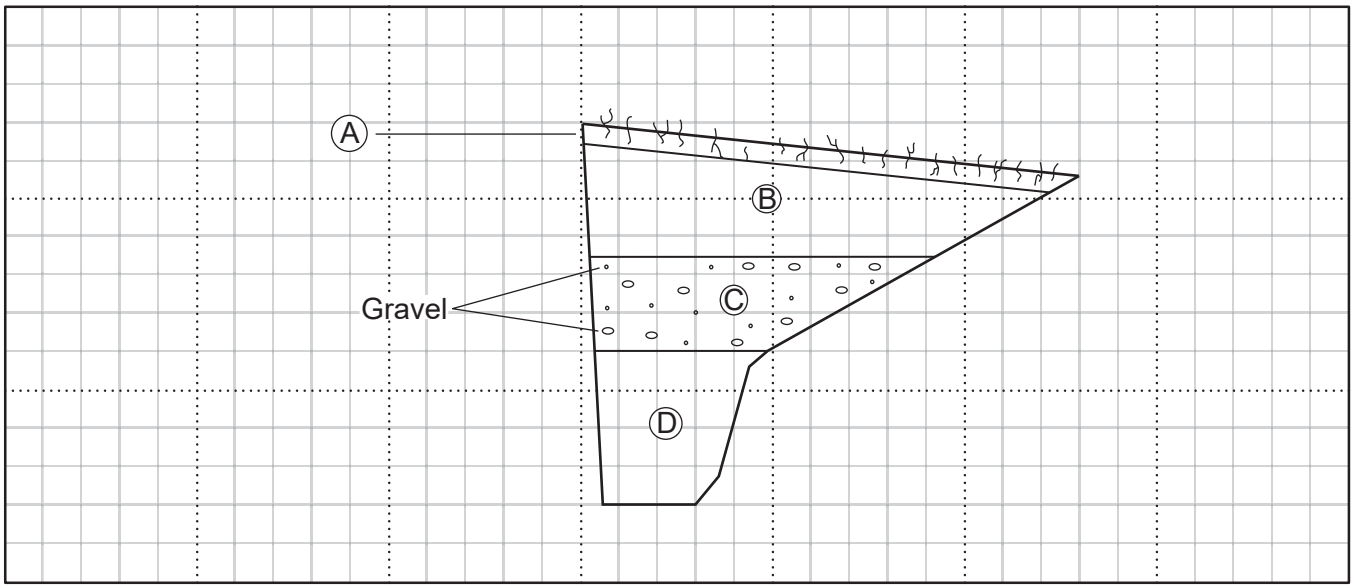
B - Bedding Plane
J - Joint
C - Contact
F - Fault
S - Shear

LOG OF EXPLORATORY TEST PIT

Project:	**Jack Rabbit trenches**	Test Pit No.:	**TP-5**
Project Number:	**18060-01**	Contractor:	**Bob Turner**
Date Drilled:	**7/8/19**	Backhoe:	**John Deere 410K**
Logged By:	**DKL**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	Geologic Notes	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests
5				4	112		**(A)** **@ Surface - TOPSOIL** **(B)<u>San Timoteo Formation (Tst):</u>** **@ 0.5 feet - <u>Silty SANDSTONE:</u>** grey-brown, fine to medium-grained with few gravel up to 1/2", severely weathered, closely fractured, weak, some calcium carbonate. **(C)** **@ 3.5 feet - <u>CONGLOMERATE:</u>** grey-brown, fine to coarse-grained with gravel up to 3" and cobbles up to 5", severely weathered, moderately fractured, weak, some calcium carbonate. **(D)** **@ 6.0 feet - <u>Silty SANDSTONE:</u>** brown, fine to medium-grained, severely weathered, moderately fractured, weak, some calcium carbonate.		
10							Total depth: 10.0 feet. No groundwater. No caving. Trench backfilled with spoils on 7/8/2019.		



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Scale: H 5 [ft]
V 5 [ft]

Pit Orientation: N 5 W
Natural Slope Angle: ~6

B - Bedding Plane
J - Joint
C - Contact
F - Fault
S - Shear

LOG OF EXPLORATORY TEST PIT

Project:	**Jack Rabbit trenches**	Test Pit No.:	**TP-6**
Project Number:	**18060-01**	Contractor:	**Bob Turner**
Date Drilled:	**7/8/19**	Backhoe:	**John Deere 410K**
Logged By:	**DKL**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Depth [ft] | Graphic Log | Sample Type | Blows/6" | Moisture Content [%] | Dry Density, [pcf] | Geologic Notes

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

SOIL DESCRIPTION and CLASSIFICATION (USCS)

Pocket Pen. [tsf] | Lab Tests

5

10

(A)
@ Surface - TOPSOIL

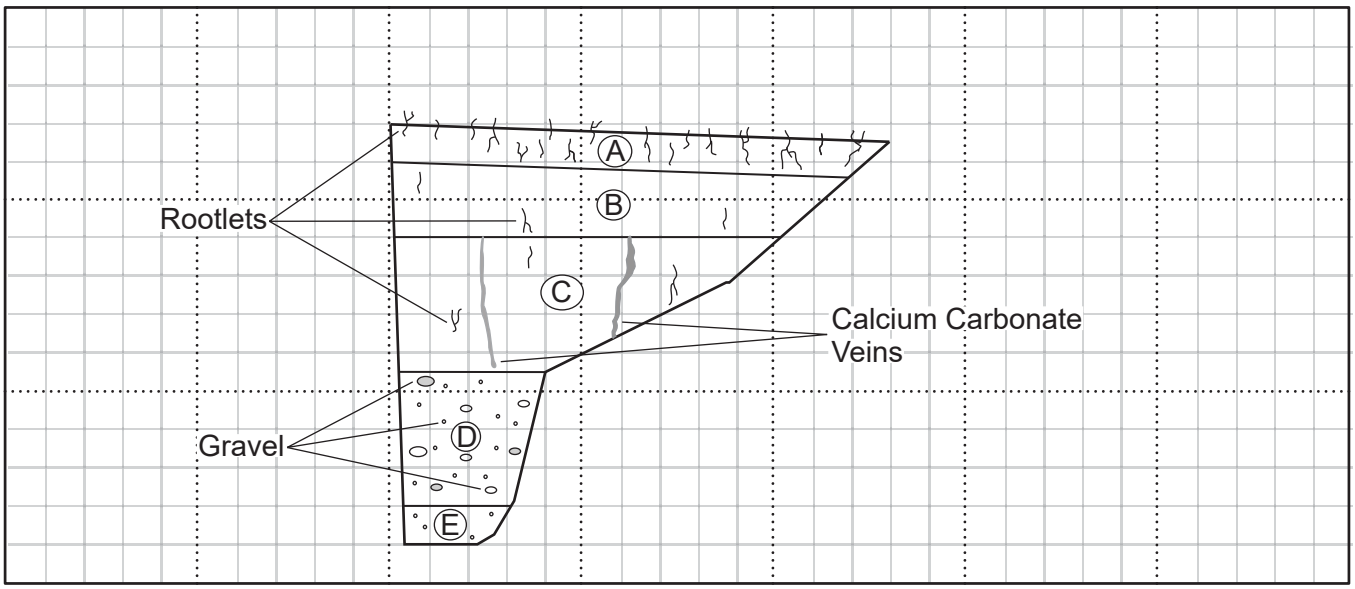
(B)San Timoteo Formation (Tst):
@ 1.0 foot - Sandy clayey SILTSTONE: olive-brown, severely weathered, moderately fractured, weak, trace calcium carbonate, trace rootlets.

(C)
@ 3.0 feet - Sandy SILTSTONE: olive-brown, severely weathered, moderately fractured, weak, few calcium carbonate veins, trace rootlets.

(D)
@ 6.5 feet - CONGLOMERATE: light brown, fine to coarse-grained with clasts up to 6.0", severely weathered, moderately fractured, weak, some calcium carbonate.

(E)
@ 10.0 feet - Silty SANDSTONE: grey-brown, fine to coarse-grained, severely weathered, moderately fractured, weak, trace gravel up to 1/2".

Total depth: 11.0 feet.
No groundwater.
No caving.
Trench backfilled with spoils on 7/8/2019.



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Scale: H 5 [ft] V 5 [ft]

Pit Orientation: N 19 E
Natural Slope Angle: ~2

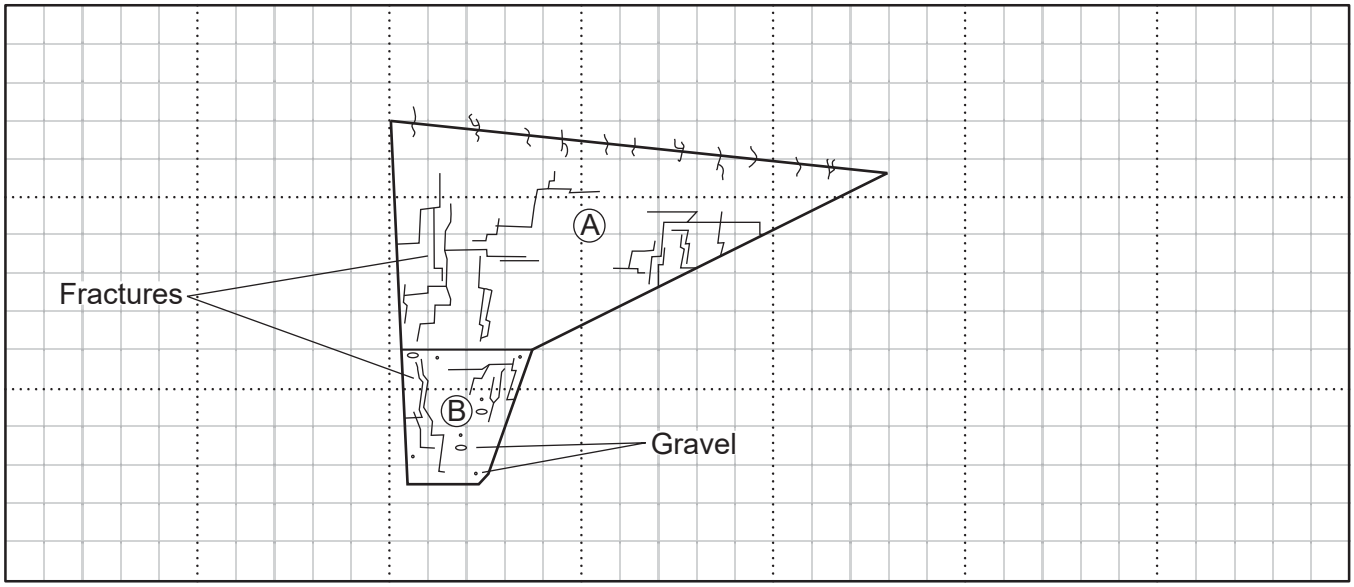
B - Bedding Plane
J - Joint
C - Contact
F - Fault
S - Shear

LOG OF EXPLORATORY TEST PIT

Project:	**Jack Rabbit trenches**	Test Pit No.:	**TP-7**
Project Number:	**18060-01**	Contractor:	**Bob Turner**
Date Drilled:	**7/9/19**	Backhoe:	**John Deere 410K**
Logged By:	**DKL**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	Geologic Notes	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests
5							**(A)<u>San Timoteo Formation (Tst):</u>** **@ Surface - <u>Silty SANDSTONE:</u>** grey-brown, fine-grained, severely weathered, very closely fractured, friable, calcium carbonate-rich. **(B)** **@ 6.0 feet - <u>Silty gravelly SANDSTONE:</u>** grey-brown, fine to medium-grained, severely weathered, closely fractured, weak, gravel up to 2.0", calcium carbonate-rich. Total depth: 9.5 feet. No groundwater. No caving. Trench backfilled with spoils on 7/9/2019.		DS EI SU



Scale: H 5 [ft] V 5 [ft]

Pit Orientation: N 40 E
Natural Slope Angle: ~6

B - Bedding Plane
J - Joint
C - Contact
F - Fault
S - Shear

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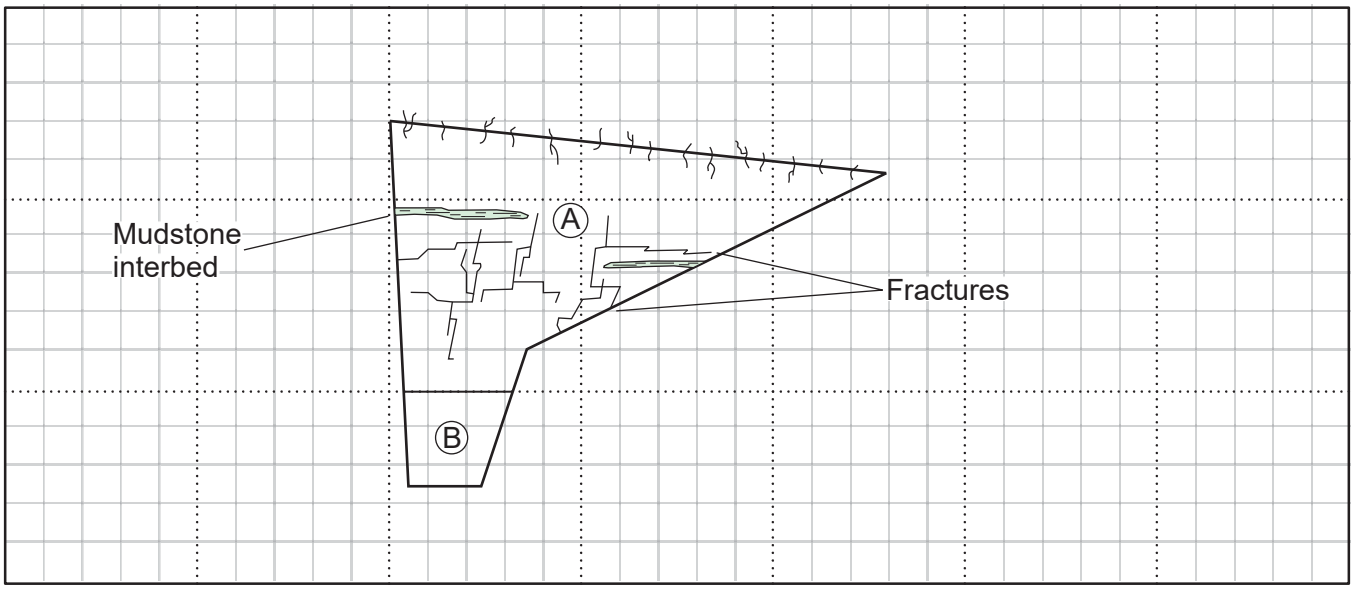
HS BA TP 18060-01, JACK RABBIT TRENCHES.GPJ Kling Consulting Group, Inc. 7/31/19

LOG OF EXPLORATORY TEST PIT

Project:	**Jack Rabbit trenches**	Test Pit No.:	**TP-8**
Project Number:	**18060-01**	Contractor:	**Bob Turner**
Date Drilled:	**7/9/19**	Backhoe:	**John Deere 410K**
Logged By:	**DKL**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Depth [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	Geologic Notes	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests
5				10			**(A)San Timoteo Formation (Tst):** **@ Surface - Sandy SILTSTONE:** grey-brown, severely weathered, very closely fractured, weak, calcium carbonate-rich, trace mudstone interbedded. **(B)** **@ 7.0 feet - Sandy SILTSTONE:** grey-brown, severely weathered, closely fractured, weak, some calcium carbonate. Total depth: 9.5 feet. No groundwater. No caving. Trench backfilled with spoils on 7/9/2019.		



Scale: H 5 [ft] V 5 [ft]

Pit Orientation: N 24 W
Natural Slope Angle: ~6

B - Bedding Plane
J - Joint
C - Contact
F - Fault
S - Shear

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APPENDIX C

SUMMARY OF LABORTORY TEST PROCEDURES AND RESULTS

APPENDIX C

LABORATORY TEST PROCEDURES

VISUAL CLASSIFICATION OF SOILS

As a part of the routine laboratory soil testing, the soil samples are visually classified in accordance with the Unified Soil Classification System by experienced laboratory technicians. If necessary, in order to verify the visual classification, selected samples are classified utilizing the results of Standard Classification tests performed in accordance - with ASTM D2487-00.

MOISTURE AND DENSITY TESTING

Moisture content and dry density determinations are performed on relatively undisturbed samples obtained from the exploratory excavation. The results of these tests are presented in the boring logs. Where applicable, only moisture content is determined from "undisturbed" or disturbed samples.

MAXIMUM DENSITY TESTS

The maximum dry density and optimum moisture content of typical materials is determined in accordance with ASTM D1557 (five layers). The results of these tests are presented graphically as an attachment in this Appendix.

CONSOLIDATION TESTS

Consolidation tests were performed in general accordance with ASTM D2435-96 on selected, relatively undisturbed, ring samples recovered from the exploratory excavations. Samples are placed in a consolidometer where increasing load increments are applied in geometric progression. The soil specimen is placed between porous stones that allow water to infiltrate and flow on the soil sample. During the loading stages prior to the addition of water, the soil sample is sealed in order to prevent evaporation of soil water. The load increment where water was added is indicated on the consolidation pressure curves. The percent consolidation for each load cycle is recorded as the ratio of the amount of vertical compression to the original 1-inch height. The time-rate of consolidation was also performed on each soil specimen tested. The results of this test are presented graphically as an attachment in this Appendix.

HYDRO-COLLAPSE TESTS

Hydro-collapse tests were performed in general accordance with ASTM D5333-03 on selected undisturbed ring samples to determine the hydro-collapse potential. In general, the procedure entailed the application of normal stress roughly equal to the sum of the existing overburden and final fill load prior to inundating the sample with water. The resulting change in height of the sample indicates the collapse potential. The results of these tests are presented graphically as an attachment in the appropriate Appendix.

APPENDIX C

LABORATORY TEST PROCEDURES (Continued)

DIRECT SHEAR TESTS

Direct shear tests were performed in accordance to ASTM D3080-98 on selected remolded and/or undisturbed samples which were pre-soaked for a minimum of 24 hours. The samples were then tested under various normal loads; a different specimen being used for each normal load. The samples were sheared in a motor driven, strain-controlled direct shear testing apparatus at a strain rate of 0.01 in. per minute. The test results are presented in the Laboratory Summary.

GRAIN SIZE DISTRIBUTION

A representative sample was dried, weighed, and soaked in water until individual soil particles were separated and then washed on the No. 200 sieve. That portion of the material retained on the No. 200 sieve was oven-dried and then run through a standard set of sieves in accordance with ASTM D422-63. The grain size distribution curves are attached to the Laboratory Summary.

EXPANSION INDEX TEST

The expansion potential of selected materials was evaluated by the Expansion Index Test, U.B.C. Standard No. 18-2. The specimen was molded under a given compactive energy and moisture content to achieve approximately 50 percent saturation. The prepared 1-inch thick by 4-inch diameter specimen was then loaded with a 144 psf surcharge and inundated with water until volumetric equilibrium is reached. The result of this test is presented in the Laboratory Summary.

SOLUBLE SULFATES

Soluble sulfate tests determined in general accordance with California Test Method No. 417 were also performed on representative samples collected during the field investigation. Soils with a sulfate concentration greater than 0.10% are considered potentially harmful to concrete and would require following the current ACI or C.B.C. for "moderate" or more severe sulfate exposure requirements. The results of this test are presented in the Laboratory Summary.

GRAIN SIZE DISTRIBUTION

A representative sample was dried, weighed, and soaked in water until individual soil particles were separated and then washed on the No. 200 sieve. That portion of the material retained on the No. 200 sieve was oven-dried and then run through a standard set of sieves in accordance with ASTM D422-63. The grain size distribution curves are attached to the Laboratory Summary.

ATTERBERG LIMITS

The Atterberg limits were performed in general accordance with ASTM D4318-00 and are used frequently in soil classification and identification. The soil descriptions defined by the United Soil Classification System (USCS) are based on these limits. Fine-grained soils are classified in the laboratory by performing several tests that define the plastic and liquid limits. The results of these tests are presented graphically as an attachment in this Appendix.

LABORATORY TEST SUMMARY

Atterberg Limits

Location	**Soil Description**	**Percent Passing #200 sieve**	**Liquid Limit**	**Plastic Limit**	**Plasticity Index**
KB-5 @ 10’	Brown Sandy Clay (CL)	N/A	30	19	11
KB-8 @ 40’	Brown Clayey Silt (CL-ML)	N/A	24	20	4
KTP-2- @ 6’	Brown Silt (ML)	N/A	30	27	3

Expansion Index and Soluble Sulfate

Location	Soil Description	Expansion Index	Soluble Sulfate (%)
KB-2 @0’-5’	Brown Clayey Sand (SC)	21	0.0009
KB-3 @0’-5’	Brown Clayey Sand (SC)	37	0.0036
KB-5 @0’-5’	Brown Clayey Sand (SC)	23	0.0030
KB-10 @0’-5’	Brown Clayey Sand (SC)	24	0.0021
TP-7 @4’-6’	Light Brown Silty Sand (SM)	1	0.0012

Direct Shear

Location	Soil Description	Cohesion	Friction angle
KB-1 @ 0-5'	Dark Brown clayey Sand (SC)	150 psf	29 degrees
KB-4 @ 0-5'	Dark Brown clayey Sand (SC)	200 psf	29 degrees
KB-6 @ 0-5'	Dark Brown clayey Sand (SC)	200 psf	29 degrees
KB-9 @ 0-5'	Dark Brown clayey Sand (SC)	150 psf	29 degrees
TP-3 @ 6’	Red Brown Sandy Clay (CL)	400	23 degrees
TP-7 @ 4-6'	Brown silty Sand (SM)	100 psf	28 degrees

* Test also plotted graphically following the tables.

R-VALUE

The suitability of selected soil samples for support of flexible pavement was evaluated by conducting stabilometer resistance (R-Value) testing. R-value testing was performed in accordance with California Standard Test Method No. 301. The results of this test are presented in the Laboratory Summary.

CORROSION TEST (BY OTHERS)
The corrosion test, including sulfate content, was performed by Anaheim Test Laboratory, and the results are presented in the attached results in this Appendix.

PROJECT NAME : JACK RABBIT TRAIL PROJECT NO: 18060-01 DATE : 15-Jul-19

BORING NUMBER : KB-5 SAMPLE NO./DEPTH : 10' TESTED BY : RB

SAMPLE DESCRIPTIONS/CLASSIFICATION : BROWN LEAN CLAY (CL)

PLASTIC LIMIT

DETERMINATION NO	1	2
DISH NO.	B	
MASS OF DISH + WET SOIL,(Gms)	23.56	
MASS OF DISH + DRY SOIL,(Gms)	21.58	
MASS OF WATER,(Gms)	1.98	
MASS OF DISH,(Gms)	10.94	
MASS OF DRY SOIL,(Gms)	10.64	
MOISTURE CONTENT,(%)	18.6	

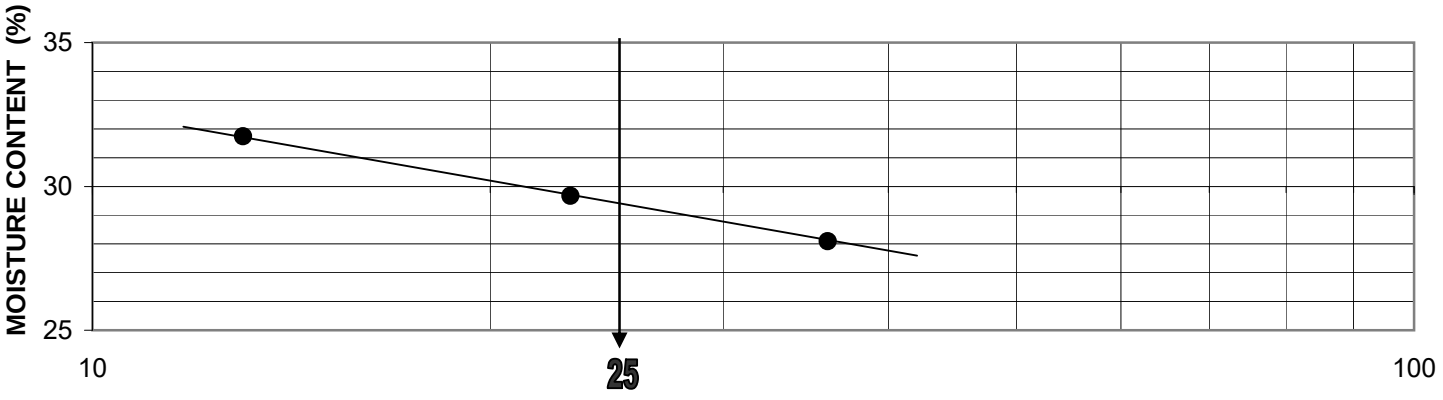
LIQUID LIMIT

DETERMINATION NO.	1	2	3
DISH NUMBER	15C	A1	8
MASS, DISH + WET SOIL,(Gms)	12.41	11.86	11.74
MASS, DISH + DRY SOIL,(Gms)	10.49	10.16	10.13
MASS OF WATER,(Gms)	1.92	1.70	1.61
MASS OF DISH,(Gms)	4.44	4.43	4.40
MOISTURE CONTENT,(%)	31.7	29.7	28.1
NUMBER OF BLOWS	13	23	36

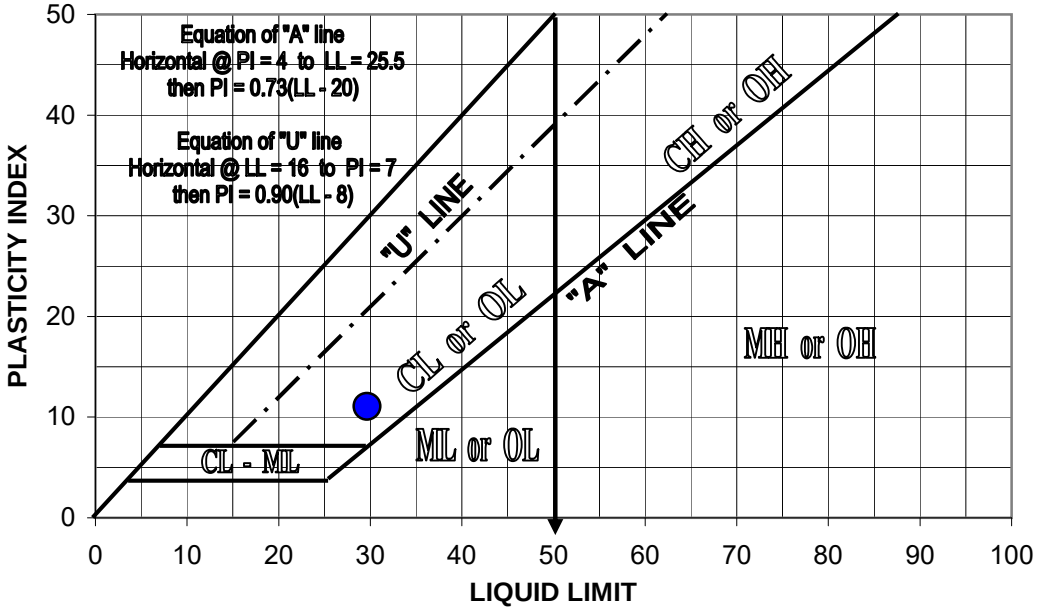
NATURAL MOISTURE CONTENT,%

0.00
#DIV/0!

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	-
LIQUID LIMIT (LL)	30
PLASTIC LIMIT (PL)	19
PLASTICITY INDEX (PI)	11
SYMBOL FROM PLASTICITY CHART	(CL)

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS :

KCG KLING Consulting Group, Inc.
18008 Sky Park Circle, Suite 250
Irvine, Ca. 92614
Tel: (949) 797-6241 Fax: (949)797-6260

ATTERBERG LIMITS

(ASTM D4318-00)

PROJECT NAME : JACK RABBIT TRAIL PROJECT NO: 18060-01 DATE : 24-Jul-19

BORING NUMBER : KB - 8 SAMPLE NO./DEPTH : 40' TESTED BY : RB

SAMPLE DESCRIPTIONS/CLASSIFICATION : BROWN CLAY TO SILT (CL/ML)

PLASTIC LIMIT

DETERMINATION NO	1	2
DISH NO.	10	
MASS OF DISH + WET SOIL,(Gms)	27.46	
MASS OF DISH + DRY SOIL,(Gms)	24.81	
MASS OF WATER,(Gms)	2.65	
MASS OF DISH,(Gms)	11.37	
MASS OF DRY SOIL,(Gms)	13.44	
MOISTURE CONTENT,(%)	19.7	

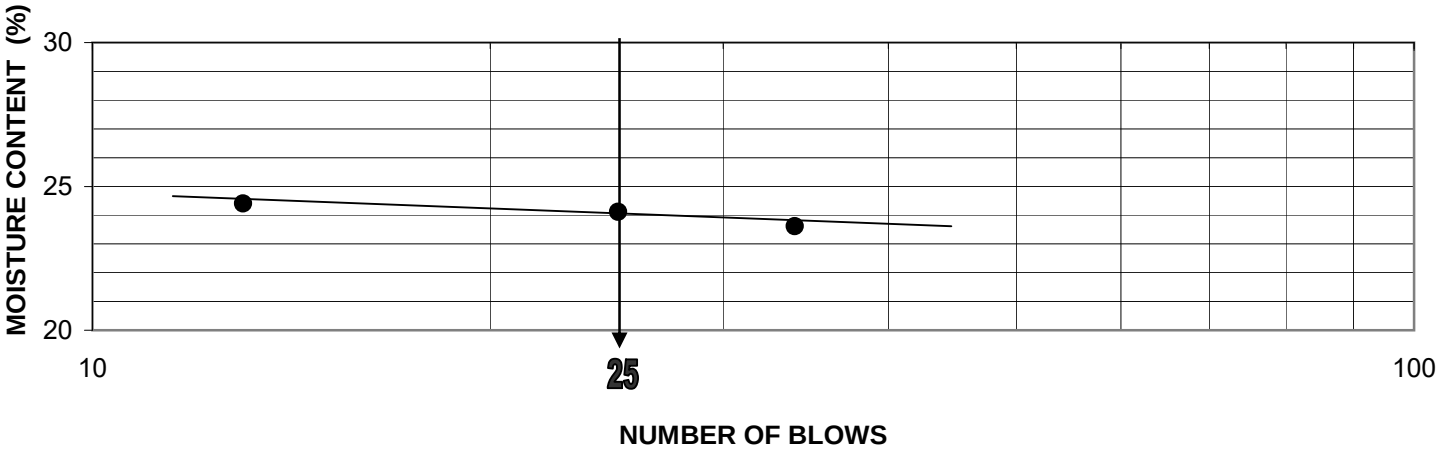
LIQUID LIMIT

DETERMINATION NO.	1	2	3
DISH NUMBER	6	8	A1
MASS, DISH + WET SOIL,(Gms)	12.00	11.84	11.60
MASS, DISH + DRY SOIL,(Gms)	10.47	10.40	10.23
MASS OF WATER,(Gms)	1.53	1.44	1.37
MASS OF DISH,(Gms)	4.20	4.43	4.43
MOISTURE CONTENT,(%)	24.4	24.1	23.6
NUMBER OF BLOWS	13	25	34

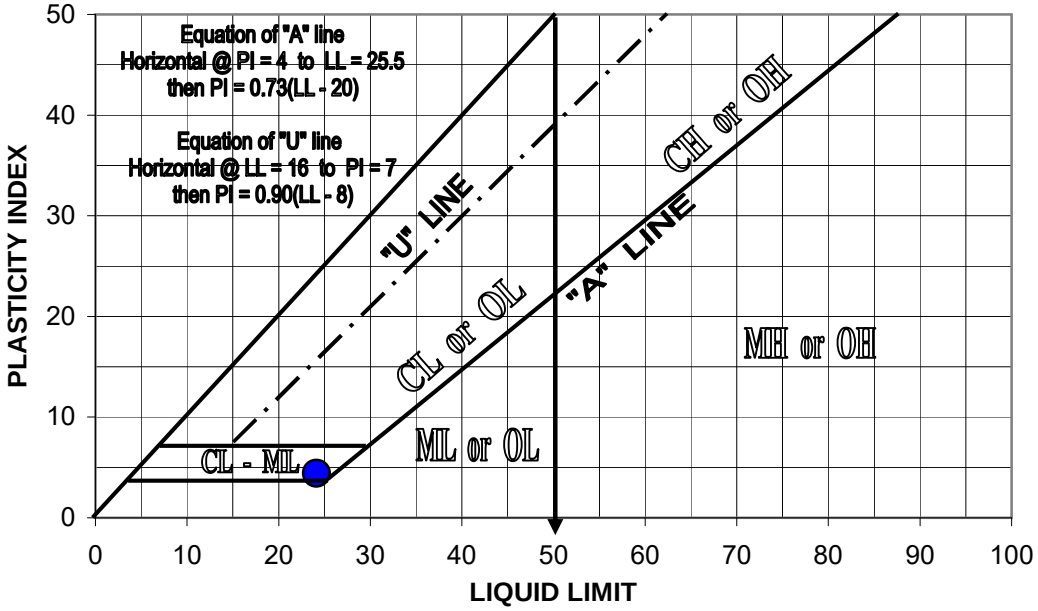
NATURAL MOISTURE CONTENT,%

0.00
#DIV/0!

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	-
LIQUID LIMIT (LL)	24
PLASTIC LIMIT (PL)	20
PLASTICITY INDEX (PI)	4
SYMBOL FROM PLASTICITY CHART	(CL/ML)

METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS :

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ATTERBERG LIMITS

(ASTM D4318-00)

PROJECT NAME : JACK RABBIT TRAIL PROJECT NO: 18060-01 DATE : 24-Jul-19

BORING NUMBER : KTP - 2 SAMPLE NO./DEPTH : 6' TESTED BY : RB

SAMPLE DESCRIPTIONS/CLASSIFICATION : OLIVE BROWN SILT (ML)

PLASTIC LIMIT

DETERMINATION NO	1	2
DISH NO.	R	
MASS OF DISH + WET SOIL,(Gms)	26.13	
MASS OF DISH + DRY SOIL,(Gms)	22.92	
MASS OF WATER,(Gms)	3.21	
MASS OF DISH,(Gms)	10.9	
MASS OF DRY SOIL,(Gms)	12.02	
MOISTURE CONTENT,(%)	26.7	

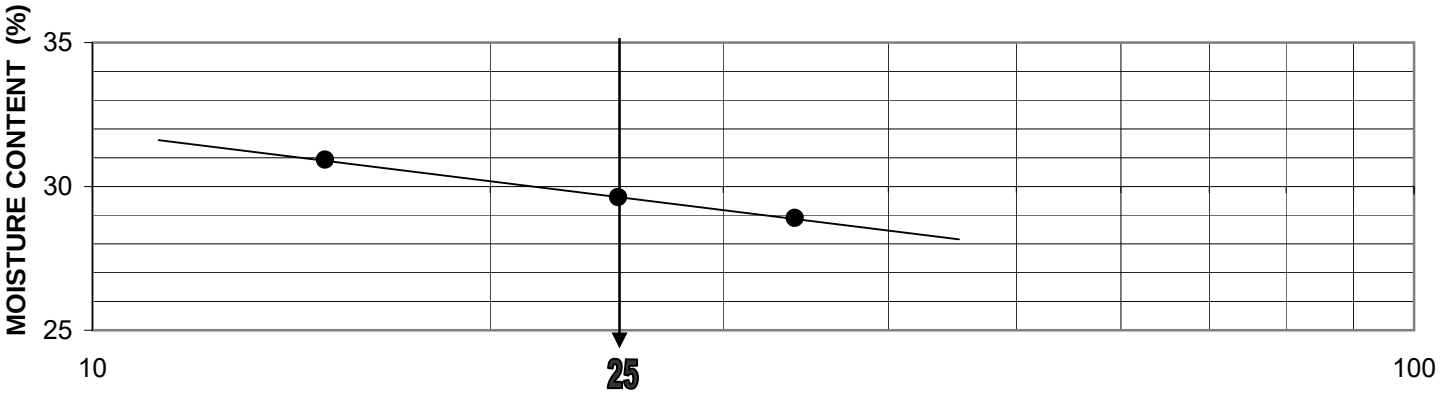
LIQUID LIMIT

DETERMINATION NO.	1	2	3
DISH NUMBER	112	12	9
MASS, DISH + WET SOIL,(Gms)	11.99	11.55	11.44
MASS, DISH + DRY SOIL,(Gms)	10.19	9.87	9.81
MASS OF WATER,(Gms)	1.80	1.68	1.63
MASS OF DISH,(Gms)	4.37	4.20	4.17
MOISTURE CONTENT,(%)	30.9	29.6	28.9
NUMBER OF BLOWS	15	25	34

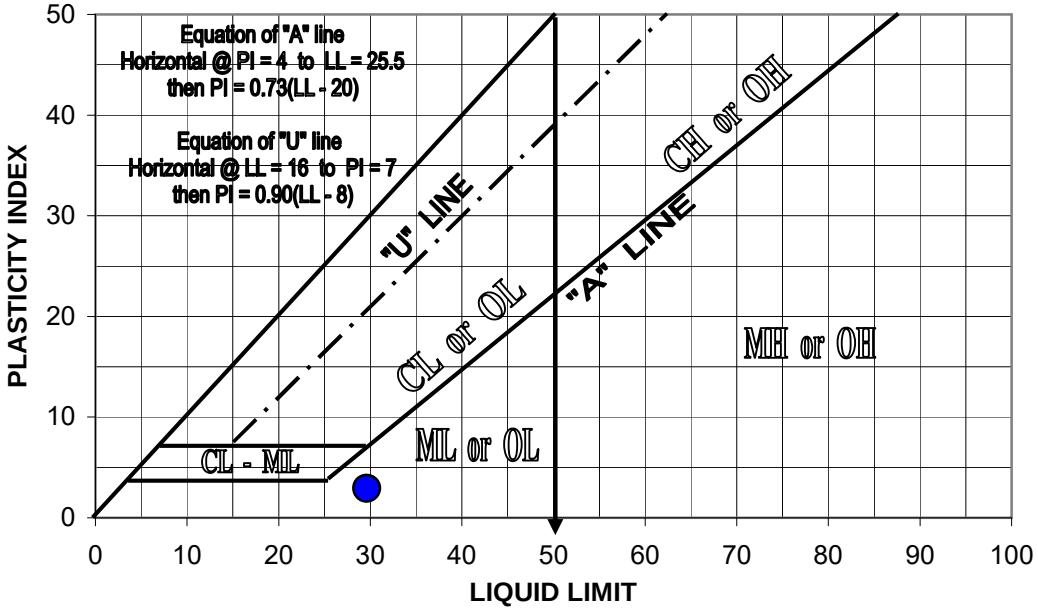
NATURAL MOISTURE CONTENT,%

0.00
#DIV/0!

FLOW CURVE



PLASTICITY CHART



RESULT SUMMARY

NATURAL MOISTURE CONTENT, (%)	-
LIQUID LIMIT (LL)	30
PLASTIC LIMIT (PL)	27
PLASTICITY INDEX (PI)	3
SYMBOL FROM PLASTICITY CHART	(ML)

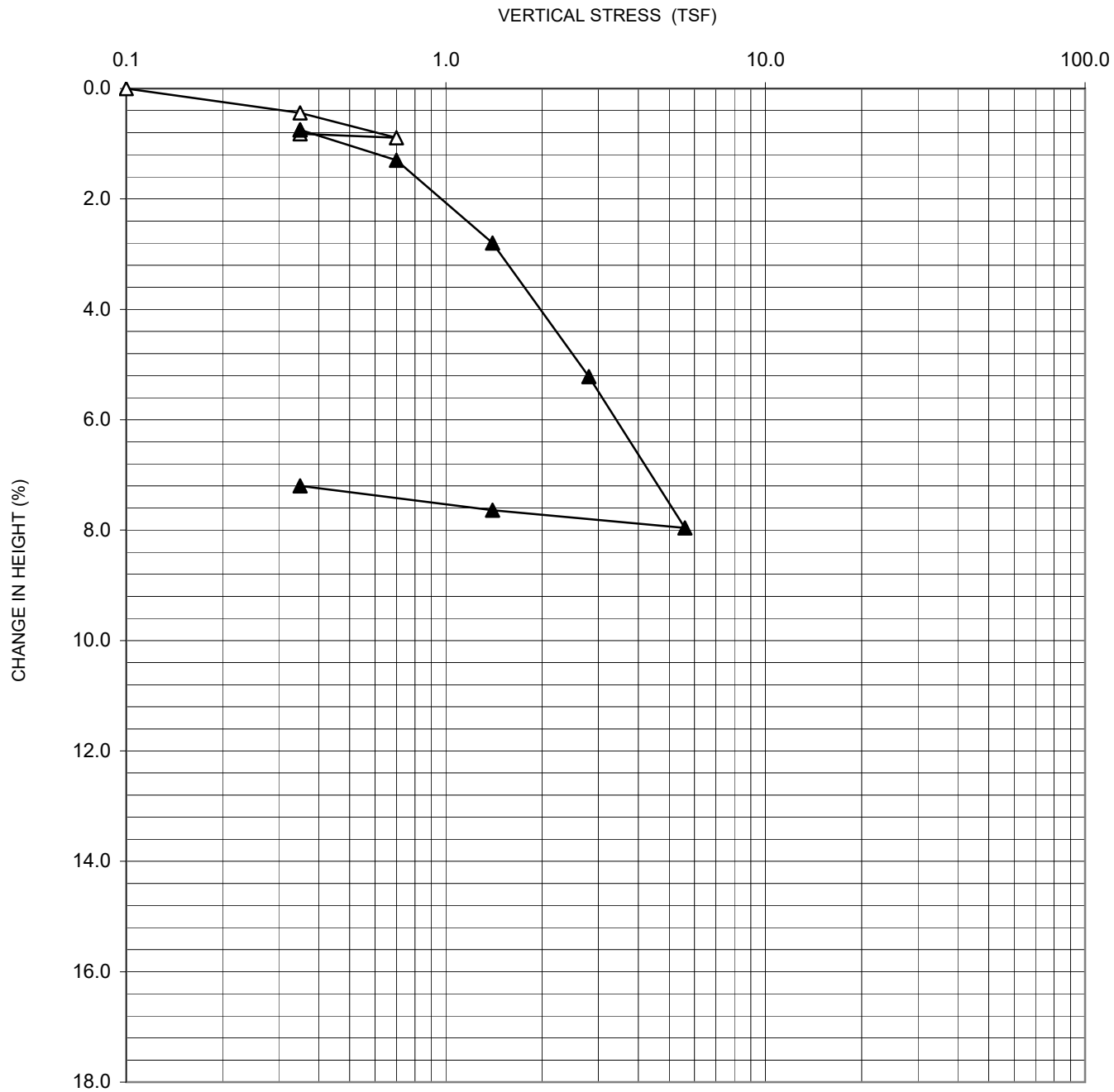
METHOD OF PREPARATION		METHOD OF LL DETERMINATION	
DRY	X	MULTIPOINT	X
WET		ONE-POINT	

REMARKS :

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ATTERBERG LIMITS

(ASTM D4318-00)



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: DK. BROWN SANDY CLAY (CL)

BORING NO./LOCATION : KB - 1 DEPTH / ELEV. : 10' LIQUID LIMIT : -

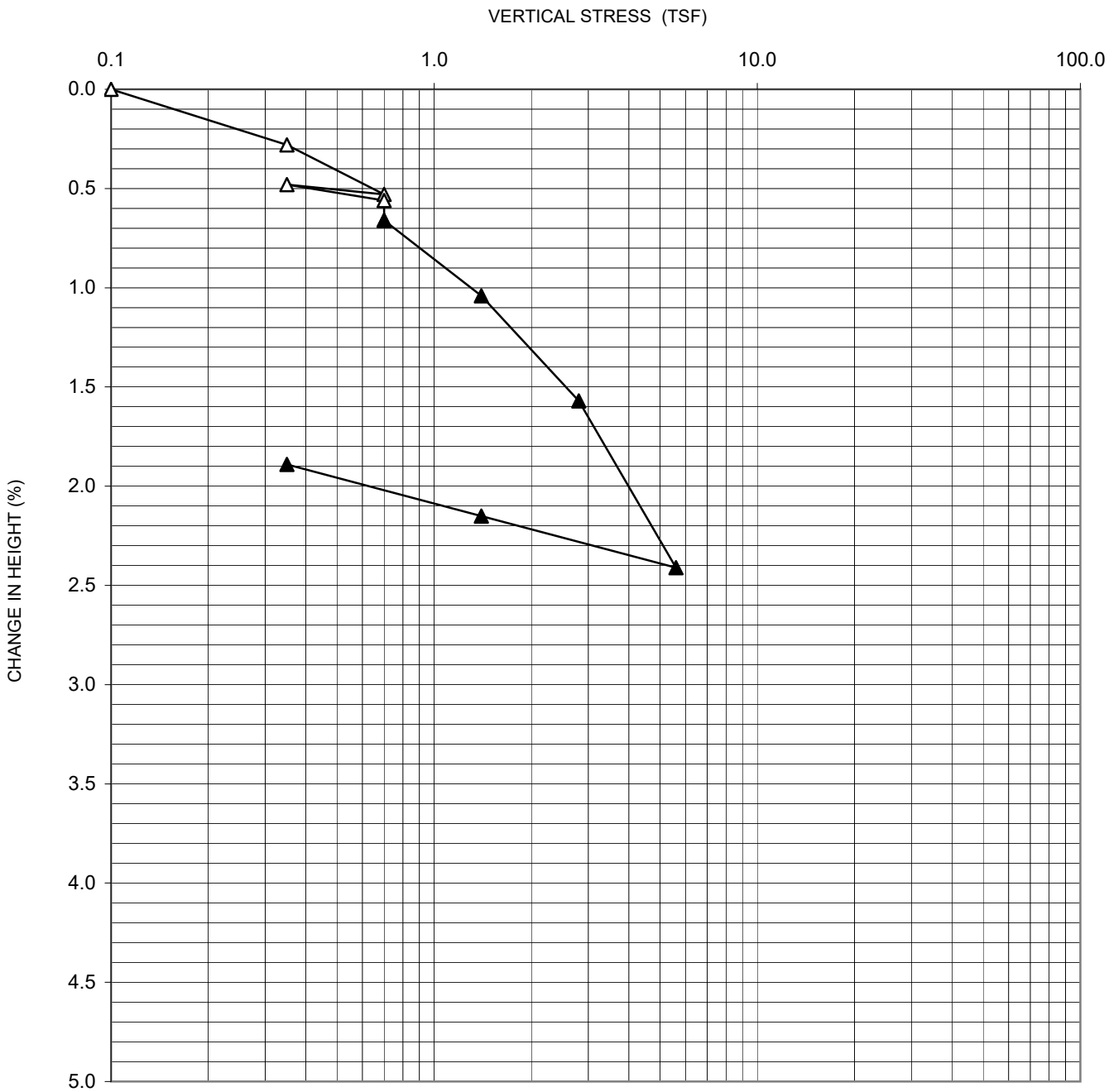
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	12.1	107.2	58.2	0.559
FINAL	0.9280	18.5	115.5	110.9	0.448

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: LT. BROWN SILTY SAND (SM)

BORING NO./LOCATION : KB - 1 DEPTH / ELEV. : 15' LIQUID LIMIT : -

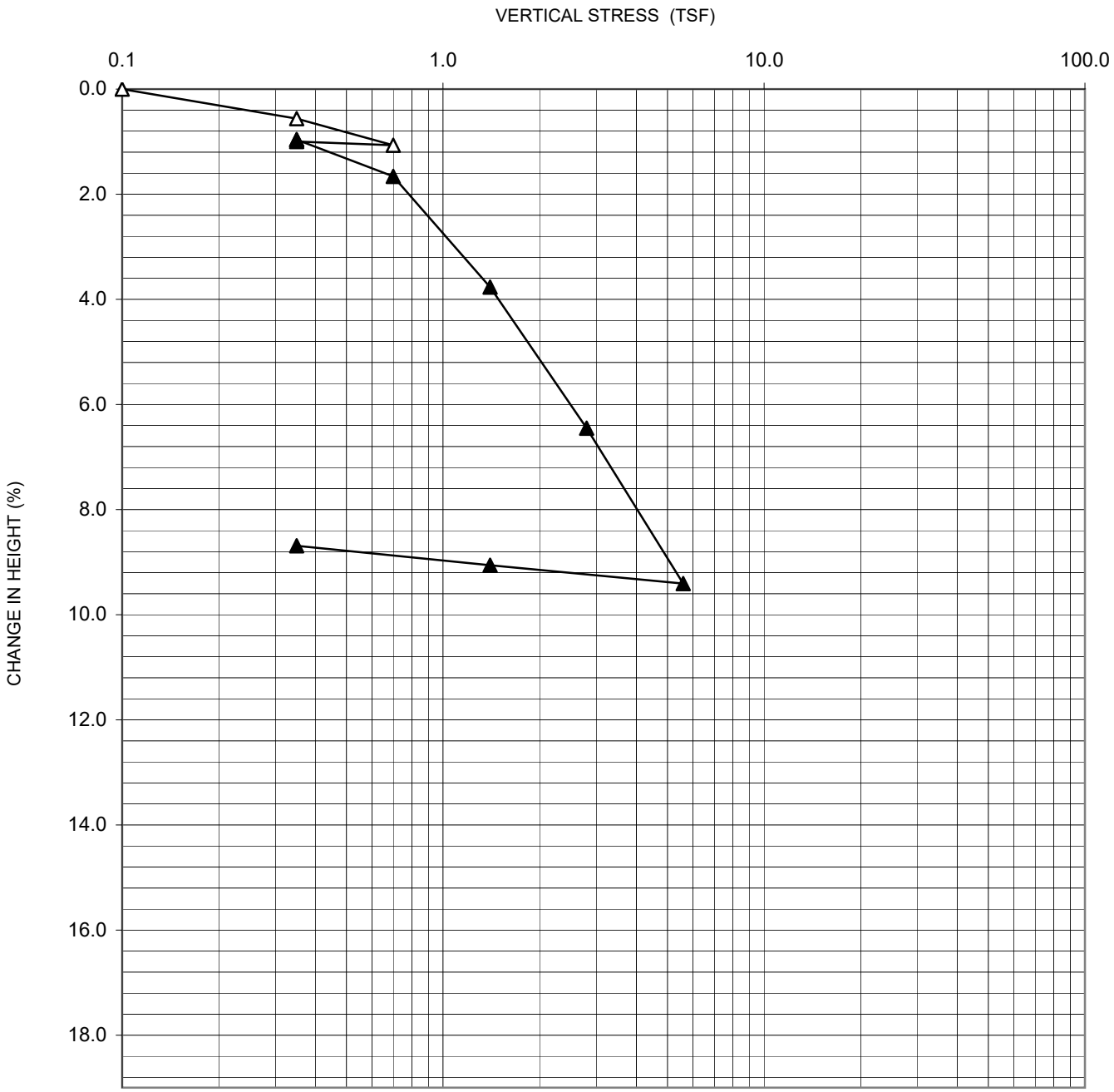
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	7.8	117.8	49.7	0.420
FINAL	0.9811	18.3	120.0	124.2	0.394

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: DK. BROWN CLAYEY SAND (SC)

BORING NO./LOCATION : KB - 2 DEPTH / ELEV. : 10' LIQUID LIMIT : -

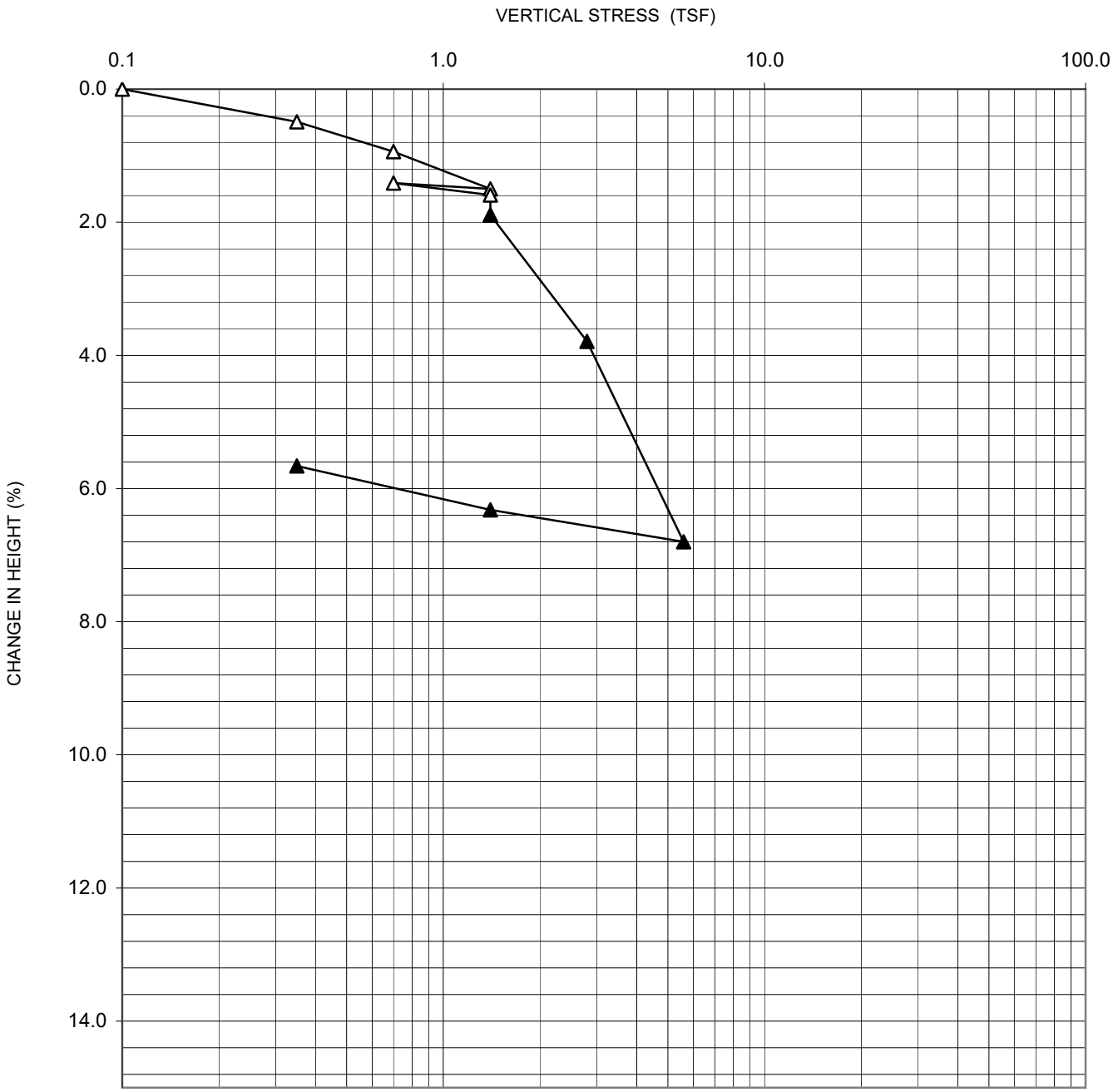
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	11.5	109.3	58.1	0.530
FINAL	0.9131	16.8	119.6	113.4	0.398

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: DK. BROWN CLAYEY SAND (SC)

BORING NO./LOCATION : KB - 2 DEPTH / ELEV. : 25' LIQUID LIMIT : -

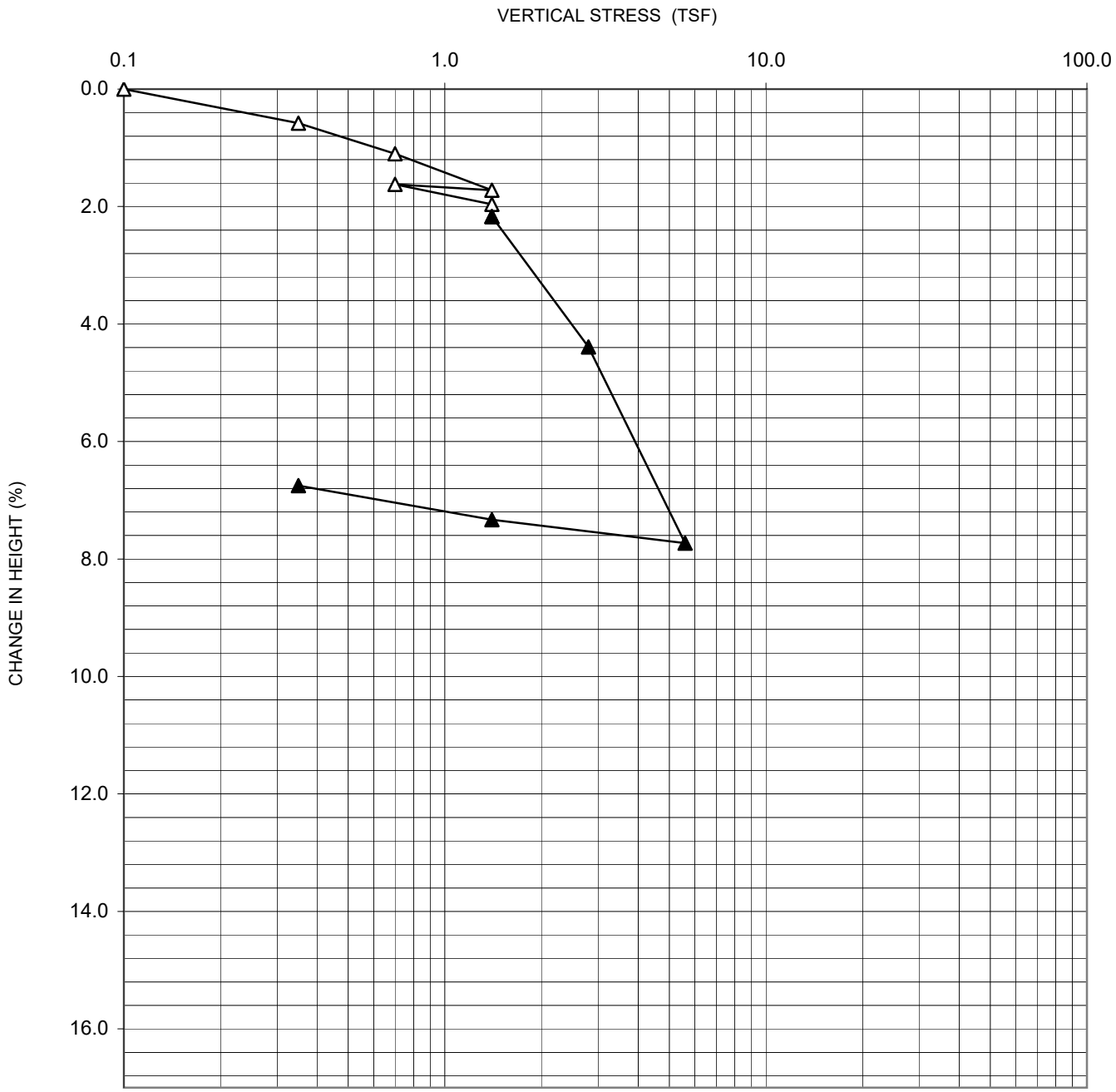
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	14.1	107.5	68.2	0.555
FINAL	0.9434	20.5	113.9	117.3	0.468

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: DK. BROWN SANDY CLAY (CL)

BORING NO./LOCATION : KB - 2 DEPTH / ELEV. : 35' LIQUID LIMIT : -

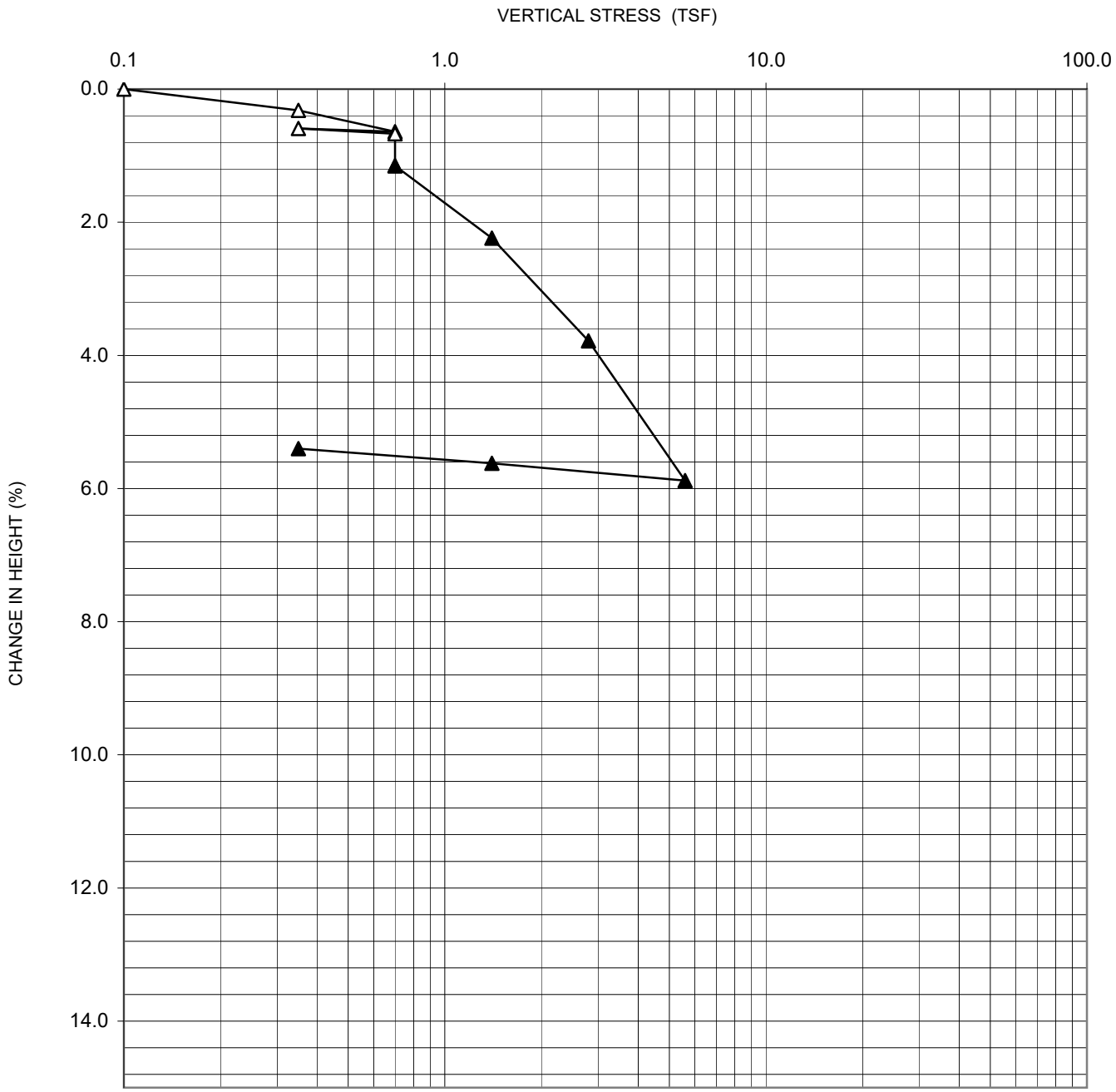
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	13.0	108.1	63.6	0.547
FINAL	0.9325	17.8	115.9	107.6	0.443

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-00 SOIL DESCRIPTIONS: BROWN SILTY SAND W/ GRAVEL (SM)

BORING NO./LOCATION : KB - 3 DEPTH / ELEV. : 10' LIQUID LIMIT : -

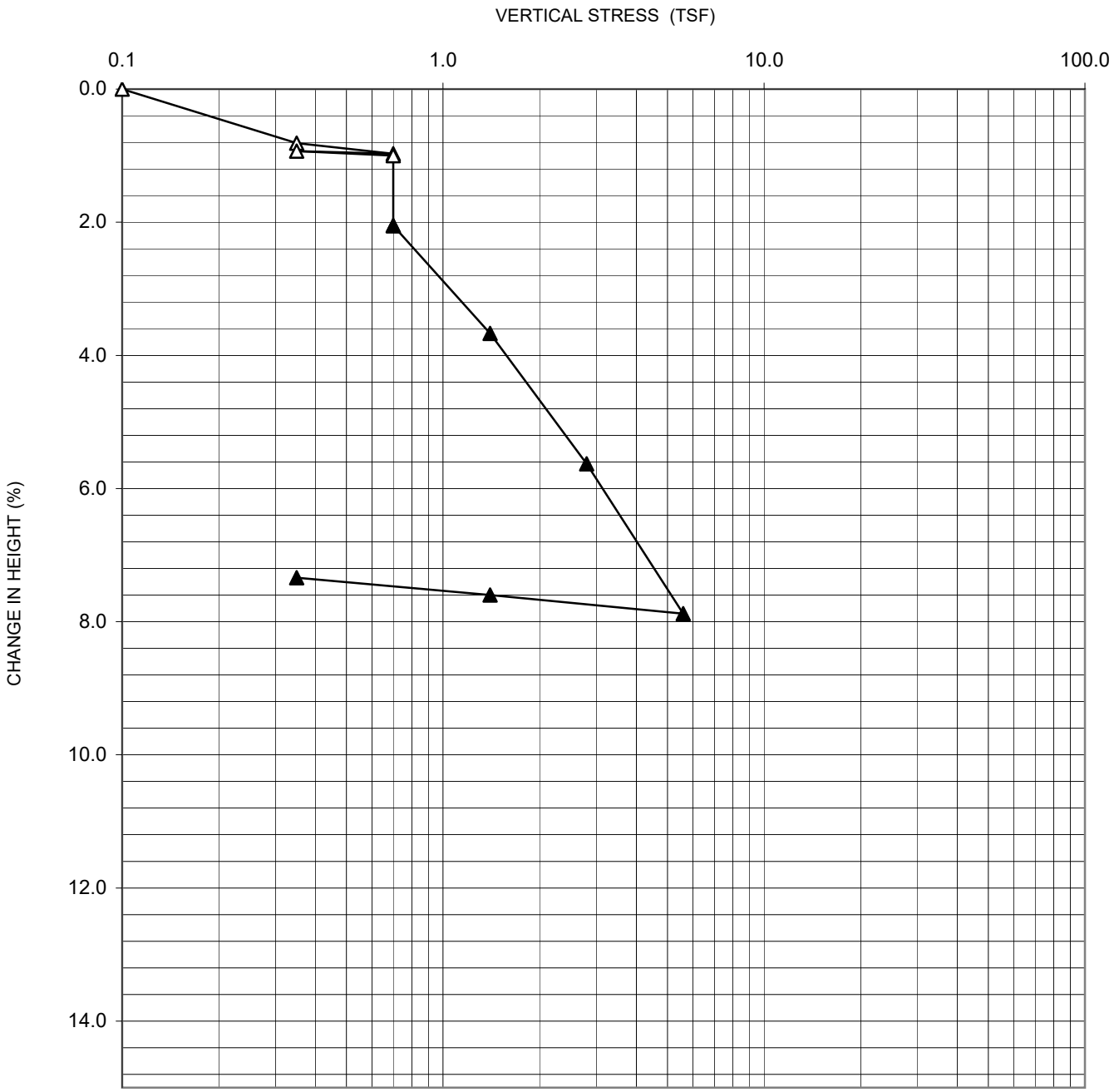
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	6.8	112.5	37.4	0.487
FINAL	0.9460	16.4	118.9	107.9	0.407

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-00 SOIL DESCRIPTIONS: BROWN SILTY SAND (SM)

BORING NO./LOCATION : KB - 4 DEPTH / ELEV. : 15' LIQUID LIMIT : -

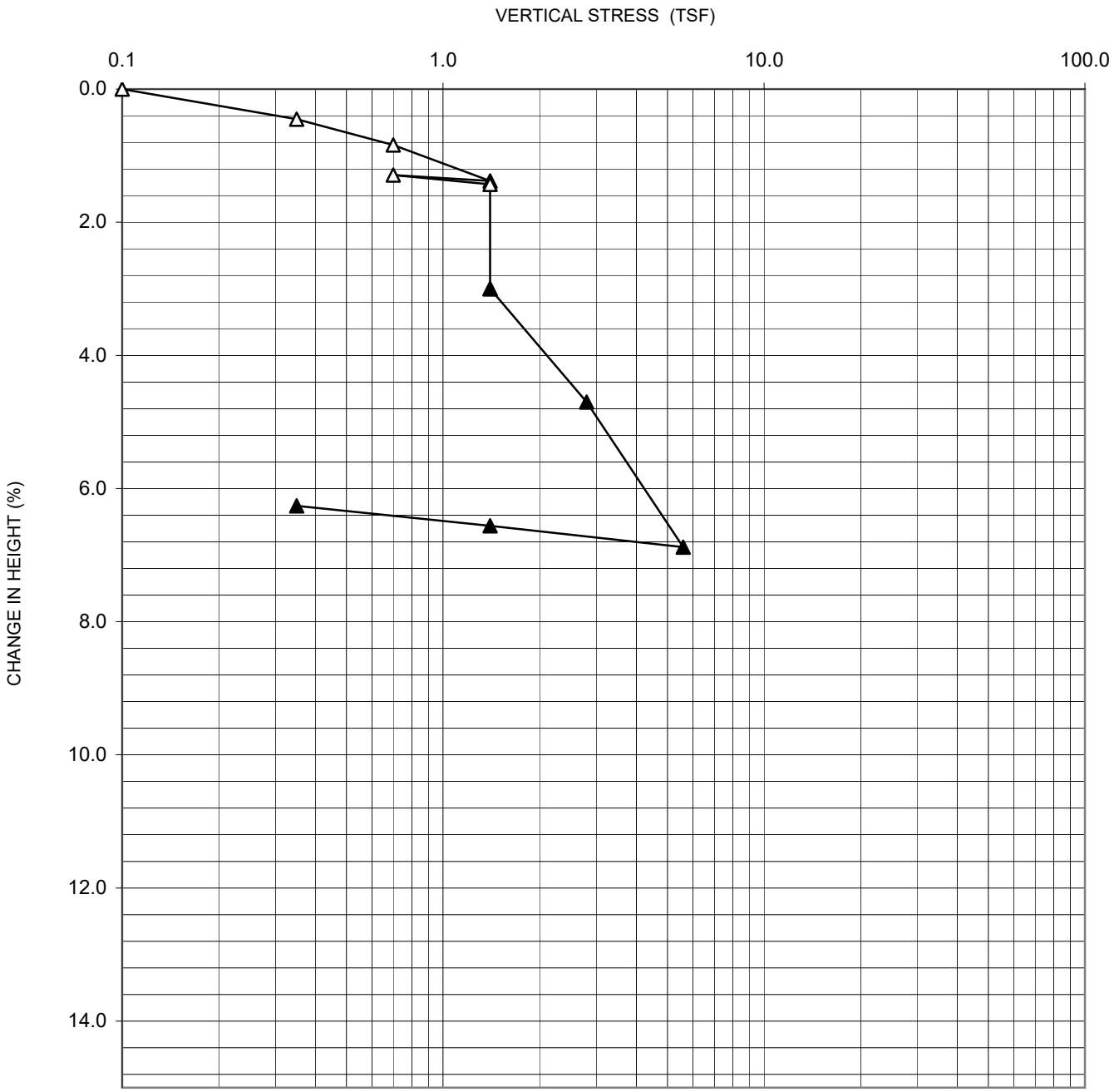
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	6.5	109.8	33.4	0.523
FINAL	0.9266	18.4	118.4	119.5	0.412

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-00

SOIL DESCRIPTIONS: BR. SILTY FINE SAND W/ TR. OF CLAY (SM)

BORING NO./LOCATION : KB - 4

DEPTH / ELEV. : 25'

LIQUID LIMIT : -

SPECIFIC GRAVITY : 2.68 (Assumed)

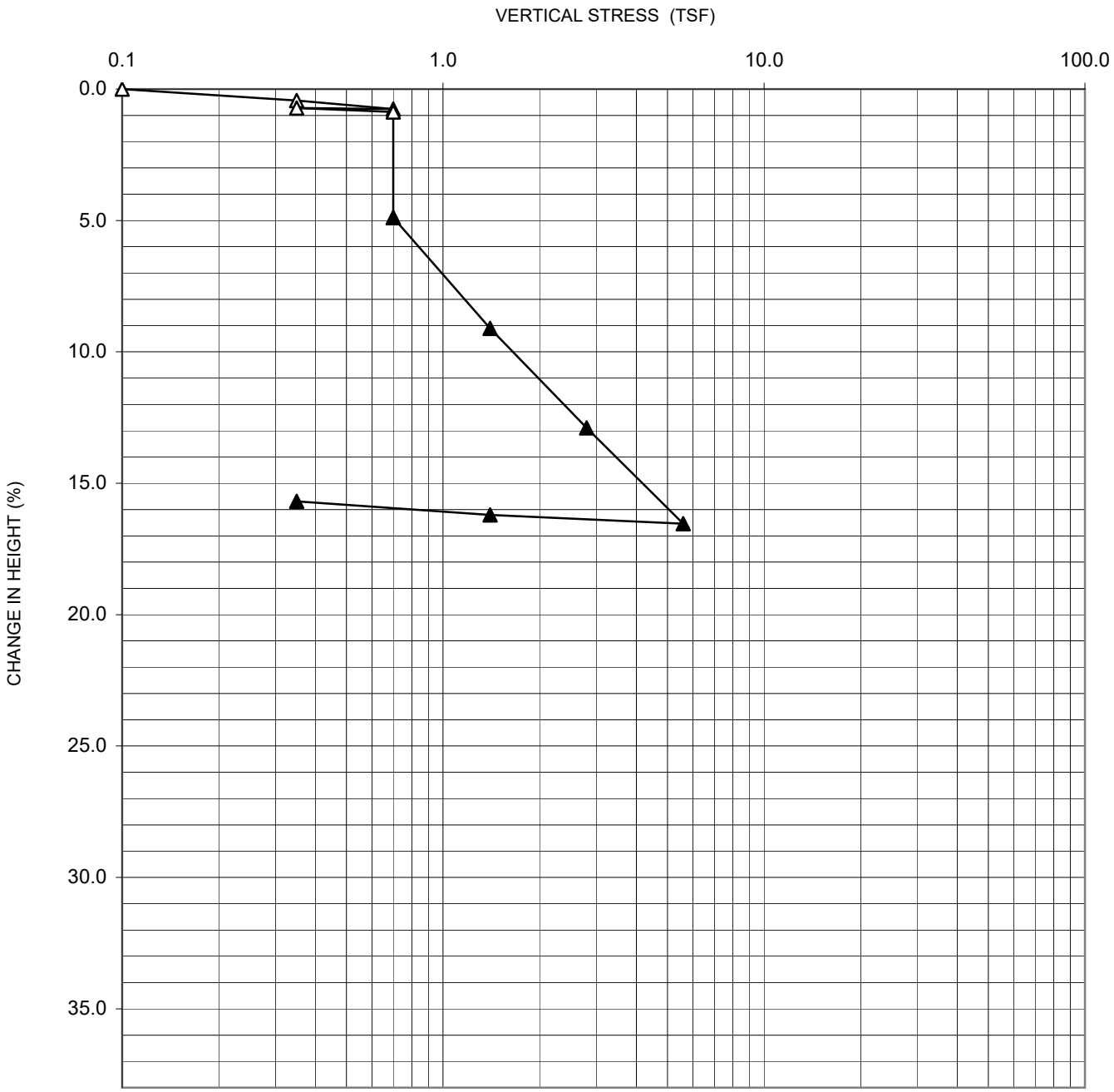
PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	7.4	105.3	33.9	0.588
FINAL	0.9374	20.8	112.3	114.3	0.489

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-00

SOIL DESCRIPTIONS: DK. BROWN SANDY CLAY (PORUOS) (CL)

BORING NO./LOCATION : KB - 5

DEPTH / ELEV. : 10'

LIQUID LIMIT : -

SPECIFIC GRAVITY : 2.68 (Assumed)

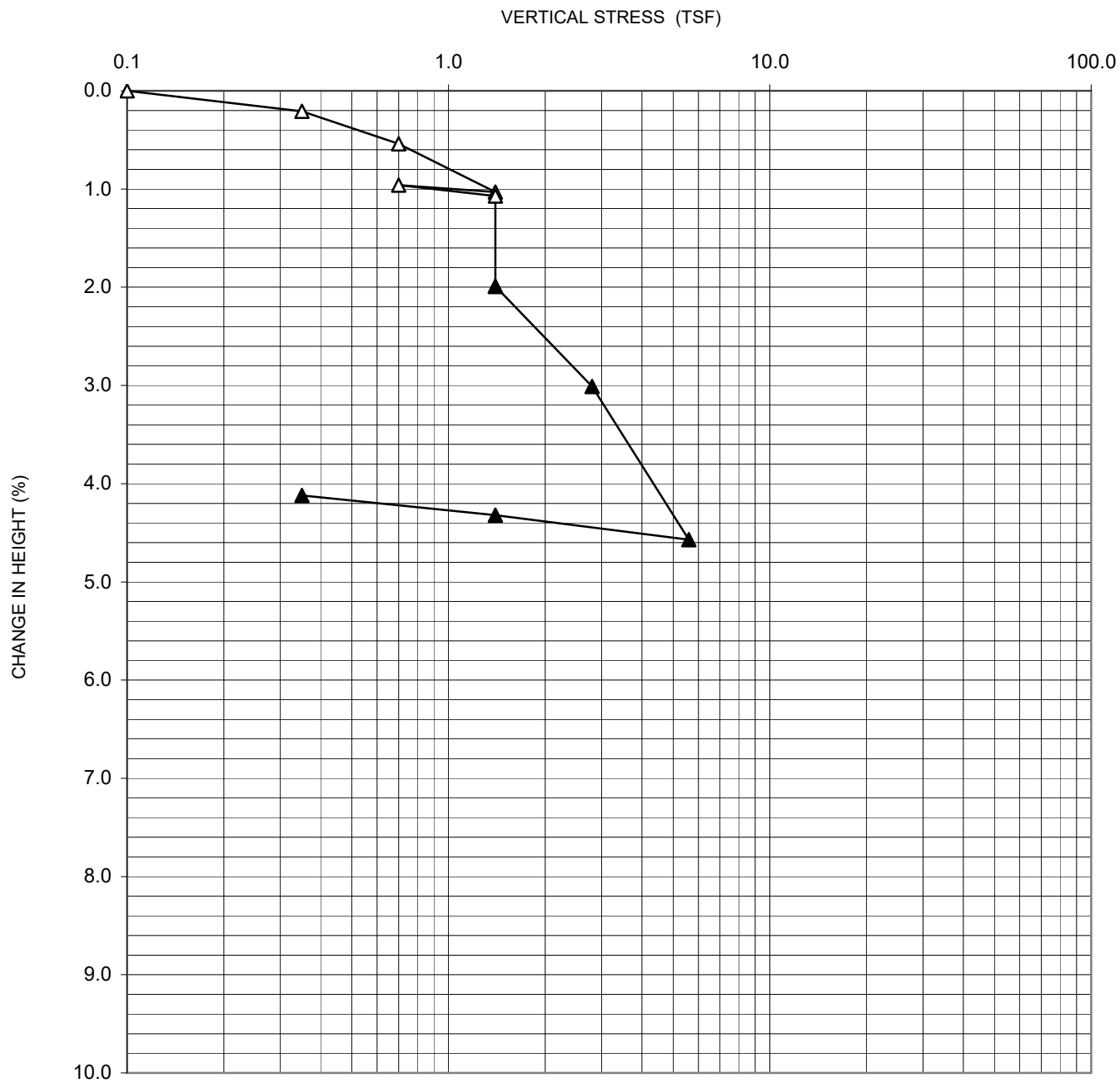
PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	25.1	84.7	69.1	0.974
FINAL	0.8431	40.0	100.4	161.2	0.665

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-00 SOIL DESCRIPTIONS: LT. BROWN SILTY SAND W/ GRAVEL (SP/SM)

BORING NO./LOCATION : KB - 5 DEPTH / ELEV. : 25' LIQUID LIMIT : -

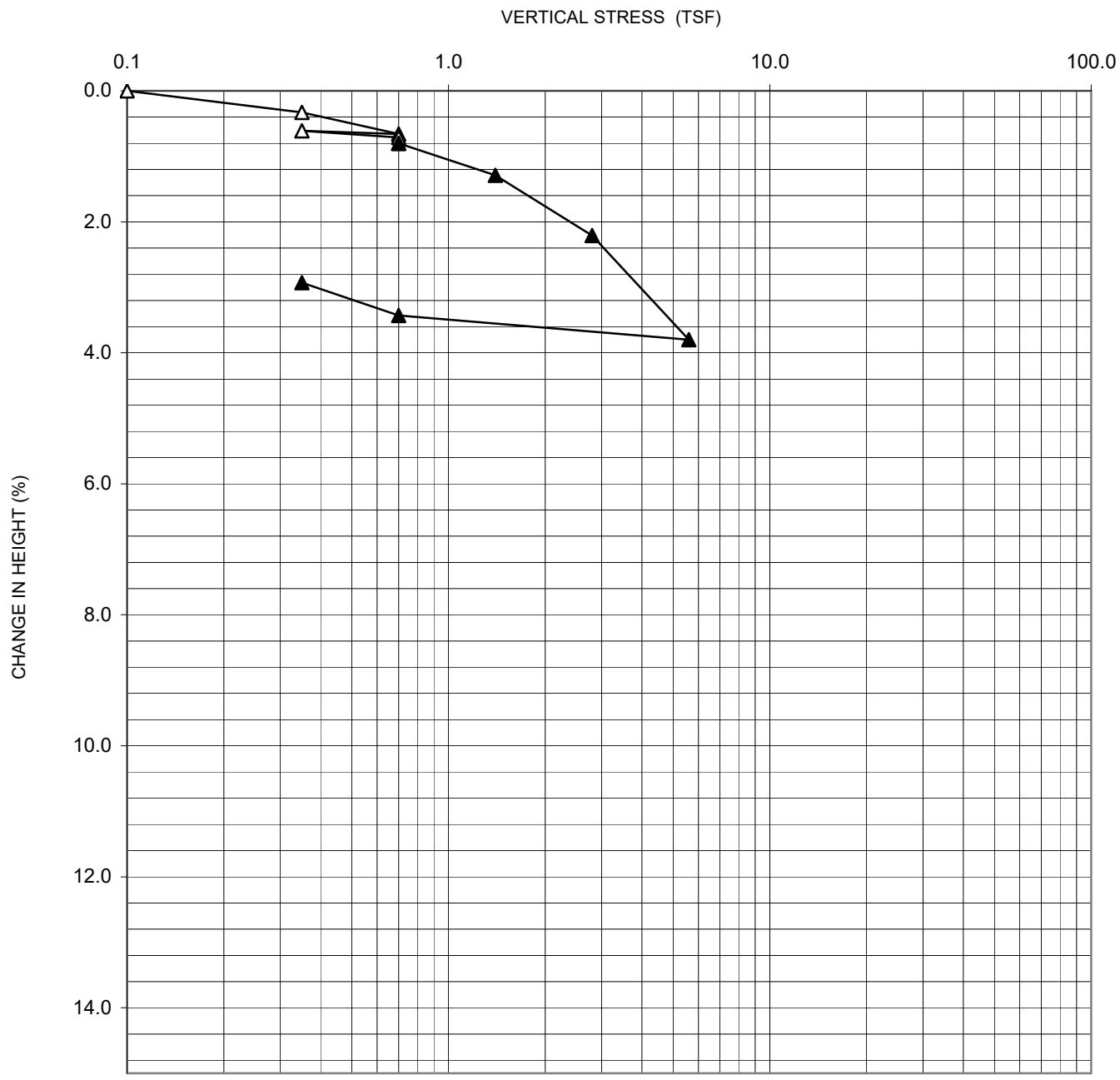
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	3.2	117.6	20.1	0.423
FINAL	0.9588	18.9	122.6	139.0	0.365

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-00 SOIL DESCRIPTIONS: BROWN SILTY FINE SAND W/ CLAY (SM)

BORING NO./LOCATION : KB - 6 DEPTH / ELEV. : 15' LIQUID LIMIT : -

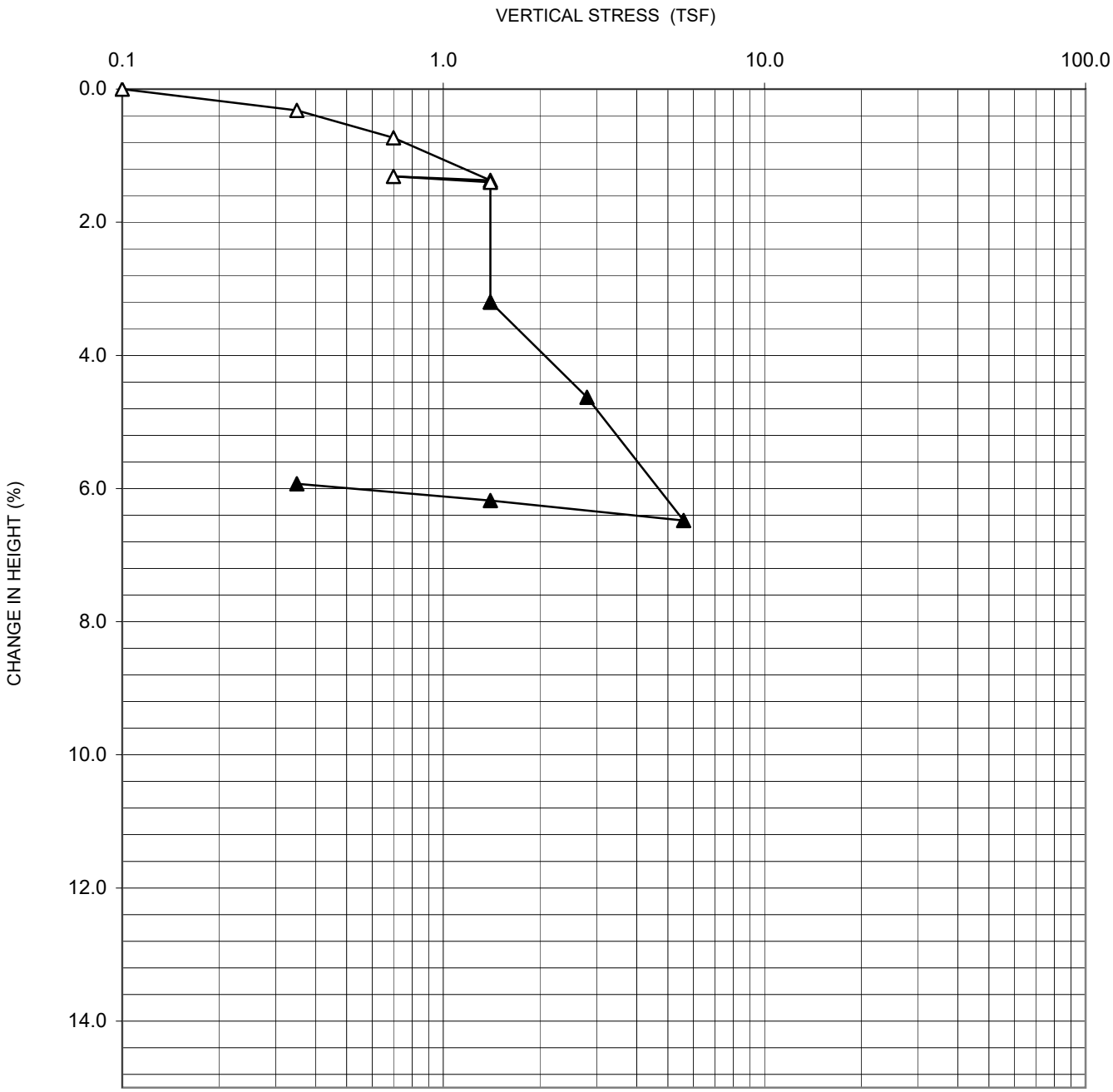
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	9.9	116.1	60.2	0.440
FINAL	0.9707	18.4	119.6	123.9	0.399

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-00

SOIL DESCRIPTIONS: LT. BROWN SILTY SAND W/ GRAVEL (SP/SM)

BORING NO./LOCATION : KB - 6

DEPTH / ELEV. : 25'

LIQUID LIMIT : -

SPECIFIC GRAVITY : 2.68 (Assumed)

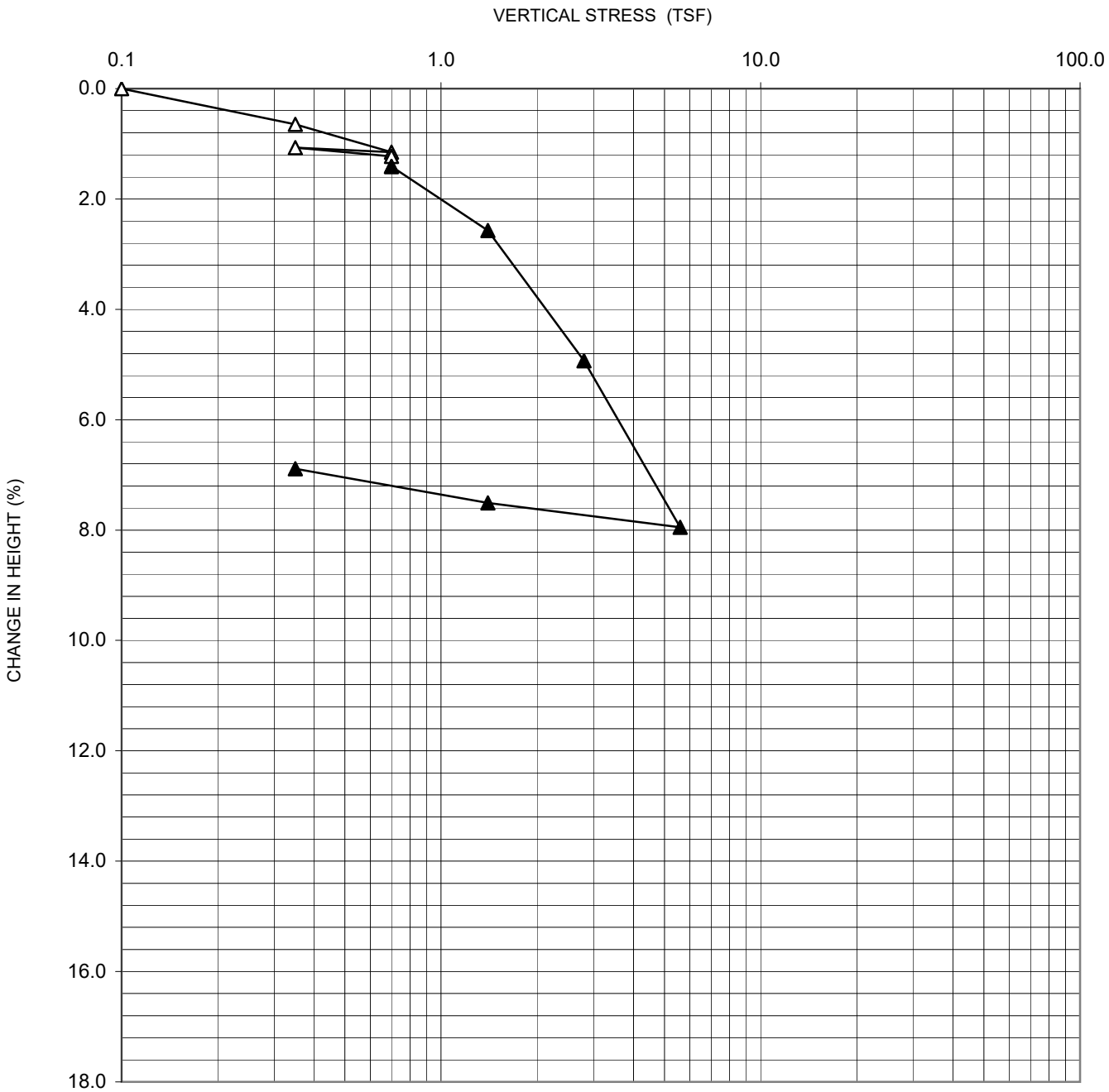
PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	3.8	113.4	21.7	0.475
FINAL	0.9407	17.5	120.5	121.2	0.388

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: DK. BROWN SANDY CLAY (CL)

BORING NO./LOCATION : KB - 7 DEPTH / ELEV. : 15' LIQUID LIMIT : -

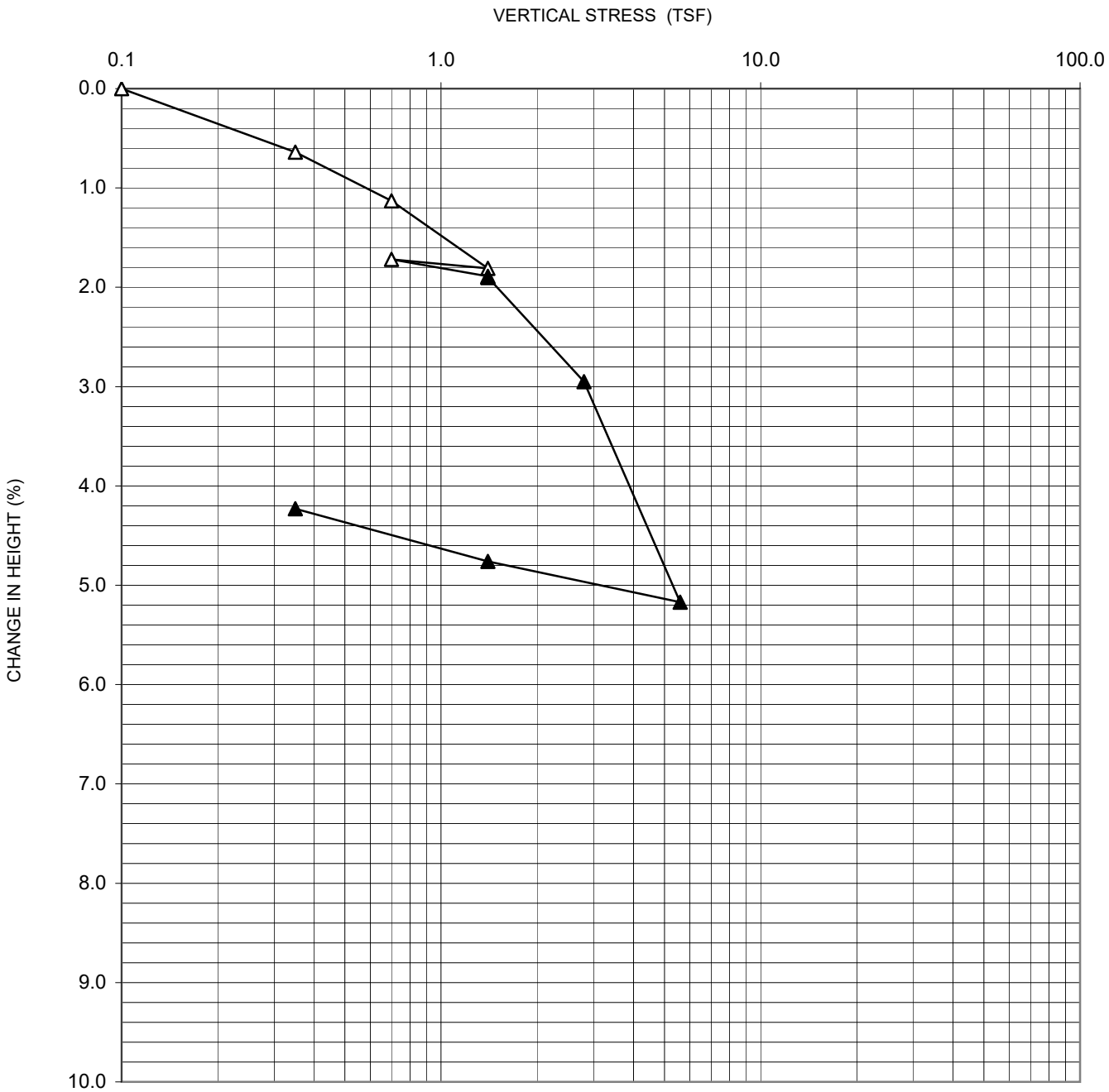
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	13.2	109.7	67.4	0.525
FINAL	0.9311	18.3	117.7	116.7	0.420

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: DK. BROWN SANDY CLAY (CL)

BORING NO./LOCATION : KB - 7 DEPTH / ELEV. : 35' LIQUID LIMIT : -

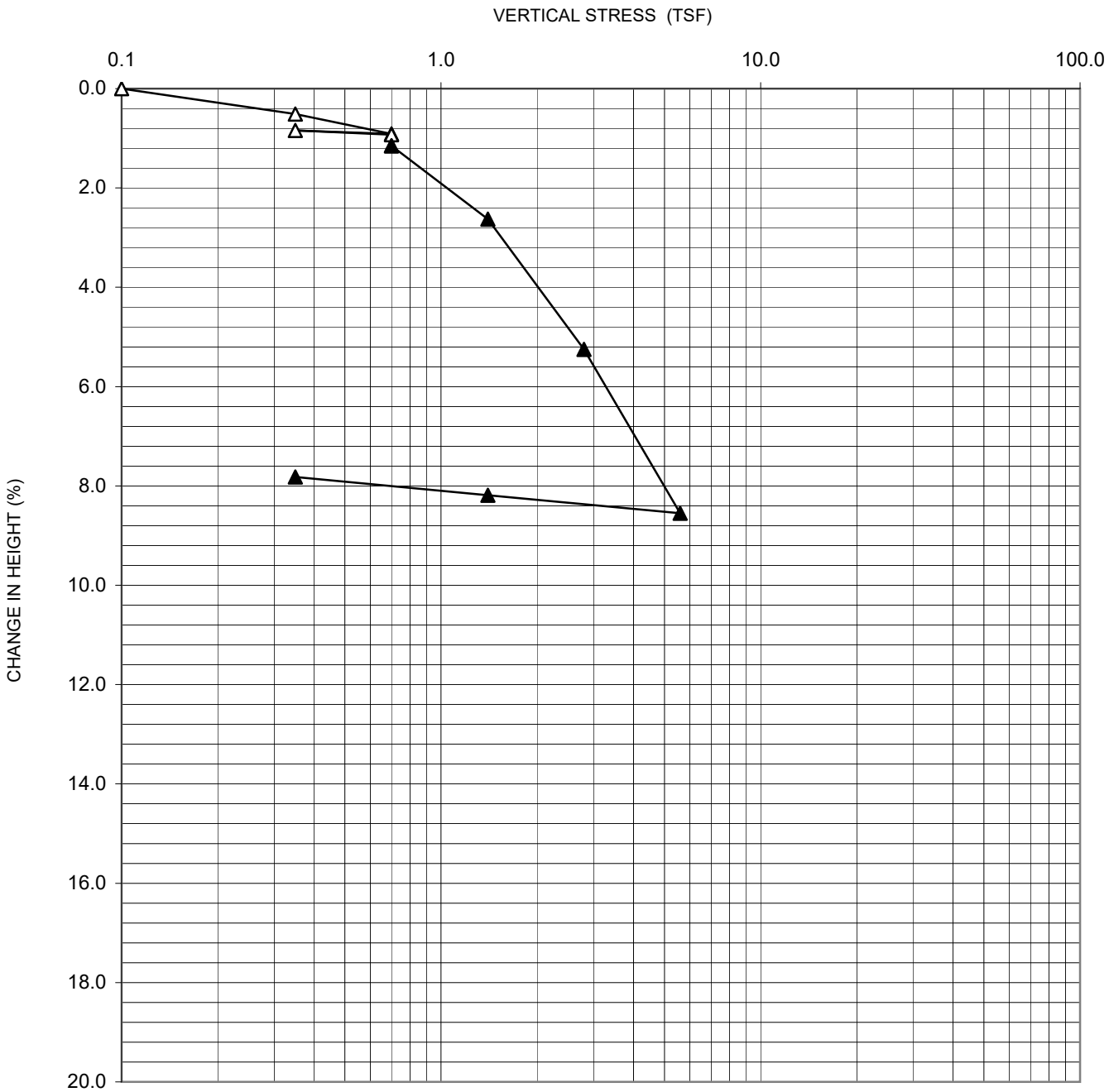
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	14.4	115.4	86.0	0.450
FINAL	0.9577	16.8	120.4	115.5	0.389

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: BROWN CLAYEY SAND W/ GRAVEL (SC)

BORING NO./LOCATION : KB - 8 DEPTH / ELEV. : 15' LIQUID LIMIT : -

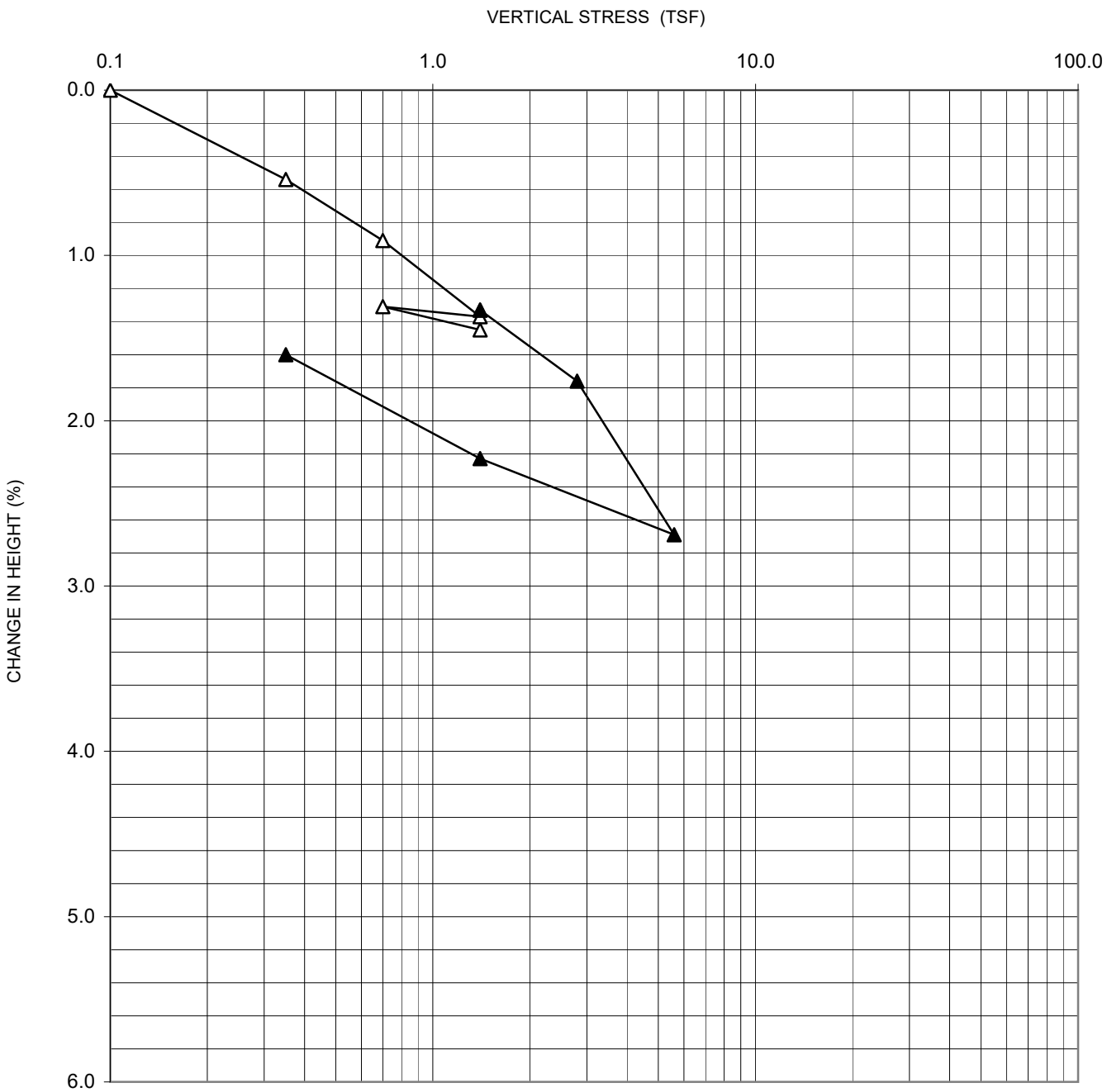
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	9.5	105.6	43.5	0.584
FINAL	0.9218	19.4	114.5	112.8	0.460

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: BROWN SANDY CLAY (CL)

BORING NO./LOCATION : KB - 8 DEPTH / ELEV. : 25' LIQUID LIMIT : -

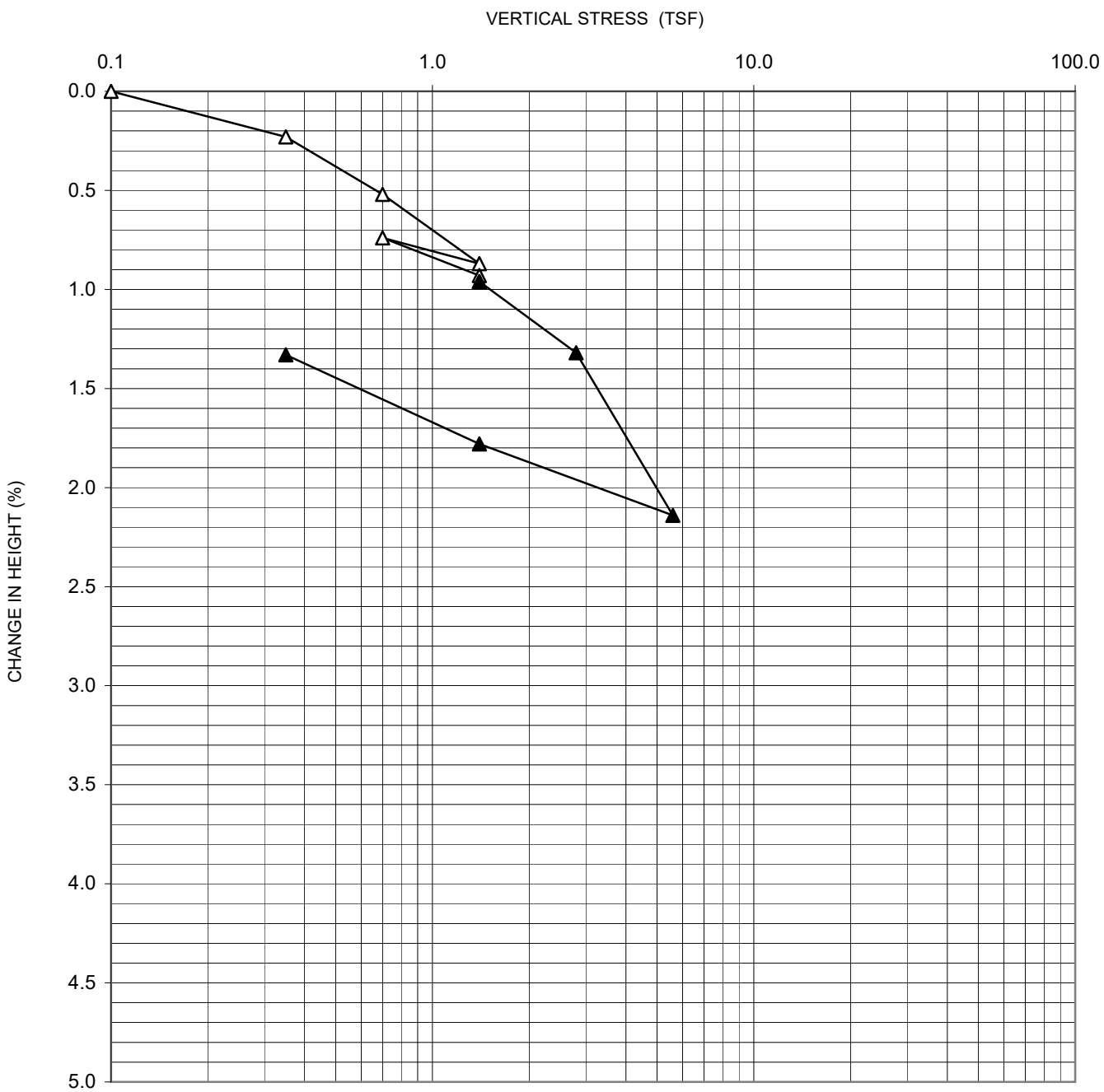
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	12.9	120.1	88.1	0.392
FINAL	0.9840	17.1	122.1	123.6	0.370

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: BROWN SILTY SAND (SM)

BORING NO./LOCATION : KB - 8 DEPTH / ELEV. : 35' LIQUID LIMIT : -

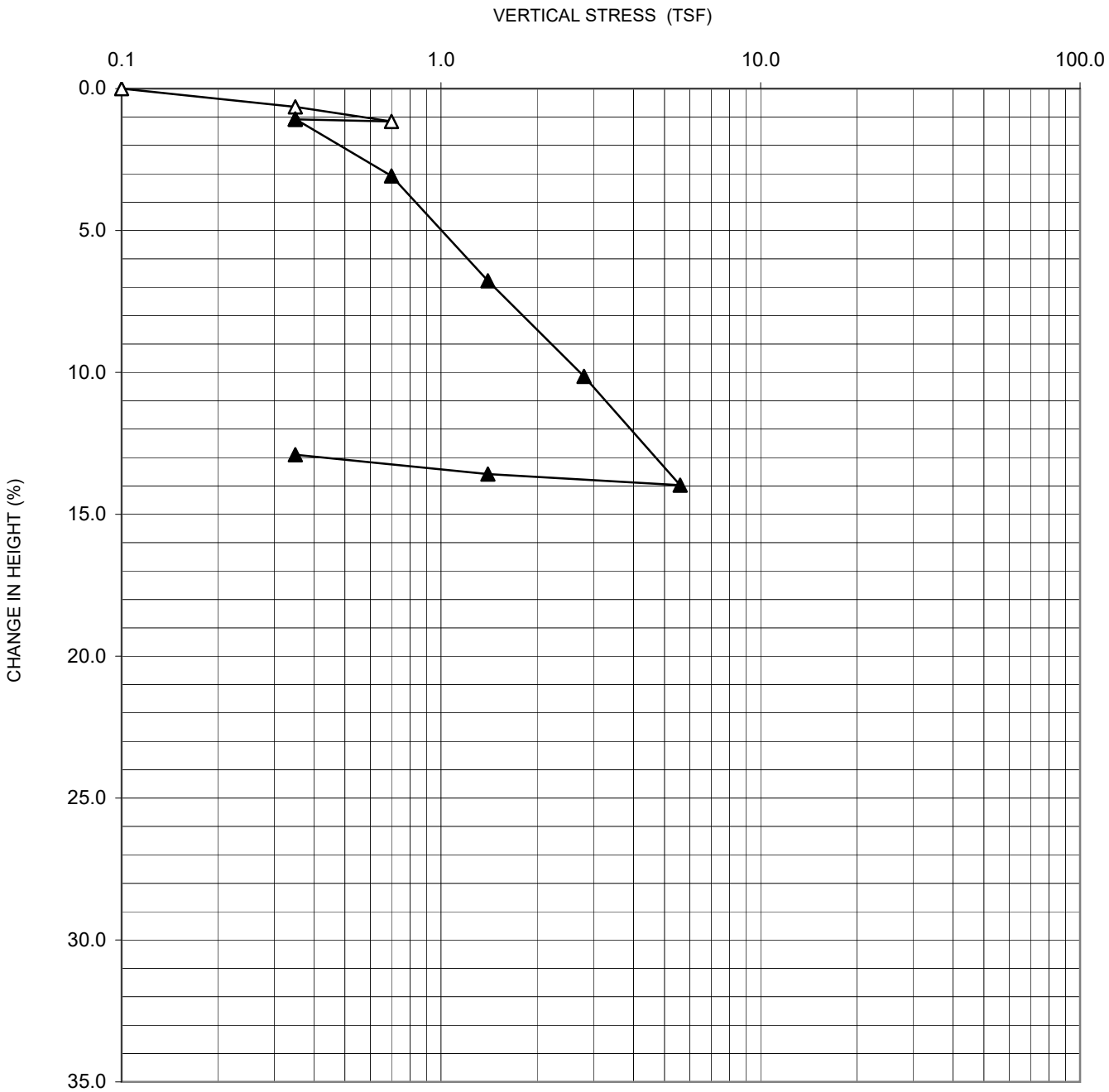
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	10.0	113.8	57.4	0.469
FINAL	0.9867	18.4	115.3	109.6	0.450

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: DK. BROWN SANDY CLAY (CL)

BORING NO./LOCATION : KB - 9 DEPTH / ELEV. : 10' LIQUID LIMIT : -

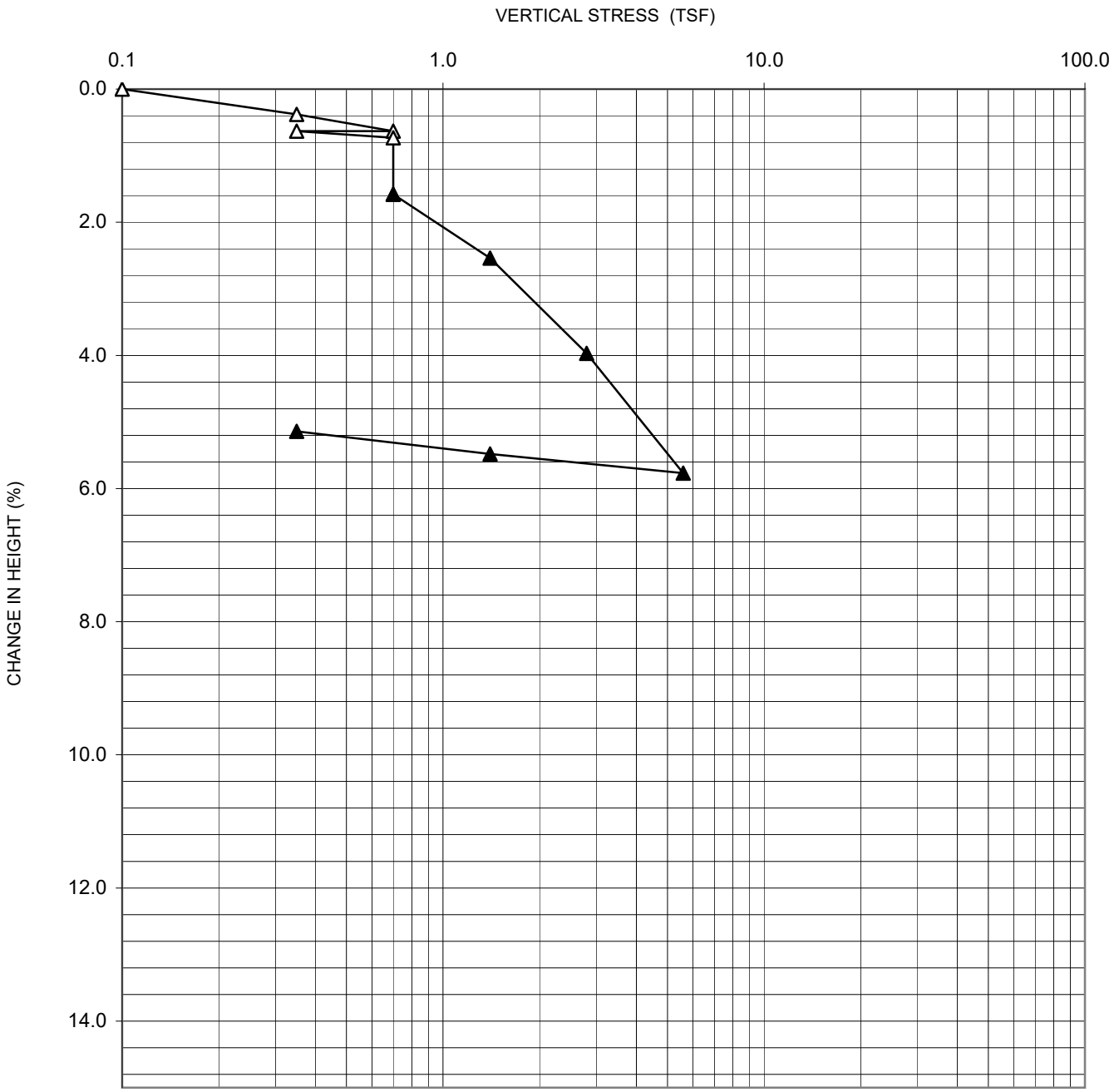
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	9.1	102.7	39.0	0.629
FINAL	0.8710	20.3	117.8	130.0	0.419

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: BROWN CLAYEY SAND W/ GRAVEL (SC)

BORING NO./LOCATION : KB - 9 DEPTH / ELEV. : 15' LIQUID LIMIT : -

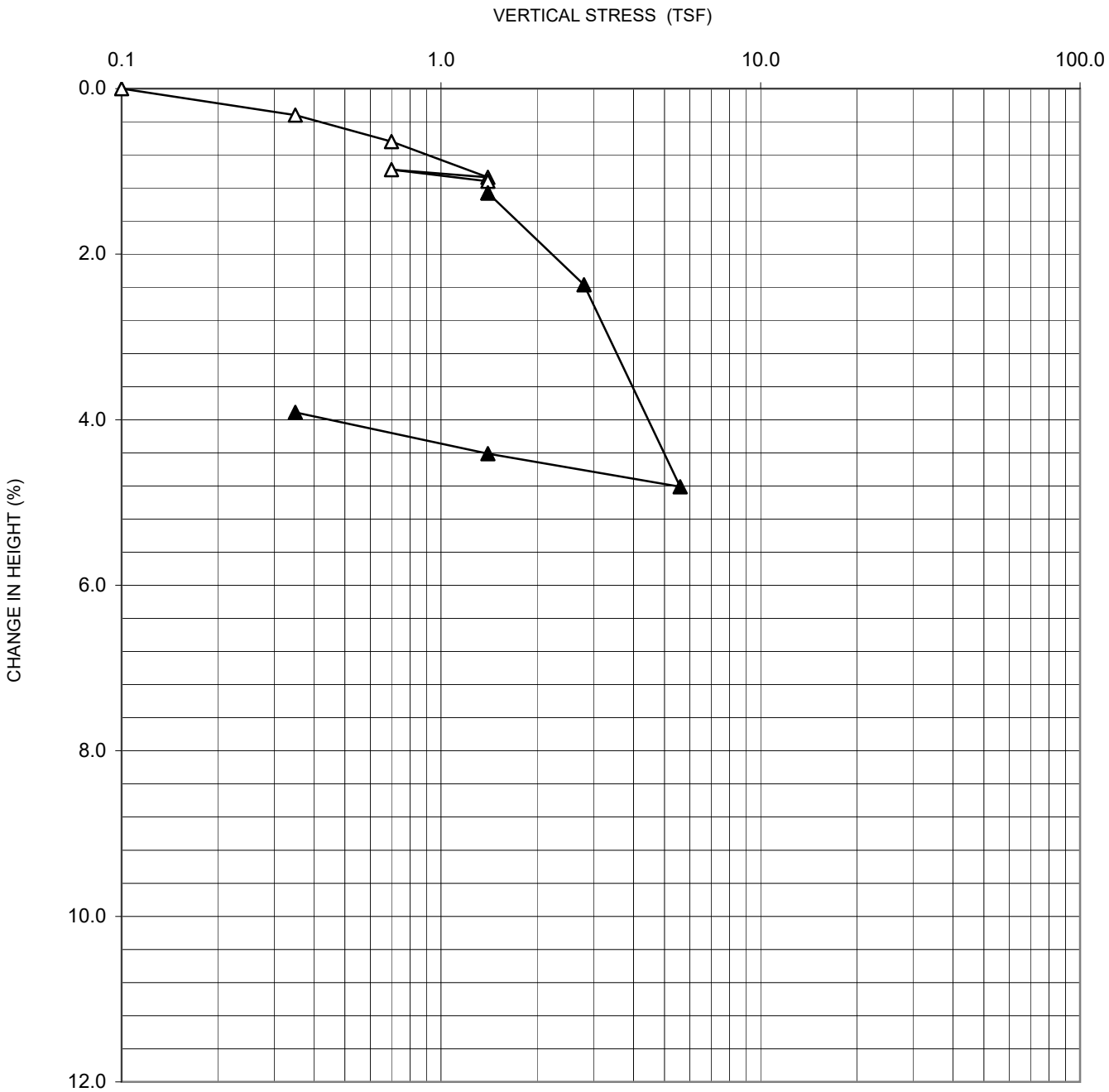
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	4.2	118.1	26.9	0.415
FINAL	0.9486	15.8	124.5	123.4	0.343

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: BROWN CLAYEY SAND (SC)

BORING NO./LOCATION : KB - 9 DEPTH / ELEV. : 35' LIQUID LIMIT : -

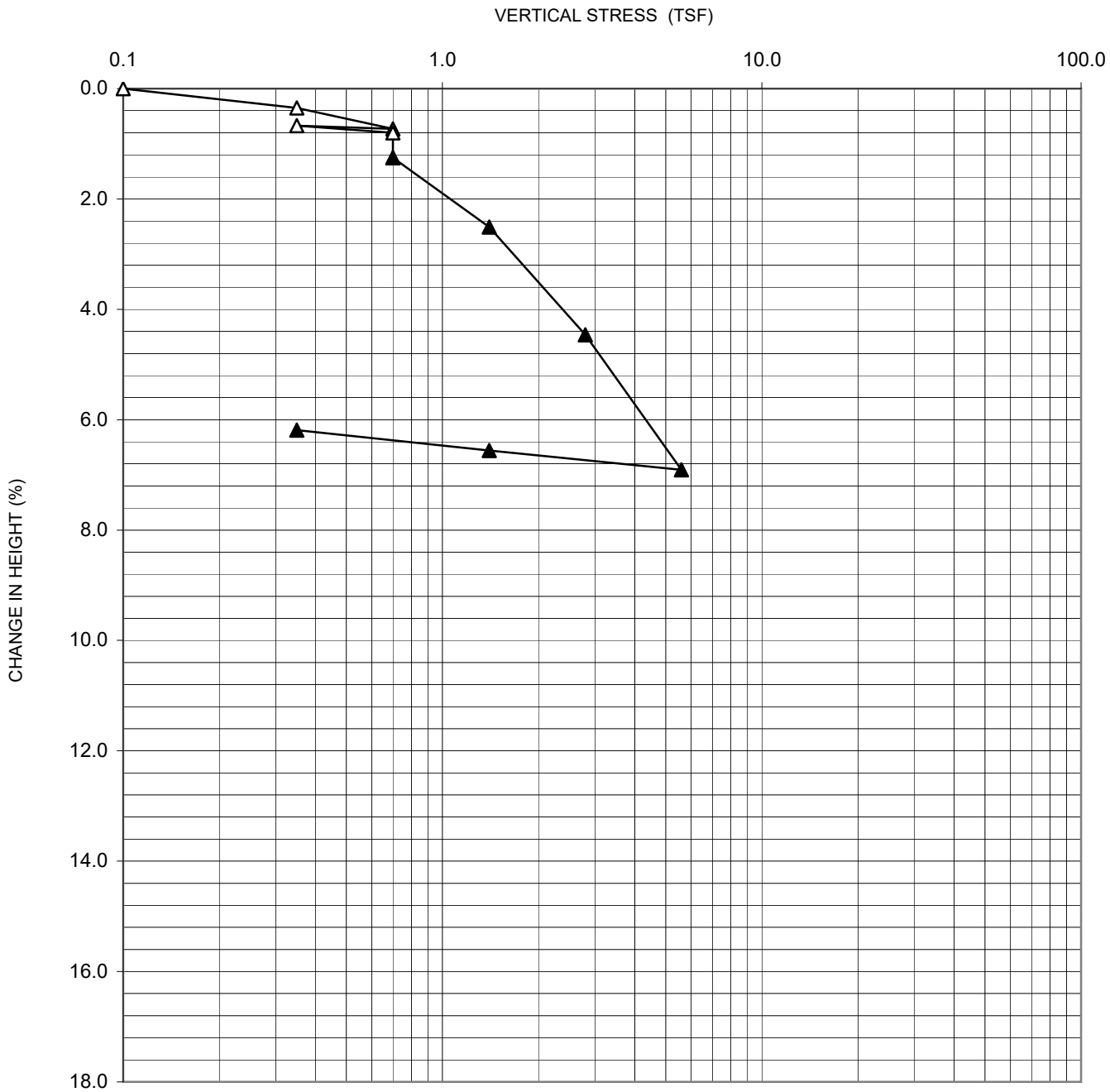
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	10.7	104.5	47.6	0.601
FINAL	0.9609	19.8	108.7	98.3	0.539

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: BROWN CLAYEY SAND (SC)

BORING NO./LOCATION : KB - 10 DEPTH / ELEV. : 15' LIQUID LIMIT : -

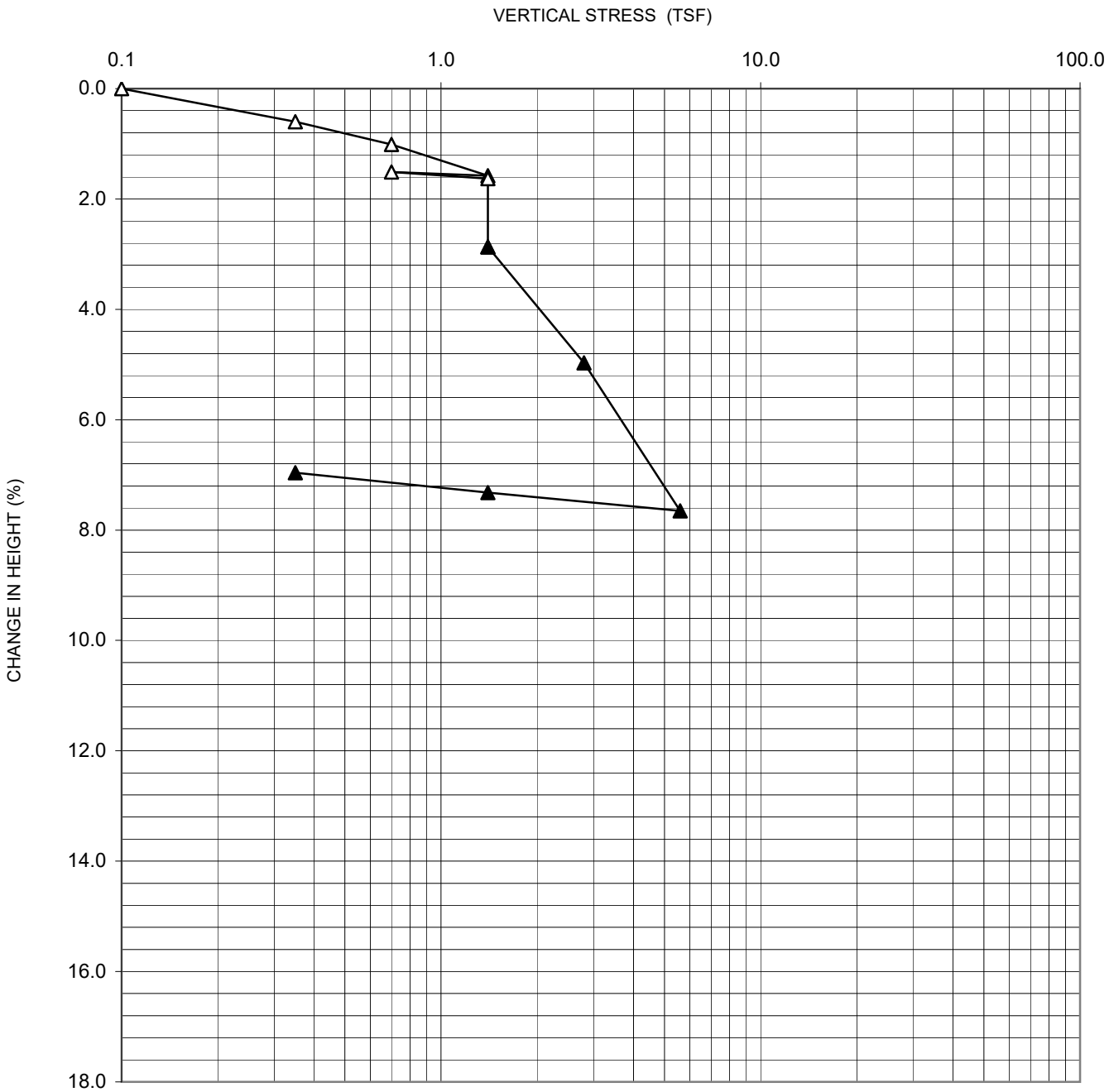
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	7.3	111.7	39.6	0.497
FINAL	0.9381	17.7	119.0	117.4	0.405

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-00 SOIL DESCRIPTIONS: BROWN CLAYEY SAND (SC)

BORING NO./LOCATION : KB - 10 DEPTH / ELEV. : 25' LIQUID LIMIT : -

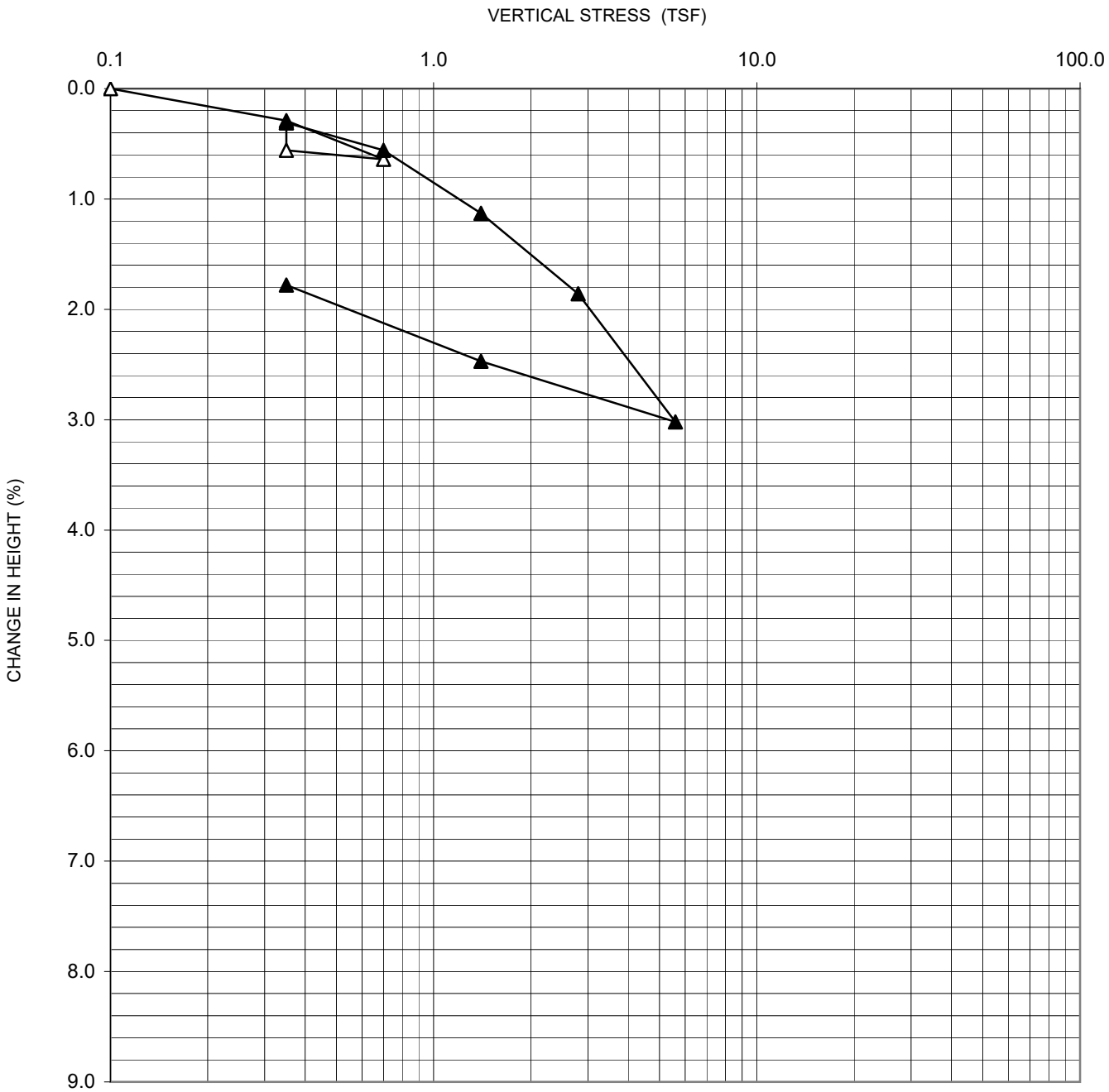
SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	10.1	103.2	43.8	0.620
FINAL	0.9304	22.7	110.9	119.8	0.508

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CONSOLIDATION TEST CURVE



PROJECT NO.: 18060-01 SOIL DESCRIPTIONS: OLIVE BROWN CLAYEY SAND (SC)

BORING NO./LOCATION : KTP - 2 DEPTH / ELEV. : 6' LIQUID LIMIT : -

SPECIFIC GRAVITY : 2.68 (Assumed) PLASTIC LIMIT: -

REMARKS :

	SPECIMEN HEIGHT (INCHES)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SATURATION (%)	VOID RATIO
INITIAL	1.0000	14.3	104.5	64.1	0.600
FINAL	0.9822	22.7	106.4	106.2	0.572

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CONSOLIDATION TEST CURVE

Project Name :	JACK RABBIT TRAIL			Project No. :	18060-01
Boring / Sample No :	B - 2 / KB - 6	Depth :	0' - 5' (ft.)	Tested By :	RB Date: 16-Jul-19
Sample Descriptions / Classification :	DK BROWN CLAYEY SAND (SC)				

Applied Normal Load (ksf)	1.0		2.0		4.0	
Shear Stress,(Peak) (ksf)	0.960		1.428		2.448	
Shear Stress,(Ultimate) (ksf)	0.744		1.296		2.412	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Weight of Soil + Ring (gms)	196.32	203.02	197.2	204.88	196.81	203.48
Dry Weight of Soil + Ring (gms)		181.66		182.54		182.15
Weight of Water (gms)	-	46.54	-	47.28	-	45.81
Weight of Ring (gms)	-	42.04	-	42.92	-	42.53
Weight of Dry Soil (gms)	-	139.62	-	139.62	-	139.62
Moisture Content (%)	10.5	33.3	10.5	33.9	10.5	32.8
Wet Density (pcf)	128.8	134.4	128.8	135.2	128.8	134.3
Dry Density (pcf)	-	100.8	-	101.0	-	101.2
Specific Gravity,G_s (Assumed)	2.68					
Thickness of Specimen, (in.)	1.00					
Degree of Saturation, (%)	42.7	135.5	42.9	138.3	43.1	134.6
Void Ratio	-	0.659	-	0.656	-	0.653

Lateral Displacement, d_h 0.36 (in.)

Displacement Rate, d_r 0.05 (in./min.)

Elapsed Time of Test, t_e 7.20 (min.)

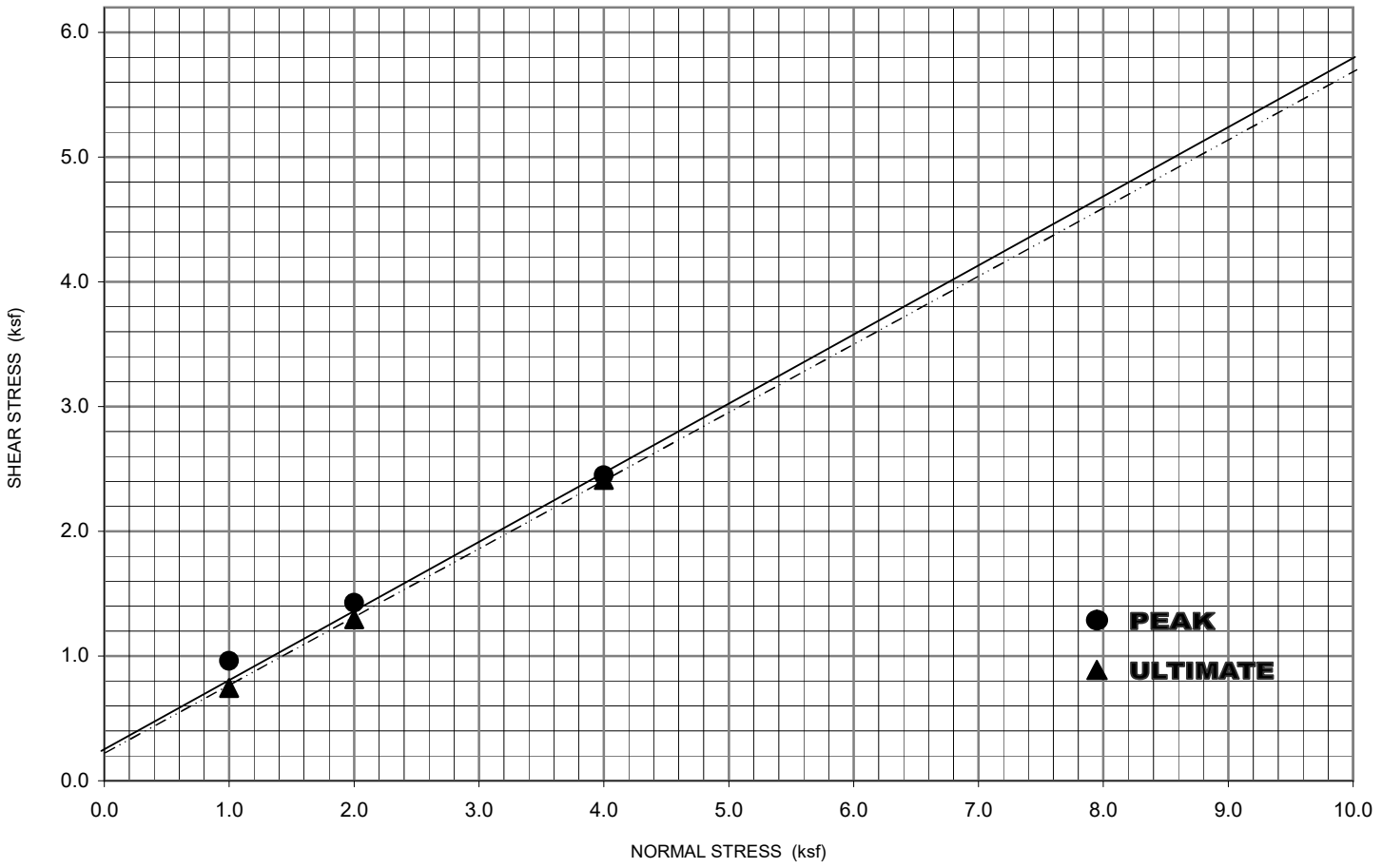
Specimen : Undisturbed : -

Remolded : X

Reconstituted : -

	PEAK	ULTIMATE
Cohesion,c (psf)	250	200
Friction Angle, ϕ	29	29

Remarks : SAMPLE REMOLDED TO 90% OF (129.5 PCF @ 10.5%)



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DIRECT SHEAR TEST
(ASTM D3080)

Project Name :	JACK RABBIT TRAIL			Project No. :	18060-00
Boring / Sample No :	B - 4 / KB - 4	Depth :	0' - 5' (ft.)	Tested By :	RB Date: 9-Jul-19
Sample Descriptions / Classification :	DK. BROWN CLAYEY SAND (SC)				

Applied Normal Load (ksf)	1.0		2.0		4.0	
Shear Stress,(Peak) (ksf)	0.924		1.356		2.472	
Shear Stress,(Ultimate) (ksf)	0.684		1.344		2.448	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Weight of Soil + Ring (gms)	198.07	206.36	199.88	208.53	196.33	205.13
Dry Weight of Soil + Ring (gms)		185.36		187.17		183.78
Weight of Water (gms)	-	46.54	-	47.28	-	45.81
Weight of Ring (gms)	-	44.12	-	45.93	-	44.38
Weight of Dry Soil (gms)	-	141.24	-	141.24	-	139.40
Moisture Content (%)	9.0	33.0	9.0	33.5	9.0	32.9
Wet Density (pcf)	128.5	135.4	128.5	135.7	126.9	134.2
Dry Density (pcf)	-	101.9	-	101.7	-	101.0
Specific Gravity,G_s (Assumed)	2.68					
Thickness of Specimen, (in.)	1.00					
Degree of Saturation, (%)	37.6	137.6	37.4	139.2	36.8	134.3
Void Ratio	-	0.642	-	0.645	-	0.656

Lateral Displacement, d_h 0.36 (in.)

Displacement Rate, d_r 0.05 (in./min.)

Elapsed Time of Test, t_e 7.20 (min.)

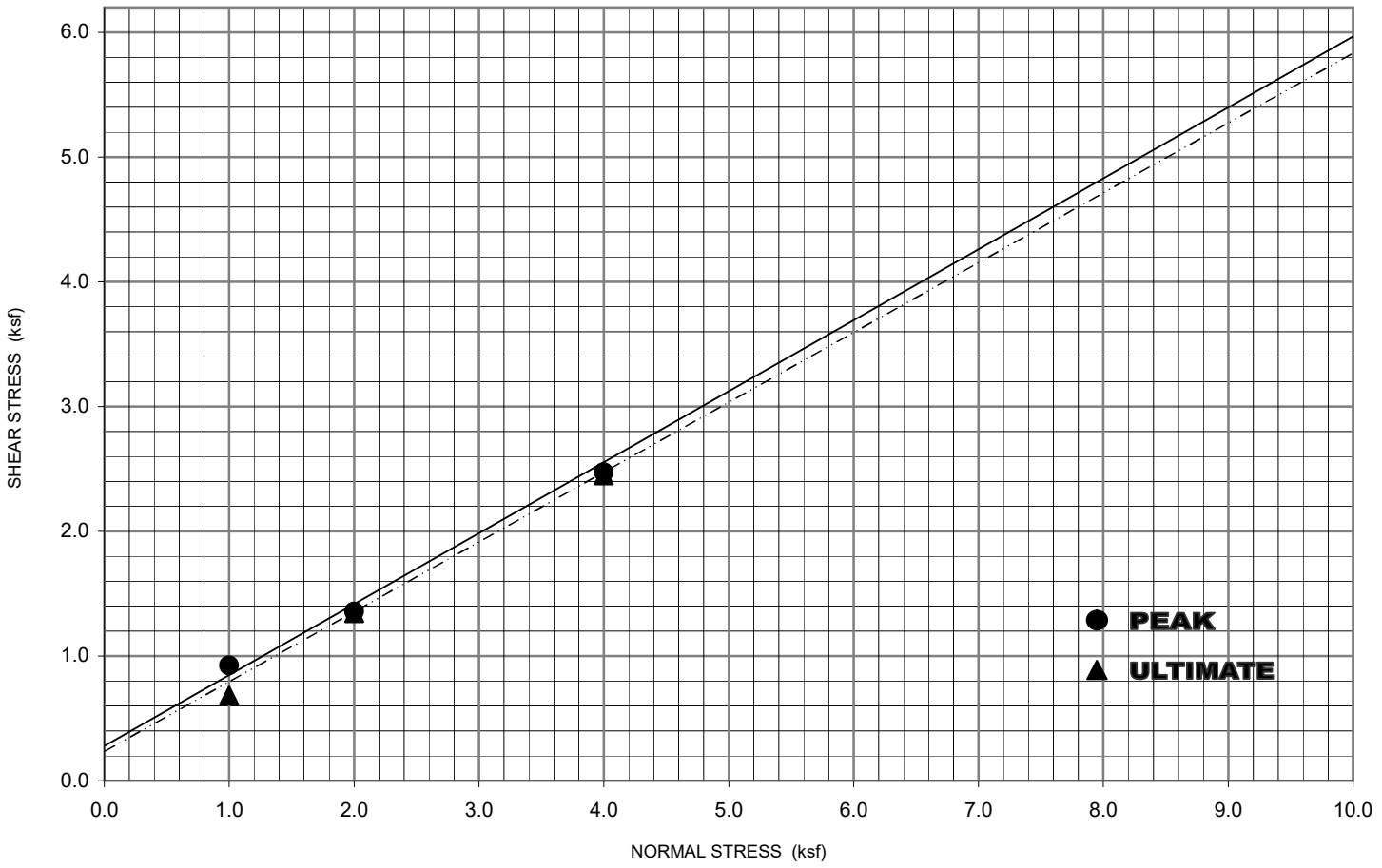
Specimen : Undisturbed : -

Remolded : X

Reconstituted : -

	PEAK	ULTIMATE
Cohesion,c (psf)	250	200
Friction Angle, ϕ	30	29

Remarks : SAMPLE REMOLDED TO 90% OF (131.0 PCF @ 9.0%)



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DIRECT SHEAR TEST

(ASTM D3080)

Project Name : JACK RABBIT TRAIL Project No. : 18060-01

Boring / Sample No : B - 5 / KB - 1 Depth : 0' - 5' (ft.) Tested By : RB Date: 23-Jul-19

Sample Descriptions / Classification : DK. BROWN CLAYEY SAND (SC)

Applied Normal Load (ksf)	1.0		2.0		4.0	
Shear Stress,(Peak) (ksf)	0.924		1.320		2.328	
Shear Stress,(Ultimate) (ksf)	0.672		1.224		2.328	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Weight of Soil + Ring (gms)	197.51	204.07	197.94	205.22	197.84	205.39
Dry Weight of Soil + Ring (gms)		182.96		183.39		183.29
Weight of Water (gms)	-	46.54	-	47.28	-	45.81
Weight of Ring (gms)	-	44.42	-	44.85	-	44.75
Weight of Dry Soil (gms)	-	138.54	-	138.54	-	138.54
Moisture Content (%)	10.5	33.6	10.5	34.1	10.5	33.1
Wet Density (pcf)	127.8	133.3	127.8	133.9	127.8	134.1
Dry Density (pcf)	-	99.8	-	99.8	-	100.8
Specific Gravity,G_s (Assumed)	2.68					
Thickness of Specimen, (in.)	1.00					
Degree of Saturation, (%)	41.6	133.1	41.6	135.3	42.7	134.3
Void Ratio	-	0.676	-	0.676	-	0.660

Lateral Displacement, d_h 0.36 (in.)

Displacement Rate, d_r 0.05 (in./min.)

Elapsed Time of Test, t_e 7.20 (min.)

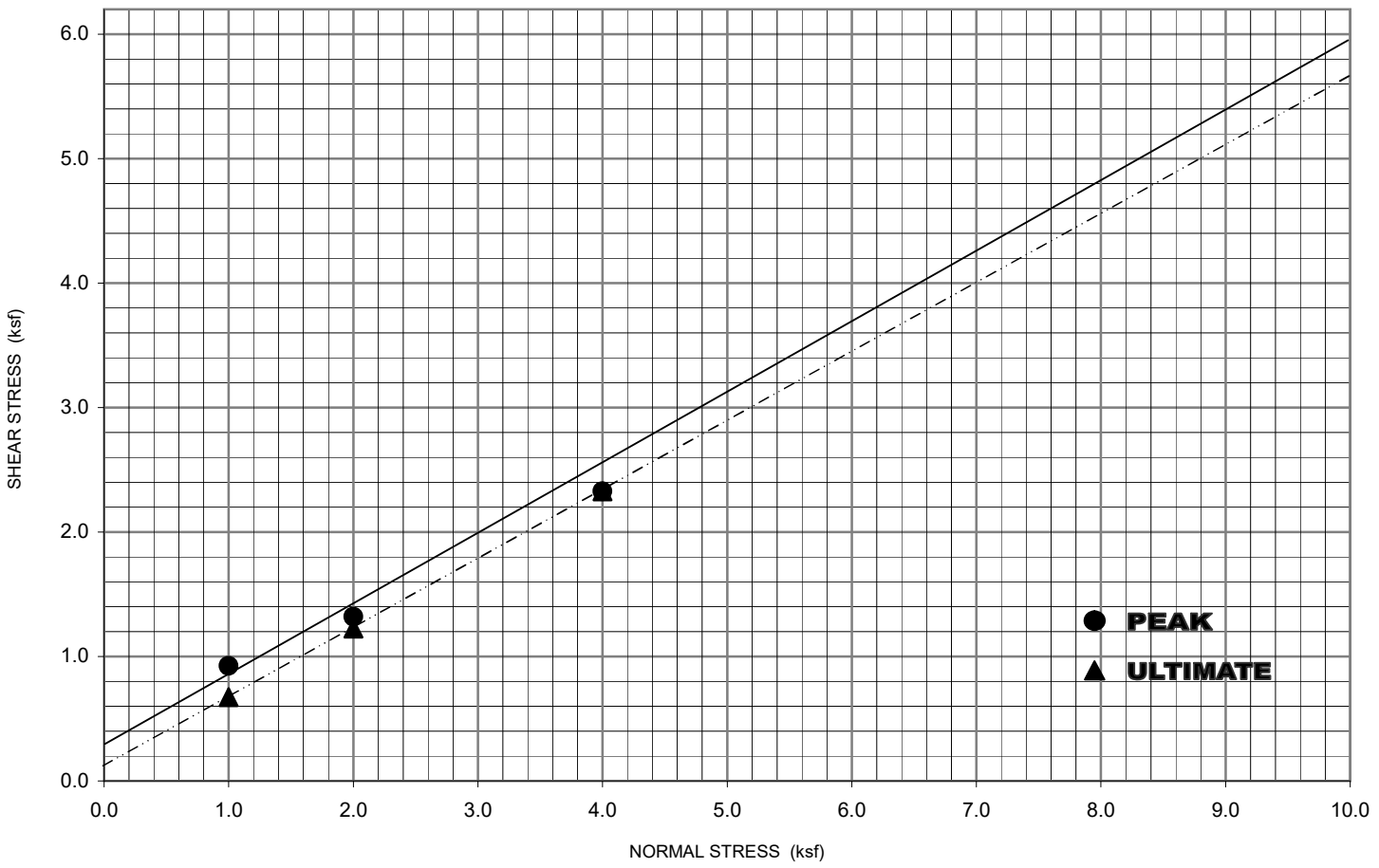
Specimen : Undisturbed : -

Remolded : X

Reconstituted : -

	PEAK	ULTIMATE
Cohesion,c (psf)	350	150
Friction Angle, ϕ	29	29

Remarks : SAMPLE REMOLDED TO 90% OF (128.5 PCF @ 10.5%)



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DIRECT SHEAR TEST

(ASTM D3080)

Project Name :	JACK RABBIT TRAIL	Project No. :	18060-01
Boring / Sample No :	B - 7 / KB - 9	Depth : 0' - 5' (ft.)	Tested By : RB Date: 23-Jul-19
Sample Descriptions / Classification :	DK. BROWN CLAYEY SAND (SC)		

Applied Normal Load (ksf)	1.0		2.0		4.0	
Shear Stress,(Peak) (ksf)	0.780		1.344		2.352	
Shear Stress,(Ultimate) (ksf)	0.672		1.236		2.316	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Weight of Soil + Ring (gms)	200.57	207.75	201.14	207.68	201.15	208.59
Dry Weight of Soil + Ring (gms)		187.10		187.67		187.68
Weight of Water (gms)	-	46.54	-	47.28	-	45.81
Weight of Ring (gms)	-	45.33	-	45.90	-	45.91
Weight of Dry Soil (gms)	-	141.77	-	141.77	-	141.77
Moisture Content (%)	9.5	32.8	9.5	33.3	9.5	32.3
Wet Density (pcf)	129.6	135.6	129.6	135.0	129.6	135.8
Dry Density (pcf)	-	102.1	-	101.3	-	102.6
Specific Gravity,G_s (Assumed)	2.68					
Thickness of Specimen, (in.)	1.00					
Degree of Saturation, (%)	39.9	137.8	39.1	137.2	40.4	137.5
Void Ratio	-	0.638	-	0.651	-	0.630

Lateral Displacement, d_h 0.36 (in.)

Displacement Rate, d_r 0.05 (in./min.)

Elapsed Time of Test, t_e 7.20 (min.)

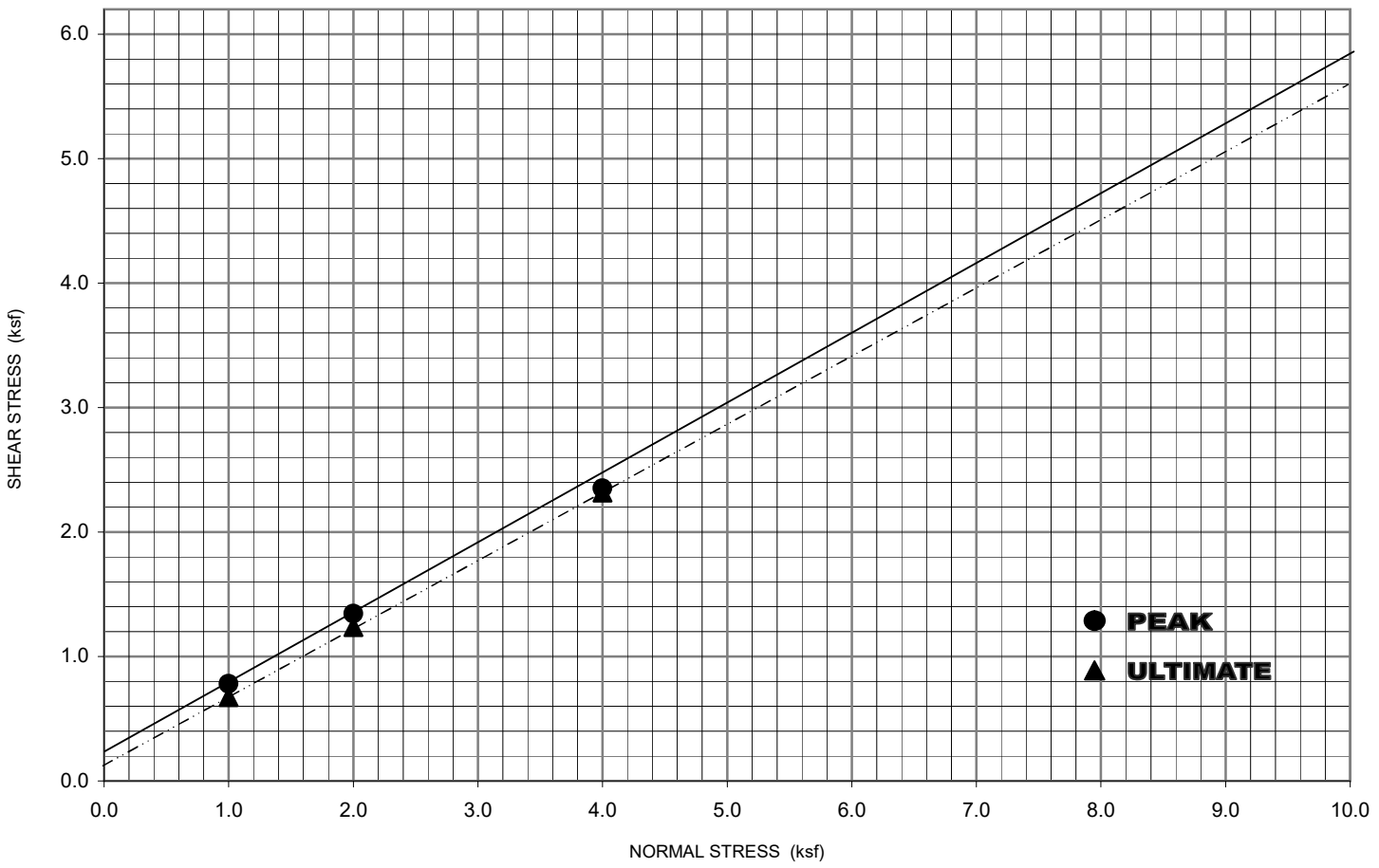
Specimen : Undisturbed : -

Remolded : X

Reconstituted : -

	PEAK	ULTIMATE
Cohesion,c (psf)	300	150
Friction Angle, ϕ	29	29

Remarks : SAMPLE REMOLDED TO 90% OF (131.5 PCF @ 9.5%)



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DIRECT SHEAR TEST

(ASTM D3080)

Project Name :	JACK RABBIT TRAIL			Project No. :	18060-01
Boring / Sample No :	B - 11 / KTP-3	Depth :	6' (ft.)	Tested By :	RB Date: 24-Jul-19
Sample Descriptions / Classification :	REDDISH BROWN SANDY CLAY (CL)				

Applied Normal Load (ksf)	1.0		2.0		4.0	
Shear Stress,(Peak) (ksf)	0.924		1.332		2.232	
Shear Stress,(Ultimate) (ksf)	0.900		1.320		2.172	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Weight of Soil + Ring (gms)	195.39	204.04	195.23	204.01	194.96	203.91
Dry Weight of Soil + Ring (gms)		179.35		179.19		178.92
Weight of Water (gms)	-	46.54	-	47.28	-	45.81
Weight of Ring (gms)	-	45.66	-	45.5	-	45.23
Weight of Dry Soil (gms)	-	133.69	-	133.69	-	133.69
Moisture Content (%)	12.0	34.8	12.0	35.4	12.0	34.3
Wet Density (pcf)	125.0	132.2	125.0	132.3	125.0	132.5
Dry Density (pcf)	-	98.1	-	97.7	-	98.6
Specific Gravity,G_s (Assumed)	2.68					
Thickness of Specimen, (in.)	1.00					
Degree of Saturation, (%)	45.6	132.3	45.2	133.3	46.3	132.1
Void Ratio	-	0.705	-	0.711	-	0.695

Lateral Displacement, d_h 0.36 (in.)

Displacement Rate, d_r 0.05 (in./min.)

Elapsed Time of Test, t_e 7.20 (min.)

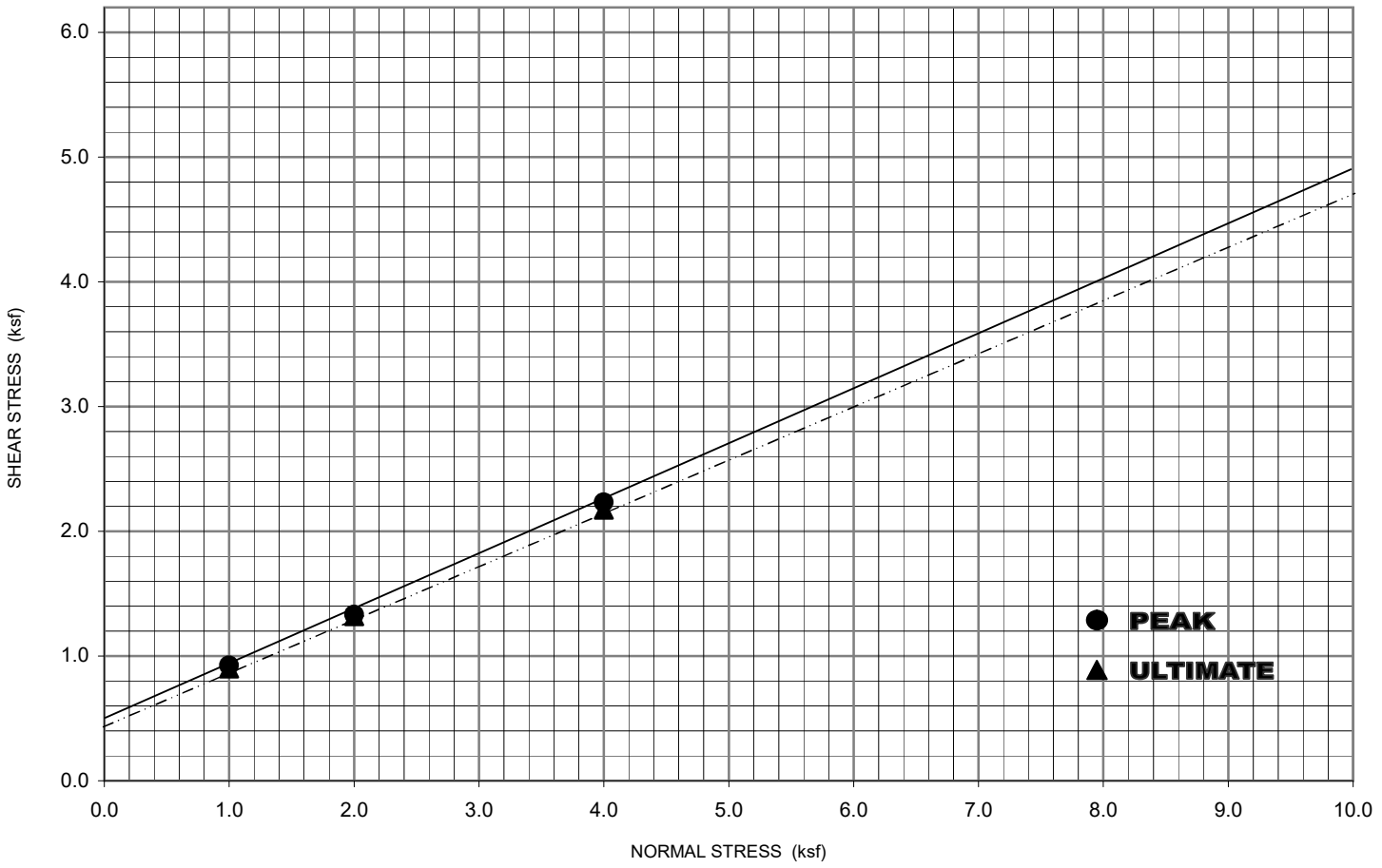
Specimen : Undisturbed : -

Remolded : X

Reconstituted : -

	PEAK	ULTIMATE
Cohesion,c (psf)	500	400
Friction Angle, ϕ	24	23

Remarks : SAMPLE REMOLDED TO 90% OF (124.0 PCF @ 12.0%)



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DIRECT SHEAR TEST
(ASTM D3080)

Project Name : JACK RABBIT TRAIL | Project No. : 18060-01

Boring / Sample No : B - 13 / KTP - 7 | Depth : 4' - 6' (ft.) | Tested By : RB | Date: 29-Jul-19

Sample Descriptions / Classification : LT. BROWN SILTY FINE SAND (SM)

Applied Normal Load (ksf)	1.0		2.0		4.0	
Shear Stress,(Peak) (ksf)	0.708		1.188		2.244	
Shear Stress,(Ultimate) (ksf)	0.624		1.188		2.244	
Density and Saturation	Initial	Final	Initial	Final	Initial	Final
Wet Weight of Soil + Ring (gms)	191.98	200.61	192.02	200.63	191.74	199.86
Dry Weight of Soil + Ring (gms)		175.74		175.78		175.50
Weight of Water (gms)	-	46.54	-	47.28	-	45.81
Weight of Ring (gms)	-	45.83	-	45.87	-	45.59
Weight of Dry Soil (gms)	-	129.91	-	129.91	-	129.91
Moisture Content (%)	12.5	35.8	12.5	36.4	12.5	35.3
Wet Density (pcf)	122.0	129.2	122.0	129.2	122.0	128.8
Dry Density (pcf)	-	95.1	-	94.7	-	95.2
Specific Gravity,G_s (Assumed)	2.68					
Thickness of Specimen, (in.)	1.00					
Degree of Saturation, (%)	44.2	126.6	43.7	127.4	44.3	124.9
Void Ratio	-	0.758	-	0.766	-	0.757

Lateral Displacement, d_h 0.36 (in.)

Displacement Rate, d_r 0.05 (in./min.)

Elapsed Time of Test, t_e 7.20 (min.)

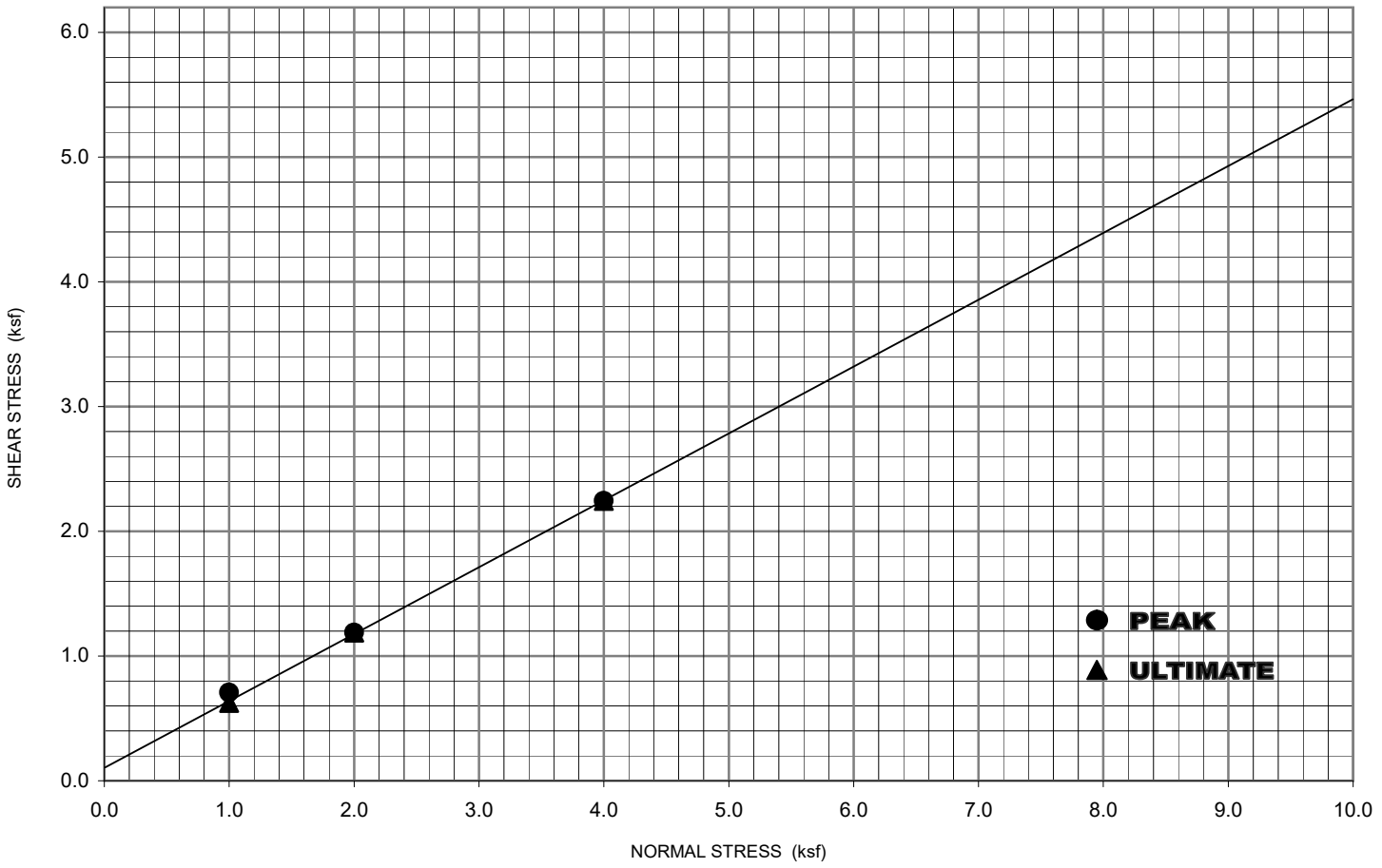
Specimen : Undisturbed : -

Remolded : x

Reconstituted : -

	PEAK	ULTIMATE
Cohesion,c (psf)	100	100
Friction Angle, ϕ	28	28

Remarks : SAMPLE REMOLDED TO 90% OF (120.5 PCF @ 12.5%)



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DIRECT SHEAR TEST

(ASTM D3080)

PROJECT NAME : JACK RABBIT TRAIL

PROJECT NUMBER : 18060-01

TRACT NUMBER :

TESTED BY : RB DATE : 17-Jul-19

LOT NUMBER :

SAMPLED BY: DKL DATE : 25-Jun-19

SAMPLE NO. :

LOCATION : B - 1 / KB - 5 @ 0' - 5'

SOIL DESCRIPTIONS / CLASSIFICATION : DK. BROWN CLAYEY SAND (SC)

TRIAL NUMBER		1	2	3	4
WET WT. OF SOIL + RING	(g)	619.35	627.48		
WEIGHT OF RING	(g)	204.33	204.33		
WET WEIGHT OF SOIL	(g)	415.02	423.15		
FACTOR		0.3030	0.3030		
WET DENSITY	(pcf)	125.8	128.2		
DRY DENSITY	(pcf)	117.4	119.0		
DEGREE OF SATURATION	(%)	44.0	50.1		

MOISTURE DETERMINATION

WET WEIGHT OF SOIL	(g)	347.58	321.05		
DRY WEIGHT OF SOIL	(g)	324.59	298.10		
MOISTURE CONTENT	(%)	7.1	7.7		

RACK NO. : 4

SURCHARGE : 144 psf

FINAL DENSITY & SATURATION

WET WT. + RING	(g)	
DRY WT. + RING	(g)	
MOISTURE CONTENT	(%)	
SAMPLE LENGTH	(cm)	
SAMPLE AREA	(cm^2)	
VOLUME	(cc)	
WT. OF RING	(g)	
DRY DENSITY	(pcf)	
SPEC.GRAVITY (assumed)		2.70
SATURATION	(%)	
% RETAINED ON #4 SIEVE		

DATE	TIME	ELAPSED TIME (min.)	DIAL READING (in.)	DEFLECTION (in.)
17-Jul	8:38		0.443	
18-Jul	5:07		0.466	
18-Jul	10:40		0.466	0.023

E. I. 23 SO_4 30 ppm

REMARKS :

KCG KLING Consulting Group, Inc.

18008 Sky Park Circle, Suite 250

Irvine, Ca. 92614

Tel: (949)797-6241 Fax: (949)797-6260

EXPANSION INDEX

(UBC 18-2)

PROJECT NAME : JACK RABBIT TRAIL

PROJECT NUMBER : 18060-01

TRACT NUMBER :

TESTED BY : RB DATE : 17-Jul-19

LOT NUMBER :

SAMPLED BY: DKL DATE : 25-Jun-19

SAMPLE NO. :

LOCATION : B - 3 / KB - 3 @ 0' - 5'

SOIL DESCRIPTIONS / CLASSIFICATION : DK. BROWN CLAYEY SAND (SC)

TRIAL NUMBER		1	2	3	4
WET WT. OF SOIL + RING	(g)	644.75	617.66		
WEIGHT OF RING	(g)	204.45	204.45		
WET WEIGHT OF SOIL	(g)	440.30	413.21		
FACTOR		0.3030	0.3030		
WET DENSITY	(pcf)	133.4	125.2		
DRY DENSITY	(pcf)	120.6	115.6		
DEGREE OF SATURATION	(%)	72.2	49.0		

MOISTURE DETERMINATION

WET WEIGHT OF SOIL	(g)	320.50	307.16		
DRY WEIGHT OF SOIL	(g)	289.76	283.62		
MOISTURE CONTENT	(%)	10.6	8.3		

RACK NO. : 3

SURCHARGE : 144 psf

FINAL DENSITY & SATURATION

WET WT. + RING	(g)	
DRY WT. + RING	(g)	
MOISTURE CONTENT	(%)	
SAMPLE LENGTH	(cm)	
SAMPLE AREA	(cm^2)	
VOLUME	(cc)	
WT. OF RING	(g)	
DRY DENSITY	(pcf)	
SPEC.GRAVITY (assumed)		2.70
SATURATION	(%)	
% RETAINED ON #4 SIEVE		

DATE	TIME	ELAPSED TIME (min.)	DIAL READING (in.)	DEFLECTION (in.)
17-Jul	7:54		0.589	
18-Jul	5:07		0.626	
18-Jul	10:38		0.626	0.037

E. I. 37 SO_4 36 ppm

REMARKS :

KCG KLING Consulting Group, Inc.
18008 Sky Park Circle, Suite 250
Irvine, Ca. 92614
Tel: (949)797-6241 Fax: (949)797-6260

EXPANSION INDEX
(UBC 18-2)

PROJECT NAME : JACK RABBIT TRAIL

PROJECT NUMBER : 18060-01

TRACT NUMBER :

TESTED BY : RB DATE : 17-Jul-19

LOT NUMBER :

SAMPLED BY: DKL DATE : 25-Jun-19

SAMPLE NO. :

LOCATION : B - 6 / KB - 2 @ 0' - 5'

SOIL DESCRIPTIONS / CLASSIFICATION : DK. BROWN CLAYEY SAND (SC)

TRIAL NUMBER		1	2	3	4
WET WT. OF SOIL + RING	(g)	630.27	623.81		
WEIGHT OF RING	(g)	204.42	204.42		
WET WEIGHT OF SOIL	(g)	425.85	419.39		
FACTOR		0.3030	0.3030		
WET DENSITY	(pcf)	129.0	127.1		
DRY DENSITY	(pcf)	118.9	117.7		
DEGREE OF SATURATION	(%)	55.2	50.0		

MOISTURE DETERMINATION

WET WEIGHT OF SOIL	(g)	328.73	305.41		
DRY WEIGHT OF SOIL	(g)	302.92	282.79		
MOISTURE CONTENT	(%)	8.5	8.0		

RACK NO. : 2

SURCHARGE : 144 psf

FINAL DENSITY & SATURATION

WET WT. + RING	(g)	
DRY WT. + RING	(g)	
MOISTURE CONTENT	(%)	
SAMPLE LENGTH	(cm)	
SAMPLE AREA	(cm^2)	
VOLUME	(cc)	
WT. OF RING	(g)	
DRY DENSITY	(pcf)	
SPEC.GRAVITY (assumed)		2.70
SATURATION	(%)	
% RETAINED ON #4 SIEVE		

DATE	TIME	ELAPSED TIME (min.)	DIAL READING (in.)	DEFLECTION (in.)
17-Jul	7:34		0.234	
18-Jul	5:07		0.255	
18-Jul	10:38		0.255	0.021

E. I. 21 SO_4 9 ppm

REMARKS :

KCG KLING Consulting Group, Inc.
18008 Sky Park Circle, Suite 250
Irvine, Ca. 92614
Tel: (949)797-6241 Fax: (949)797-6260

EXPANSION INDEX

(UBC 18-2)

PROJECT NAME : JACK RABBIT TRAIL

PROJECT NUMBER : 18060-01

TRACT NUMBER :

TESTED BY : RB DATE : 16-Jul-19

LOT NUMBER :

SAMPLED BY: DKL DATE : 25-Jun-19

SAMPLE NO. :

LOCATION : B - 8 / KB - 10 @ 0' - 5'

SOIL DESCRIPTIONS / CLASSIFICATION : DK. BROWN CLAYEY SAND (SC)

TRIAL NUMBER		1	2	3	4
WET WT. OF SOIL + RING	(g)	628.32	619.06		
WEIGHT OF RING	(g)	203.61	203.61		
WET WEIGHT OF SOIL	(g)	424.71	415.45		
FACTOR		0.3030	0.3030		
WET DENSITY	(pcf)	128.7	125.9		
DRY DENSITY	(pcf)	118.0	116.3		
DEGREE OF SATURATION	(%)	57.1	49.4		

MOISTURE DETERMINATION

WET WEIGHT OF SOIL	(g)	335.51	311.46		
DRY WEIGHT OF SOIL	(g)	307.66	287.86		
MOISTURE CONTENT	(%)	9.1	8.2		

RACK NO. : 1

SURCHARGE : 144 psf

FINAL DENSITY & SATURATION

WET WT. + RING	(g)	
DRY WT. + RING	(g)	
MOISTURE CONTENT	(%)	
SAMPLE LENGTH	(cm)	
SAMPLE AREA	(cm^2)	
VOLUME	(cc)	
WT. OF RING	(g)	
DRY DENSITY	(pcf)	
SPEC.GRAVITY (assumed)		2.70
SATURATION	(%)	
% RETAINED ON #4 SIEVE		

DATE	TIME	ELAPSED TIME (min.)	DIAL READING (in.)	DEFLECTION (in.)
16-Jul	9:51		0.436	
16-Jul	11:43		0.459	
17-Jul	9:15		0.460	0.024

E. I. 24 SO_4 21 ppm

REMARKS :

KCG KLING Consulting Group, Inc.
18008 Sky Park Circle, Suite 250
Irvine, Ca. 92614
Tel: (949)797-6241 Fax: (949)797-6260

EXPANSION INDEX
(UBC 18-2)

PROJECT NAME : JACK RABBIT TRAIL

PROJECT NUMBER : 18060-01

TRACT NUMBER :

TESTED BY : RB DATE : 25-Jul-19

LOT NUMBER :

SAMPLED BY: DKL DATE : 28-Jun-19

SAMPLE NO. :

LOCATION : B - 13 / KTP - 7 @ 4' - 6'

SOIL DESCRIPTIONS / CLASSIFICATION : LT. BROWN SILTY FINE SAND (SM)

TRIAL NUMBER		1	2	3	4
WET WT. OF SOIL + RING	(g)	583.59	609.61		
WEIGHT OF RING	(g)	204.42	204.42		
WET WEIGHT OF SOIL	(g)	379.17	405.19		
FACTOR		0.3030	0.3030		
WET DENSITY	(pcf)	114.9	122.8		
DRY DENSITY	(pcf)	108.0	112.6		
DEGREE OF SATURATION	(%)	30.6	49.0		

MOISTURE DETERMINATION

WET WEIGHT OF SOIL	(g)	336.95	311.56		
DRY WEIGHT OF SOIL	(g)	316.88	285.83		
MOISTURE CONTENT	(%)	6.3	9.0		

RACK NO. : 2

SURCHARGE : 144 psf

FINAL DENSITY & SATURATION

WET WT. + RING	(g)	
DRY WT. + RING	(g)	
MOISTURE CONTENT	(%)	
SAMPLE LENGTH	(cm)	
SAMPLE AREA	(cm^2)	
VOLUME	(cc)	
WT. OF RING	(g)	
DRY DENSITY	(pcf)	
SPEC.GRAVITY (assumed)		2.70
SATURATION	(%)	
% RETAINED ON #4 SIEVE		

DATE	TIME	ELAPSED TIME (min.)	DIAL READING (in.)	DEFLECTION (in.)
25-Jul	10:47		0.255	
25-Jul	12:00		0.256	
26-Jul	12:20		0.256	0.001

E. I. 1 SO_4 12 ppm

REMARKS :

KCG KLING Consulting Group, Inc.
18008 Sky Park Circle, Suite 250
Irvine, Ca. 92614
Tel: (949)797-6241 Fax: (949)797-6260

EXPANSION INDEX
(UBC 18-2)

ANAHEIM TEST LAB, INC

197 Technology Drive, Unit D
Irvine, CA 92618
Phone (949) 336-6544

KLING CONSULTING GROUP, INC.
18008 SKY PARK CIRCLE, STE 250
IRVINE, CA 92614

DATE: 07/03/2019

P.O. NO. Verbal

LAB NO: C-3031

SPECIFICATION: CTM-417/422/643

MATERIAL: Soil

Project No.: 18060-00
Project: Jack Rabbit Trail

ANALYTICAL REPORT

CORROSION SERIES
SUMMARY OF DATA

	pH	SOLUBLE SULFATES per CT. 417 ppm	SOLUBLE CHLORIDES per CT. 422 ppm	MIN. RESISTIVITY per CT. 643 ohm-cm
B5/KB1 @ 0-5'	6.8	94	29	2,800

RESPECTFULLY SUBMITTED

WES BRIDGER LAB MANAGER

ANAHEIM TEST LAB, INC

197 Technology Drive, Unit D
Irvine, CA 92618
Phone (949) 336-6544

KLING CONSULTING GROUP, INC.
18008 SKY PARK CIRCLE, STE 250
IRVINE, CA 92614

DATE: 07/12/2019

P.O. NO. Verbal

LAB NO: C-3039

SPECIFICATION: CTM-417/422/643

MATERIAL: Soil

Project No.: 18060-01
Project: Jack Rabbit Trail

ANALYTICAL REPORT

CORROSION SERIES
SUMMARY OF DATA

	pH	SOLUBLE SULFATES per CT. 417 ppm	SOLUBLE CHLORIDES per CT. 422 ppm	MIN. RESISTIVITY per CT. 643 ohm-cm
B-1/KB-5 @ 0-5’	7.0	148	59	2,500

RESPECTFULLY SUBMITTED

WES BRIDGER LAB MANAGER

• ANALYSIS
• DESIGN

LaBelle • Marvin
PROFESSIONAL PAVEMENT ENGINEERING
A CALIFORNIA CORPORATION

• SOILS, ASPHALT TECHNOLOGY

July 11, 2019

RECEIVED
JUL 15 2019
KLING CONSULTING GROUP

Mr. Dante Domingo
Kling Consulting Group
18008 Sky Park Circle #250
Irvine, California 92614

Project No. 45094

Dear Mr. Domingo:

Testing of the bulk soil samples delivered to our laboratory on 7/9/2019 has been completed.

Reference: J.N. 18060-01 (JB)
Project: Jack Rabbit Trail
Samples: B-9 / KB-7 @ 0'-5'
B-10 / KB-8 @ 0'-5'

Data sheets are attached for your use and file. Any untested portion of the sample will be retained for a period of 60 days prior to disposal. The opportunity to be of service is sincerely appreciated and should you have any questions, kindly call.

Respectfully Submitted,



Steven R. Marvin
RCE 30659

SRM:jw
Enclosure

2700 S. GRAND AVENUE • SANTA ANA, CA 92705-5404 • (714) 546-3468 • FAX (714) 546-5841
INFO@LABELLEMARVIN.COM

R - VALUE DATA SHEET

LaBelle Marvin

PROJECT No. 45094

DATE: 7/11/2019

BORING NO. B-9 / KB-7 @ 0'-5'

Jack Rabbit Trail

P.N. 18060-01

SAMPLE DESCRIPTION: Brown Silty Fine Sand

R-VALUE TESTING DATA | CA TEST 301			
	SPECIMEN ID		
	a	b	c
Mold ID Number	4	5	6
Water added, grams	75	55	39
Initial Test Water, %	12.7	10.7	9.2
Compact Gage Pressure,psi	70	185	350
Exudation Pressure, psi	171	296	553
Height Sample, Inches	2.62	2.57	2.43
Gross Weight Mold, grams	3121	3076	3079
Tare Weight Mold, grams	1957	1944	1955
Sample Wet Weight, grams	1164	1132	1124
Expansion, Inches x 10exp-4	5	26	68
Stability 2,000 lbs (160psi)	47 / 111	28 / 62	19 / 39
Turns Displacement	4.72	4.00	3.92
R-Value Uncorrected	19	50	66
R-Value Corrected	20	52	65
Dry Density, pcf	119.5	120.5	128.3

DESIGN CALCULATION DATA

Traffic Index	Assumed:	4.0	4.0	4.0
G.E. by Stability		0.82	0.49	0.36
G. E. by Expansion		0.17	0.87	2.27

Equilibrium R-Value	**41** by EXPANSION	Examined & Checked: 7 /11/ 19
REMARKS:	Gf = 1.25 0.6% Retained on the 3/4" Sieve.	REGISTERED PROFESSIONAL ENGINEER STEVEN R. MARVIN C 30659 STATE OF CALIFORNIA Steven R. Marvin, RCE 30659

The data above is based upon processing and testing samples as received from the field. Test procedures in accordance with latest revisions to Department of Transportation, State of California, Materials & Research Test Method No. 301.

R-VALUE GRAPHICAL PRESENTATION

LaBelle Marvin

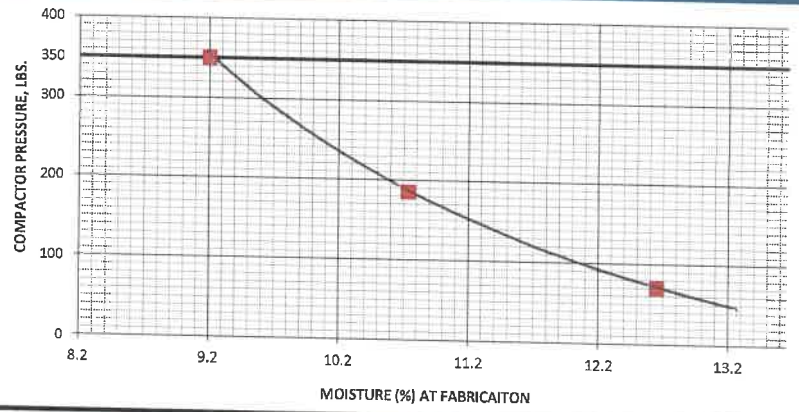
PROJECT NO. 45094

DATE: 7 /11/ 19

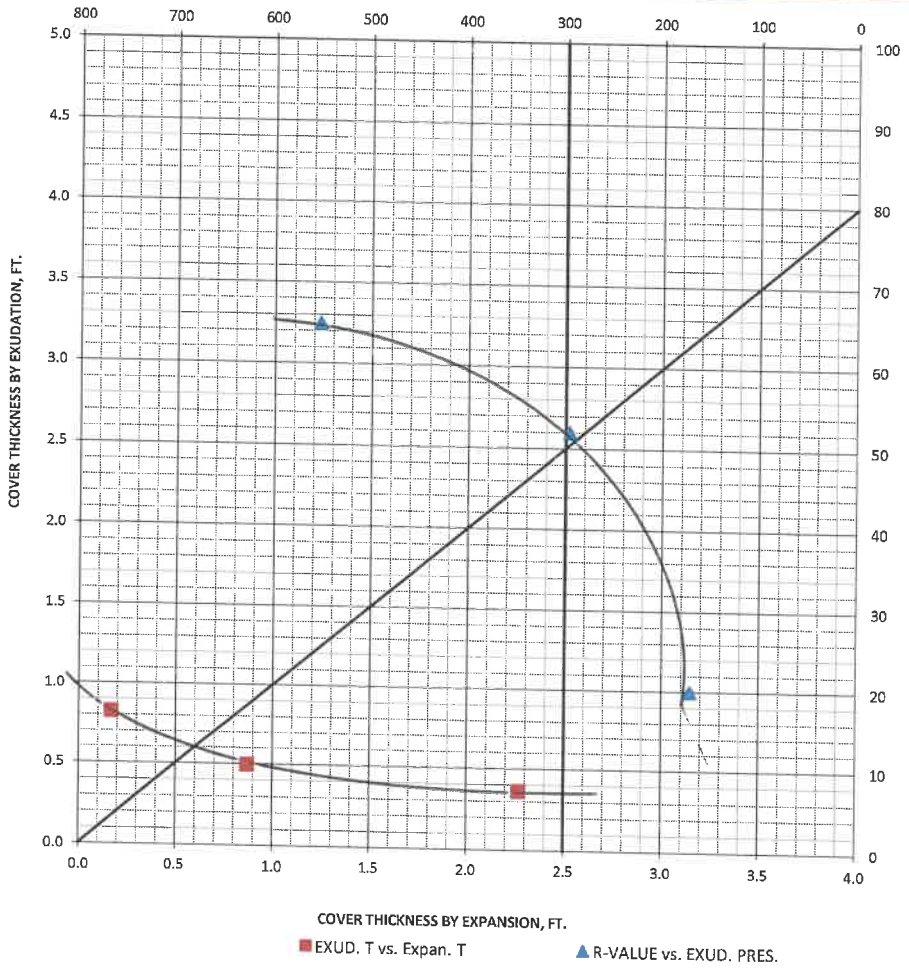
BORING NO. B-9 / KB-7 @ 0'-5'
Jack Rabbit Trail
P.N. 18060-01

REMARKS:

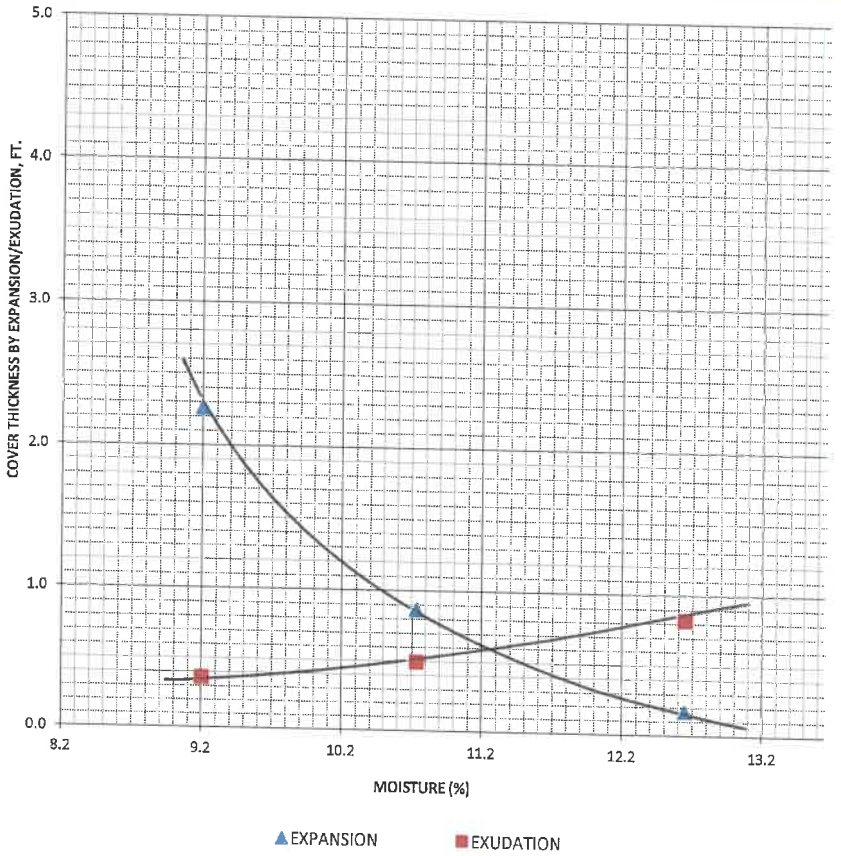
COMPACTOR PRESSURE vs MOISTURE %



COVER THICKNESS BY EXUDATION vs COVER THICKNESS BY EXPANSION



COVER THICKNESS vs MOISTURE %



R - VALUE DATA SHEET

LaBelle Marvin

PROJECT No. 45094

DATE: 7/11/2019

BORING NO. B-10 / KB-8 @ 0'-5'

Jack Rabbit Trail

P.N. 18060-01

SAMPLE DESCRIPTION: Brown Silty Fine Sand

R-VALUE TESTING DATA | CA TEST 301			
	SPECIMEN ID		
	a	b	c
Mold ID Number	1	2	3
Water added, grams	85	66	57
Initial Test Water, %	11.1	9.3	8.4
Compact Gage Pressure,psi	90	350	350
Exudation Pressure, psi	188	417	669
Height Sample, Inches	2.58	2.49	2.45
Gross Weight Mold, grams	3122	3099	3109
Tare Weight Mold, grams	1954	1946	1958
Sample Wet Weight, grams	1168	1153	1151
Expansion, Inches x 10exp-4	2	12	33
Stability 2,000 lbs (160psi)	43 / 96	24 / 61	15 / 27
Turns Displacement	4.73	3.88	3.65
R-Value Uncorrected	26	51	77
R-Value Corrected	27	51	77
Dry Density, pcf	123.5	128.4	131.3

DESIGN CALCULATION DATA

Traffic Index	Assumed:	4.0	4.0	4.0
G.E. by Stability		0.75	0.50	0.24
G. E. by Expansion		0.07	0.40	1.10

Equilibrium R-Value	**40** by EXUDATION	Examined & Checked: 7 /11/ 19
REMARKS:	Gf = 1.25 0.5% Retained on the 3/4" Sieve.	Steven R. Marvin, RCE 30659

REGISTERED PROFESSIONAL ENGINEER STEVEN R. MARVIN C 30659 CIVIL STATE OF CALIFORNIA

The data above is based upon processing and testing samples as received from the field. Test procedures in accordance with latest revisions to Department of Transportation, State of California, Materials & Research Test Method No. 301.

LaBelle Marvin

R-VALUE GRAPHICAL PRESENTATION

PROJECT NO. 45094

DATE: 7 /11/ 19

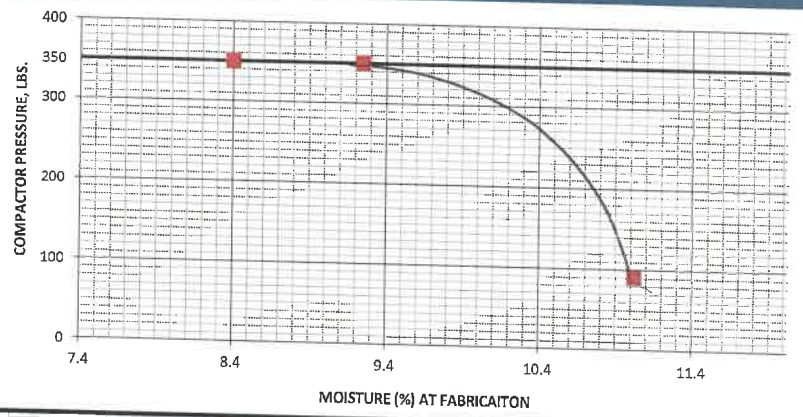
BORING NO. B-10 / KB-8 @ 0'-5'

Jack Rabbit Trail

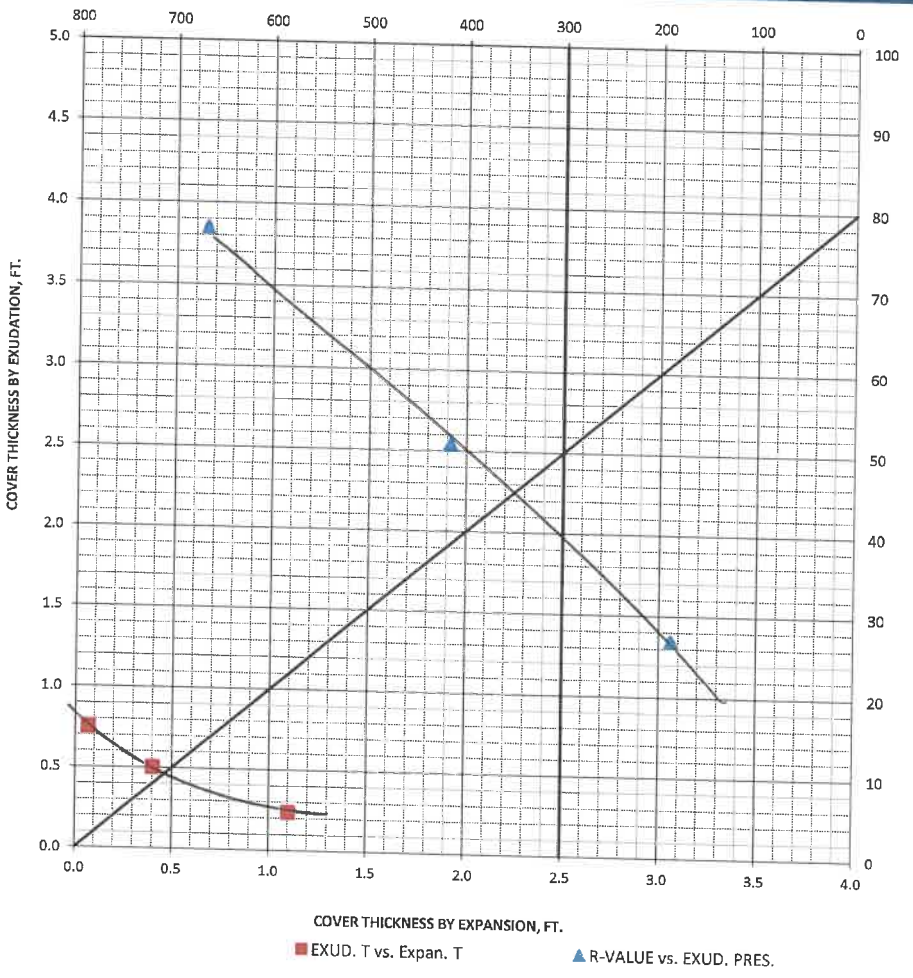
P.N. 18060-01

REMARKS:

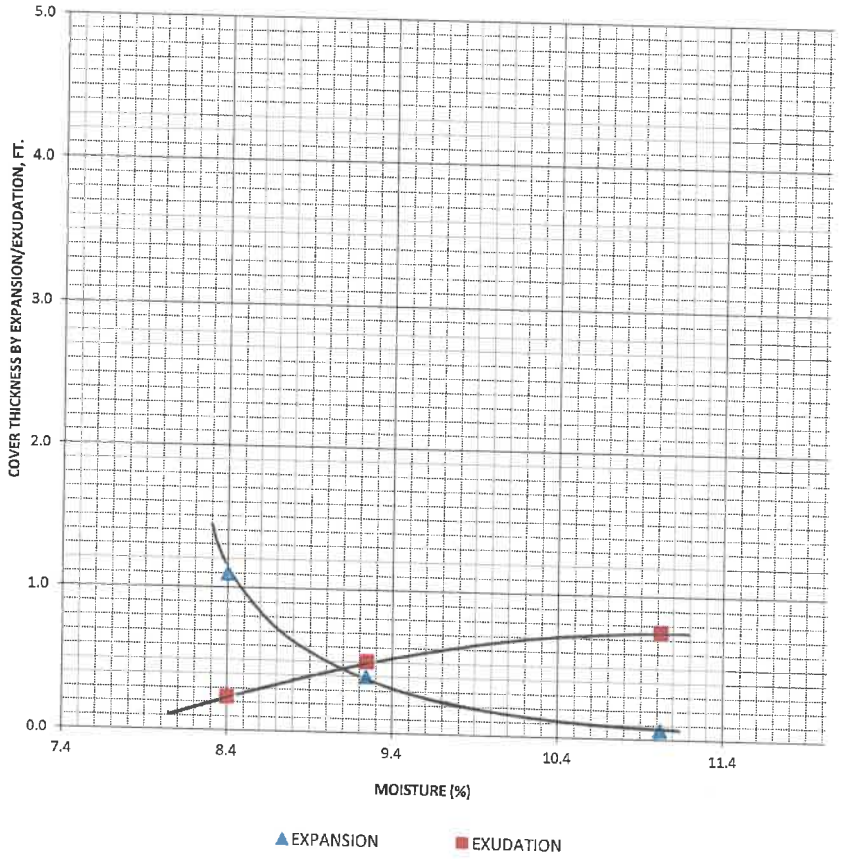
COMPACTOR PRESSURE vs MOISTURE %



COVER THICKNESS BY EXUDATION vs COVER THICKNESS BY EXPANSION



COVER THICKNESS vs MOISTURE %



• ANALYSIS
• DESIGN

LaBelle • Marvin
PROFESSIONAL PAVEMENT ENGINEERING
A CALIFORNIA CORPORATION

• SOILS, ASPHALT TECHNOLOGY

July 25, 2019

Mr. Dante Domingo
Kling Consulting Group
18008 Sky Park Circle #250
Irvine, California 92614 Project No. 45149

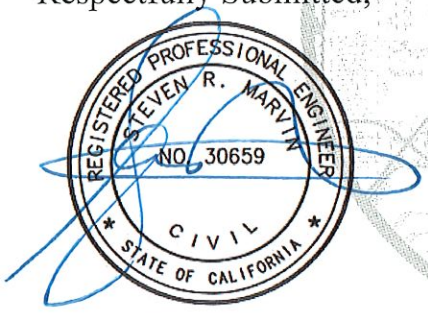
Dear Mr. Domingo:

Testing of the bulk soil sample delivered to our laboratory on 7/23/2019 has been completed.

Reference: J.N. 18060-01
Project: Jack Rabbit Trail, 7/8/2019
Sample: KTP-3 @ 6'

Data sheets are attached for your use and file. Any untested portion of the sample will be retained for a period of 60 days prior to disposal. The opportunity to be of service is sincerely appreciated and should you have any questions, kindly call.

Respectfully Submitted,



Steven R. Marvin
RCE 30659

SRM:jw
Enclosure

2700 S. GRAND AVENUE • SANTA ANA, CA 92705-5404 • (714) 546-3468 • FAX (714) 546-5841
INFO@LABELLEMARVIN.COM

R - VALUE DATA SHEET

LaBelle Marvin

PROJECT No. 45149

DATE: 7/25/2019

BORING NO. KTP-3 @ 6'
Jack Rabbit Trail, 7/8/19
P.N. 18060-01

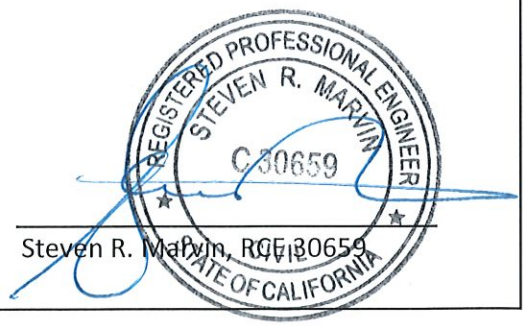
SAMPLE DESCRIPTION: Brown Sandy Clay

R-VALUE TESTING DATA | CA TEST 301			
	SPECIMEN ID		
	a	b	c
Mold ID Number	4	5	6
Water added, grams	80	55	122
Initial Test Water, %	15.7	13.2	20.0
Compact Gage Pressure,psi	60	140	30
Exudation Pressure, psi	320	504	215
Height Sample, Inches	2.55	2.42	2.67
Gross Weight Mold, grams	3070	3031	3057
Tare Weight Mold, grams	1957	1944	1955
Sample Wet Weight, grams	1113	1087	1102
Expansion, Inches x 10exp-4	32	95	0
Stability 2,000 lbs (160psi)	53 / 127	36 / 90	69 / 150
Turns Displacement	3.78	3.25	5.27
R-Value Uncorrected	15	37	3
R-Value Corrected	15	35	3
Dry Density, pcf	114.3	120.2	104.2

DESIGN CALCULATION DATA

Traffic Index	Assumed:	4.0	4.0	4.0
G.E. by Stability		0.87	0.67	0.99
G. E. by Expansion		1.07	3.17	0.00

Equilibrium R-Value	**13** by EXUDATION	Examined & Checked: 7 /25/ 19
REMARKS:	Gf = 1.25 0.0% Retained on the 3/4" Sieve.	Steven R. Marvin, RCE 30659



The data above is based upon processing and testing samples as received from the field. Test procedures in accordance with latest revisions to Department of Transportation, State of California, Materials & Research Test Method No. 301.

R-VALUE GRAPHICAL PRESENTATION

LaBelle Marvin

PROJECT NO. 45149

DATE: 7 /25/ 19

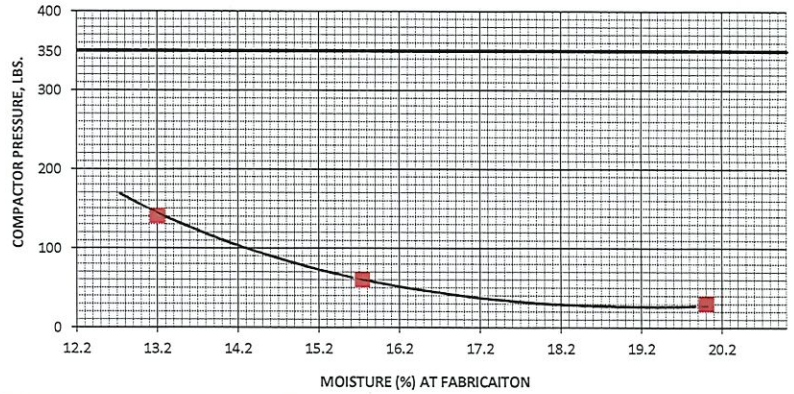
REMARKS:

BORING NO. KTP-3 @ 6'

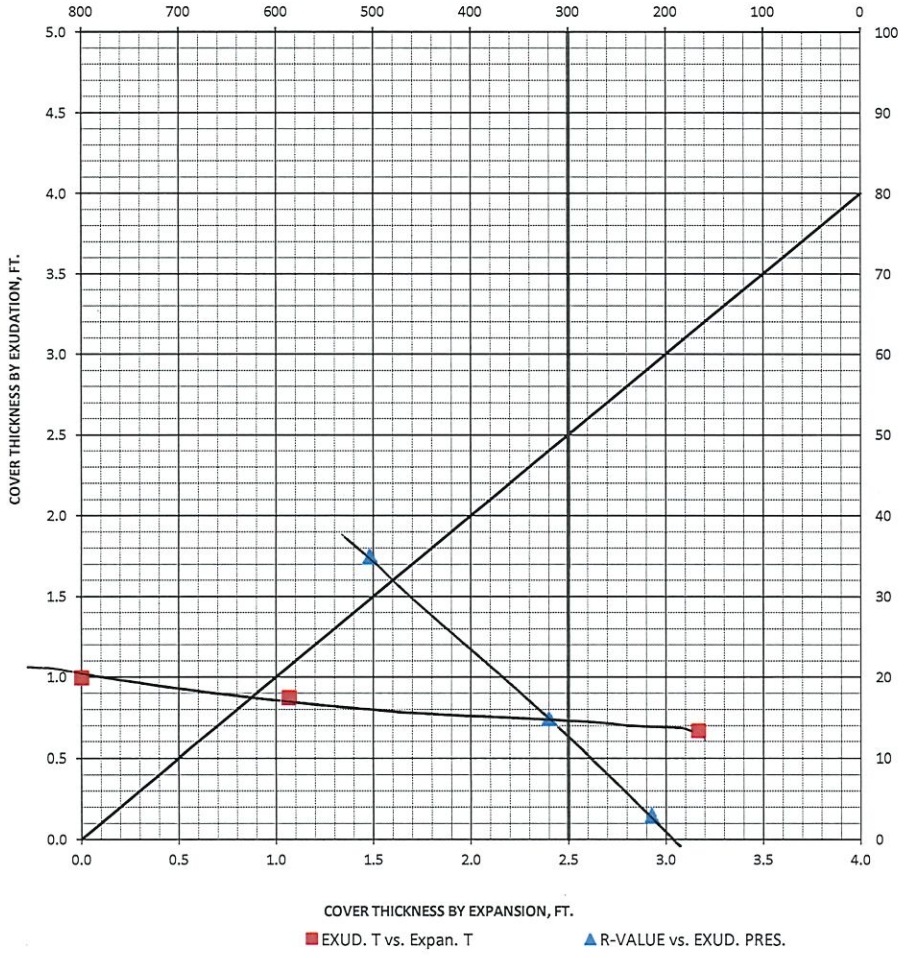
Jack Rabbit Trail, 7/8/19

P.N. 18060-01

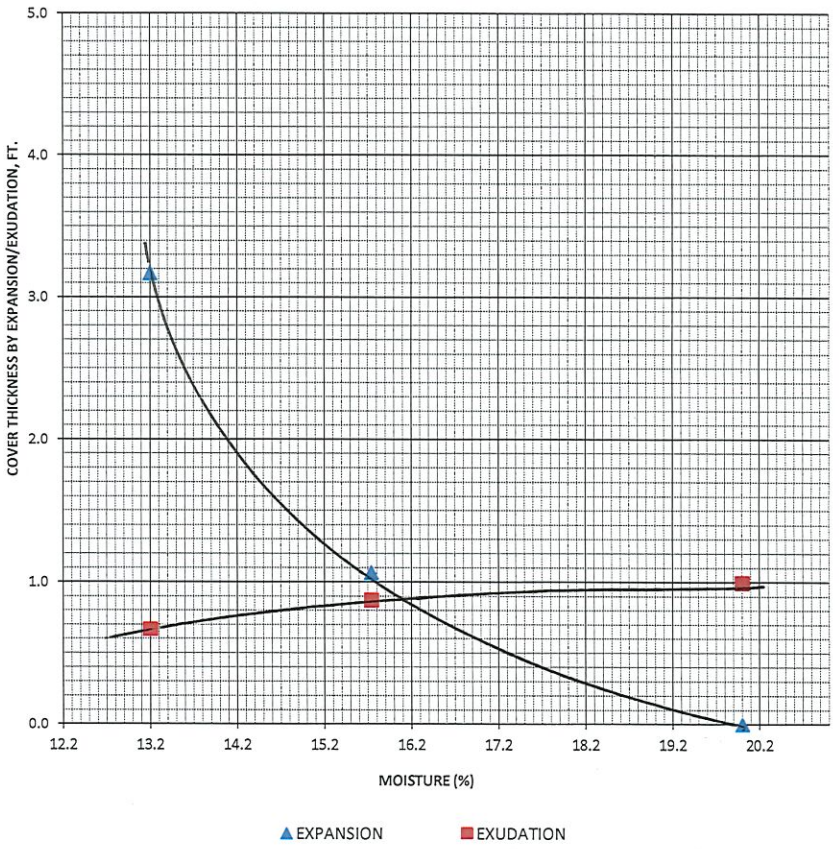
COMPACTOR PRESSURE vs MOISTURE %



COVER THICKNESS BY EXUDATION vs COVER THICKNESS BY EXPANSION



COVER THICKNESS vs MOISTURE %



JOB NAME :	JACK RABBIT TRAIL	JOB NUMBER:	18060-00
SAMPLE NUMBER :		TESTED BY :	RB
SAMPLE LOCATION :	B - 2 / KB - 6 @ 0' - 5'	DATE :	12-Jul-19
SAMPLE DESCRIPTIONS / CLASSIFICATION :	DK. BROWN CLAYEY SAND (SC)		

TEST STANDARD	ASTM D-698 - 00			**ASTM D 1557-02**		
METHOD	A	B	C	**A**	B	C
TRIAL NUMBER	1	2	3	4	5	
WATER ADDED (ML)	-100	-50	0	50		
WT. SOIL + MOLD (GMS)	3920	4074	4139	4095		
WT.OF MOLD (GMS)	1974	1974	1974	1974		
WT. OF WET SOIL (GMS)	1946	2100	2165	2121		
WET DENSITY (PCF)	128.7	138.9	143.2	140.3		
CAN NUMBER	R	M	N	S		
WET SOIL + TARE (GMS)	306.04	310.51	316.51	319.81		
DRY SOIL + TARE (GMS)	287.75	285.50	285.85	282.75		
TARE (GMS)	0.00	0.00	0.00	0.00		
DRY SOIL (GMS)	287.75	285.50	285.85	282.75		
WATER (GMS)	18.29	25.01	30.66	37.06		
MOISTURE CONTENT (%)	6.4	8.8	10.7	13.1		
DRY DENSITY (PCF)	121.0	127.7	129.3	124.0		

DIAMETER OF MOLD:	4	In.
VOLUME OF MOLD:	0.0333	Cu.Ft.
SCALPED ON SIEVE SIZE/NO.:	#4	
PERCENT RETAINED,(%) :		
MAXIMUM DRY DENSITY:	**129.5**	Pcf.
OPT. MOIST. CONTENT :	**10.5**	%

FOR OVERSIZE CORRECTION (ASTM D4718):

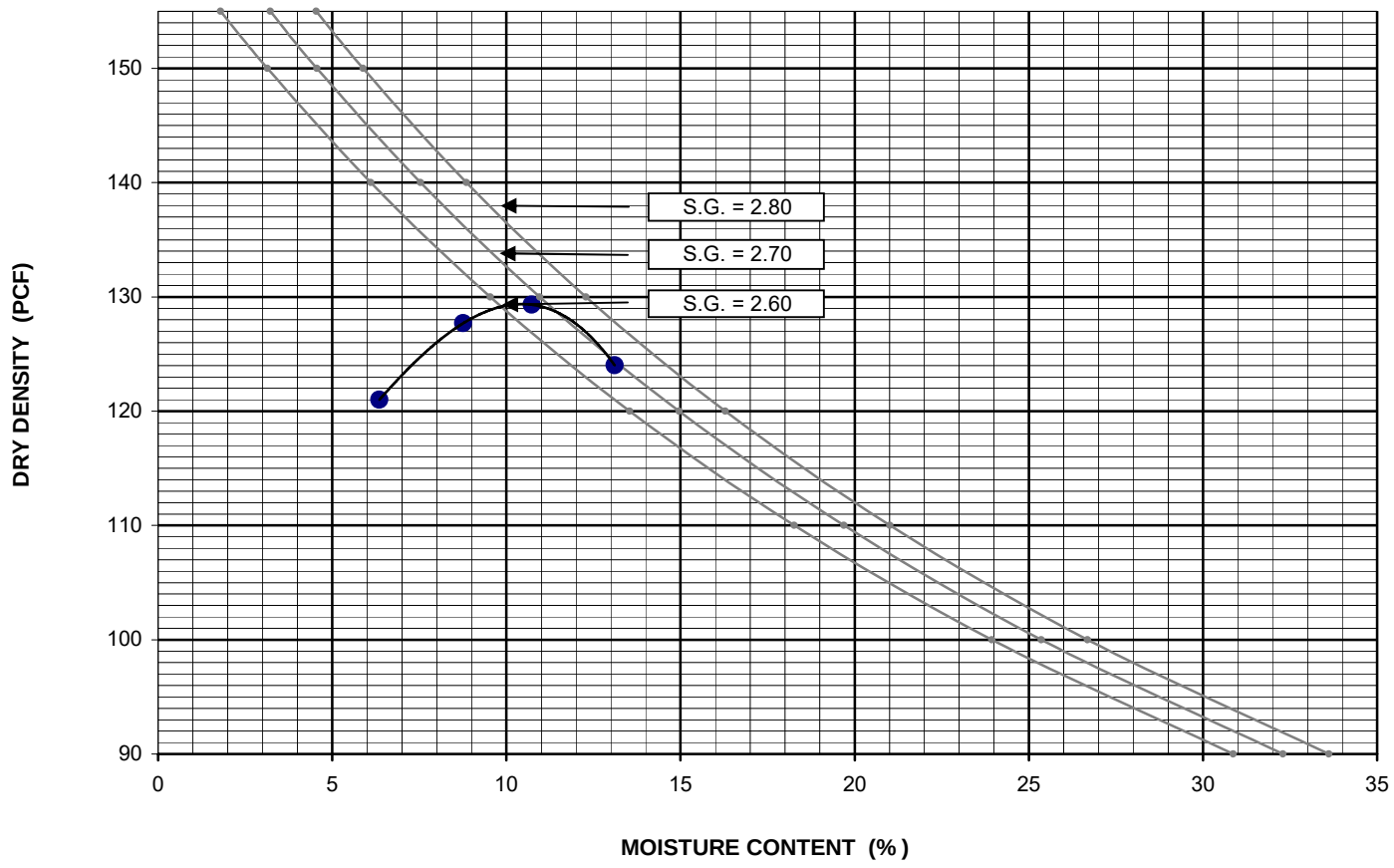
%,Finer Fraction = - % Moisture = -

%,Oversize Fraction = - Assumed Sp.Gr. 2.64

Corrected MDD of Total Materials,(PCF) = -

Corrected OMC of Total Materials, (%) = -

REMARKS :



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18008 Sky Park Circle, Suite 250
Irvine,Ca. 92614
Tel: (949)797-6241 Fax: (949)797-6260

MAXIMUM DENSITY TEST

JOB NAME :	JACK RABBIT TRAIL	JOB NUMBER:	18060-00
SAMPLE NUMBER :		TESTED BY :	RB
SAMPLE LOCATION :	B - 4 / KB - 4 @ 0' - 5'	DATE :	3-Jul-19
SAMPLE DESCRIPTIONS / CLASSIFICATION :	DK. BROWN CLAYEY SAND (SC)		

TEST STANDARD	ASTM D-698 - 00			**ASTM D 1557-02**		
METHOD	A	B	C	**A**	B	C
TRIAL NUMBER	1	2	3	4	5	
WATER ADDED (ML)	0	50	100	150		
WT. SOIL + MOLD (GMS)	4018	4119	4144	4090		
WT.OF MOLD (GMS)	1974	1974	1974	1974		
WT. OF WET SOIL (GMS)	2044	2145	2170	2116		
WET DENSITY (PCF)	135.2	141.9	143.5	139.9		
CAN NUMBER	M	N	S	R		
WET SOIL + TARE (GMS)	308.45	311.01	315.00	319.81		
DRY SOIL + TARE (GMS)	289.89	286.79	285.84	284.59		
TARE (GMS)	0.00	0.00	0.00	0.00		
DRY SOIL (GMS)	289.89	286.79	285.84	284.59		
WATER (GMS)	18.56	24.22	29.16	35.22		
MOISTURE CONTENT (%)	6.4	8.4	10.2	12.4		
DRY DENSITY (PCF)	127.1	130.8	130.2	124.5		

DIAMETER OF MOLD:	4	In.
VOLUME OF MOLD:	0.0333	Cu.Ft.
SCALPED ON SIEVE SIZE/NO.:	#4	
PERCENT RETAINED,(%) :	-	
MAXIMUM DRY DENSITY:	**131.0**	Pcf.
OPT. MOIST. CONTENT :	**9.0**	%

FOR OVERSIZE CORRECTION (ASTM D4718):

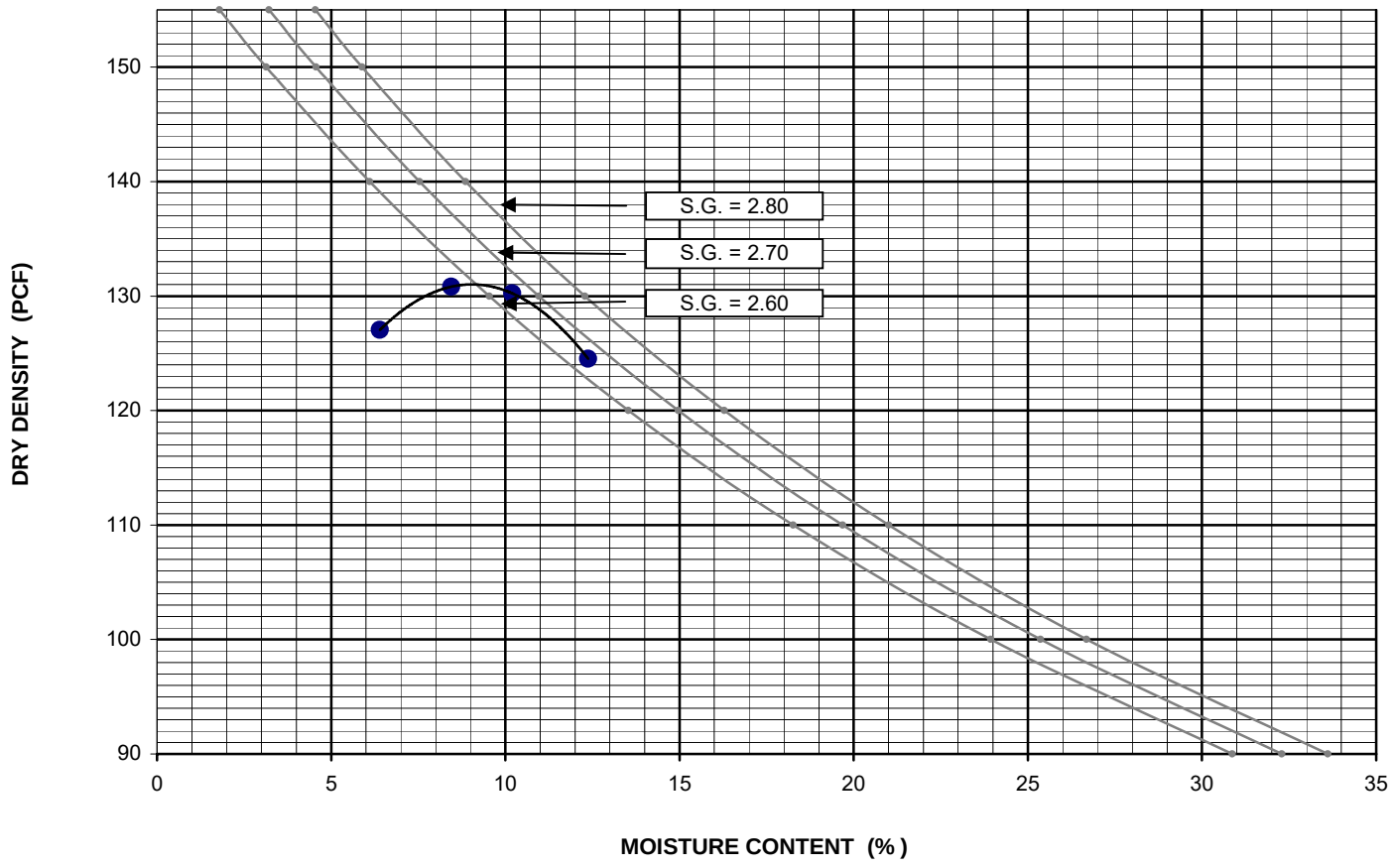
%,Finer Fraction = - % Moisture = -

%,Oversize Fraction = - Assumed Sp.Gr. 2.64

Corrected MDD of Total Materials,(PCF) = -

Corrected OMC of Total Materials, (%) = -

REMARKS :



KCG KLING Consulting Group, Inc.
18008 Sky Park Circle, Suite 250
Irvine,Ca. 92614
Tel: (949)797-6241 Fax: (949)797-6260

MAXIMUM DENSITY TEST

JOB NAME :	JACK RABBIT TRAIL	JOB NUMBER:	18060-01
SAMPLE NUMBER :		TESTED BY :	RB
SAMPLE LOCATION :	B - 5 / KB - 1 @ 0' - 5'	DATE :	18-Jul-19
SAMPLE DESCRIPTIONS / CLASSIFICATION :	DK. BROWN CLAYEY SAND (SC)		

TEST STANDARD	ASTM D-698 - 00			**ASTM D 1557-02**		
METHOD	A	B	C	**A**	B	C
TRIAL NUMBER	1	2	3	4	5	
WATER ADDED (ML)	-	0	50	100		
WT. SOIL + MOLD (GMS)	3999	4095	4123	4052		
WT.OF MOLD (GMS)	1974	1974	1974	1974		
WT. OF WET SOIL (GMS)	2025	2121	2149	2078		
WET DENSITY (PCF)	133.9	140.3	142.1	137.4		
CAN NUMBER		M	R	N		
WET SOIL + TARE (GMS)	308.74	316.16	318.83	322.53		
DRY SOIL + TARE (GMS)	287.02	288.70	286.42	284.41		
TARE (GMS)	0.00	0.00	0.00	0.00		
DRY SOIL (GMS)	287.02	288.70	286.42	284.41		
WATER (GMS)	21.72	27.46	32.41	38.12		
MOISTURE CONTENT (%)	7.6	9.5	11.3	13.4		
DRY DENSITY (PCF)	124.5	128.1	127.7	121.2		

DIAMETER OF MOLD:	4	In.
VOLUME OF MOLD:	0.0333	Cu.Ft.
SCALPED ON SIEVE SIZE/NO.:	#4	
PERCENT RETAINED,(%) :	-	
MAXIMUM DRY DENSITY:	**128.5**	Pcf.
OPT. MOIST. CONTENT :	**10.5**	%

FOR OVERSIZE CORRECTION (ASTM D4718):

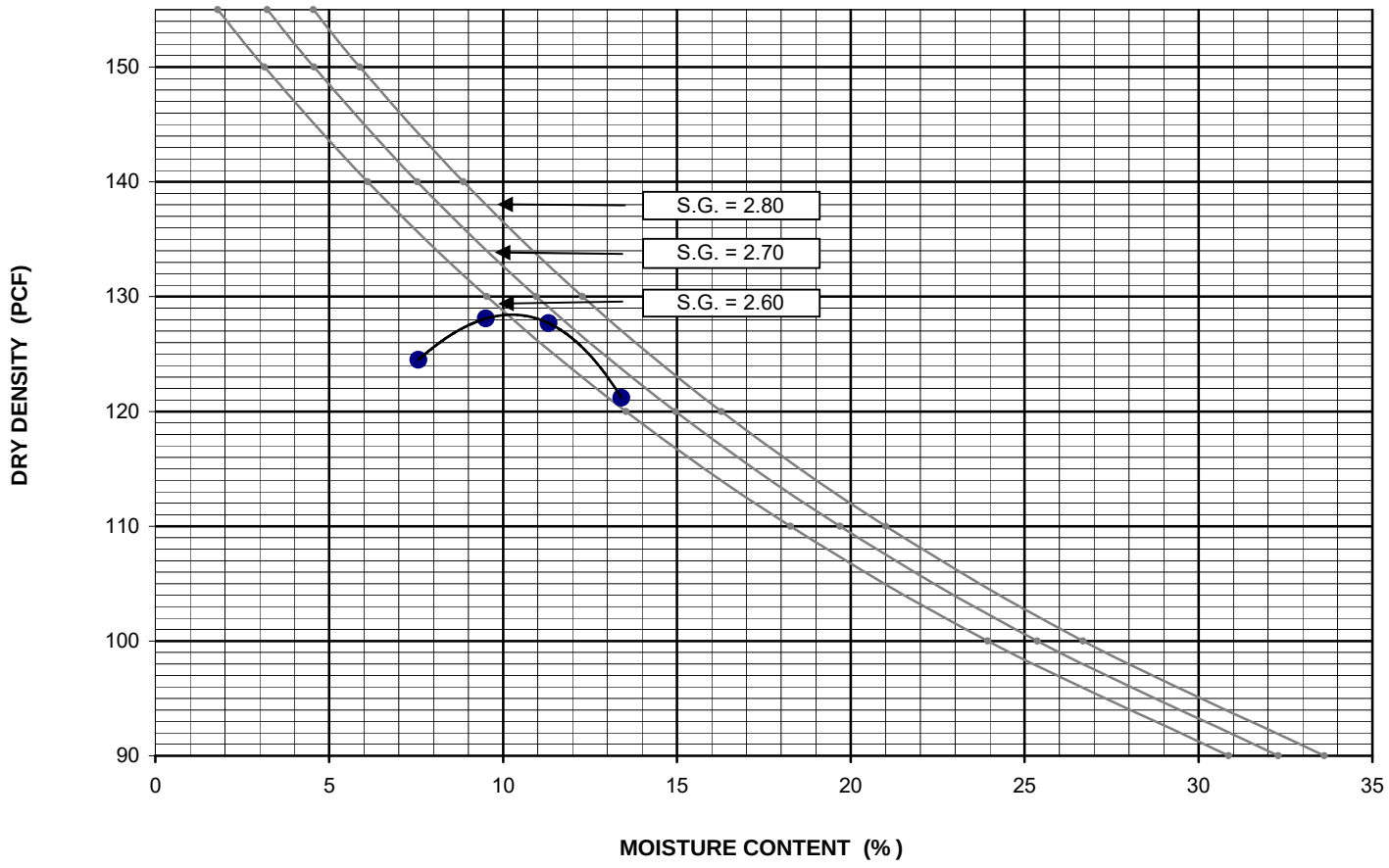
%,Finer Fraction = - % Moisture = -

%,Oversize Fraction = - Assumed Sp.Gr. 2.64

Corrected MDD of Total Materials,(PCF) = -

Corrected OMC of Total Materials, (%) = -

REMARKS :



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18008 Sky Park Circle, Suite 250
Irvine,Ca. 92614
Tel: (949)797-6241 Fax: (949)797-6260

MAXIMUM DENSITY TEST

JOB NAME :	JACK RABBIT TRAIL	JOB NUMBER:	18060-01
SAMPLE NUMBER :		TESTED BY :	RB
SAMPLE LOCATION :	B - 7 / KB - 9 @ 0' - 5'	DATE :	19-Jul-19
SAMPLE DESCRIPTIONS / CLASSIFICATION :	DK. BROWN CLAYEY SAND (SC)		

TEST STANDARD	ASTM D-698 - 00			**ASTM D 1557-02**		
METHOD	A	B	C	**A**	B	C
TRIAL NUMBER	1	2	3	4	5	
WATER ADDED (ML)	-	0	50	100		
WT. SOIL + MOLD (GMS)	3967	4054	4143	4116		
WT.OF MOLD (GMS)	1974	1974	1974	1974		
WT. OF WET SOIL (GMS)	1993	2080	2169	2142		
WET DENSITY (PCF)	131.8	137.6	143.5	141.7		
CAN NUMBER	N	M	R	S		
WET SOIL + TARE (GMS)	307.32	310.19	313.99	318.89		
DRY SOIL + TARE (GMS)	290.52	289.04	287.39	286.34		
TARE (GMS)	0.00	0.00	0.00	0.00		
DRY SOIL (GMS)	290.52	289.04	287.39	286.34		
WATER (GMS)	16.80	21.15	26.60	32.55		
MOISTURE CONTENT (%)	5.8	7.3	9.3	11.4		
DRY DENSITY (PCF)	124.6	128.2	131.3	127.2		

DIAMETER OF MOLD:	4	In.
VOLUME OF MOLD:	0.0333	Cu.Ft.
SCALPED ON SIEVE SIZE/NO.:	#4	
PERCENT RETAINED,(%) :	5.9	
MAXIMUM DRY DENSITY:	**131.5**	Pcf.
OPT. MOIST. CONTENT :	**9.5**	%

FOR OVERSIZE CORRECTION (ASTM D4718):

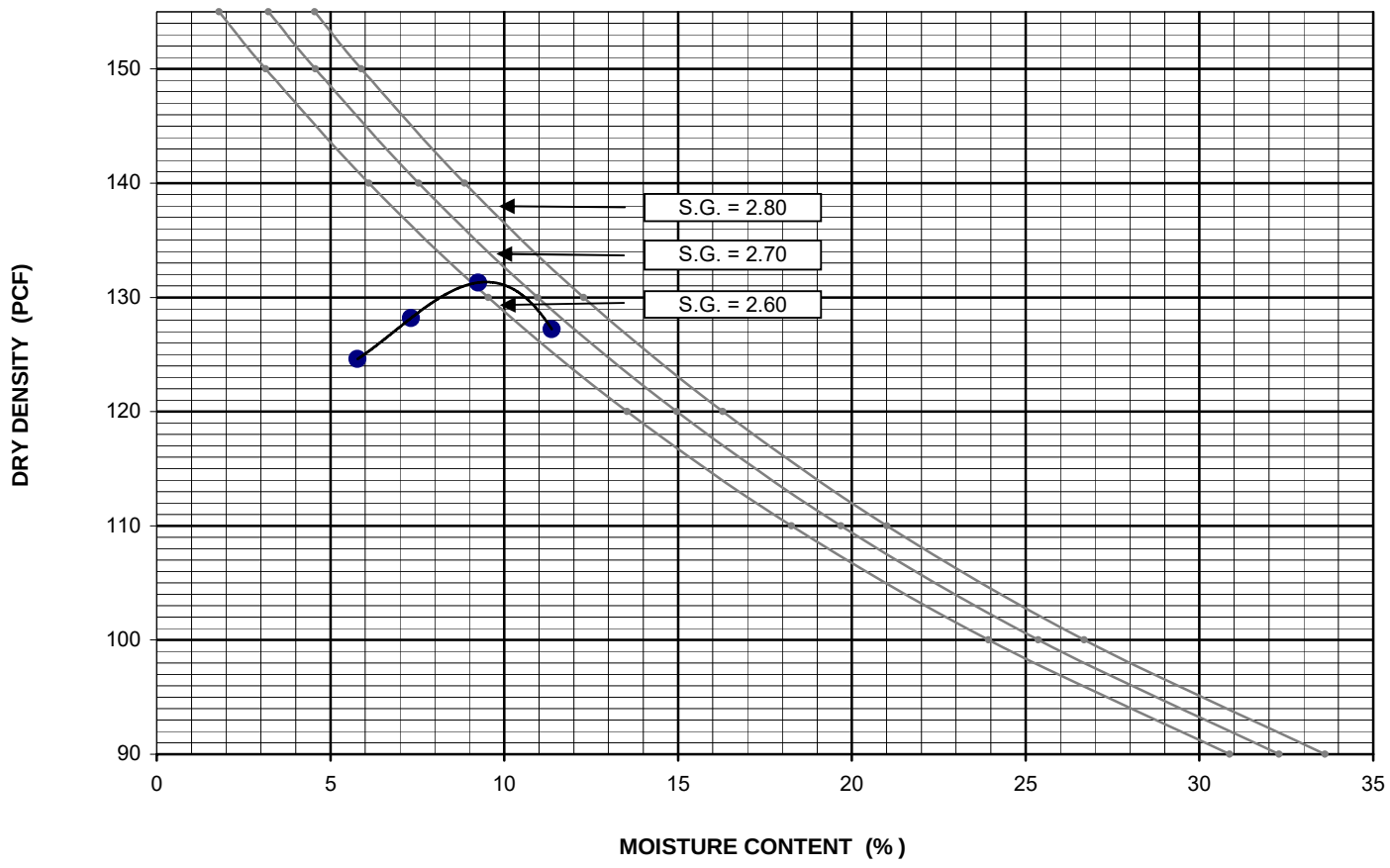
%,Finer Fraction = - % Moisture = -

%,Oversize Fraction = - Assumed Sp.Gr. 2.64

Corrected MDD of Total Materials,(PCF) = -

Corrected OMC of Total Materials, (%) = -

REMARKS :



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Irvine,Ca. 92614
Tel: (949)797-6241 Fax: (949)797-6260

MAXIMUM DENSITY TEST

JOB NAME :	JACK RABBIT TRAIL	JOB NUMBER:	18060-01
SAMPLE NUMBER :		TESTED BY :	RB
SAMPLE LOCATION :	B - 13 / KTP - 7 @ 4' - 6'	DATE :	26-Jul-19
SAMPLE DESCRIPTIONS / CLASSIFICATION :	LT. BROWN SILTY FINE SAND (SM)		

TEST STANDARD	ASTM D-698 - 00			**ASTM D 1557-02**		
METHOD	A	B	C	**A**	B	C
TRIAL NUMBER	1	2	3	4	5	
WATER ADDED (ML)	50	100	150	200		
WT. SOIL + MOLD (GMS)	3899	3967	4019	4012		
WT.OF MOLD (GMS)	1974	1974	1974	1974		
WT. OF WET SOIL (GMS)	1925	1993	2045	2038		
WET DENSITY (PCF)	127.3	131.8	135.3	134.8		
CAN NUMBER	R	S	N	M		
WET SOIL + TARE (GMS)	311.18	315.68	321.64	325.12		
DRY SOIL + TARE (GMS)	288.26	286.01	286.23	284.16		
TARE (GMS)	0.00	0.00	0.00	0.00		
DRY SOIL (GMS)	288.26	286.01	286.23	284.16		
WATER (GMS)	22.92	29.67	35.41	40.96		
MOISTURE CONTENT (%)	8.0	10.4	12.4	14.4		
DRY DENSITY (PCF)	117.9	119.4	120.4	117.8		

DIAMETER OF MOLD:	4	In.
VOLUME OF MOLD:	0.0333	Cu.Ft.
SCALPED ON SIEVE SIZE/NO.:	#4	
PERCENT RETAINED,(%) :		
MAXIMUM DRY DENSITY:	**120.5**	Pcf.
OPT. MOIST. CONTENT :	**12.5**	%

FOR OVERSIZE CORRECTION (ASTM D4718):

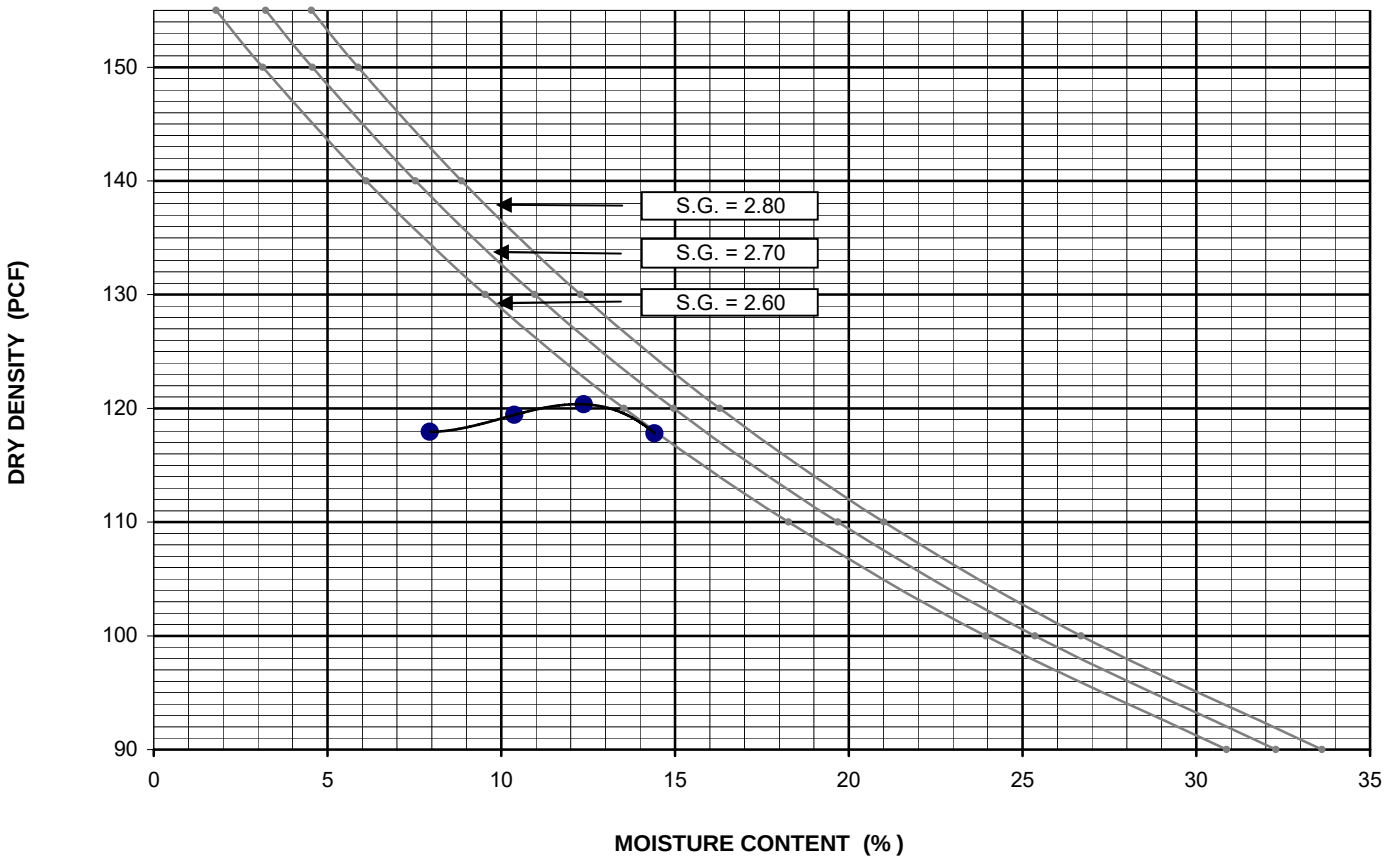
%,Finer Fraction = - % Moisture = -

%,Oversize Fraction = - Assumed Sp.Gr. 2.64

Corrected MDD of Total Materials,(PCF) = -

Corrected OMC of Total Materials, (%) = -

REMARKS :



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MAXIMUM DENSITY TEST

JOB NAME :	JACK RABBIT TRAIL	JOB NUMBER:	18060-01
SAMPLE NUMBER :		TESTED BY :	RB
SAMPLE LOCATION :	KTP - 3 / B - 11 @ 6'	DATE :	22-Jul-19
SAMPLE DESCRIPTIONS / CLASSIFICATION :	REDDISH BROWN SANDY CLAY (CL)		

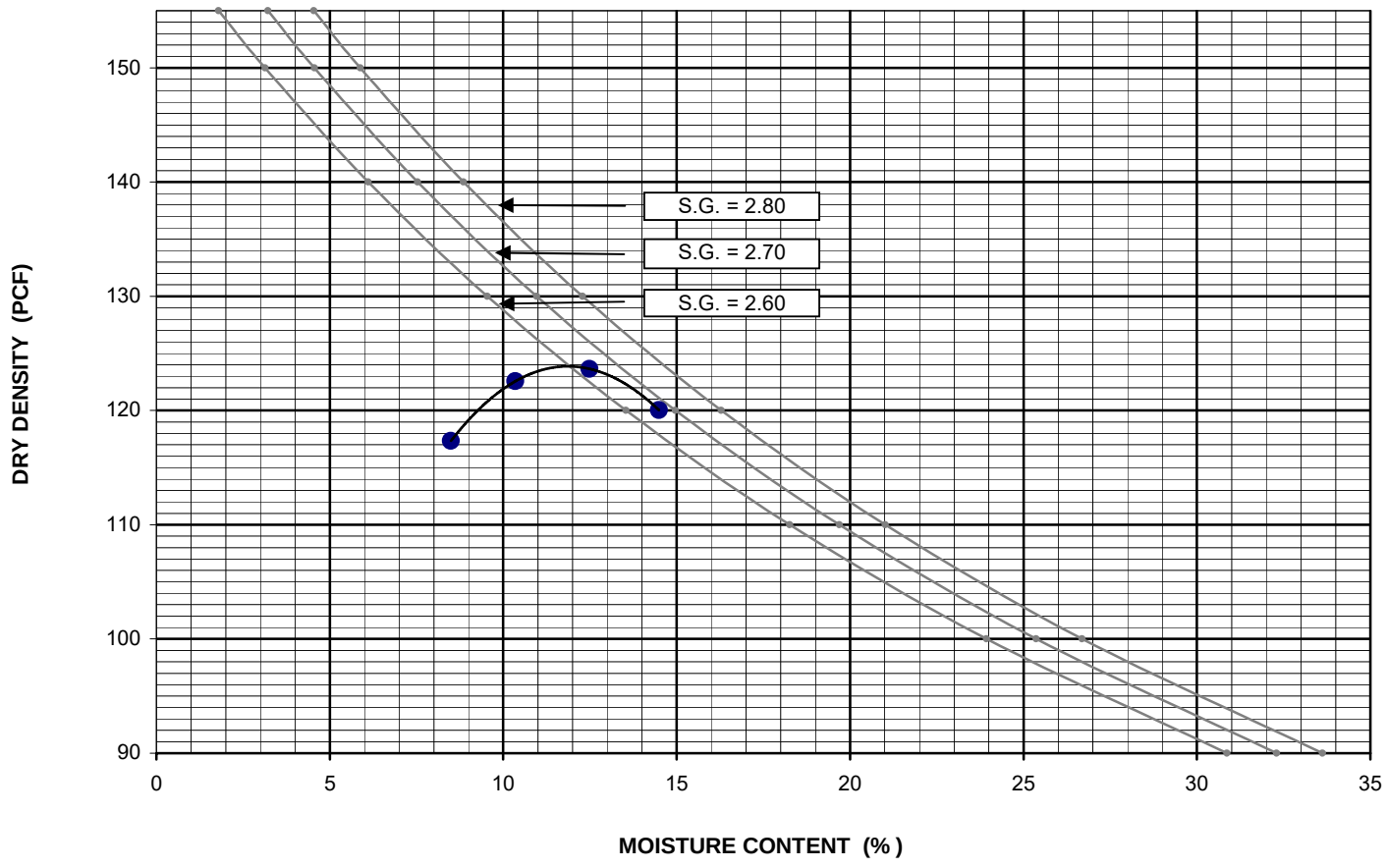
TEST STANDARD	ASTM D-698 - 00			**ASTM D 1557-02**		
METHOD	A	B	C	**A**	B	C
TRIAL NUMBER	1	2	3	4	5	
WATER ADDED (ML)	-	0	50	100		
WT. SOIL + MOLD (GMS)	3899	4019	4077	4052		
WT.OF MOLD (GMS)	1974	1974	1974	1974		
WT. OF WET SOIL (GMS)	1925	2045	2103	2078		
WET DENSITY (PCF)	127.3	135.3	139.1	137.4		
CAN NUMBER	N	S	R	M		
WET SOIL + TARE (GMS)	307.52	315.56	320.22	323.81		
DRY SOIL + TARE (GMS)	283.44	285.96	284.67	282.83		
TARE (GMS)	0.00	0.00	0.00	0.00		
DRY SOIL (GMS)	283.44	285.96	284.67	282.83		
WATER (GMS)	24.08	29.60	35.55	40.98		
MOISTURE CONTENT (%)	8.5	10.4	12.5	14.5		
DRY DENSITY (PCF)	117.3	122.6	123.6	120.0		

DIAMETER OF MOLD:	4	In.	
VOLUME OF MOLD:	0.0333	Cu.Ft.	
SCALPED ON SIEVE SIZE/NO.:	#4		
PERCENT RETAINED,(%) :	-		
MAXIMUM DRY DENSITY:	**124.0**	Pcf.	
OPT. MOIST. CONTENT :	**12.0**	%	

FOR OVERSIZE CORRECTION (ASTM D4718):

%,Finer Fraction =	-	% Moisture =	-
%,Oversize Fraction =	-	Assumed Sp.Gr.	2.64
Corrected MDD of Total Materials,(PCF) =			-
Corrected OMC of Total Materials, (%) =			-

REMARKS :



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MAXIMUM DENSITY TEST

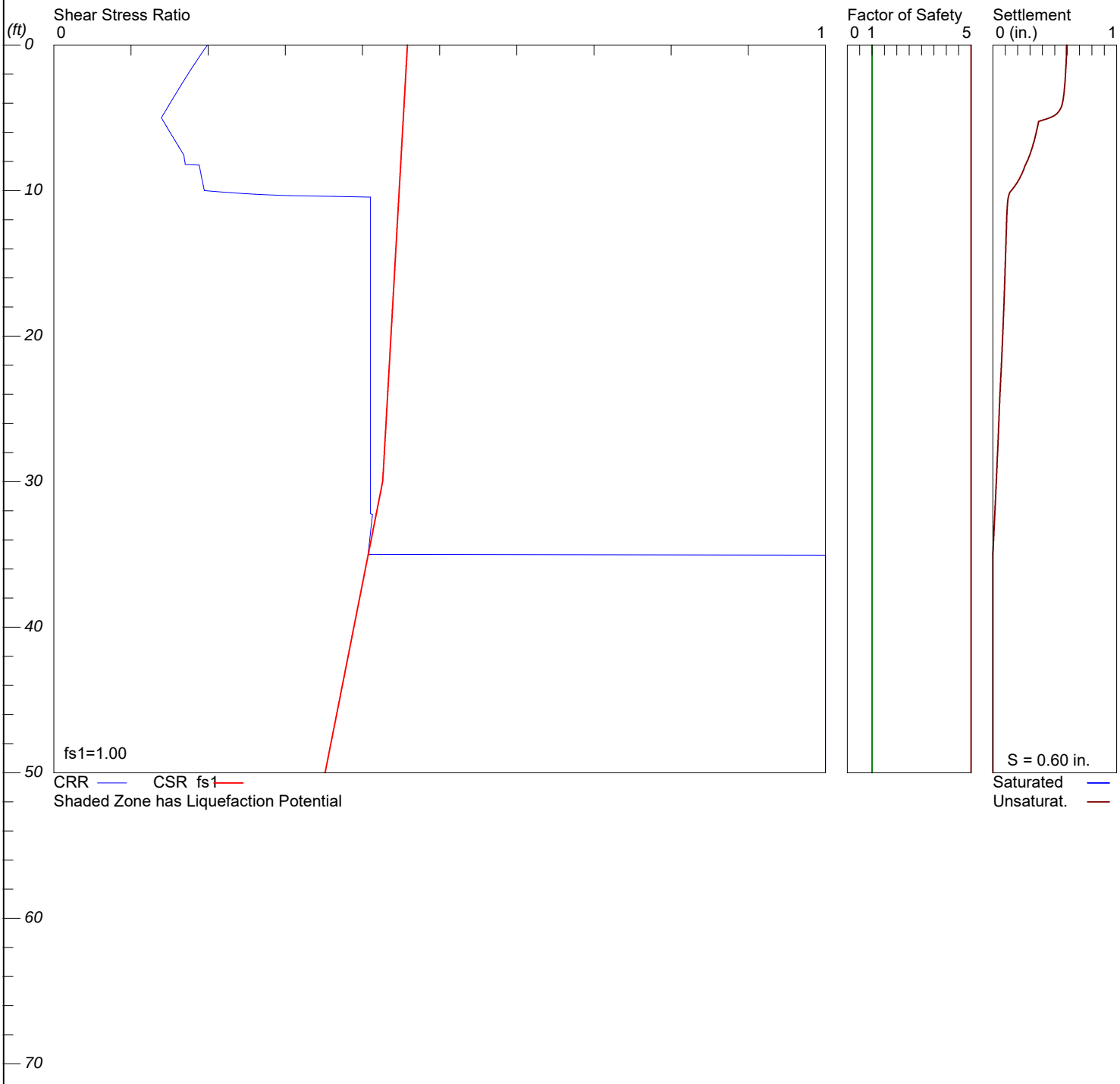
APPENDIX D

SEISMIC SETTLEMENT/LIQUEFACTION ANALYSIS

18060-00

Hole No.=KB-1 Water Depth=100 ft

Magnitude=8.1
Acceleration=0.705g

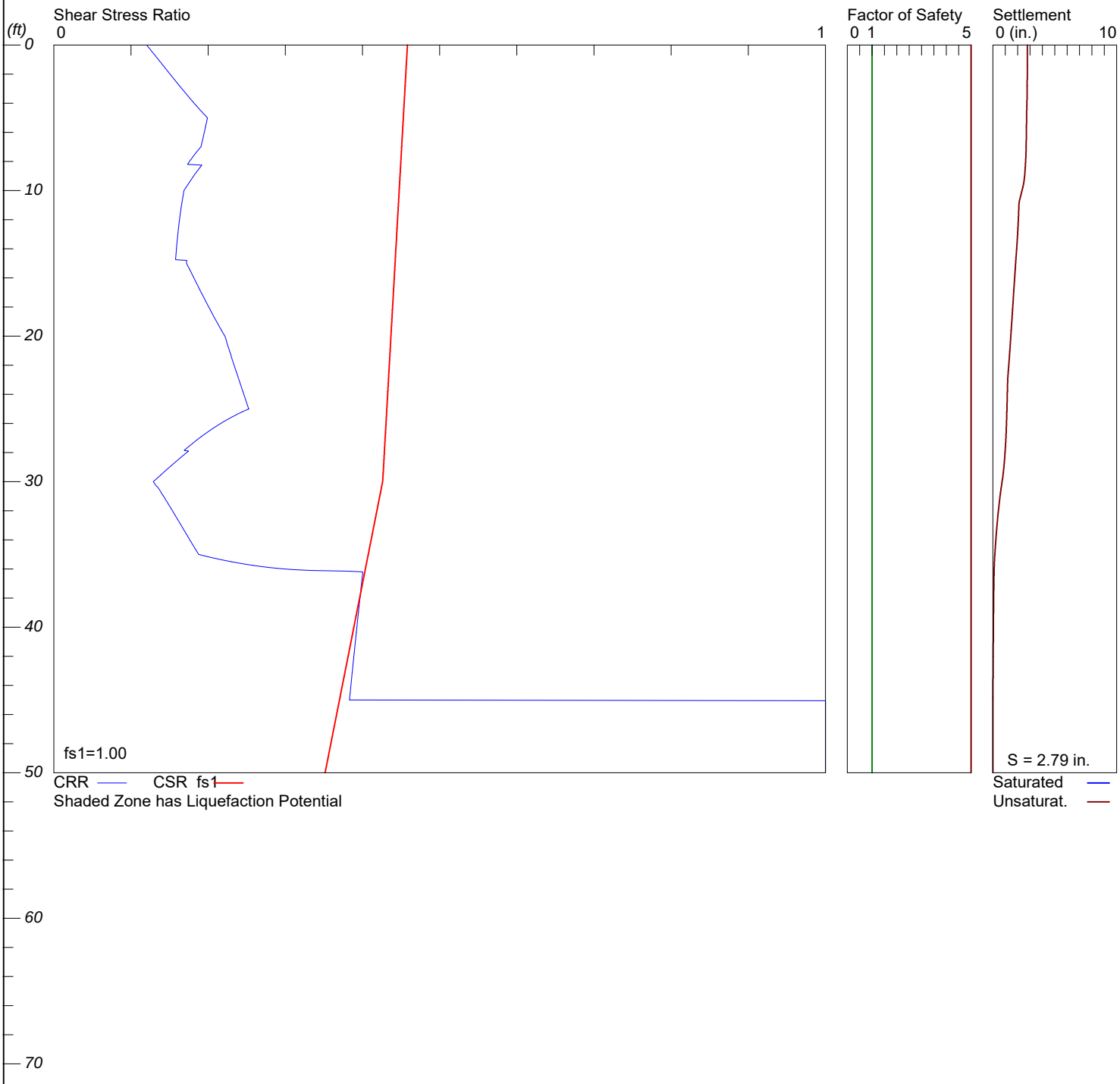


LiquefyPro CivilTech Software USA www.civiltech.com

18060-00

Hole No.=KB-2 Water Depth=100 ft

Magnitude=8.1
Acceleration=0.705g

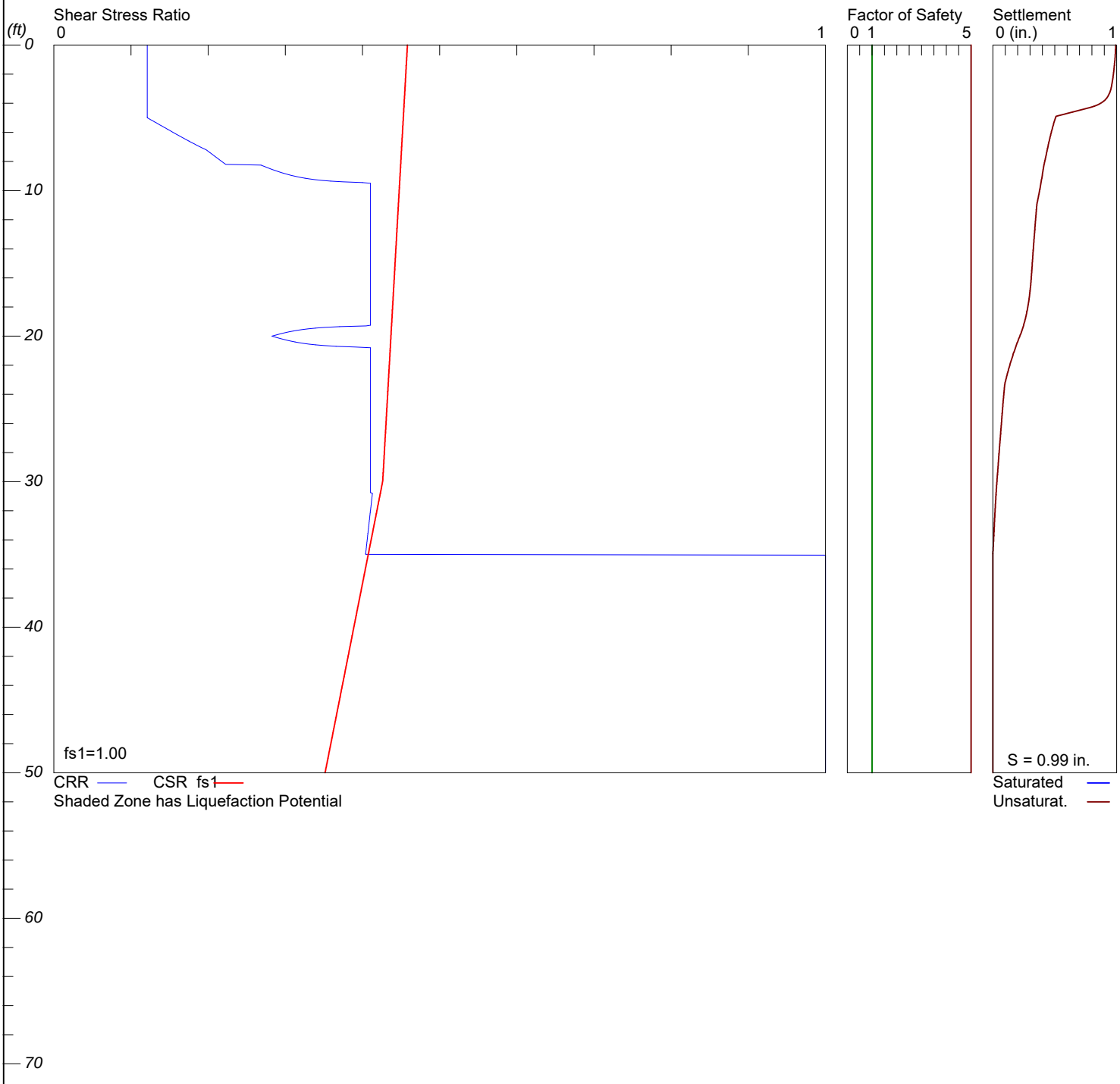


LiquefyPro CivilTech Software USA www.civiltech.com

18060-00

Hole No.=KB-3 Water Depth=100 ft

Magnitude=8.1
Acceleration=0.705g

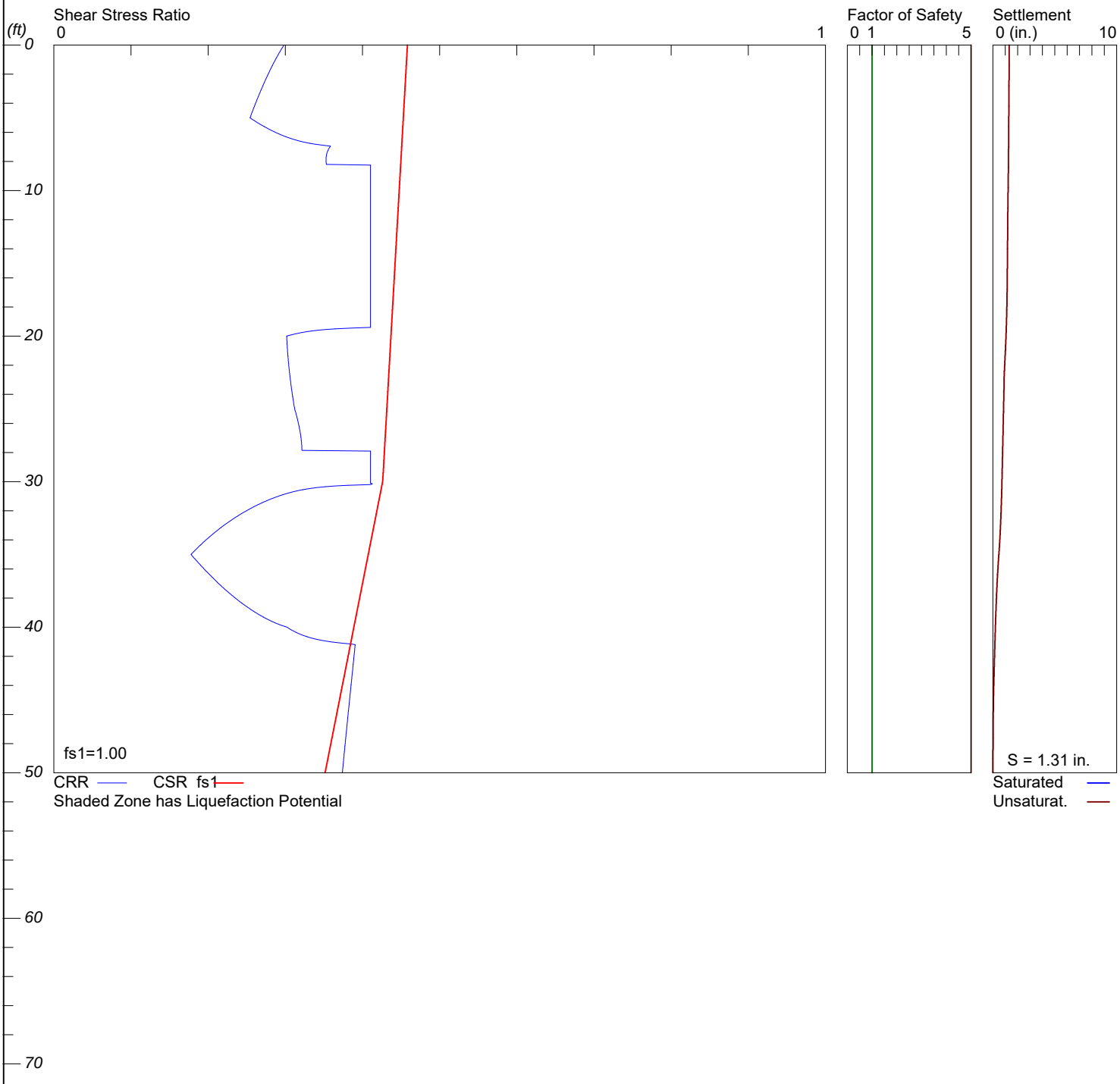


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18060-00

Hole No.=KB-4 Water Depth=100 ft

Magnitude=8.1
Acceleration=0.705g

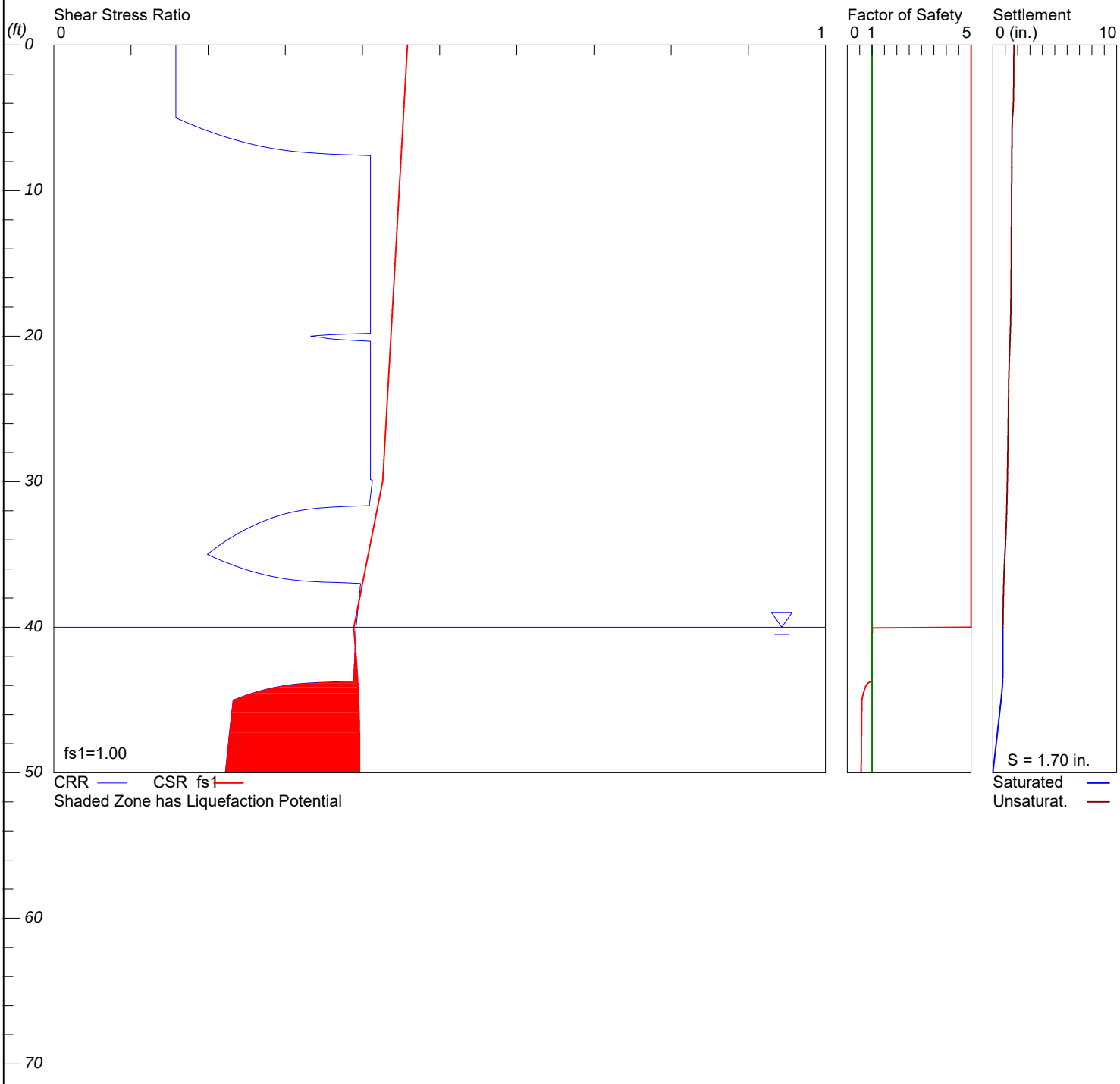


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18060-00

Hole No.=KB-5 Water Depth=40 ft

Magnitude=8.1
Acceleration=0.705g

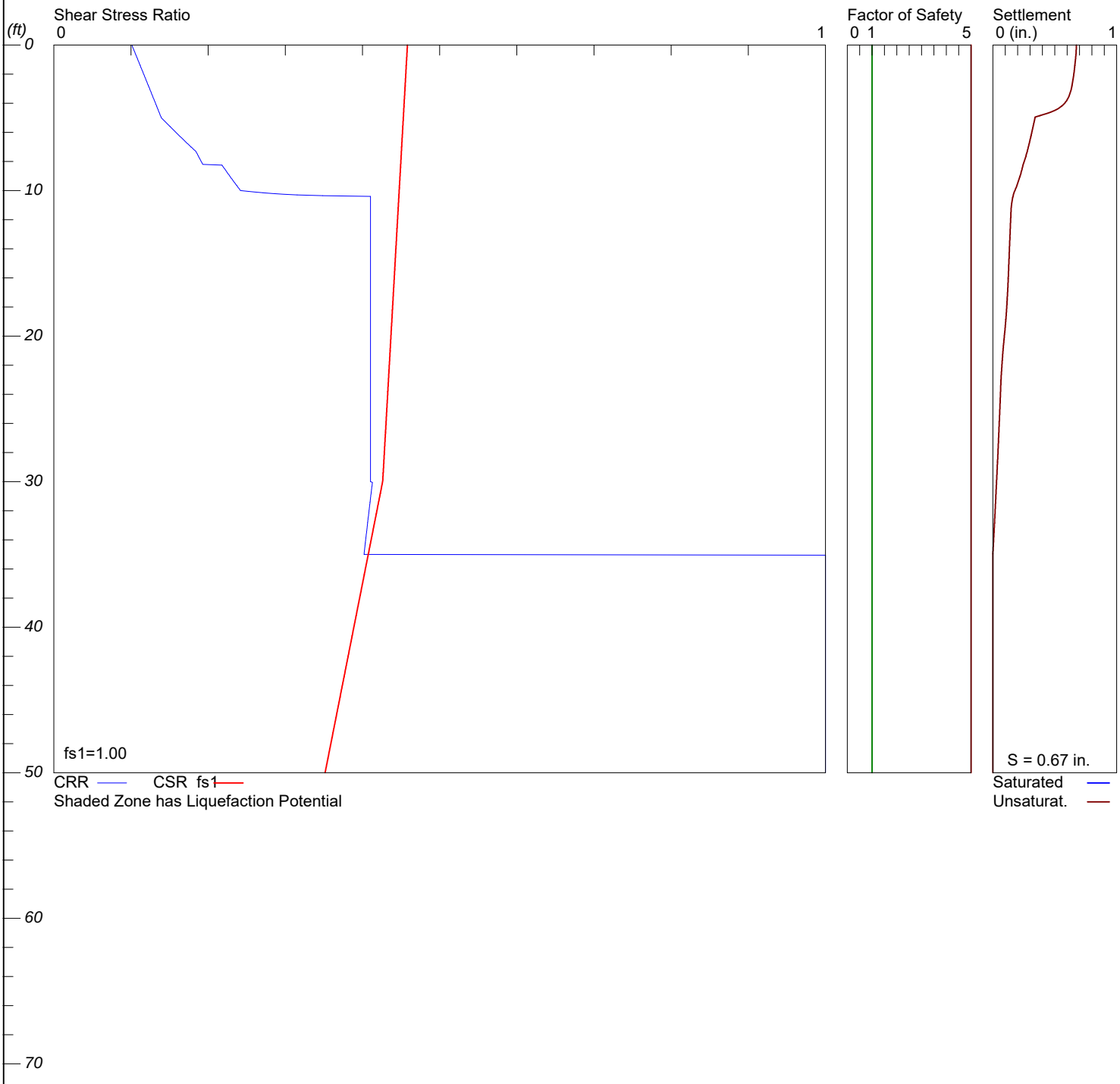


LiquefyPro CivilTech Software USA www.civiltech.com

18060-00

Hole No.=KB-6 Water Depth=100 ft

Magnitude=8.1
Acceleration=0.705g



LiquefyPro CivilTech Software USA www.civiltech.com

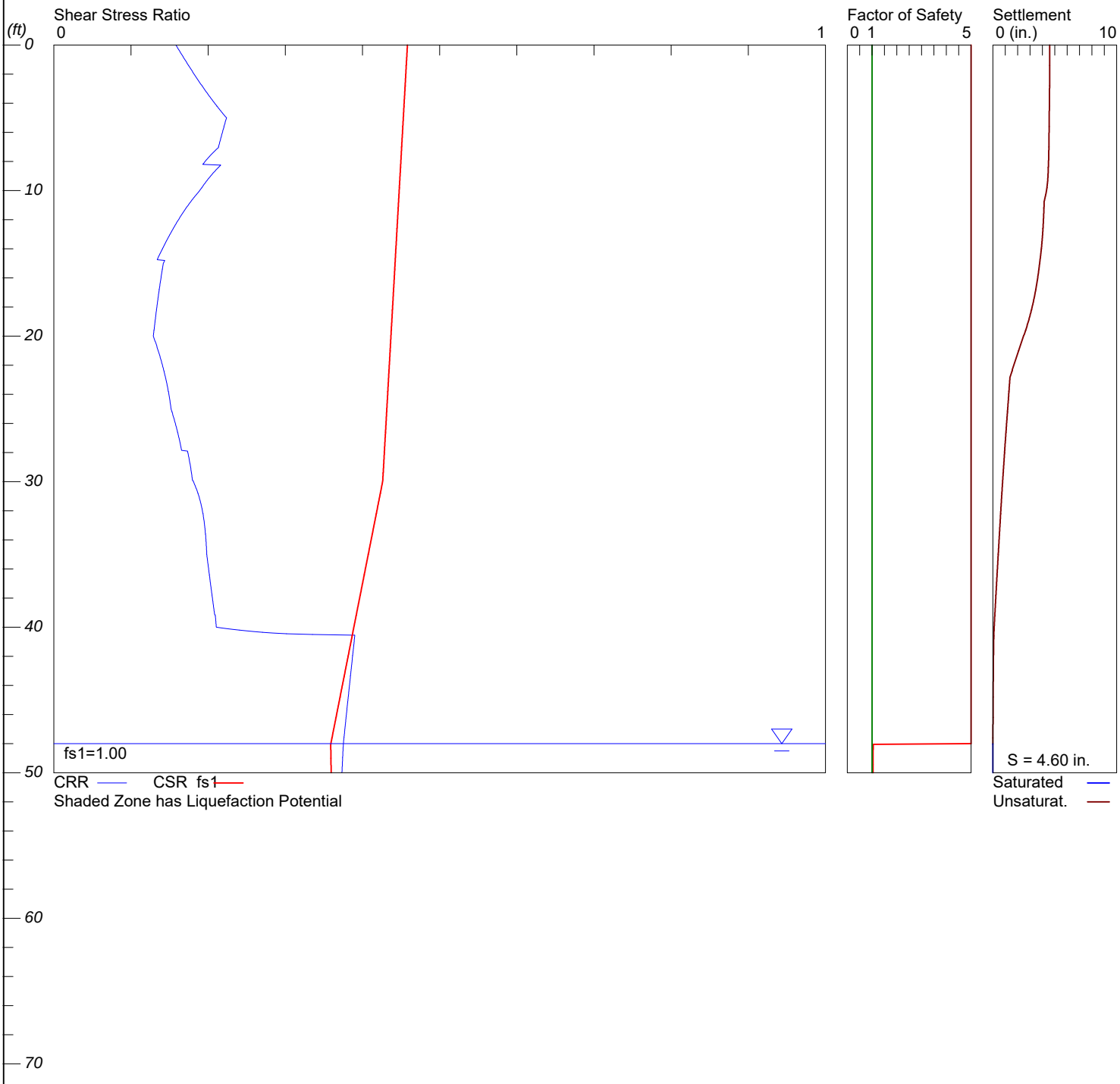
Jack Rabbit Trail

Plate A-1

18060-00

Hole No.=KB-7 Water Depth=48 ft

Magnitude=8.1
Acceleration=0.705g

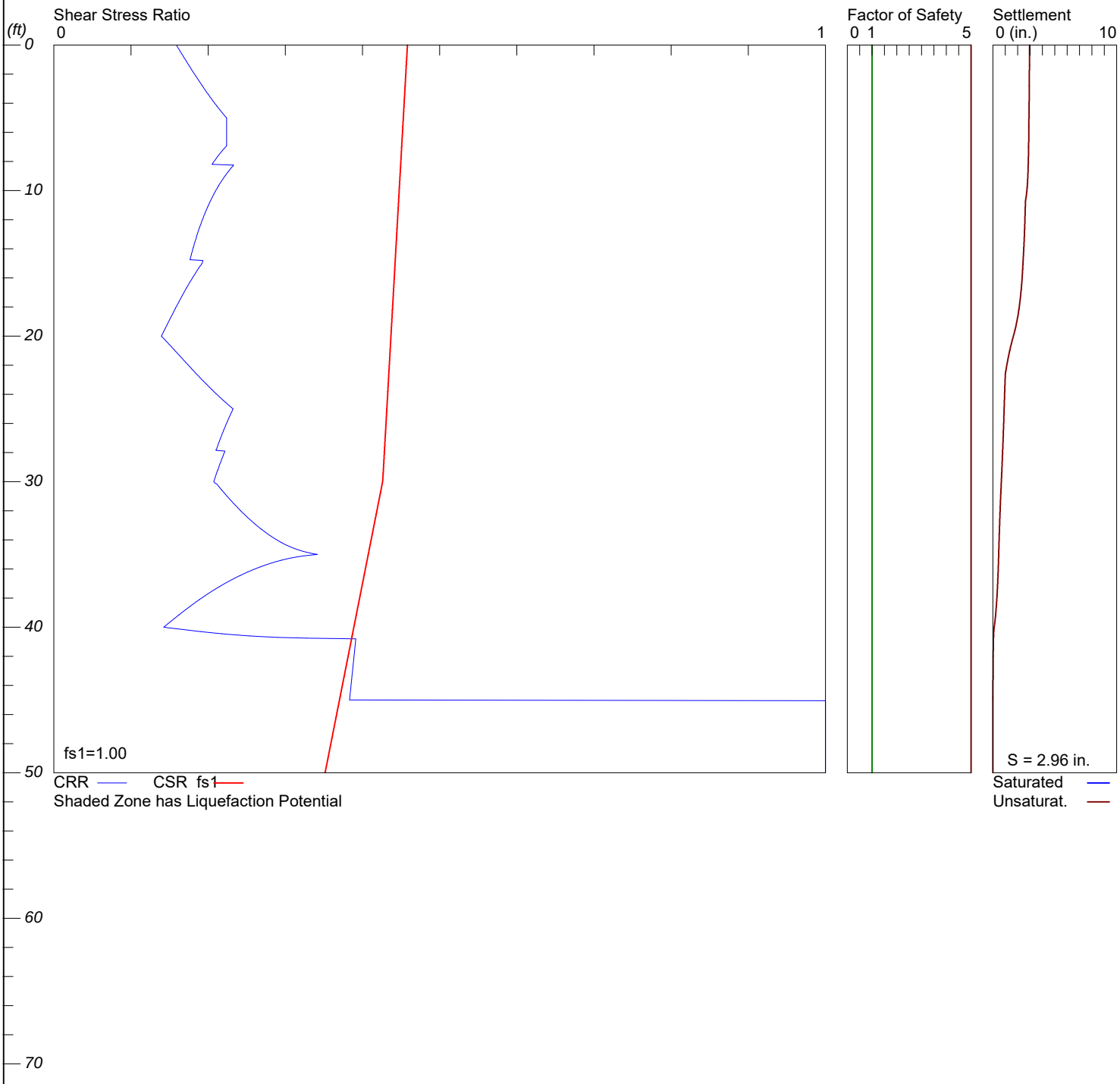


LiquefyPro CivilTech Software USA www.civiltech.com

18060-00

Hole No.=KB-8 Water Depth=100 ft

Magnitude=8.1
Acceleration=0.705g

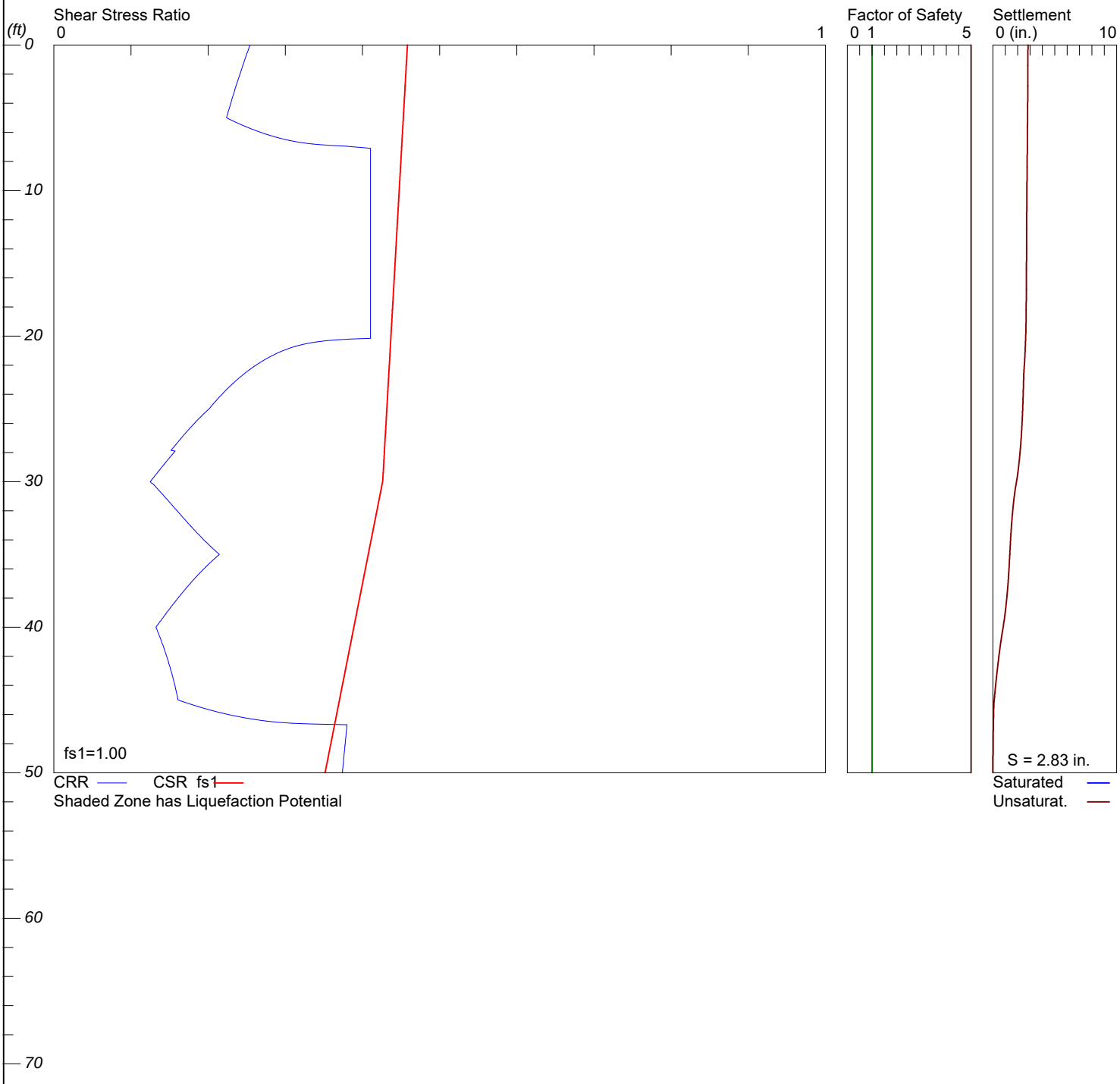


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18060-00

Hole No.=KB-9 Water Depth=100 ft

Magnitude=8.1
Acceleration=0.705g

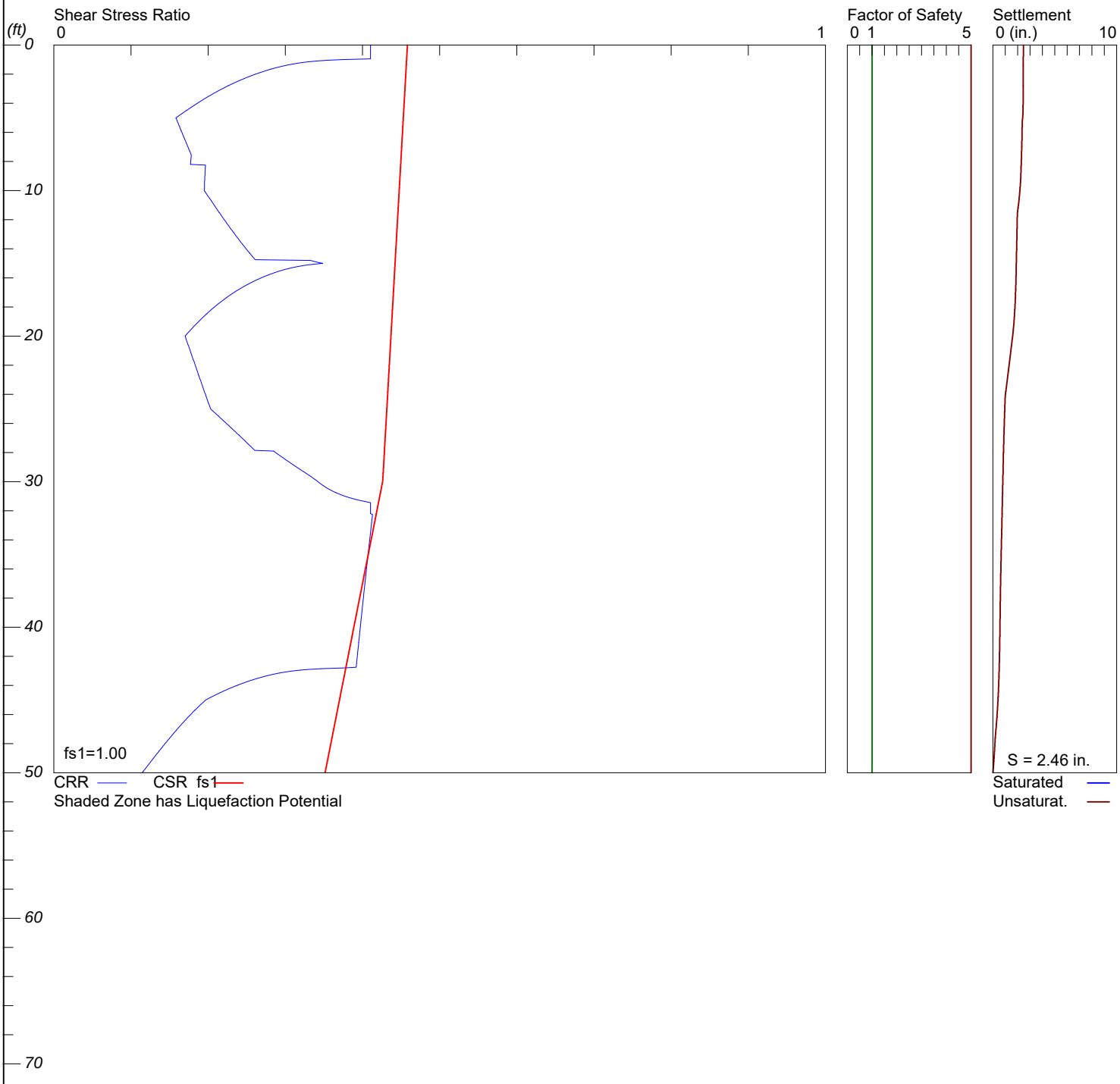


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18060-00

Hole No.=KB-10 Water Depth=100 ft

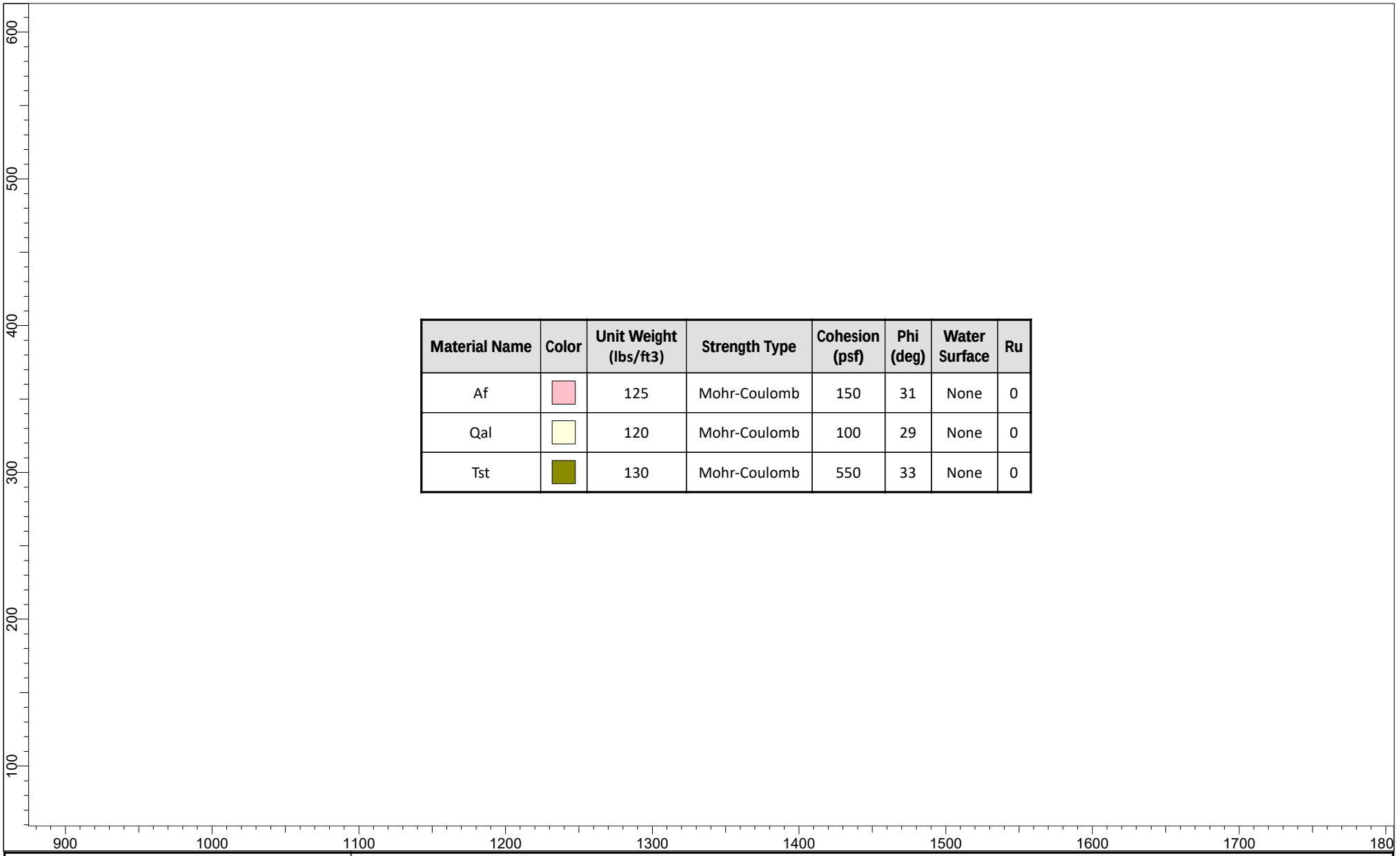
Magnitude=8.1
Acceleration=0.705g



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APPENDIX E

SLOPE STABILITY ANALYSIS

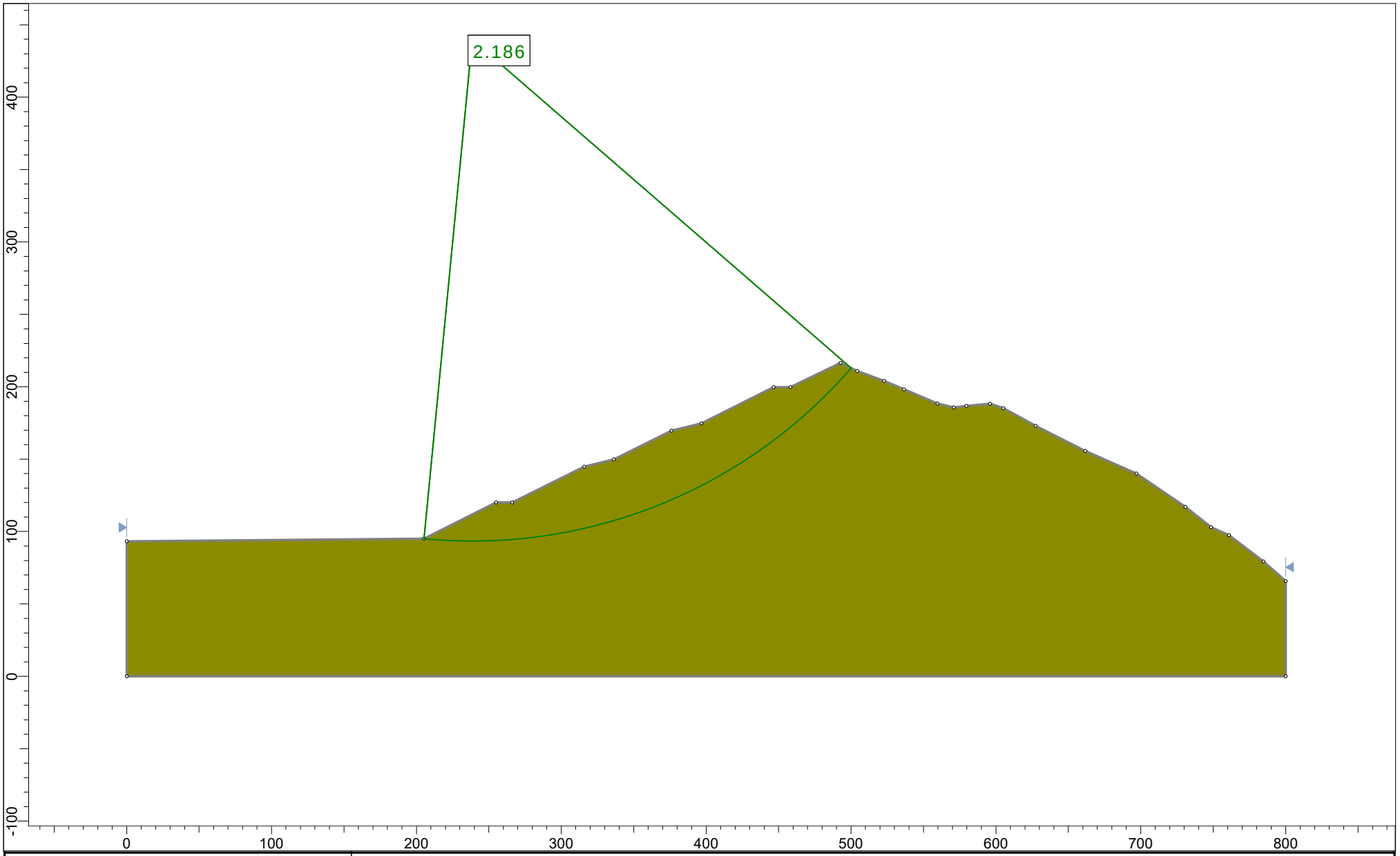


Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
Af		125	Mohr-Coulomb	150	31	None	0
Qal		120	Mohr-Coulomb	100	29	None	0
Tst		130	Mohr-Coulomb	550	33	None	0

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SLIDEINTERPRET 8.016

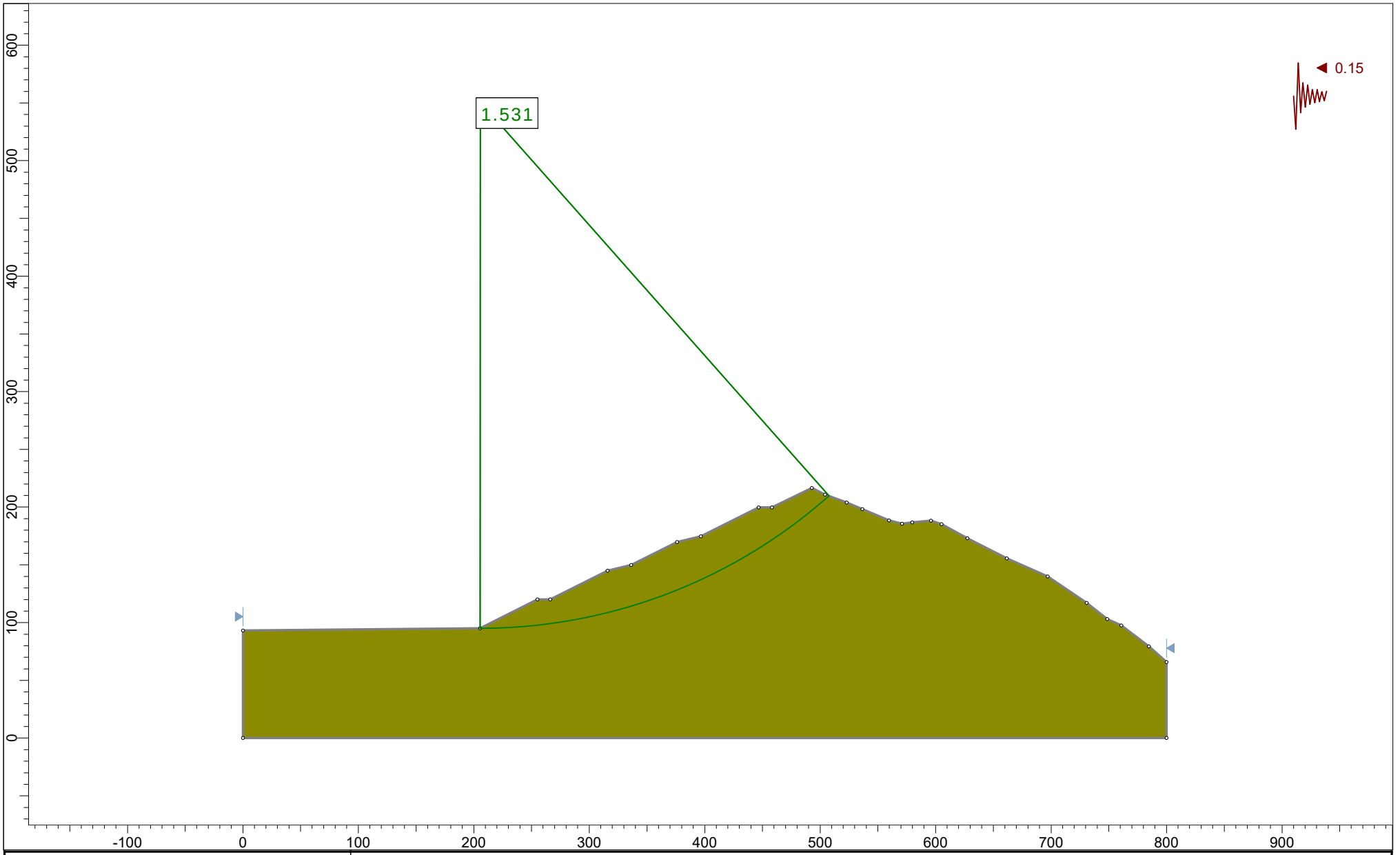
Project	18060-00 Jack Rabbit Trail		
Analysis Description			
Drawn By	CJO	*Project Number*	18060-00
Date	8/16/2019	*Figure*	



KCG KLING Consulting Group, Inc.

Project	18060-00 Jack Rabbit Trail		
Analysis Description	Cross Section A-A' Static		
Drawn By	CJO	*Project Number*	18060-00
Date	8/16/2019	*Figure*	

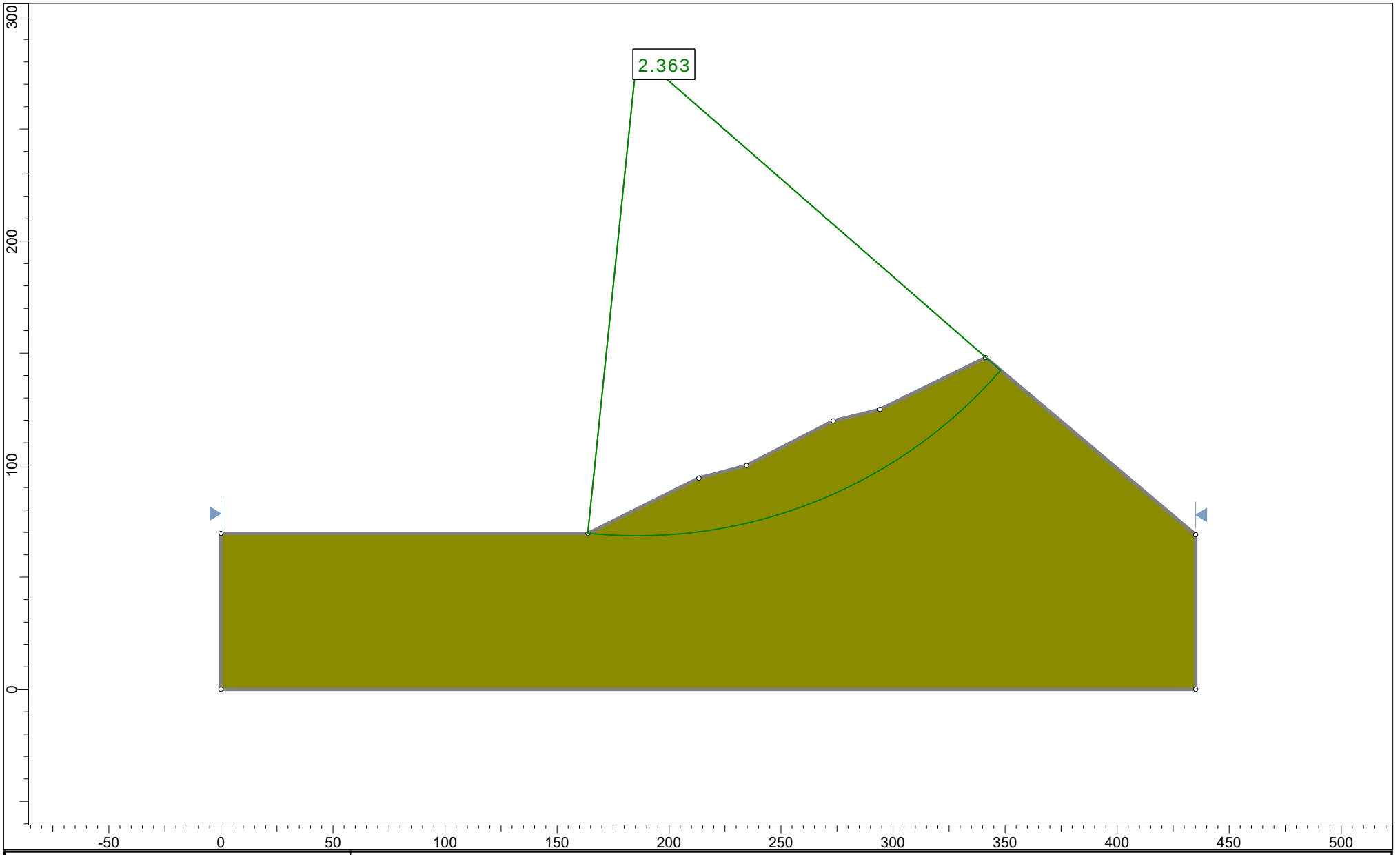
SLIDEINTERPRET 8.016



KCG KLING Consulting Group, Inc.

Project	18060-00 Jack Rabbit Trail		
Analysis Description	Cross Section A-A' Puesdo Static		
Drawn By	CJO	*Project Number*	18060-00
Date	8/16/2019	*Figure*	

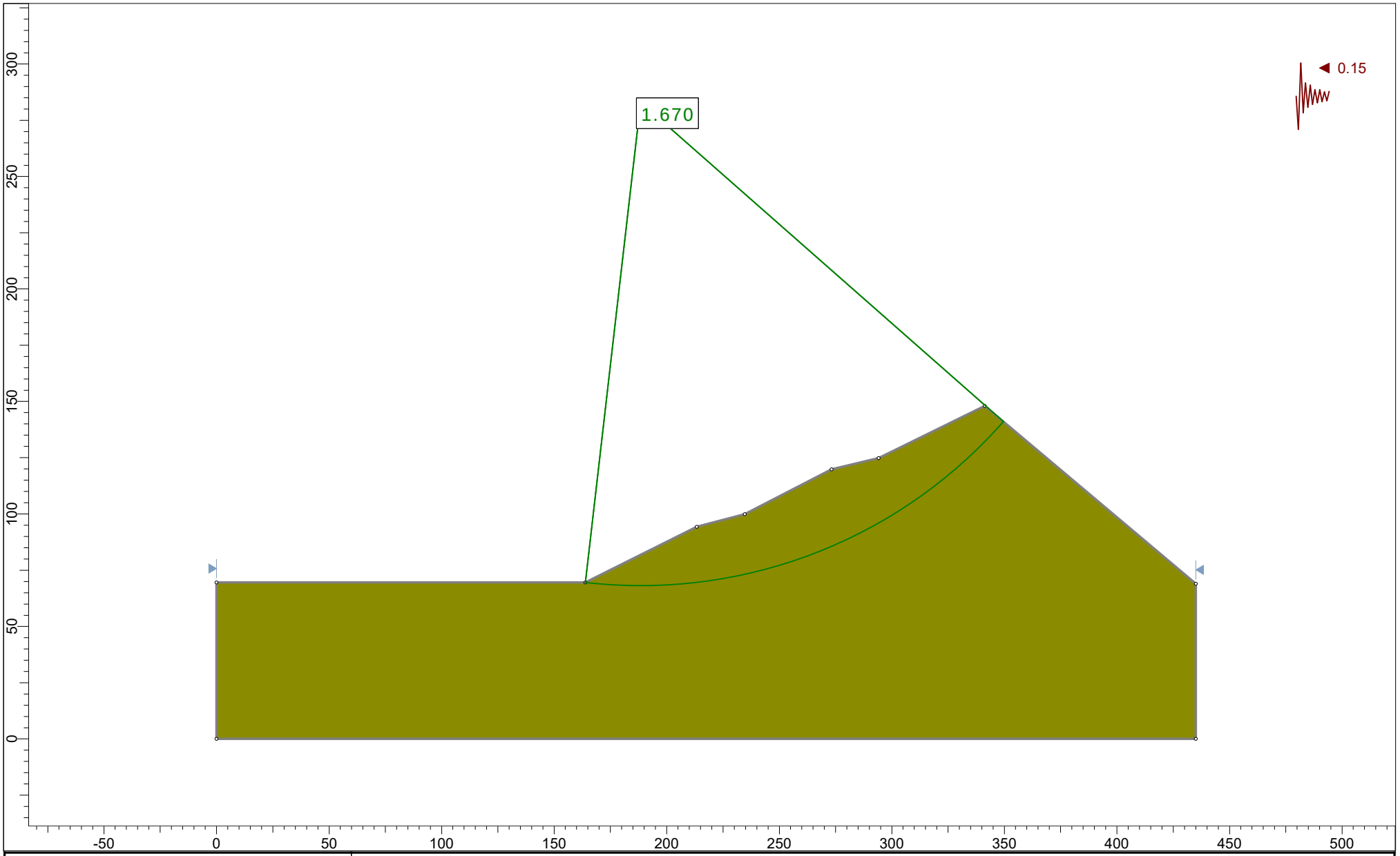
SLIDEINTERPRET 8.016



KCG KLING Consulting Group, Inc.

SLIDEINTERPRET 8.016

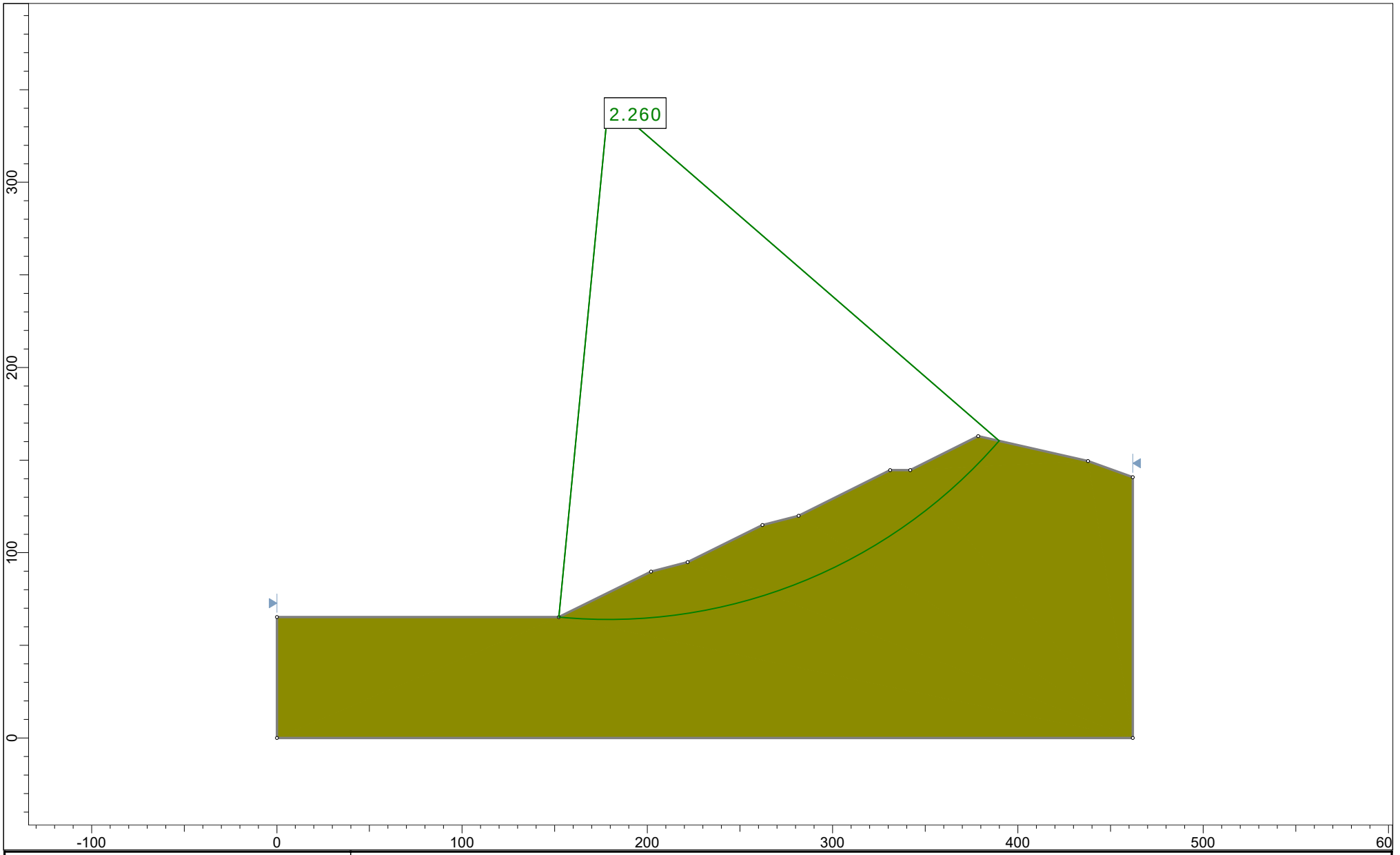
Project	18060-00 Jack Rabbit Trail		
Analysis Description	Cross Section B-B' Static		
Drawn By	CJO	*Project Number*	18060-00
Date	8/16/2019	*Figure*	



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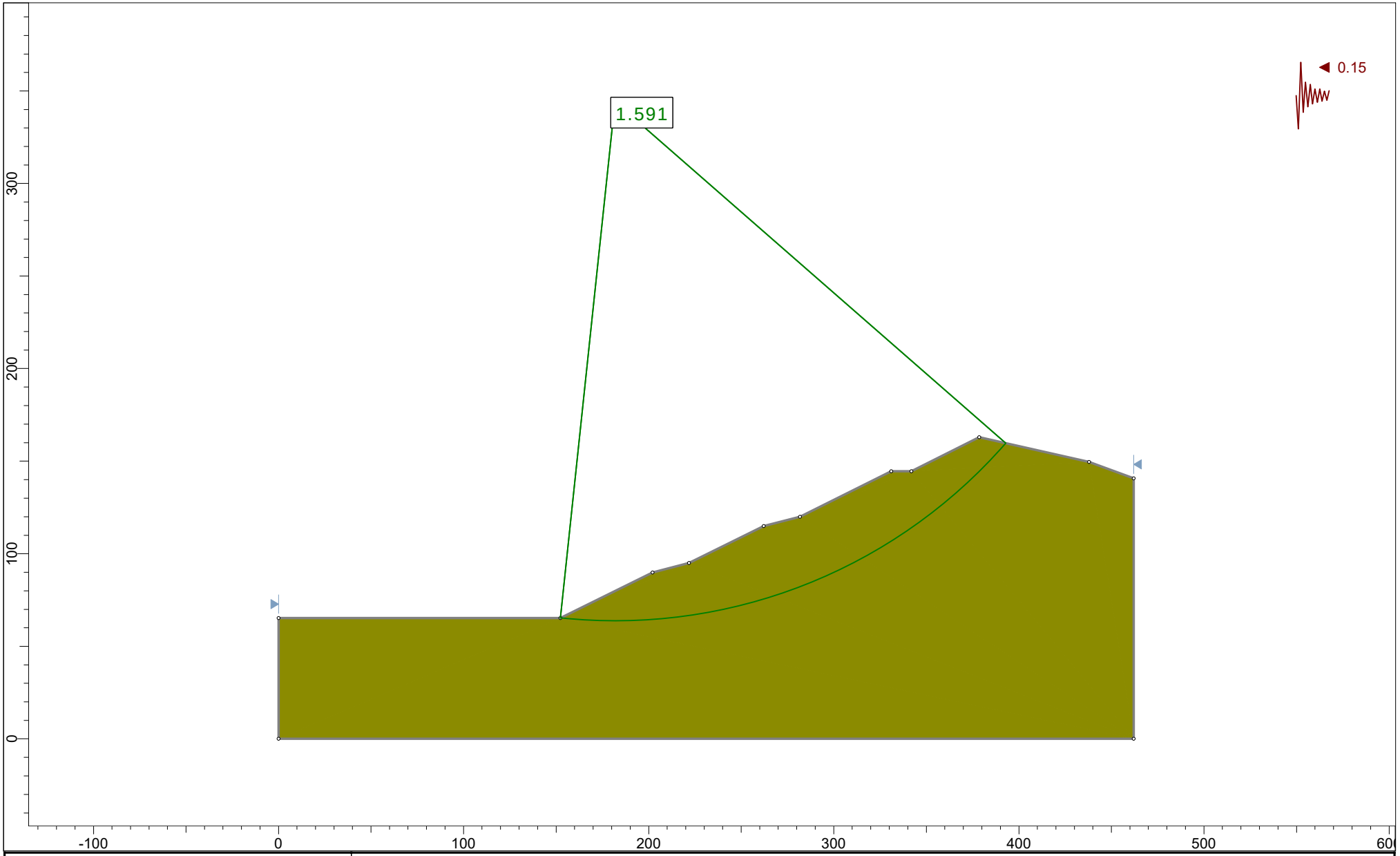
SLIDEINTERPRET 8.016

Project	18060-00 Jack Rabbit Trail	
Analysis Description	Cross Section B-B' Pusedo Static	
Drawn By	CJO	*Project Number* 18060-00
Date	8/16/2019	*Figure*



KCG KLING Consulting Group, Inc.	*Project*	18060-00 Jack Rabbit Trail	
	Analysis Description	Cross Section C-C' Static	
	Drawn By	CJO	*Project Number* 18060-00
	Date	8/16/2019	*Figure*

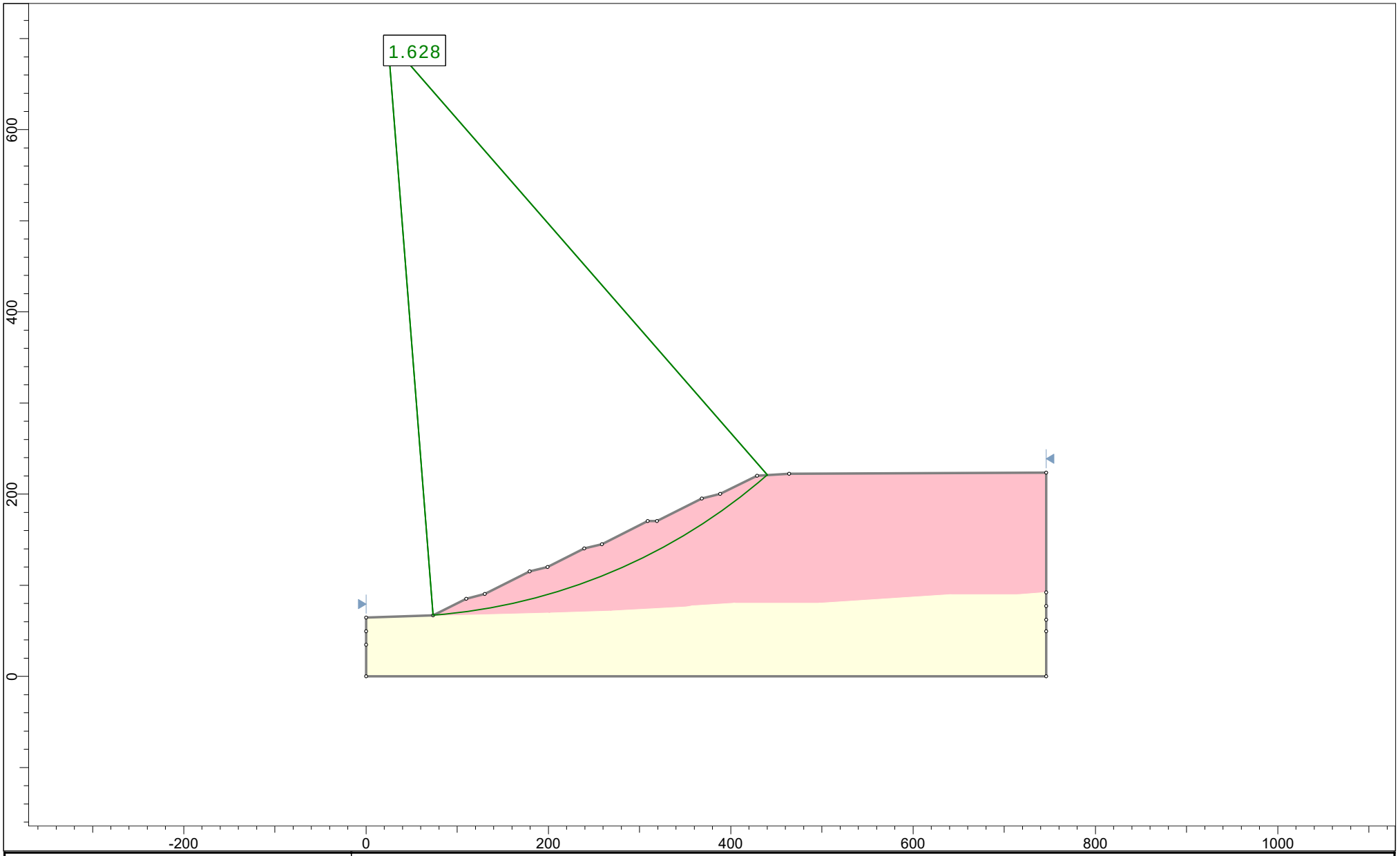
SLIDEINTERPRET 8.016



KCG KLING Consulting Group, Inc.

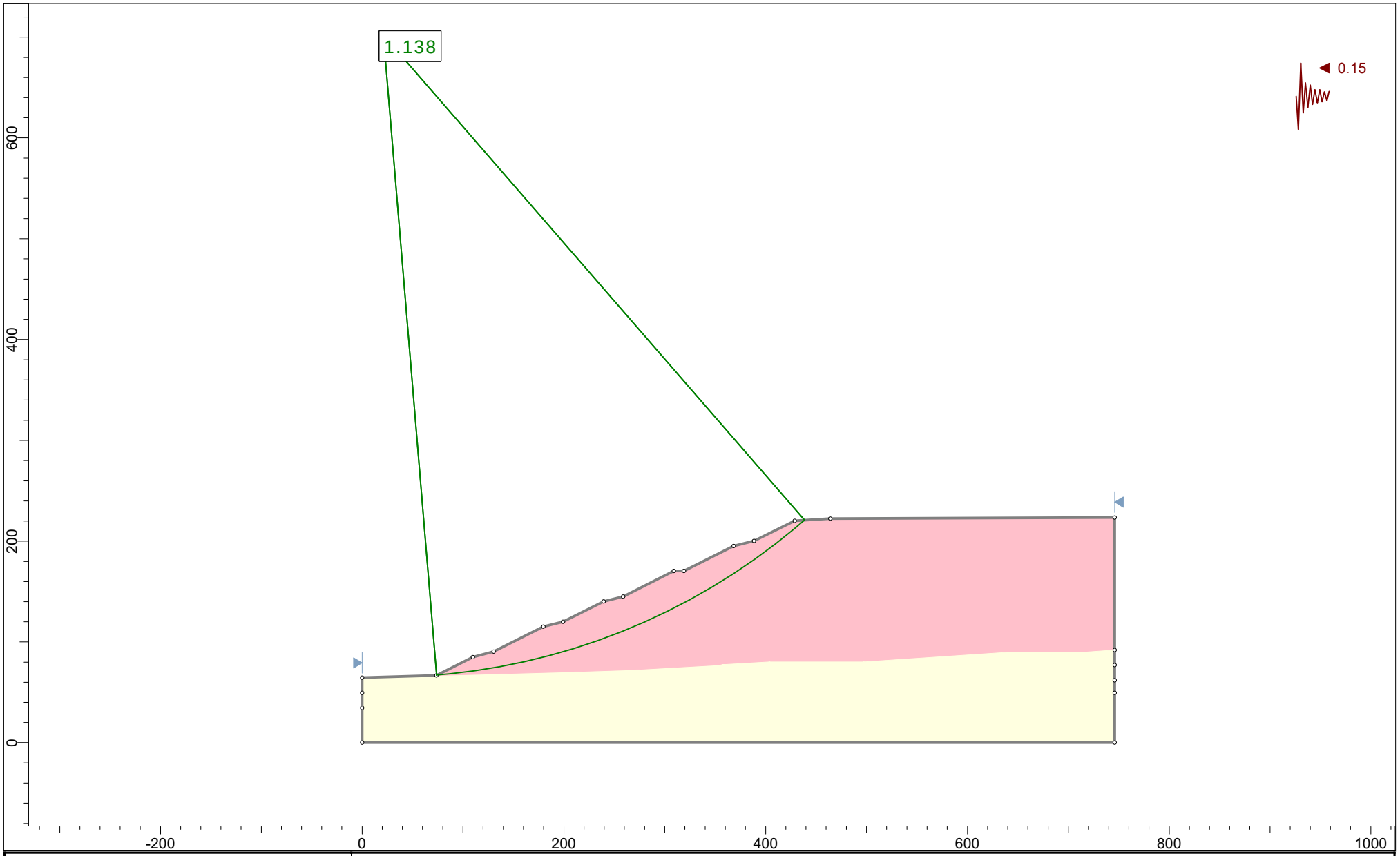
Project	18060-00 Jack Rabbit Trail		
Analysis Description	Cross Section C-C' Pusedo Static		
Drawn By	CJO	*Project Number*	18060-00
Date	8/16/2019	*Figure*	

SLIDEINTERPRET 8.016



KCG KLING Consulting Group, Inc.	*Project*	18060-00 Jack Rabbit Trail	
	Analysis Description	Cross Section D-D' Static	
	Drawn By	CJO	*Project Number* 18060-00
	Date	8/16/2019	*Figure*

SLIDEINTERPRET 8.016



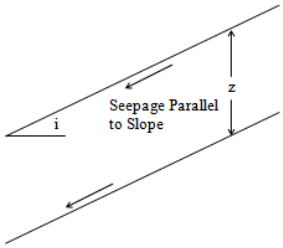
KCG KLING Consulting Group, Inc.	*Project*	18060-00 Jack Rabbit Trail	
	Analysis Description	Cross Section D-D' Puesdo Static	
	Drawn By	CJO	*Project Number* 18060-00
	Date	8/16/2019	*Figure*

SLIDEINTERPRET 8.016

KCG KLING Consulting Group, Inc.

Jack Rabbit Trail
Surficial Stability Calculation 2:1 Cut Slope

August, 2019



Soil Properties

$\gamma := 130\ pcf$	Unit Weight of Soil	$\phi' := 33\ deg$	Angle of Internal Friction
$\gamma_w := 62.4\ pcf$	Unit Weight of Water	$i := 26.6\ deg$	Slope Angle
$c := 550\ psf$	Cohesion	$z := 4\ ft$	Depth of Saturation

Surficial Stability Calculation

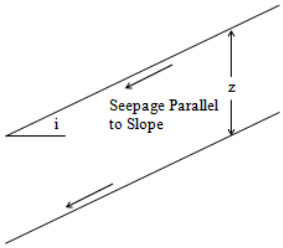
$$FS := \frac{c + \left(\left(\gamma - \gamma_w\right) \cdot z \cdot \cos(i)^2 \cdot \tan(\phi')\right)}{\gamma \cdot z \cdot \sin(i) \cdot \cos(i)} = 3.32$$

Non-Commercial Use Only

KCG KLING Consulting Group, Inc.

Jack Rabbit Trail
Surficial Stability Calculation 2:1 Fill Slope

August, 2019



Soil Properties

$\gamma := 125\ pcf$	Unit Weight of Soil	$\phi' := 31\ deg$	Angle of Internal Friction
$\gamma_w := 62.4\ pcf$	Unit Weight of Water	$i := 26.6\ deg$	Slope Angle
$c := 350\ psf$	Cohesion	$z := 4\ ft$	Depth of Saturation

Surficial Stability Calculation

$$FS := \frac{c + \left(\left(\gamma - \gamma_w\right) \cdot z \cdot \cos(i)^2 \cdot \tan(\phi')\right)}{\gamma \cdot z \cdot \sin(i) \cdot \cos(i)} = 2.35$$

Non-Commercial Use Only

APPENDIX F

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

KCG KLING Consulting Group, Inc.

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

1.0 GENERAL INTENT

These specifications present general procedures and requirements for grading and earthwork as shown on the project grading plans, including preparation of areas to be filled, placement of fill, installation of subsurface drainage, and excavations. The recommendations contained in the geotechnical report(s) are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict. Evaluations performed by the geotechnical consultant during the course of grading may result in new specifications or recommendations in addition to those contained in the geotechnical report(s).

2.0 EARTHWORK OBSERVATION AND TESTING

Prior to the commencement of grading, a qualified geotechnical consultant (soils engineer and engineering geologist, and their representatives) shall be employed for the purpose of observing earthwork procedures and testing the fills for conformance with the recommendations of the geotechnical report and these specifications. It will be necessary that the geotechnical consultant provide adequate testing and observation so that he may determine that the work was accomplished as specified. If conditions exposed during grading differ significantly from those interpreted during the preliminary design investigation, the geotechnical consultant shall inform the client, recommend appropriate changes in the geotechnical design to account for the observed conditions, and notify City or County grading authorities, as necessary. It shall be the responsibility of the contractor to assist the geotechnical consultant and keep him apprised of work schedules and changes so that he may schedule his personnel accordingly.

The Project Geotechnical Consultant shall observe processing, moisture conditioning, and compaction of fill and subgrade materials. Testing of compacted fill in representative locations shall be performed by the Project Geotechnical Consultant's field representative. Daily reports and test results shall be provided to the client representative on a regular and frequent basis. Maximum dry density tests used to determine the degree of compaction and optimum moisture content shall be performed in accordance with the American Society for Testing and Materials test method ASTM D1557.

It shall be the sole responsibility of the contractor to provide adequate equipment and methods to accomplish the work in accordance with the geotechnical report(s) applicable grading codes and project grading plans. If, in the opinion of the geotechnical consultant, unsatisfactory conditions, such as questionable soil, poor moisture condition, inadequate compaction, adverse weather, etc., are resulting in the quality of work less than required in these specifications, the geotechnical consultant will be empowered to reject the work and recommend that construction be stopped until the conditions are rectified.

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3.0 PREPARATION OF AREA TO BE FILLED

3.1 Clearing and Grubbing

All brush, vegetation, trash, debris and other deleterious material shall be removed from fill areas and disposed of off site. Vegetation cleared from the site shall not be placed within engineered compacted fill areas.

3.2 Processing

The existing ground which is determined to be satisfactory for support of fill shall be scarified to a minimum depth of six (6) inches. Existing ground which is not satisfactory shall be overexcavated as specified in the following section. Scarification shall continue until the soils are broken down and free of large clay lumps or clods and until the working surface is reasonably uniform and free of uneven features which would inhibit uniform compaction.

3.3 Overexcavation

Soft, dry, spongy, highly fractured or otherwise unsuitable ground, extending to such a depth that surface processing cannot adequately improve the condition, shall be overexcavated to firm ground, and verified by the project geotechnical consultant.

3.4 Moisture Conditioning

Overexcavated and processed soils shall be watered, dried-back, blended, and/or mixed as required to attain a uniform moisture content near optimum.

3.5 Recompaction

Overexcavated and processed soils which have been properly mixed and moisture-conditioned shall be recompacted to a minimum relative compaction of 90 percent, ASTM D1557.

3.6 Benching

Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal: vertical units), the ground shall be stepped or benched. The lowest bench shall be a minimum of 15 feet wide, shall be at least 2 feet deep, shall expose firm material, and shall be verified by the geotechnical consultant. Other benches shall be excavated in firm material for a minimum width of 4 feet. Ground sloping flatter than 5:1 shall be benched or otherwise overexcavated when considered necessary by the geotechnical consultant.

3.7 Evaluation of Areas to Receive Fill

All areas to receive fill, including processed areas, removal areas and toe-of-fill benches shall be observed, tested, and/or mapped by the geotechnical consultant prior to fill placement. A written evaluation of the area to be filled shall be obtained by the Contractor prior to placement of fill.

4.0 FILL MATERIAL

4.1 General

Material to be placed as fill shall be free of roots, grasses, branches, wood or other organic matter and other deleterious materials, and shall be tested by the geotechnical consultant prior to use as fill. Soils of poor gradation, expansion, or strength characteristics shall be placed in areas designated by the geotechnical consultant or shall be mixed with other soils to serve as satisfactory fill material.

4.2 Oversize Material

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 12 inches, shall not be buried or placed in fills, unless the location, materials, and disposal methods are specifically recommended by the geotechnical consultant. Oversized disposal operations shall be such that nesting of oversize material does not occur, and such that the oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 feet vertically of finish grade or construction, unless specifically recommended by the geotechnical consultant.

4.3 Import

If importing of fill material is required for grading, the import material shall meet the requirements of Section 4.1. Samples of import soils shall be provided for testing a minimum of 48 hours before the import materials are brought on site.

5.0 FILL PLACEMENT AND COMPACTION

5.1 Fill Lifts

Fill material shall be placed in prepared areas in near-horizontal layers not exceeding 8 inches in loose thickness. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to attain uniformity of material and moisture in each layer.

5.2 Fill Moisture

Fill layers at a moisture content less than optimum shall be watered and mixed, and wet fill layers shall be aerated by scarification or shall be blended with drier material. Moisture-conditioning and mixing of fill layers shall continue until the fill material is at a uniformly processed at a minimum of 125 percent of the optimum moisture content.

5.3 Fill Compaction

Each layer of fill shall be evenly spread, moisture-conditioned, mixed, and shall be uniformly compacted to not less than 90 percent of the maximum dry density at a minimum of 125 percent of the optimum moisture content. Compaction equipment shall be adequately sized and shall be either specifically designed for soil compaction or of proven reliability, to efficiently achieve the specified degree of compaction.

5.4 Fill Slopes

Compacting of slopes shall be accomplished, in addition to normal compacting procedures, by overfilling and compacting the slope face a minimum of four feet horizontally from finish grade, and cutting the slope face back to the core of compacted fill. In restricted spaces where overfilling is not possible, fill slopes may be compacted by back-rolling of slopes, with sheepsfoot rollers at frequent increments of 1 to 2 feet in fill elevation gain. At the completion of grading, the relative compaction of the slope out to the slope face shall be a minimum of 90 percent.

5.5 Compaction Testing

Field tests to check the fill moisture and degree of compaction will be performed by the geotechnical consultant. The location and frequency of tests shall be at the geotechnical consultant's discretion. In general, the tests will be taken at an interval not exceeding 2 feet in vertical elevation and/or 1,000 cubic yards of fill placed.

6.0 SUBDRAIN INSTALLATION

Subdrain systems shall be installed in locations recommended by the geotechnical consultant to conform to the approximate alignment and details shown on the plans or herein. The subdrain location or materials shall not be changed or modified without the recommendation of the geotechnical consultant. The geotechnical consultant; however, may recommend changes in subdrain line, grade or material. All subdrains should be surveyed for line and grade after installation. Sufficient time shall be allowed for the surveys, prior to commencement of filling over subdrain areas.

7.0 EXCAVATION

Excavation and cut slopes will be geologically mapped and examined during grading. Sufficient time shall be allowed by the contractor to permit geologic mapping of excavation bottoms and cut slopes. If directed by the geotechnical consultant, further excavation or overexcavation and refilling of cut areas shall be performed, and/or remedial grading of cut slopes. All fill-over-cut slopes are to be graded, unless otherwise stated, shall be constructed as a fill slope with the use of minimum width stabilization fills, as necessary.

APPENDIX G

SLOPE MAINTENANCE GUIDELINES

SLOPE MAINTENANCE GUIDELINES

INTRODUCTION

Permanent slope maintenance measures should be initiated as soon as possible after completion of slope construction. However, all soil slopes will undergo some erosion when subjected to sustained water application. To reduce long-term erosion, we have outlined below some important points to be considered when planning, designing, and installing or implementing slope erosion control plans. The following general guidelines are provided to mitigate slope maintenance problems and should be implemented by the responsible party, during landscaping improvements and subsequent maintenance:

1. Manufactured or natural slopes, terraces, berms (ridges at crown of slopes) and proper drainage should not be disturbed or altered. Surface drainage should be positively maintained to the street.

2. Construction delays, climate/weather conditions, and plant growth rates may be such that additional short-term, non-plant erosion control measures may be needed; examples would be matting, netting, plastic sheets, deep (5-feet) staking, etc.

3. Roof, and drive runoff should be positively conducted away from structures to either the street or storm drain by nonerosive devices such as sidewalks, drainage pipes, ground gutters, and driveway pavement. Drainage should meet the minimum requirements of Section 1804 of the California Building Code.

4. Drains and "V" ditches, etc., should be periodically cleared and unclogged, including gutters and downspouts. During heavy rain periods, drainage should be inspected for performance often, as this is when trouble occurs. Problems such as gullying or ponding should be corrected as soon as possible.

5. High water content in slope soils is a major factor in slope erosion or slope failures. Therefore, all possible precautions should be taken to minimize soil moisture. Leakage from waterlines, irrigation systems, etc., or bypassing of clogged drains should be promptly repaired.

6. Animal burrows should be periodically filled or eliminated in order to minimize infiltration of water and slope failures.

7. If completion of new slopes occurs during the rainy season, contingency plans should be developed to provide prompt temporary protection against major erosion or sloughing. One method would be to place plastic sheeting over the slopes. This should be carefully coordinated with the Landscape Architect/Contractor.

8. The above guidelines are general maintenance procedures but may be superseded under specific direction of the geotechnical consultant/landscape architect/contractor.

APPENDIX H

AFSE INSERT

Important Information About Your

Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one - not even you* - should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from alight industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes - even minor ones - and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ-sometimes significantly from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.

A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the express purpose of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in-this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

Rely on Your ASFE-Member Geotechnical Engineer For Additional Assistance

Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

ASFE
The Best People on Earth

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone:' 301/565-2733 Facsimile: 301/589-2017
e-mail: info@asfe.org www.asfe.org

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IIGER06045.0M

EXPLANATION

Locations Approximate

Qal	Alluvium and Older Alluvium undifferentiated.
Tst	San Timoteo Formation- sandstone, siltstone, and conglomerate, undifferentiated.
	Strike and dip of bedding
	Approximate Geologic Contact
KB-5	Approximate Boring Location
	Approximate Trench/Test Pit Location
D D'	Approximate Location of Geologic Cross Section

N

150 0 150

KB-9
Estimated Removal Depth= 15'
Depth of Qal> 51.5'

KB-10
Estimated Removal Depth= 15' to 30'
Depth of Qal> 51.5'

KB-7
Estimated Removal Depth= 10'
Depth of Qal> 51.5'

KB-6
Estimated Removal Depth= 7.5'
Depth of Qal> 50.5'

KTP-8

KTP-7

Qal

Tst

20

17

18

KCG KLING Consulting Group, Inc.

Beaumont Pointe Specific Plan
Beaumont, CA

Plate: 1
PN: 18060-01
Date: July 23, 2021

EXPLANATION

Locations Approximate

Qal	Alluvium and Older Alluvium undifferentiated.
Tst	San Timoteo Formation- sandstone, siltstone, and conglomerate, undifferentiated.
	Strike and dip of bedding
	Approximate Geologic Contact
KB–5	Approximate Boring Location
	Approximate Trench/Test Pit Location
D D'	Approximate Location of Geologic Cross Section

N

150 0 150

KB–5
Estimated Removal Depth= 15'
Depth of Qal> 51.5'

KB–6
Estimated Removal Depth= 15'
Depth of Qal> 50.5'

KB–4
Estimated Removal Depth= 7.5'
Depth of Qal> 51'

KB–3
Estimated Removal Depth= 7.5'
Depth of Qal> 50.9'

KB–2
Estimated Removal Depth= 10'
Depth of Qal> 51'

KB–1
Estimated Removal Depth= 7.5'
Depth of Qal> 51.5'

KTP–7 KTP–6 KTP–5 KTP–4 KTP–3 KTP–2 KTP–1

A A' B B'

Tst Qal

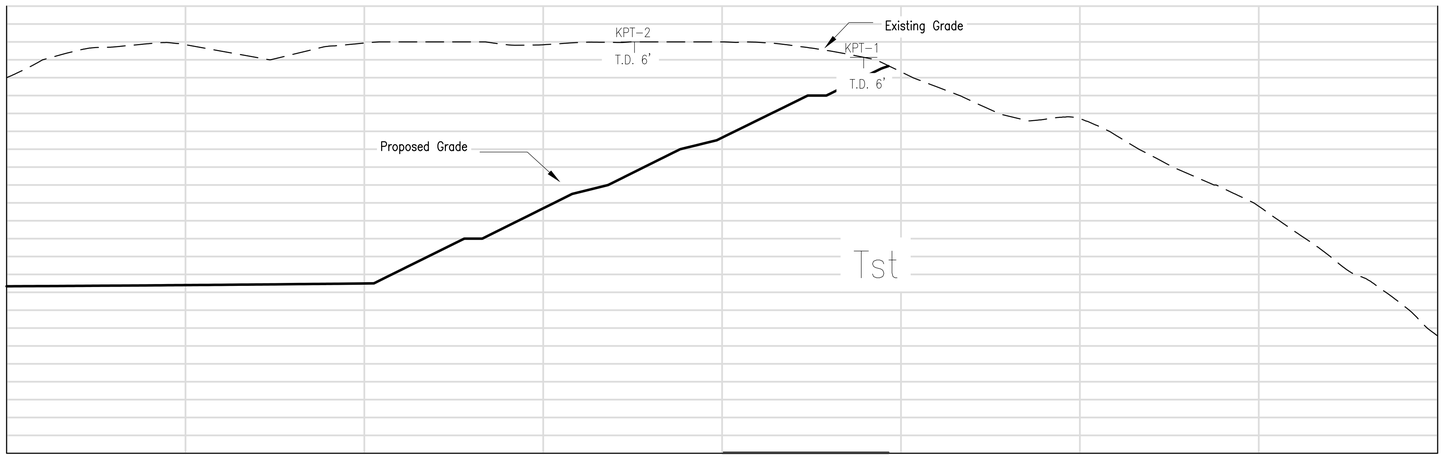
KCG KLING Consulting Group, Inc.

Beaumont Pointe Specific Plan
Beaumont, CA

Plate: 2
PN: 18060-01
Date: July 23, 2021

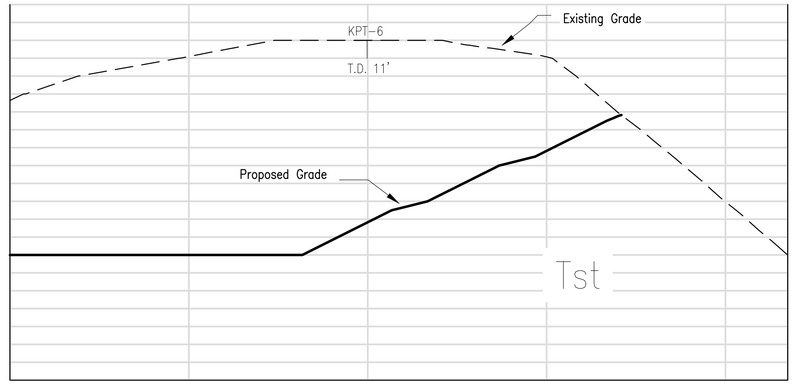
Cross Section A–A'

N 57 E



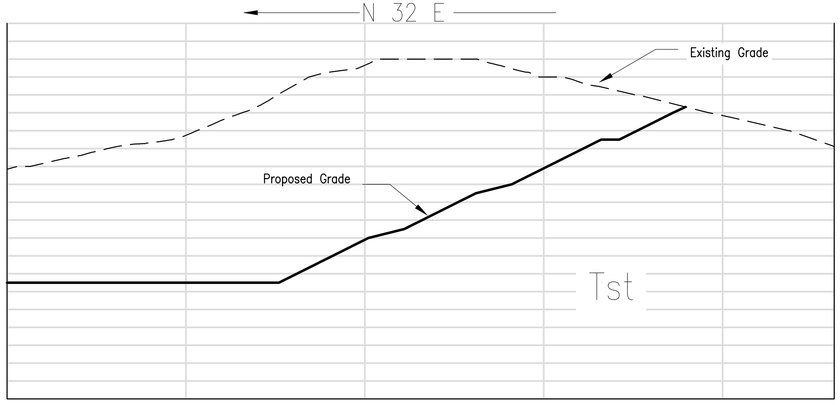
Cross Section B–B'

N 29 E



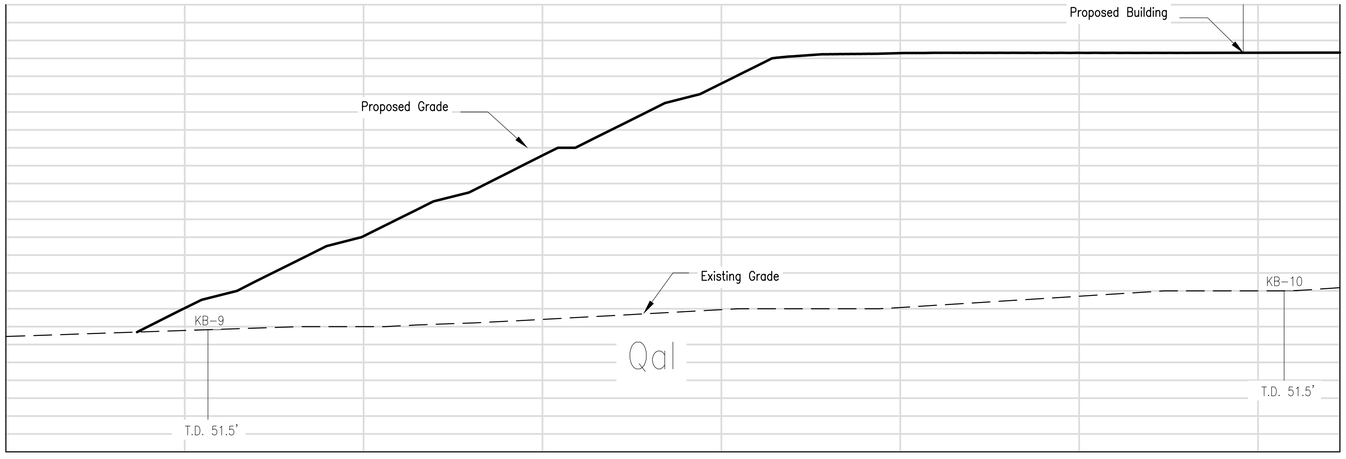
Cross Section C–C'

N 32 E



Cross Section D–D'

N 10 W



KCG KLING Consulting Group, Inc.

Cross Sections
Beaumont Pointe Specific Plan
Beaumont, CA

Plate: 3
PN: 18060–01
Date: **July 23, 2021**

KCG KLING Consulting Group, Inc.

December 17, 2020 PN 18060-04

Michael Masterton
JRT BP 1, LLC
18032 Lemon Drive, Suite 367
Yorba Linda, Ca, 92223

Subject: Limited Percolation Study, Jack Rabbit Trail, Percolation Testing for Onsite Water Quality Detention Basins, Proposed Detention Basins 1-4, Jack Rabbit Trail, Beaumont, CA 92648

Dear Mr. Masterton:

Introduction

As per your request, our firm performed limited percolation testing at the subject site in Beaumont, California. The percolation testing was performed to provide preliminary feasibility information of the subsurface soil infiltration charactersisitcs for the proposed water quality basin systems at the site. The investigation included the excavation of four borings to depths of 10 and 15 feet for the in-situ percolation testing.

Prior to our percolation testing, coordination with the project civil engineer was conducted to discuss the proposed locations and depths of the basins.

Site Location and Description

The subject site consists of a vacant property located south of the Moreno Valley Freeway and Jack Rabbit Trail in Beaumont, California (**Figure 1**). The subject site encompasses approximately 620 acres and is bounded by the Moreno Valley Freeway to the north and west, Jack Rabbit Trail to the north, and the San Timoteo Badlands to the south. Sparse vegetation and weeds are scattered throughout the site. Existing soils at grade are made up predominantly of sandy silt and silty sand.

Site Exploration

Four (4) hollow stem auger borings were drilled to depths from 10 feet to 15 feet below the ground surface within the proposed detention basin/infiltration locations. The four borings were used to perform percolation testing to determine estimated infiltration rates. The approximate locations of borings/percolation tests are shown on the Percolation Test Location Map (**Figure 2**).

Continuous logs of the subsurface conditions, as encountered in the test borings, were recorded and are presented in Appendix B.



Notes:

Scale: 1'':900'

0 200 400ft

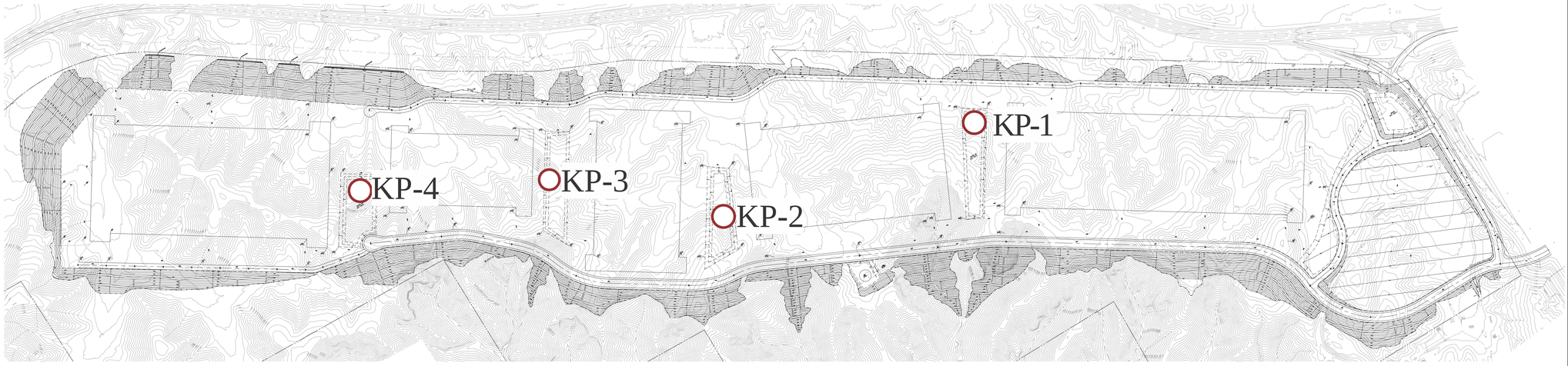
KCG KLING Consulting Group, Inc.

Client: JRT BP 1, LLC

Address: Jackrabbit Trail, Beaumont, Ca.

Site Location Map

Drawn: S.W	**Date:** 12/15/20
P/N: 18060-04	**Figure:** 1



Notes:

○ Approximate Location of Percolation Test

Scale: 1’’:300’

0 200 400ft

KCG KLING Consulting Group, Inc.

Client:
JRT BP 1, LLC

Address:
Jackrabbit Trail,
Beaumont, Ca.

Percolation Test Location Map

Drawn: S.W	**Date:** 12/15/20
P/N: 18060-04	**Figure:** 2

Subsurface Soil Conditions

The subsurface soils as encountered in the borings consists of silty fine sand and silt underlain by silty sand and gravelly sand to the maximum depth of 15 feet.

Groundwater

Groundwater was not encountered to the maximum depth of 15 feet in our subsurface exploratory borings. Based on the previous subsurface exploration performed by Kling Consulting Group (Reference 4), groundwater was encountered at approximately 40 feet below the ground surface in the low-lying drainage areas in the northern-northwest portion of the overall site.

Percolation Testing

Percolation testing was performed in general accordance with the Riverside County Low Impact Development Best Management Practice Guidelines for Design, Investigation, and Reporting (Reference 2). Drilling of the test holes was performed on December 4, 2020. Test excavations were drilled using a hollow stem auger with a diameter of 8-inches to depths of between 10 and 15 feet. Before pre-soaking the test holes, a three-inch diameter slotted pipe was installed into the excavations. A filter pack consisting of 2-inch graded gravel was placed on the bottom of the hole.

Following the completion of the bore holes as described above, the percolation test holes were pre-saturated. The excavations were pre-soaked by filling the pipes with a 5-gallon bottle of clear water supported over the hole so that water flow into the hole is constant and filled to a depth at least 5 times the hole radius. Two consecutive 25-minute readings indicated a change in water level greater than 6 inches which met the criteria for measuring percolation rates of sandy soil. Based on the criteria for sandy soil, measurements were taken at 10-minute intervals for an additional hour. The percolation test results are presented in Appendix C.

Percolation Test Results

The following table presents a summary of the test results for each location. The percolation rates obtained during field testing were converted to infiltration rates utilizing the “Porchet Method.” A Factor of Safety of 3 has been applied to the rates as per Reference No 2. Calculated infiltration rates are tabulated below.

Infiltration Rates

Test Boring Number	Depth Below Existing Ground Surface (ft)	Soil Description	*Infiltration Rate (inches per hour)
KP-1	15	Silty Sand (SM)	0.13
KP-2	15	Silty Sand (SM)	0.18
KP-3	15	Silty Sand (SM)	0.08
KP-4	10	Silty Sand (SM)	0.06

* Factor of safety of 3 has been applied to this rate.

Conclusions and Recommendations

The following preliminary conclusions and recommendations regarding the proposed infiltration of storm-water are based on the limited percolation testing as discussed herein and the Riverside County Low-Impact Best Management Practice guidelines (Reference 3). The following conclusions regarding percolation testing performed and the proposed infiltration of storm-water is based on our review of the available geotechnical report for the site and the results of our field investigation, engineering analysis, and input from the project civil engineer.

- Direct infiltration is not recommended based on the overall dense underlying soils and estimated infiltration rates reported herein. If infiltration were to be implemented, the layers would likely cause a localized perched groundwater condition that could be detrimental to local building foundations and pavement improvements.

- Based on the previous site exploration performed by Kling Consulting Group (Reference 4) the bottom of the proposed infiltration basins is not anticipated to encroach within 10 feet of groundwater.

- Proposed infiltration systems should be setback from building foundations and adjacent properties to avoid the development of a localized perched groundwater condition that could result in damage to building foundations and pavement improvements.

- Final plans for infiltration systems should be reviewed by this office when they become available to see that our recommendations are utilized within the design.

Limitations

Geotechnical services are provided by Kling Consulting Group, Inc. in accordance with generally accepted professional engineering and geologic practice in the area where these services are to be rendered. Client acknowledges that the present standard in the engineering and geologic and environmental profession does not include a guarantee of perfection and, except as expressly set forth in the Conditions above, no warranty, expressed or implied, is extended by KCG.

Geotechnical reports are based on the project description and proposed scope of work as described in the proposal. Our conclusions and recommendations are based on the results of the field, laboratory, and office studies, combined with an interpolation and extrapolation of soil conditions as described in the report. The results reflect our geotechnical interpretation of the limited direct evidence obtained. Our conclusions and recommendations are made contingent upon the opportunity for KCG to continue to provide geotechnical services beyond the scope in the proposal to include all geotechnical services. If parties other than KCG are engaged to provide such services, they must be notified that they will be required to assume complete responsibility for the geotechnical work of the project by concurring with the recommendations in our report or by providing alternate recommendations.

It is the readers' responsibility to verify the correct interpretation and intention of the recommendations presented herein. KCG assumes no responsibility for misunderstandings or improper interpretations that result in unsatisfactory or unsafe work products. It is the reader's further responsibility to acquire copies of any supplemental reports, addenda, or responses to public agency reviews that may supersede recommendations in this report.

Kling Consulting Group, Inc. appreciates this opportunity to be of service. Should you have any questions regarding our report, please do not hesitate to call our office.

Closure

We appreciate the opportunity to work with you on this project. Should you have any questions regarding this report, please do not hesitate to call.

Sincerely,

KLING CONSULTING GROUP, INC.

Sean M. Webb
Senior Staff Geologist

Henry F. Kling
Principal Geotechnical Engineer
GE 2205
Expires 3/31/22

Jeffrey P. Blake
Associate Engineering Geologist
CEG 2248
Expires 10/31/21

TD: HFK:MK

Figure 1 – Site Location Map
Figure 2 – Boring/Percolation Test Location Map

Attachments: Appendix A – References
Appendix B – Boring Logs
Appendix C – Percolation Test Results

Dist.: (4) Addressee

APPENDIX A

REFERENCES

APPENDIX A

REFERENCES

1. Proactive Engineering Consultants West, Inc. Jackrabbit Trail, Dated: 8/03/2020.

2. Riverside County Flood Control and Water Conservation District, 2011, Appendix A-Design Handbook for Low Impact Development BMP, dated September 2011.

3. Kling Consultanting Group, 2019, Preliminary Geotechnical Feasibility Investigation, 620 Acre Industrial Commercial Development, Jackrabbit Trail, Beaumont, California, PN 18060-01, dated August 26, 2019.

APPENDIX B

BORING LOGS

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KP-1**
Project Number:	**18060-04**	Driller:	**Cal Pac**
Date Drilled:	**12/4/20**	Drill Type:	**Hollow Stem**
Logged By:	**S.W**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Elevation [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
						San Timoteo Formation (Tstm):			
						@ **0.0 feet - Sandy SILT (ML):** Light brown, fine-grained, dry.			
5						@ **5.0 feet - Silty SAND (SM):** Light brown, fine to medium-grained, minor gravel, subangular, damp.			
10									
15						Total Depth: 15 feet. Groundwater not encountered. No caving.			

HS BA TP 18060-00 JACK RABBIT PERC.GPJ Kling Consulting Group, Inc. 12/15/20

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LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KP-2**
Project Number:	**18060-04**	Driller:	**Cal Pac**
Date Drilled:	**12/4/20**	Drill Type:	**Hollow Stem**
Logged By:	**S.W**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD | California | Bulk Sample | Static Water Table

Elevation [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
						San Timoteo Formation (Tstm): @ **0.0 feet - Sandy SILT (ML):** Light brown, fine-grained, dry. @ **3.0 feet - Silty SAND (SM):** Light brown, fine to medium-grained, damp.			
5									
10									
15						Total Depth: 15 feet. Groundwater not encountered. No caving.			

HS BA TP 18060-00 JACK RABBIT PERC.GPJ Kling Consulting Group, Inc. 12/15/20

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KP-3**
Project Number:	**18060-04**	Driller:	**Cal Pac**
Date Drilled:	**12/4/20**	Drill Type:	**Hollow Stem**
Logged By:	**S.W**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Elevation [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
						San Timoteo Formation (Tstm):			
						@ **0.0 feet - Sandy SILT (ML):** Light brown, fine-grained, dry.			
						@ **3.0 feet - Silty SAND (SM):** Light brown, fine to medium-grained, minor gravel, subangular to subrounded, damp.			
5									
10									
15						Total Depth: 15 feet. Groundwater not encountered. No caving.			

HS BA TP 18060-00 JACK RABBIT PERC.GPJ Kling Consulting Group, Inc. 12/15/20

KCG KLING Consulting Group, Inc.

LOG OF EXPLORATORY BORING

Project:	**Jack Rabbit Trail**	Boring No.:	**KP-4**
Project Number:	**18060-04**	Driller:	**Cal Pac**
Date Drilled:	**12/4/20**	Drill Type:	**Hollow Stem**
Logged By:	**S.W**	Hammer Wt. / Drop:	
		Ground Elev. [ft]:	**---**

Standard Split Spoon | Shelby Tube | Water Level ATD
California | Bulk Sample | Static Water Table

Elevation [ft]	Graphic Log	Sample Type	Blows/6"	Moisture Content [%]	Dry Density, [pcf]	SOIL DESCRIPTION and CLASSIFICATION (USCS)	Pocket Pen. [tsf]	Lab Tests	Remarks
						San Timoteo Formation (Tstm): @ **0.0 feet - Sandy SILT (ML):** Light brown, fine-grained, dry.			
5						@ **5.0 feet - Silty SAND (SM):** Light brown, fine-grained, damp.			
10						Total Depth: 10 feet. Groundwater not encountered. No caving.			

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APPENDIX C

PERCOLATION TEST RESULTS

KCG KLING Consulting Group, Inc.

Infiltration Test Data Sheet

Project: 18066-04
Date: December 9, 2020

Test Hole No: KP-1
Hole Depth, D_T (inches): 180 inches
Diameter (inches): 8 inches
Soil Description: (SM) Silty Sand

Tested Infiltration Rate[1]
0.13 in/hr

Sandy Soil Criteria Test

Trial No.	Start Time	Stop Time	Time Interval (min.)	Initial Depth to Water (ft.)	Initial Depth to Water (in.)	Final Depth to Water (ft.)	Final Depth to Water (in.)	Change in Water Level (in.)	Great than or Equal to 6"? (Y/N)
1	1.00	1.25	25	12.50	150.00	13.50	162.00	12.00	Y
2	1.25	1.50	25	12.00	144.00	13.00	154.00	10.00	Y

Trial Readings

Trial No.	Start Time	Stop Time	Time Interval (min.)	Initial Depth to Water (ft.)	Initial Depth to Water (in.)	Final Depth to Water (ft.)	Final Depth to Water (in.)	Change in Water Level (in.)	Percolation Rate (min./in.)
1	1.50	2.00	10	12.50	150.00	13.00	156.00	6.00	1.67
2	2.00	2.10	10	12.00	144.00	12.50	150.00	6.00	1.67
3	2.10	2.20	10	12.00	144.00	12.55	150.60	6.60	1.52
4	2.20	2.30	10	12.50	150.00	12.80	153.60	3.60	2.78
5	2.30	2.40	10	12.00	144.00	12.25	147.00	3.00	3.33
6	2.40	2.50	10	12.00	144.00	12.25	147.00	3.00	3.33
7									
8									
9									
10									
11									
12									

Comments: [1]Tested infiltration rate from Riverside County - Low Impact Development BMP Design Handbook (Appendix A- 2011)
Minimum factor of safety of 3 is applied to this rate.

KCG KLING Consulting Group, Inc.

Infiltration Test Data Sheet

Project: 18066-04
Date: December 9, 2020

Test Hole No: KP-2
Hole Depth, D_T (inches): 180 inches
Diameter (inches): 8 inches
Soil Description: (SM) Silty Sand

Tested Infiltration Rate[1]
0.18 in/hr

Sandy Soil Criteria Test

Trial No.	Start Time	Stop Time	Time Interval (min.)	Initial Depth to Water (ft.)	Initial Depth to Water (in.)	Final Depth to Water (ft.)	Final Depth to Water (in.)	Change in Water Level (in.)	Great than or Equal to 6"? (Y/N)
1	11.05	11.30	25	12.00	144.00	13.00	156.00	12.00	Y
2	11.30	11.55	25	11.50	138.00	12.50	150.00	12.00	Y

Trial Readings

Trial No.	Start Time	Stop Time	Time Interval (min.)	Initial Depth to Water (ft.)	Initial Depth to Water (in.)	Final Depth to Water (ft.)	Final Depth to Water (in.)	Change in Water Level (in.)	Percolation Rate (min./in.)
1	11.55	12.05	10	12.00	144.00	12.50	150.00	6.00	1.67
2	12.05	12.15	10	12.00	144.00	12.40	148.80	4.80	2.08
3	12.15	12.25	10	12.00	144.00	12.35	148.20	4.20	2.38
4	12.25	12.35	10	12.00	144.00	12.35	148.20	4.20	2.38
5	12.35	12.45	10	12.00	144.00	12.30	147.60	3.60	2.78
6	12.45	12.55	10	12.00	144.00	12.30	147.60	3.60	2.78
7									
8									
9									
10									
11									
12									

Comments: [1]Tested infiltration rate from Riverside County - Low Impact Development BMP Design Handbook (Appendix A- 2011)
Minimum factor of safety of 3 is applied to this rate.

KCG KLING Consulting Group, Inc.

Infiltration Test Data Sheet

Project: 18066-04
Date: December 9, 2020

Test Hole No: KP-3
Hole Depth, D_T (inches): 180 inches
Diameter (inches): 8 inches
Soil Description: (SM) Silty Sand

Tested Infiltration Rate[1]
0.08 in/hr

Sandy Soil Criteria Test

Trial No.	Start Time	Stop Time	Time Interval (min.)	Initial Depth to Water (ft.)	Initial Depth to Water (in.)	Final Depth to Water (ft.)	Final Depth to Water (in.)	Change in Water Level (in.)	Great than or Equal to 6"? (Y/N)
1	14.00	14.25	25	12.00	144.00	13.00	156.00	12.00	Y
2	14.25	14.50	25	12.00	144.00	12.50	150.00	6.00	Y

Trial Readings

Trial No.	Start Time	Stop Time	Time Interval (min.)	Initial Depth to Water (ft.)	Initial Depth to Water (in.)	Final Depth to Water (ft.)	Final Depth to Water (in.)	Change in Water Level (in.)	Percolation Rate (min./in.)
1	14.50	15.00	10	11.50	138.00	12.00	144.00	6.00	1.67
2	15.00	15.10	10	12.00	144.00	12.50	150.00	6.00	1.67
3	15.10	15.20	10	11.50	138.00	11.90	142.80	4.80	2.08
4	15.20	15.30	10	11.50	138.00	11.95	143.40	5.40	1.85
5	15.30	15.40	10	12.00	144.00	12.35	148.20	4.20	2.38
6	15.40	15.50	10	12.00	144.00	12.20	146.40	2.40	4.17
7									
8									
9									
10									
11									
12									

Comments: [1]Tested infiltration rate from Riverside County - Low Impact Development BMP Design Handbook (Appendix A- 2011)
Minimum factor of safety of 3 is applied to this rate.

KCG KLING Consulting Group, Inc.

Infiltration Test Data Sheet

Project: 18066-04
Date: December 4, 2020

Test Hole No: KP-4
Hole Depth, D_T (inches): 120 inches
Diameter (inches): 8 inches
Soil Description: (SM) Silty Sand

Tested Infiltration Rate[1]
0.06 in/hr

Sandy Soil Criteria Test

Trial No.	Start Time	Stop Time	Time Interval (min.)	Initial Depth to Water (ft.)	Initial Depth to Water (in.)	Final Depth to Water (ft.)	Final Depth to Water (in.)	Change in Water Level (in.)	Great than or Equal to 6"? (Y/N)
1	10.00	10.25	25	6.50	78.00	9.00	108.00	30.00	Y
2	10.25	10.50	25	6.00	72.00	7.50	90.00	18.00	Y

Trial Readings

Trial No.	Start Time	Stop Time	Time Interval (min.)	Initial Depth to Water (ft.)	Initial Depth to Water (in.)	Final Depth to Water (ft.)	Final Depth to Water (in.)	Change in Water Level (in.)	Percolation Rate (min./in.)
1	10.50	11.00	10	6.00	72.00	7.00	84.00	12.00	0.83
2	11.00	11.10	10	6.50	78.00	7.00	84.00	6.00	1.67
3	11.10	11.20	10	6.00	72.00	6.50	78.00	6.00	1.67
4	11.20	11.30	10	6.00	72.00	6.25	75.00	3.00	3.33
5	11.30	11.40	10	6.50	78.00	6.75	81.00	3.00	3.33
6	11.40	11.50	10	6.00	72.00	6.20	74.40	2.40	4.17
7									
8									
9									
10									
11									
12									

Comments: [1]Tested infiltration rate from Riverside County - Low Impact Development BMP Design Handbook (Appendix A- 2011)
Minimum factor of safety of 3 is applied to this rate.

Appendix 4: Historical Site Conditions

Phase I Environmental Site Assessment or Other Information on Past Site Use

NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT

CEQA LEAD AGENCY:

Carole Kendrick
Planning Manager
City of Beaumont
550 East 6th Street
Beaumont CA, 92223

SUBJECT: NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR A GENERAL PLAN AMENDMENT, ADOPTION OF BEAUMONT POINTE SPECIFIC PLAN THAT WILL SERVE AS PRE-ZONING IN ANTICIPATION OF ANNEXATION TO THE CITY OF BEAUMONT AND THE BEAUMONT-CHERRY VALLEY WATER DISTRICT, FOR PROPERTY ALONG STATE ROUTE 60 NORTH OF JACK RABBIT ROAD IN THE SPHERE OF INFLUENCE OF THE CITY OF BEAUMONT

As lead agency, the City of Beaumont ("City") is publishing this Notice of Availability ("NOA") for a Draft Environmental Impact Report ("EIR") in accordance with the requirements of the California Environmental Quality Act ("CEQA"), to evaluate the environmental impacts of the following proposed actions that together are referred to as the ("Project"):

- General Plan Amendment (PLAN2019-0284) that would change approximately 539.9 acres from "Rural Residential" to "General Commercial" (30.2-acres), "Industrial," (232.6-acres), "Open Space" (124.7 acres), and "Open Space – Conservation" (152.4 acres);

- Pre-zone (PLAN2019-0284) to "Specific Plan";

- Adoption of the Beaumont Pointe Specific Plan (herein referred to as Specific Plan; SP2019-0003) that would create 10 planning areas allowing for General Commercial, Industrial, Open Space, and Open Space – Conservation land uses;

- Sign Program;

- Tentative Parcel Map (TPM) No. 82551 to subdivide the Project site; and

- Approval by the City and Riverside County Local Agency Formation Commission (LAFCO) of annexation to the City of Beaumont and approval by Beaumont-Cherry Valley Water District (BCVWD) and LAFCO of annexation to the Beaumont-Cherry Valley Water District.

NOA COMMENT PERIOD: The NOP public comment period begins **December 22, 2022 and ends on February 8, 2023**. Pursuant to pursuant to California Code of Regulations, Title 14, Sections 15087 and 15105, the City invites you to submit written comments describing your specific concerns regarding the environmental issues identified in the aforementioned EIR, and if representing a public agency, please identify your specific areas of statutory responsibility. Please send your comments to Carole Kendrick, Planning Manager, City of Beaumont City Hall, 550 East 6th Street, Beaumont CA, 92223. Please include the name of the agency or organization (if applicable), address, email, and contact person in your correspondence. If you have any questions, please contact Carole Kendrick at (951) 769-8518 or via email at CKendrick@beaumontca.gov. Written comments are wanted at the earliest possible date, but due to the time limits mandated by State law, your response must be received by **February 8, 2023**.

A copy of this NOA, EIR, technical appendices, and documents incorporated by reference are available for public review at the Planning Department at the City of Beaumont City Hall, 550 East 6th Street, Beaumont CA, 92223 or in electronic format at https://www.beaumontca.gov/1143/Beaumont-Pointe-Specific-Plan.

EIR PROCESS: In accordance with CEQA Guidelines Section 15105(a), the Draft EIR is released for public review and comment for a required 45-day review public comment period. Following the close of the public comment period, the City will prepare a Final EIR, which will include a response to comments to the Draft EIR received during the public comment period. The Final EIR will be used by the Planning Commission and the City Council to consider the Project.

PROJECT SITE LOCATION AND SETTING: The Project site consists of approximately 539.9 acres located in unincorporated Riverside County, in the sphere of influence of the City of-Beaumont (See Figures 1, *Regional Map* and 2, *Vicinity Map*). The Project site is abutted by State Route 60 (SR-60) to the north, Jack Rabbit Trail and the Hidden Canyon Industrial Park to the east, and undeveloped land to the south and west. Interstate 10 (I-10) is located approximately 4.5 miles to the east and SR-79 is located approximately 8.7 miles to the southeast. The Project site consists of flat to rolling terrain along the SR-60, with hillsides and canyons further south.

PROJECT DESCRIPTION: The Project Applicant, JRT BP 1 LLC, proposes to develop a recreational/entertainment commercial development totaling 5,331,000 sf, including up to 246,000 sf of general commercial uses in addition to a 125-room hotel (approximately 90,000 sf) and up to 4,995,000 sf of industrial and warehouse uses in five buildings ranging in size between approximately 600,000 and 1,379,000 sf and one building with 35,000 sf of self-storage. The Land Use Plan for the proposed Project is shown in Figure 3, *Land Use Plan*. Additionally, the Project would provide 124.7 acres of open space and 152.4 acres of open space-conservation to be preserved as natural habitat as required by the MSHCP and consistent with the Criteria Refinement analysis.

The Project would require annexation of the Project site into the City of Beaumont from unincorporated Riverside County and into the Beaumont-Cherry Valley Water District to obtain water service. The Project may also include establishment by the City of a Community Facilities District. As previously stated, the Project would require the following City approvals: a General Plan Amendment (PLAN2019-0284), Specific Plan (SP2019-0003), Pre-Zone (PLAN2019-0283), Sign Program, and Tentative Parcel Map (TPM) No. 82551).

General Plan Amendment (PLAN2019-0284)
The Project site is currently outside of the City's boundaries and is regulated by the County of Riverside. Nonetheless, the City has provided initial land use designations in its General Plan for properties in its SOI, including the Project site, and the Project site is currently designated "Rural Residential." The Project will include a General Plan Amendment (GPA) that would amend the City of Beaumont's General Plan Land Use Map to change the land use designations for the Project site from "Rural Residential" to "Industrial (I)," "General Commercial (GC)," "Open Space (OS)," and "Open Space-Conservation (OS-C)."

Pre-Zone (PLAN2019-0283)
The Project site is identified within the City of Beaumont Zoning Map as located in the City of Beaumont SOI; no pre-zoning is identified, and the site is currently regulated by the County of Riverside. The Project proposes to pre-zone (PLAN2019-0283) the Project site within the City's Zoning Map as "Specific Plan". This pre-zoning would become effective upon annexation of the Project site into the City (see Government Code Section 65859[a]). The proposed Pre-Zone would require future development on the Project site to comply with the applicable development standards and design guidelines from the Beaumont Pointe Specific Plan and, where applicable, the Beaumont Municipal Code.

Specific Plan (SP2019-0003)

The Specific Plan will function as the regulatory document for implementing zoning for the entire Project site, ensuring the orderly and systematic implementation of the City's General Plan. The Specific Plan establishes the necessary land use plan, development standards, design guidelines, infrastructure systems, and implementation strategies on which subsequent, Project-related development activities would be founded. Upon adoption of the Specific Plan, subsequent project-specific subdivision maps, plot plans, conditional use permits, grading and building permits, or any other actions requiring either ministerial or discretionary approvals would be required to demonstrate consistency with the Specific Plan.

The Specific Plan would allow development of the Project site with a combination of General Commercial, Industrial, Open Space, and Open Space - Conservation land uses across 10 Planning Areas (PAs). As shown in Table 3-1, *Specific Plan Land Use Summary*, PAs 1 through PA 2 will contain General Commercial land uses; PAs 3 through PA 8 will contain Industrial land uses, and PA 9 and PA 10 will contain Open Space and Open Space - Conservation land uses.

General Commercial

PAs 1 and 2 are designated General Commercial. These two PAs establish "The Experience at Beaumont Pointe." Within "The Experience at Beaumont Pointe," a combination of hospitality, restaurant, and recreation commercial uses is designed to be a multi-generational, regional destination focusing on entertainment, physical activity and wellness-based retail. "The Experience at Beaumont Pointe" is anticipated to include a 125-room limited-service hotel (approximately 90,000 sf) and a maximum of 246,000 sf of retail and commercial recreation businesses, including approximately 30,000 sf of restaurants and 216,000 sf of retail and commercial recreation businesses.

Table 3-1 Specific Plan Land Use Summary

PLANNING AREA	LAND USE DESIGNATION	ACRES	TARGET DEVELOPMENT INTENSITY
1	General Commercial	26.0	246,000[1]
2	General Commercial	4.2	125 hotel rooms
	General Commercial Subtotal	**30.2**	**246,000** 125 hotel rooms
3	Industrial	1.8	35,000
4	Industrial	67.3	1,379,000
5	Industrial	52.2	981,000
6	Industrial	33.6	700,000
7	Industrial	30.2	600,000
8	Industrial	47.5	1,300,000

Planning Area	Land Use Designation	Acres	Target Development Intensity
	Industrial Subtotal	**232.6**	**4,995,000**
9	Open Space	124.7	N/A
10	Open Space - Conservation	152.4	N/A
	Open Space Subtotal	**277.1**	**N/A**
PROJECT TOTAL		**539.9**	**5,241,000 90 hotel rooms**

Notes:
[1] PA 2 is anticipated to include a 125-room limited-service hotel (approximately 90,000 square feet). The 90,000 square feet of hotel use is not counted as part of the General Commercial's 246,000 maximum building square footage or as part of the industrial square footage because the Project's traffic analysis for the commercial site estimates traffic for hotel uses based on the number of rooms. This 90,000 sf is counted towards the Project total square footage of 5,331,000.

Industrial

PAs 3 through 8 are designated Industrial. Buildings in PAs 3-8 are envisioned to range in size from approximately 35,000 sf up to 1,379,000 sf and accommodate users such as industrial incubators, light manufacturing, parcel hub, warehouse/storage, fulfillment center, high cube warehouse, cold storage warehouse (up to 100,000 sf), and e-commerce operations and includes self-storage uses permitted only on PA 3. The maximum square footage for all industrial uses is 4,995,000 sf.

Open Space

PA 9 is designated Open Space, which accommodates landscaped, manufactured slopes, fuel modification areas, project signage, as well as the natural slopes which form a buffer between the Specific Plan's developed areas and the Open Space – Conservation in PA 10. The boundary between PA 9 and PA 10 is designated as the "Limits of Disturbance" on the Land Use Plan. This designation means that all development activity will take place inside of the limits of disturbance (i.e., within PA 9 or within PAs 1-8) and not on PA 10.

Open Space – Conservation

PA 10 is designed Open Space – Conservation and is intended to be dedicated to the RCA, pursuant to the Western Riverside County MSHCP and the Criteria Refinement analysis, for preservation to augment existing, adjacent conserved lands in this part of Riverside County. This area consists of deeply incised hillsides and watercourses along with the habitats associated with these landforms. No development would occur in this area.

The Project would construct four main roadways for on-site circulation—4th Street, Jack Rabbit Trail, Entertainment Avenue, and Industrial Way. All roadways will be public right of way unless otherwise indicated. The precise location of roadways and access points identified in this EIR are considered conceptual in that they may be modified to meet the requirements of the City of

Beaumont Public Works Department and to address final grading requirements. The Project would be developed in at least three phases with buildout expected Year 2027.

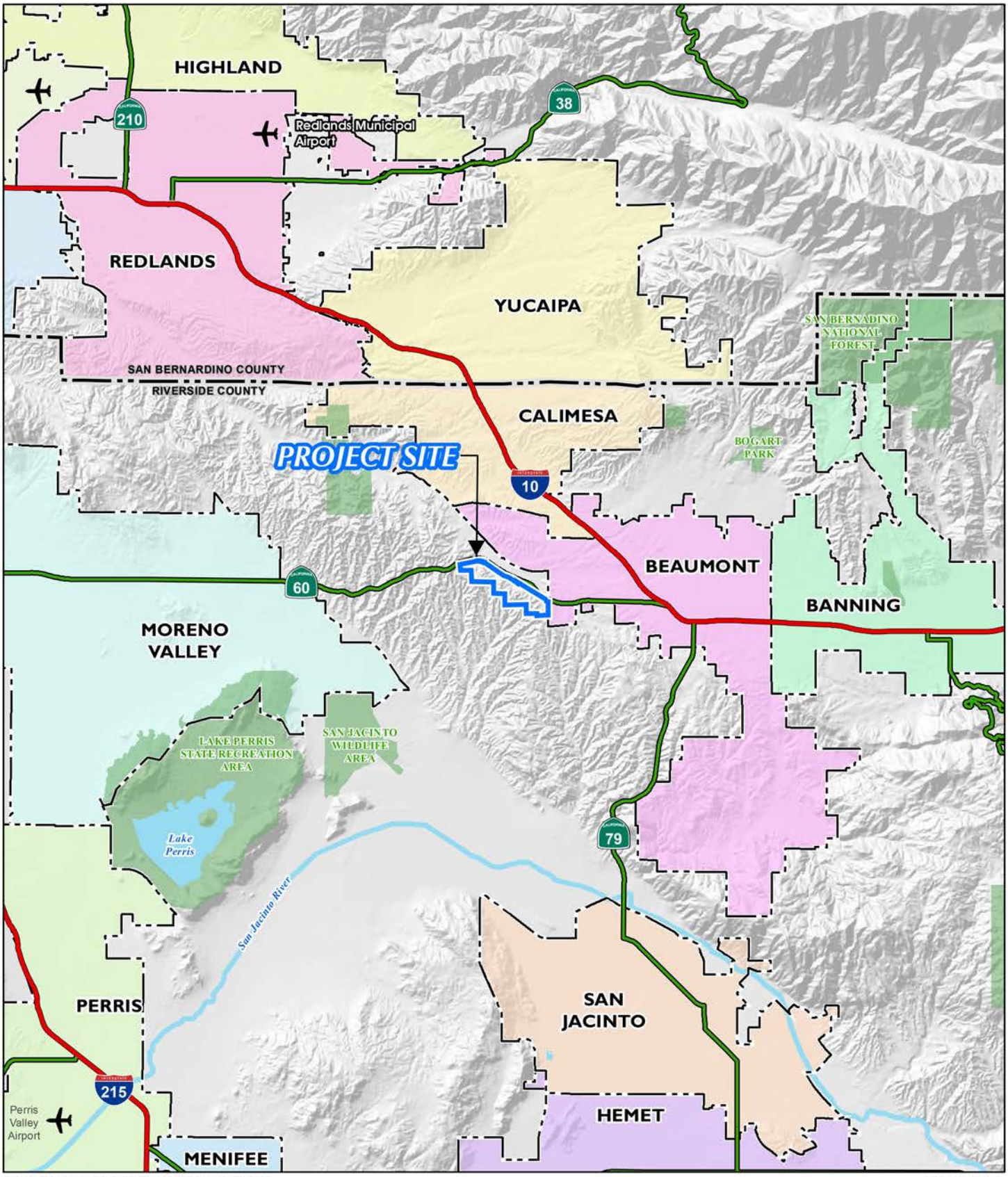
Sign Program
A Sign Program is being processed concurrently with the Specific Plan. The Sign Program provides adequate and appropriate street, building, tenant identification, pedestrian path, and wayfinding signage for the Project's anticipated variety of building sizes, designs, and use.

Tentative Parcel Map
The Project would include a Tentative Parcel Map. Additional, subdivision maps (parcel and/or tract maps, including vesting maps) could be processed in conjunction with this Specific Plan to subdivide the site into smaller parcels and to regulate development of the physical components of the Project.

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)
The City will prepare and submit to the Wildlife Agencies (U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife) a Minor Amendment request for any annexation associated with the Project. The Minor Amendment would be documented in MSHCP (Sections 11.5 and 20.4.1(E) of the MSHCP Implementation Agreement and Section 6.10.2 of the MSHCP). The Project would conserve a total of 230.82 acres of lands that would support the function of Proposed Core 3 consistent with the MSHCP goals of providing live-in habitat and facilitating movement, including 152.42 acres on-site and 78.40 acres off-site.

SIGNIFICANT ENVIRONMENTAL EFFECTS
The Draft EIR evaluated the potential environmental impacts of the proposed Project on aspects of the physical environment addressed under CEQA. The environmental topic areas include Aesthetics, Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire.

Based on the analysis conducted within the Draft EIR, the Project would result in significant and unavoidable impacts related to air quality, greenhouse gas emissions, noise, and transportation. Significant impacts related to biological resources, cultural resources, geology and soils, and tribal cultural resources would be mitigated to a less than significant level.



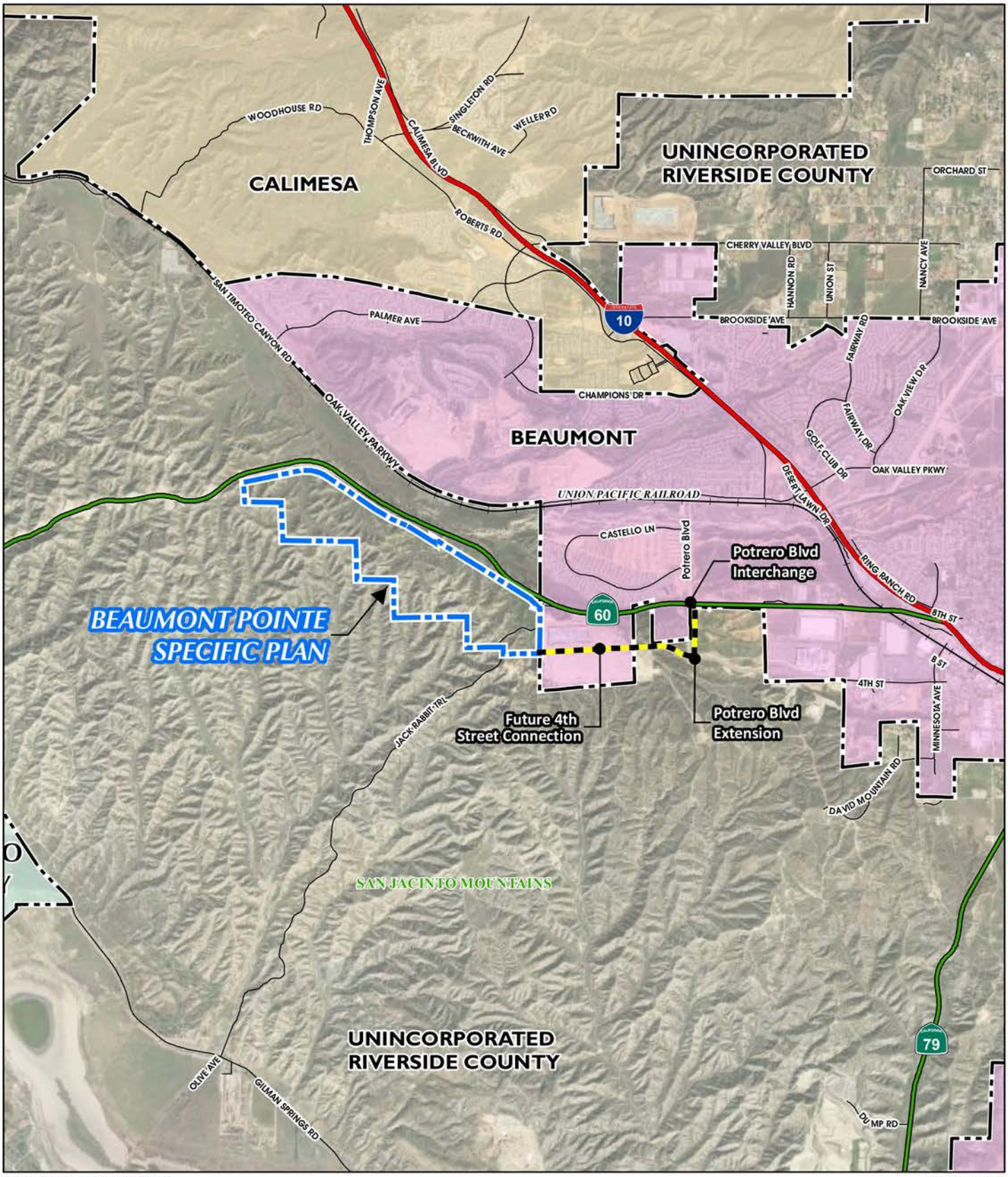
Source(s): ESRI, RCTLMA (2021), SB County (2020)

Figure 1

0 0.75 1.5 3 Miles

Regional Map

Date: December 19, 2022



Source(s): ESRI, RCTLMA (2021)

Figure 2

0 0.25 0.5 1 Miles

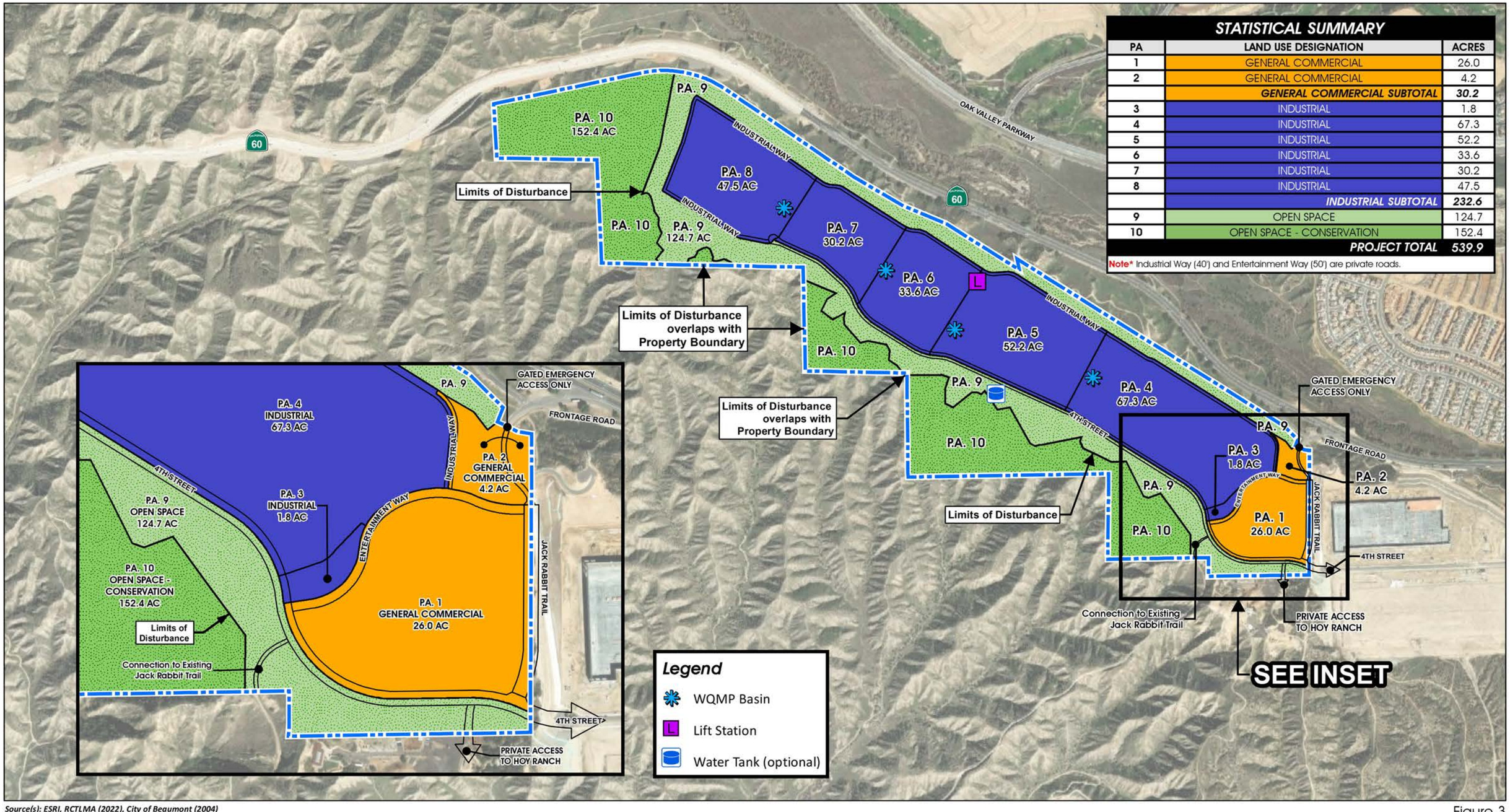
Vicinity Map

Date: December 19, 2022

STATISTICAL SUMMARY

PA	LAND USE DESIGNATION	ACRES
1	GENERAL COMMERCIAL	26.0
2	GENERAL COMMERCIAL	4.2
	GENERAL COMMERCIAL SUBTOTAL	***30.2***
3	INDUSTRIAL	1.8
4	INDUSTRIAL	67.3
5	INDUSTRIAL	52.2
6	INDUSTRIAL	33.6
7	INDUSTRIAL	30.2
8	INDUSTRIAL	47.5
	INDUSTRIAL SUBTOTAL	***232.6***
9	OPEN SPACE	124.7
10	OPEN SPACE - CONSERVATION	152.4
	PROJECT TOTAL	***539.9***

Note* Industrial Way (40') and Entertainment Way (50') are private roads.



Source(s): ESRI, RCTLMA (2022), City of Beaumont (2004)
Composite: Proactive Engineering Consultants (2020),Herdman Architecture (07-09-2021)

Figure 3

0 300 600 1,200 Feet

Land Use Plan

Date: December 19, 2022

Appendix 5: LID Infeasibility

LID Technical Infeasibility Analysis

NOT APPLICABLE

Appendix 6: BMP Design Details

BMP Sizing, Design Details and other Supporting Documentation

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Proactive Engineering Consultants West, Inc.	Date	4/26/2023
Designed by	A. Baylon	Case No	TBD
Company Project Number/Name	Beaumont Pointe		

BMP Identification

BMP NAME / ID: DMA 16 / Basin 1

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.75 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, V_{BMP} (cubic feet)	Proposed Volume on Plans (cubic feet)
Industrial Imp. (16)	2816060	Concrete or Asphalt	1	0.89	2511925.5			
Industrial Perv. (16)	801273	Ornamental Landscaping	0.1	0.11	88507			
BMP Basin	111618	Ornamental Landscaping	0.1	0.11	12329.1			
	3728951	Total			2612761.6	0.75	163297.6	450891

Notes:

Extended Detention Basin Design Procedure	BMP Subarea No. DMA 16	Legend:	Required Entries / Calculated Cells
Company Name: PEC West, Inc.			Date: ########
Designed by: A. Baylon			County/City Case No.:

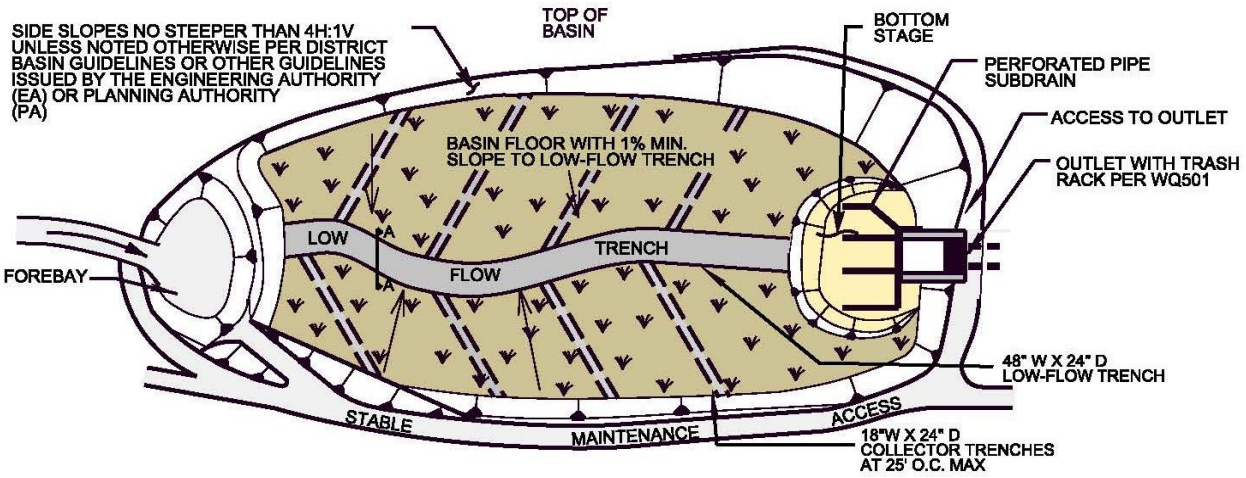
Design Volume

Tributary Area (BMP Subarea)	A_T =	85.6	acres
Enter V_{BMP}, determined from Section 2.1 of this Handbook	V_{BMP}=	163,298	ft^3

Basin Footprint

Overall Geometry

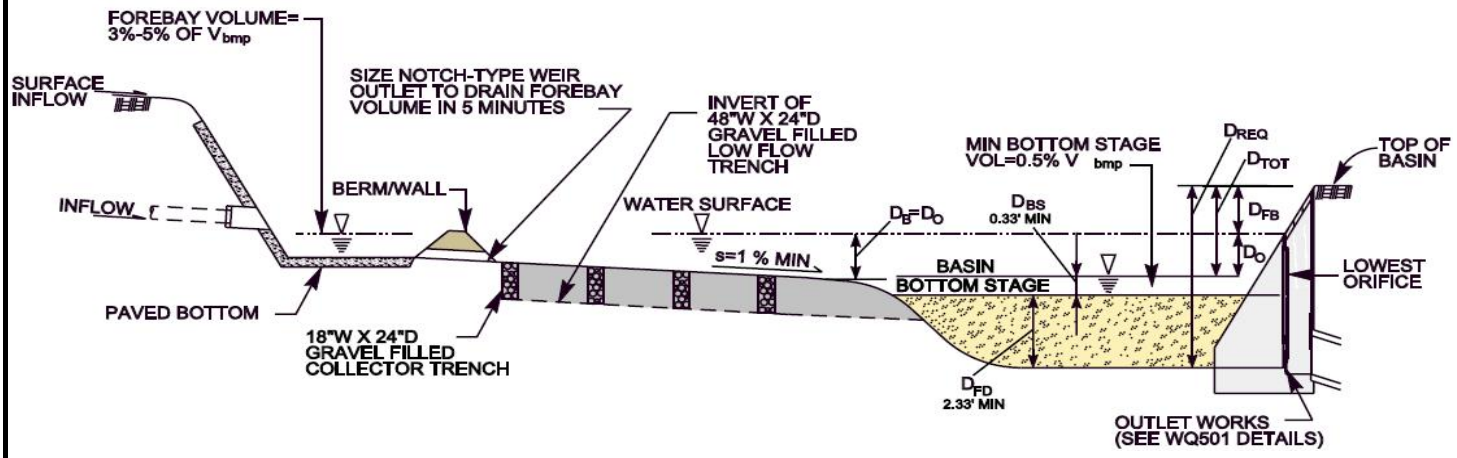
Length at Basin Bottom Surface	Length =	750	ft
Width at Basin Bottom Surface	Width =	145	ft
	Meets 1.5 : 1 requirement?	✓	
Side Slopes per "Basin Guidelines", Sect. 1.2	z =	4	:1
Proposed Basin Depth (with no freeboard)	D_B =	5.00	ft
Depth of freeboard (if used)	D_{FB} =	1.00	ft
Minimum Required Allowance for Total Depth (including proposed basin depth, freeboard, minimum depth of bottom stage (D_{BS}=0.33') and minimum filter depth (D_{FD}=2.33'))	D_{REQ} =	8.7	ft
Depth from design water surface elevation to lowest orifice	D_O =	5.0	ft



Basin Design

Basin Design

Proposed Total Basin Depth (proposed depth plus freeboard)	D_{TOT} =	6.00	ft
Basin Invert Longitudinal Slope	Slope =	1.00	%
Basin Invert Transverse Slope (1% min)	Slope =	1	%
Basin Volume	V_{Basin} =	447431	ft^3



Forebay Design

Forebay Volume (3 - 5% V_{BMP})	V_{FB} =	4900	ft^3
Forebay Depth (height of berm)	D_{FBY} =	1	ft
Minimum Forebay Surface Area	A_{FB} =	4900	ft^2
Rectangular weir (notch)	W =	8.00	in

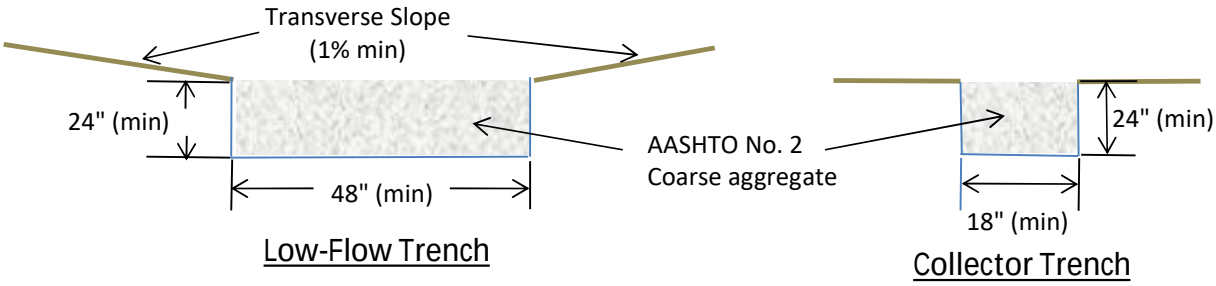
Dry Weather and Low-Flow Management

Low-Flow Trench (see graphic below)

Depth (24 inches minimum, gravel filled)	Depth =	24	inches
Width (48 inches minimum)	Width =	48	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%

Collector Trenches (see graphic below)

Depth (24 inches minimum)	Depth =	24	inches
Width (18 inches minimum)	Width =	18	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%
Spacing (25 feet on center maximum)	S =	25	feet



Low-Flow Trench

Collector Trench

Bottom Stage (Sand Filter) Design

Depth of the Bottom Stage (4" minimum ponding)	D_{BS} =	6	in
Surface Area of Bottom Stage	A_{BS} =	4100	ft^2
Dry Weather Ponded Volume (above sand layer)	V_{BS} =	2050	ft^3

Is V_{BS} no less than 0.5% V_{BMP}? OK

Depth of ASTM-C33 sand (18 inch minimum)

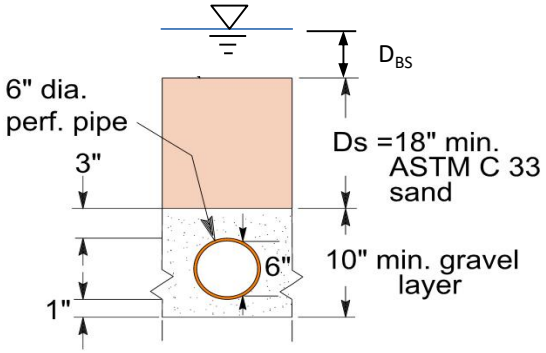
Ds = 18 inches

Diameter of Subdrains

ϕ = 8 in

Subdrain Spacing

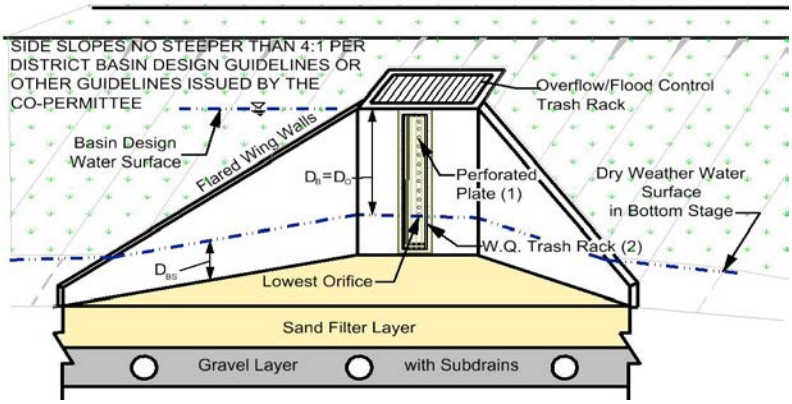
s = 8 ft. on center



Basin Outlet Design

Outlet Design

Assume an orifice area. Based on the information provided above, the spreadsheet provides discharge vs. stage data. Enter the volume vs. stage data for each interval. This information is used to route the volume through the basin. The size of the orifice is acceptable when the data shows that less than 50% of V_{BMP} has drained in 24 hours, and that 100% drawdown occurs within 72 hours.



Flow Rate, Q (cfs)

$$Q=CA[2g(H-H_o)]^{0.5}$$

Discharge Coefficient,

Default, C = 0.66

Other, C =

Orifice Area (ft^2)

Orifice Diameter, d; number of orifices per row, n; and number of orifice rows, N (from the bottom up).

d = 5.55 inches

n = 1 per row

N = 1 rows

Aeff = 0.168 ft^2 per row

or

Aeff = 24.180 in^2 per row

From outflow hydrograph, the time where 50% of V_{BMP} has drained from the basin (24 hour minimum):

Time (50%) = 24.31 hrs

OK

From outflow hydrograph, the time where 100% V_{BMP} has drained from the basin(within 72 hours):

Time (100 %) = 71.48 hrs

OK

Headwater Elev. / Stage (ft)	Discharge (cfs)	Volume (acre-ft)	Δt (hrs.)
0	0.0000	0.0000	
0.33	0.5132	0.530	24.99
0.67	0.7263	1.090	10.93
1.00	0.8894	1.660	8.54
1.33	1.0268	2.260	7.58
1.67	1.1483	2.880	6.90
2.00	1.2578	3.520	6.44
2.33	1.3584	4.180	6.11
2.67	*1.4524*	*4.860*	
3.00	*1.5404*	*5.570*	
3.33	*1.6237*	*6.300*	
3.67	*1.7031*	*7.050*	
4.00	*1.7787*	*7.820*	
4.33	*1.8513*	*8.610*	
4.67	*1.9213*	*9.430*	
5.00	*1.9887*	*10.270*	
5.33			
5.67			
6.00			
6.33			
6.67			
7.00			
7.33			
7.67			
8.00			
8.33			
8.67			
9.00			
9.33			
9.67			
10.00			
		∑ =	71.48

Notes:

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Proactive Engineering Consultants West, Inc.	Date	4/26/2023
Designed by	A. Baylon	Case No	TBD
Company Project Number/Name	Beaumont Pointe		

BMP Identification

BMP NAME / ID: DMA 13 / Basin 2

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.75 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, V_{BMP} (cubic feet)	Proposed Volume on Plans (cubic feet)
Industrial Imp. (13)	3074773	Concrete or Asphalt	1	0.89	2742697.5			
Industrial Perv. (13)	674044	Ornamental Landscaping	0.1	0.11	74453.6			
BMP Basin	115084	Ornamental Landscaping	0.1	0.11	12711.9			
	3863901	Total			2829863	0.75	176866.4	489679

Notes:

Extended Detention Basin Design Procedure		BMP Subarea No. DMA 13	Legend:	Required Entries / Calculated Cells
Company Name:	PEC West, Inc.			Date: 4/12/2022
Designed by:	A. Baylon			County/City Case No.: TBD

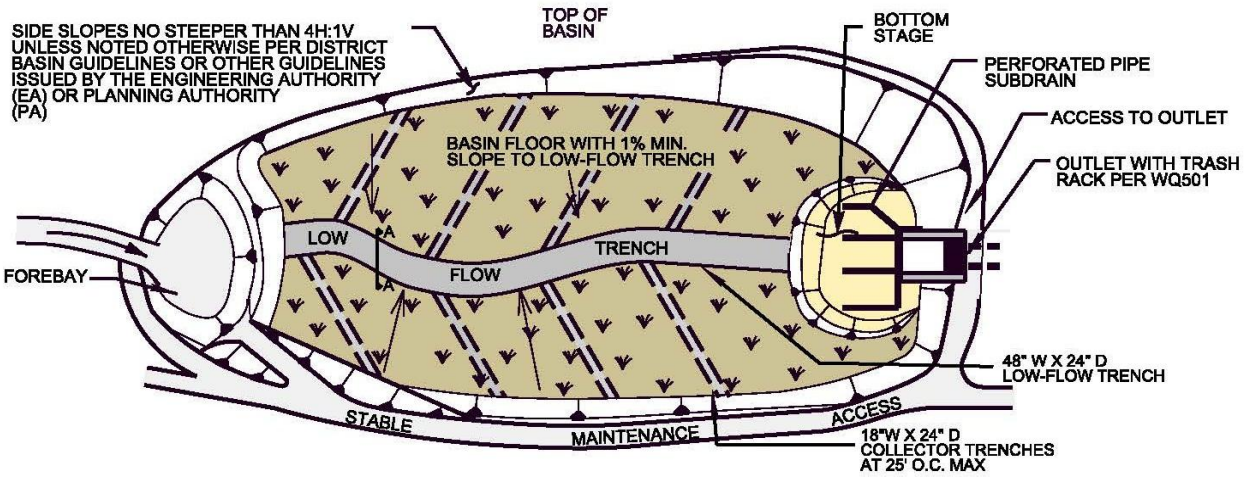
Design Volume

Tributary Area (BMP Subarea)	A_T =	88.7	acres
Enter V_{BMP}, determined from Section 2.1 of this Handbook	V_{BMP}=	176,866	ft^3

Basin Footprint

Overall Geometry

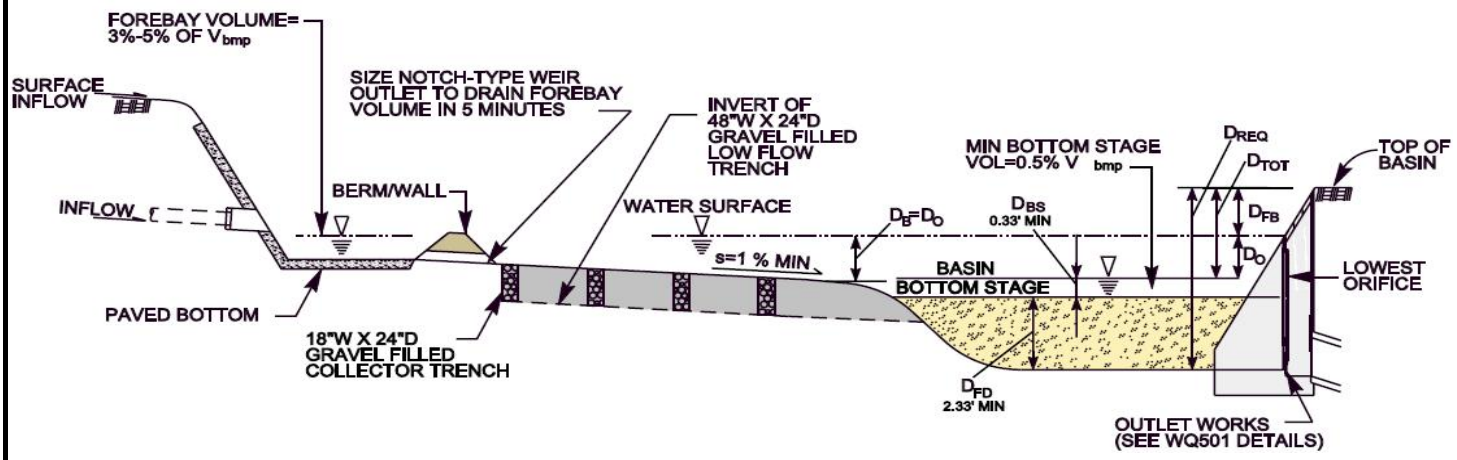
Length at Basin Bottom Surface	Length =	715	ft
Width at Basin Bottom Surface	Width =	165	ft
	Meets 1.5 : 1 requirement?	✓	
Side Slopes per "Basin Guidelines", Sect. 1.2	z =	4	:1
Proposed Basin Depth (with no freeboard)	D_B =	5.00	ft
Depth of freeboard (if used)	D_{FB} =	1.00	ft
Minimum Required Allowance for Total Depth (including proposed basin depth, freeboard, minimum depth of bottom stage (D_{BS}=0.33') and minimum filter depth (D_{FD}=2.33'))	D_{REQ} =	8.7	ft
Depth from design water surface elevation to lowest orifice	D_O =	5.0	ft



Basin Design

Basin Design

Proposed Total Basin Depth (proposed depth plus freeboard)	D_{TOT} =	6.00	ft
Basin Invert Longitudinal Slope	Slope =	1.00	%
Basin Invert Transverse Slope (1% min)	Slope =	1	%
Basin Volume	V_{Basin} =	484817	ft^3



Forebay Design

Forebay Volume (3 - 5% V_{BMP})	V_{FB} =	8711	ft^3
Forebay Depth (height of berm)	D_{FBY} =	1	ft
Minimum Forebay Surface Area	A_{FB} =	8711	ft^2
Rectangular weir (notch)	W =	8.00	in

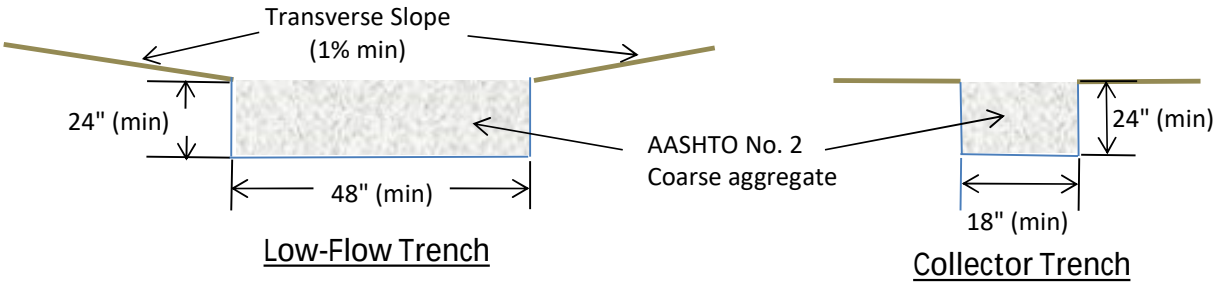
Dry Weather and Low-Flow Management

Low-Flow Trench (see graphic below)

Depth (24 inches minimum, gravel filled)	Depth =	24	inches
Width (48 inches minimum)	Width =	48	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%

Collector Trenches (see graphic below)

Depth (24 inches minimum)	Depth =	24	inches
Width (18 inches minimum)	Width =	18	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%
Spacing (25 feet on center maximum)	S =	25	feet



Low-Flow Trench

Collector Trench

Bottom Stage (Sand Filter) Design

Depth of the Bottom Stage (4" minimum ponding)	D_{BS} =	6	in
Surface Area of Bottom Stage	A_{BS} =	4100	ft^2
Dry Weather Ponded Volume (above sand layer)	V_{BS} =	2050	ft^3

Is V_{BS} no less than 0.5% V_{BMP}? OK

Depth of ASTM-C33 sand (18 inch minimum)

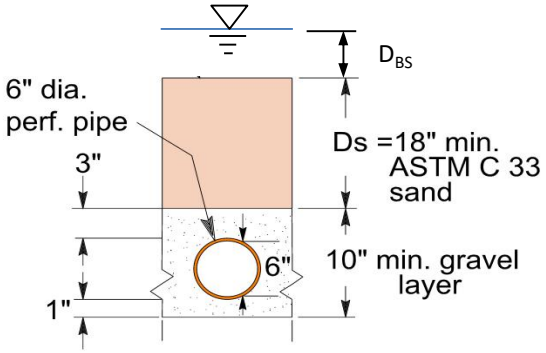
Ds = 18 inches

Diameter of Subdrains

ϕ = 8 in

Subdrain Spacing

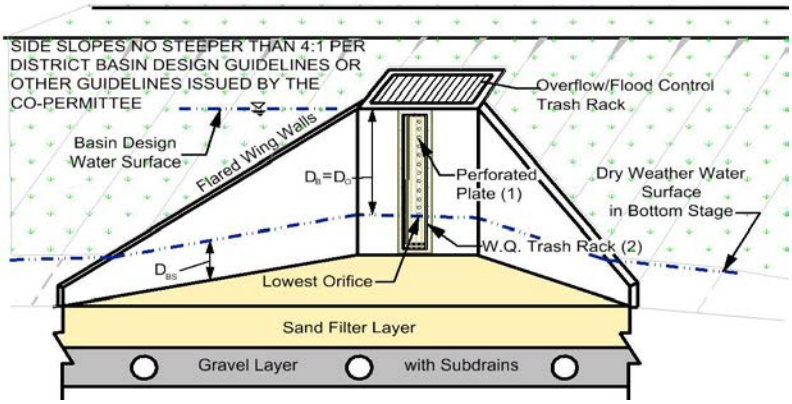
s = 8 ft. on center



Basin Outlet Design

Outlet Design

Assume an orifice area. Based on the information provided above, the spreadsheet provides discharge vs. stage data. Enter the volume vs. stage data for each interval. This information is used to route the volume through the basin. The size of the orifice is acceptable when the data shows that less than 50% of V_{BMP} has drained in 24 hours, and that 100% drawdown occurs within 72 hours.



Flow Rate, Q (cfs)

$$Q=CA[2g(H-H_o)]^{0.5}$$

Discharge Coefficient,

Default, C = 0.66

Other, C =

Orifice Area (ft^2)

Orifice Diameter, d; number of orifices per row, n; and number of orifice rows, N (from the bottom up).

d = 6 inches

n = 1 per row

N = 1 rows

Aeff = 0.196 ft^2 per row

or

Aeff = 28.260 in^2 per row

From outflow hydrograph, the time where 50% of V_{BMP} has drained from the basin (24 hour minimum):

Time (50%) = 24.53 hrs

OK

From outflow hydrograph, the time where 100% V_{BMP} has drained from the basin(within 72 hours):

Time (100 %) = 69.92 hrs

OK

Headwater Elev. / Stage (ft)	Discharge (cfs)	Volume (acre-ft)	Δt (hrs.)
0	0.0000	0.0000	
0.33	0.5998	0.620	25.01
0.67	0.8489	1.270	10.86
1.00	1.0394	1.920	8.33
1.33	1.2001	2.600	7.35
1.67	1.3420	3.290	6.57
2.00	1.4700	3.990	6.02
2.33	1.5876	4.720	5.78
2.67	*1.6975*	*5.460*	
3.00	*1.8004*	*6.220*	
3.33	*1.8976*	*6.990*	
3.67	*1.9905*	*7.780*	
4.00	*2.0789*	*8.590*	
4.33	*2.1637*	*9.420*	
4.67	*2.2455*	*10.270*	
5.00	*2.3242*	*11.130*	
5.33			
5.67			
6.00			
6.33			
6.67			
7.00			
7.33			
7.67			
8.00			
8.33			
8.67			
9.00			
9.33			
9.67			
10.00			
		∑ =	69.92

Notes:

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Proactive Engineering Consultants West, Inc.	Date	4/26/2023
Designed by	A. Baylon	Case No	TBD
Company Project Number/Name	Beaumont Pointe		

BMP Identification

BMP NAME / ID: DMA 6 / Basin 3

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.75 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, V_{BMP} (cubic feet)	Proposed Volume on Plans (cubic feet)
Industrial Imp. (6)	1097967	Concrete or Asphalt	1	0.89	979386.6			
Industrial Perv. (6)	276383	Ornamental Landscaping	0.1	0.11	30528.7			
BMP Basin (6)	106385	Ornamental Landscaping	0.1	0.11	11751.1			
	1480735	Total			1021666.4	0.75	63854.2	416,420

Notes:

Extended Detention Basin Design Procedure	BMP Subarea No. AREA 6	Legend:	Required Entries / Calculated Cells

Company Name: PEC West, Inc. Date: ########

Designed by: A. Baylon County/City Case No.:

Design Volume

Tributary Area (BMP Subarea) A_T = 33.99 acres

Enter $V_{BMP,}$ determined from Section 2.1 of this Handbook V_{BMP}= 63,854 ft^3

Basin Footprint

Overall Geometry

Length at Basin Bottom Surface Length = 1079 ft

Width at Basin Bottom Surface Width = 100 ft

Meets 1.5 : 1 requirement? ✓

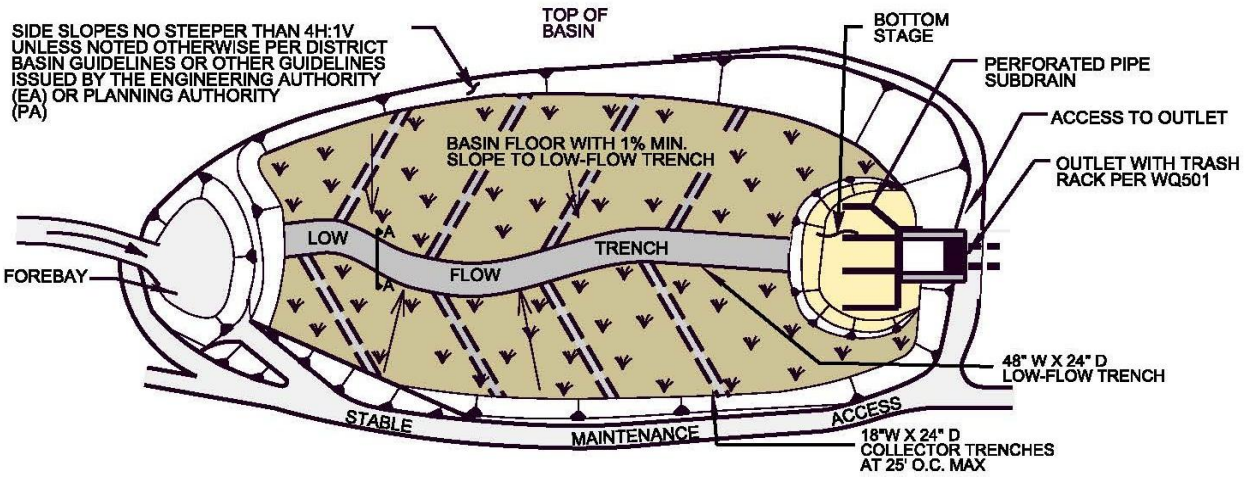
Side Slopes per "Basin Guidelines", Sect. 1.2 z = 4 :1

Proposed Basin Depth (with no freeboard) D_B = 5.00 ft

Depth of freeboard (if used) D_{FB} = 1.00 ft

Minimum Required Allowance for Total Depth (including proposed basin depth, freeboard, minimum depth of bottom stage (D_{BS}=0.33') and minimum filter depth (D_{FD}=2.33')) D_{REQ} = 8.7 ft

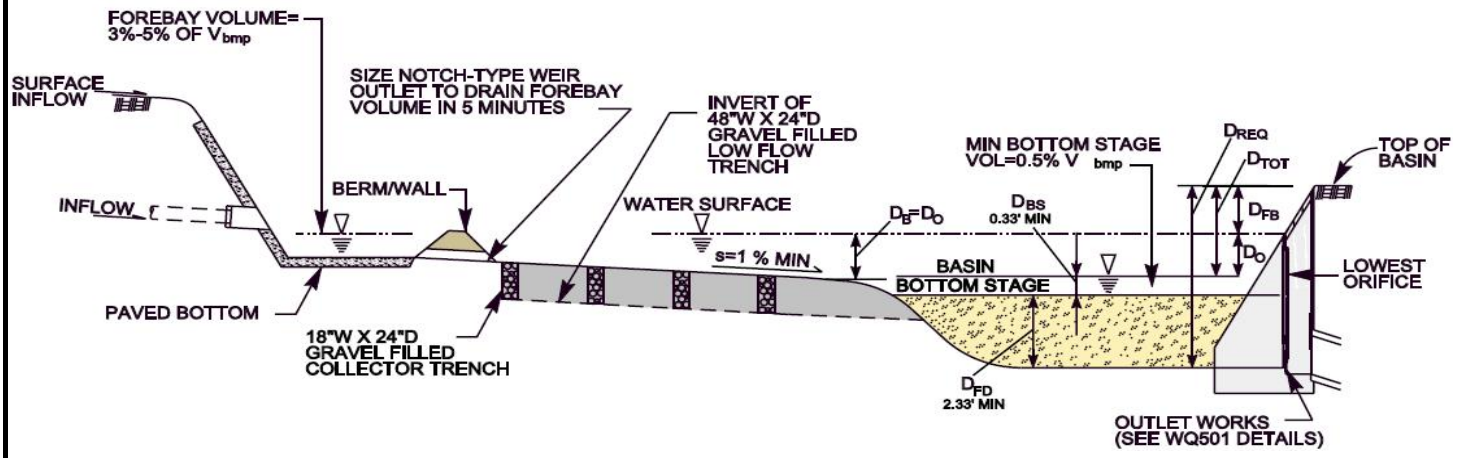
Depth from design water surface elevation to lowest orifice D_O = 5.0 ft



Basin Design

Basin Design

Proposed Total Basin Depth (proposed depth plus freeboard)	D_{TOT} =	6.00	ft
Basin Invert Longitudinal Slope	Slope =	1.00	%
Basin Invert Transverse Slope (1% min)	Slope =	1	%
Basin Volume	V_{Basin} =	412284	ft^3



Forebay Design

Forebay Volume (3 - 5% V_{BMP})	V_{FB} =	2000	ft^3
Forebay Depth (height of berm)	D_{FBY} =	1	ft
Minimum Forebay Surface Area	A_{FB} =	2000	ft^2
Rectangular weir (notch)	W =	8.00	in

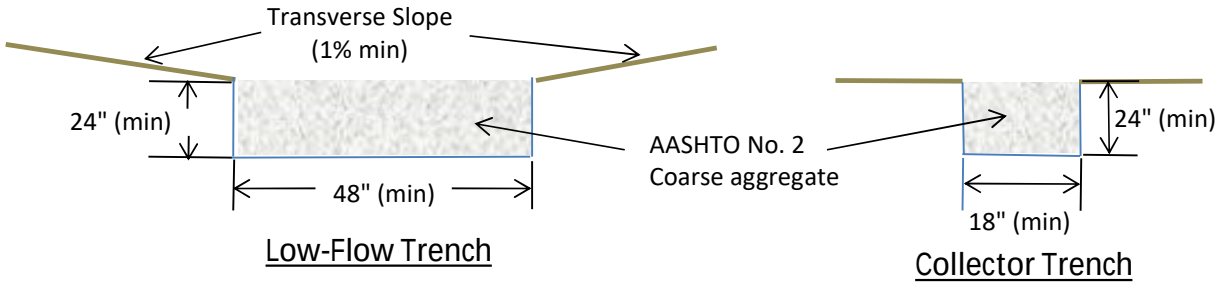
Dry Weather and Low-Flow Management

Low-Flow Trench (see graphic below)

Depth (24 inches minimum, gravel filled)	Depth =	24	inches
Width (48 inches minimum)	Width =	48	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%

Collector Trenches (see graphic below)

Depth (24 inches minimum)	Depth =	24	inches
Width (18 inches minimum)	Width =	18	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%
Spacing (25 feet on center maximum)	S =	25	feet



Low-Flow Trench

Collector Trench

Bottom Stage (Sand Filter) Design

Depth of the Bottom Stage (4" minimum ponding)	D_{BS} =	6	in
Surface Area of Bottom Stage	A_{BS} =	4150	ft^2
Dry Weather Ponded Volume (above sand layer)	V_{BS} =	2075	ft^3

Is V_{BS} no less than 0.5% V_{BMP}? OK

Depth of ASTM-C33 sand (18 inch minimum)

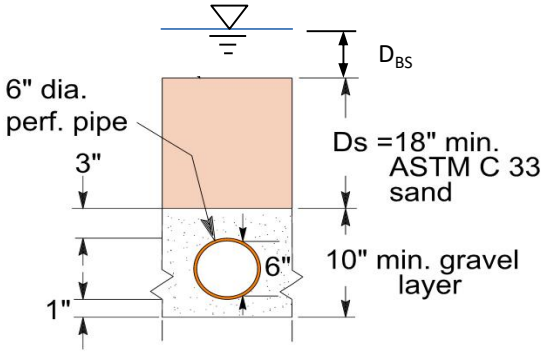
Ds = 18 inches

Diameter of Subdrains

ϕ = 8 in

Subdrain Spacing

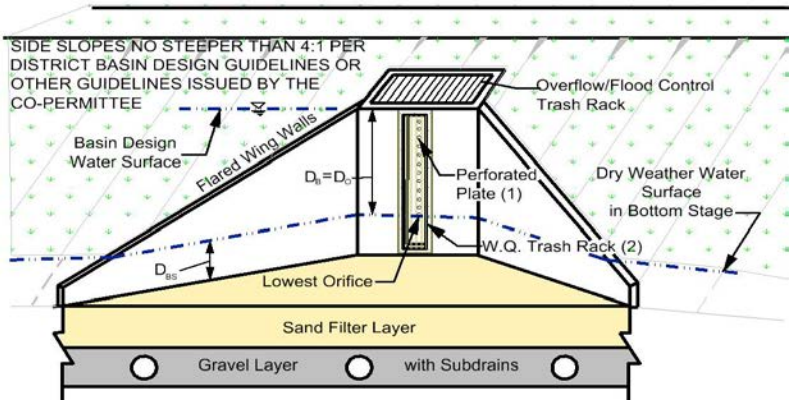
s = 8 ft. on center



Basin Outlet Design

Outlet Design

Assume an orifice area. Based on the information provided above, the spreadsheet provides discharge vs. stage data. Enter the volume vs. stage data for each interval. This information is used to route the volume through the basin. The size of the orifice is acceptable when the data shows that less than 50% of V_{BMP} has drained in 24 hours, and that 100% drawdown occurs within 72 hours.



Flow Rate, Q (cfs)

$$Q=CA[2g(H-H_o)]^{0.5}$$

Discharge Coefficient,

Default, C = 0.66

Other, C =

Orifice Area (ft^2)

Orifice Diameter, d; number of orifices per row, n; and number of orifice rows, N (from the bottom up).

d = 3.967 inches

n = 1 per row

N = 1 rows

Aeff = 0.086 ft^2 per row

or

Aeff = 12.354 in^2 per row

From outflow hydrograph, the time where 50% of V_{BMP} has drained from the basin (24 hour minimum):

Time (50%) = 24.01 hrs

OK

From outflow hydrograph, the time where 100% V_{BMP} has drained from the basin(within 72 hours):

Time (100 %) = 77.44 hrs

Redesign. 72 hour maximum

Headwater Elev. / Stage (ft)	Discharge (cfs)	Volume (acre-ft)	Δt (hrs.)
0	0.0000	0.0000	
0.33	0.2622	0.470	43.38
0.67	0.3711	0.970	19.11
1.00	0.4544	1.480	14.95
1.33	*0.5246*	*2.020*	
1.67	*0.5867*	*2.580*	
2.00	*0.6426*	*3.170*	
2.33	*0.6940*	*3.770*	
2.67	*0.7420*	*4.400*	
3.00	*0.7870*	*5.060*	
3.33	*0.8295*	*5.730*	
3.67	*0.8701*	*6.430*	
4.00	*0.9088*	*7.150*	
4.33	*0.9458*	*7.900*	
4.67	*0.9816*	*8.670*	
5.00	*1.0160*	*9.460*	
5.33			
5.67			
6.00			
6.33			
6.67			
7.00			
7.33			
7.67			
8.00			
8.33			
8.67			
9.00			
9.33			
9.67			
10.00			
		∑ =	77.44

Notes:

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Proactive Engineering Consultants West, Inc.	Date	4/26/2023
Designed by	A. Baylon	Case No	TBD
Company Project Number/Name	Beaumont Pointe		

BMP Identification

BMP NAME / ID: DMA 1 / Basin 4

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.75 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, V_{BMP} (cubic feet)	Proposed Volume on Plans (cubic feet)
Industrial Imp. (1)	2178051	Concrete or Asphalt	1	0.89	1942821.5			
Industrial Perv. (1)	109081	Ornamental Landscaping	0.1	0.11	12048.9			
BMP Basin (1)	101335	Ornamental Landscaping	0.1	0.11	11193.3			
	2388467	Total			1966063.7	0.75	122879	413768

Notes:

Extended Detention Basin Design Procedure	BMP Subarea No. DMA 1	Legend:	Required Entries / Calculated Cells
Company Name: PEC West, Inc.			Date: ########
Designed by: A. Baylon			County/City Case No.: TBD

Design Volume

Tributary Area (BMP Subarea) — A_T = 54.83 acres

Enter V_{BMP}, determined from Section 2.1 of this Handbook — V_{BMP} = 122,879 ft^3

Basin Footprint

Overall Geometry

Length at Basin Bottom Surface — Length = 750 ft

Width at Basin Bottom Surface — Width = 145 ft

Meets 1.5 : 1 requirement? ✓

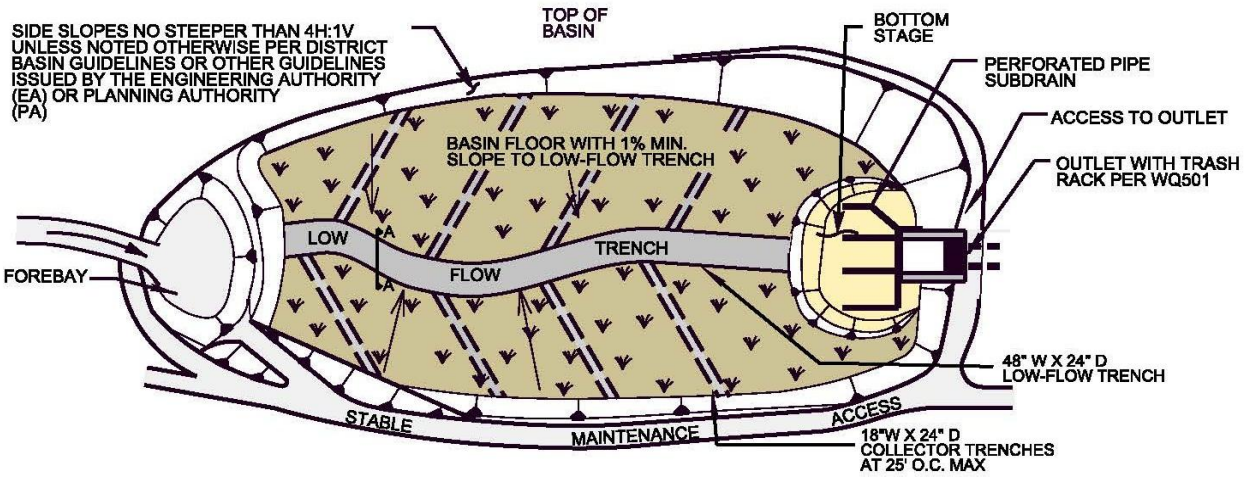
Side Slopes per "Basin Guidelines", Sect. 1.2 — z = 4 :1

Proposed Basin Depth (with no freeboard) — D_B = 5.00 ft

Depth of freeboard (if used) — D_{FB} = 1.00 ft

Minimum Required Allowance for Total Depth (including proposed basin depth, freeboard, minimum depth of bottom stage (D_{BS}=0.33') and minimum filter depth (D_{FD}=2.33')) — D_{REQ} = 8.7 ft

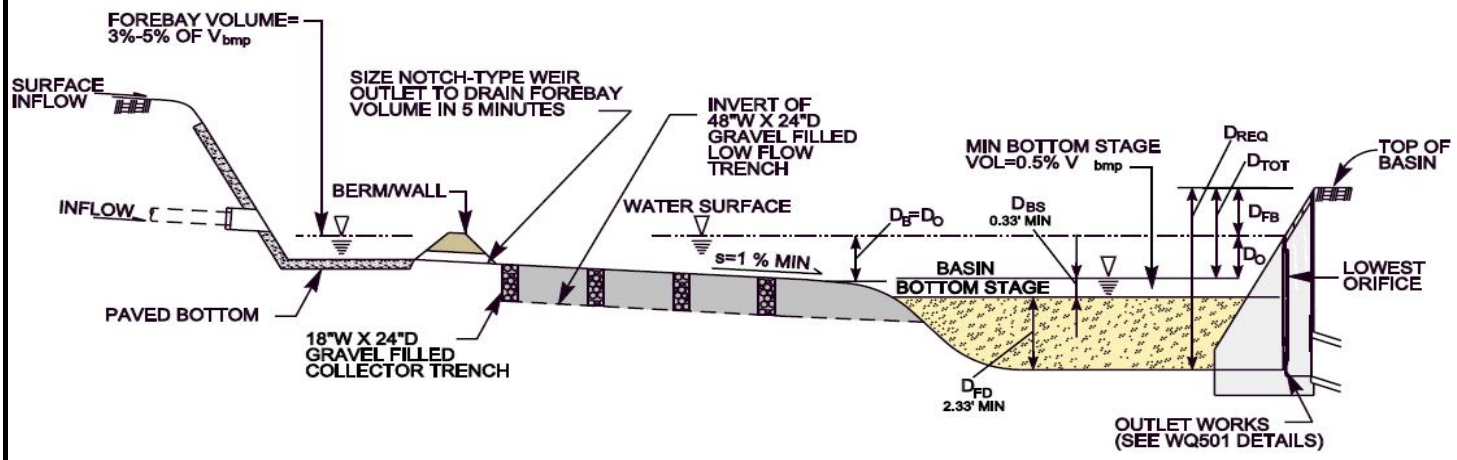
Depth from design water surface elevation to lowest orifice — D_O = 5.0 ft



Basin Design

Basin Design

Proposed Total Basin Depth (proposed depth plus freeboard)	D_{TOT} =	6.00	ft
Basin Invert Longitudinal Slope	Slope =	1.00	%
Basin Invert Transverse Slope (1% min)	Slope =	1	%
Basin Volume	V_{Basin} =	416869	ft^3



Forebay Design

Forebay Volume (3 - 5% V_{BMP})	V_{FB} =	3686.4	ft^3
Forebay Depth (height of berm)	D_{FBY} =	1	ft
Minimum Forebay Surface Area	A_{FB} =	3686	ft^2
Rectangular weir (notch)	W =	8.00	in

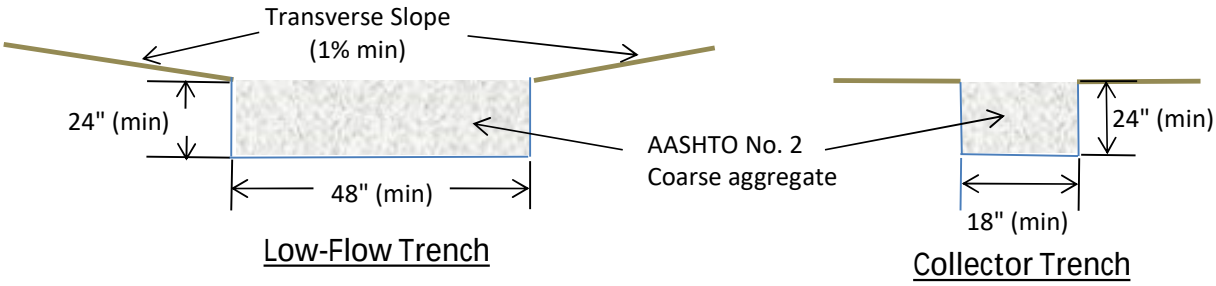
Dry Weather and Low-Flow Management

Low-Flow Trench (see graphic below)

Depth (24 inches minimum, gravel filled)	Depth =	24	inches
Width (48 inches minimum)	Width =	48	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%

Collector Trenches (see graphic below)

Depth (24 inches minimum)	Depth =	24	inches
Width (18 inches minimum)	Width =	18	inches
Trench Invert Longitudinal Slope	Slope =	0.5	%
Spacing (25 feet on center maximum)	S =	25	feet



Low-Flow Trench

Collector Trench

Bottom Stage (Sand Filter) Design

Depth of the Bottom Stage (4" minimum ponding)	D_{BS} =	6	in
Surface Area of Bottom Stage	A_{BS} =	4100	ft^2
Dry Weather Ponded Volume (above sand layer)	V_{BS} =	2050	ft^3

Is V_{BS} no less than 0.5% V_{BMP}? OK

Depth of ASTM-C33 sand (18 inch minimum)

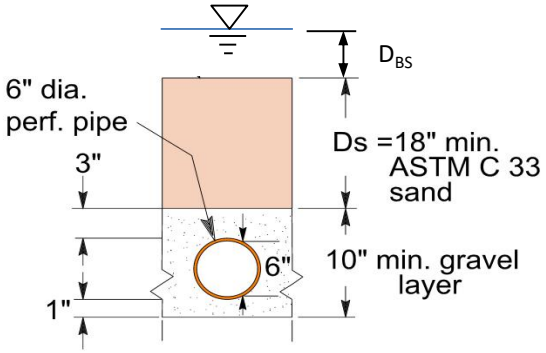
Ds = 18 inches

Diameter of Subdrains

ϕ = 8 in

Subdrain Spacing

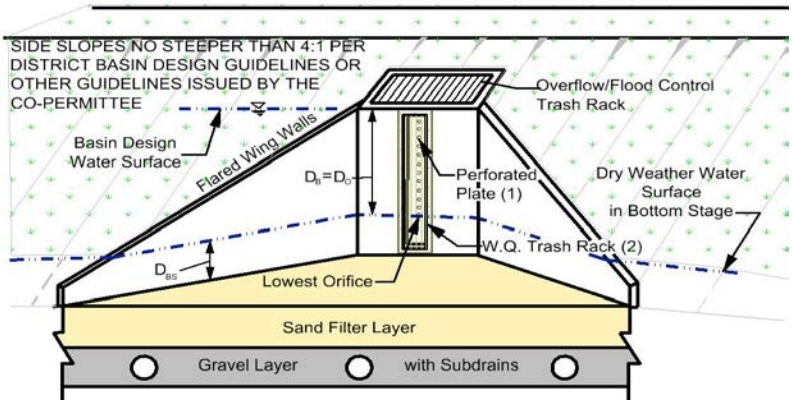
s = 8 ft. on center



Basin Outlet Design

Outlet Design

Assume an orifice area. Based on the information provided above, the spreadsheet provides discharge vs. stage data. Enter the volume vs. stage data for each interval. This information is used to route the volume through the basin. The size of the orifice is acceptable when the data shows that less than 50% of V_{BMP} has drained in 24 hours, and that 100% drawdown occurs within 72 hours.



Flow Rate, Q (cfs)

$$Q=CA[2g(H-H_o)]^{0.5}$$

Discharge Coefficient,

Default, C = 0.66

Other, C =

Orifice Area (ft^2)

Orifice Diameter, d; number of orifices per row, n; and number of orifice rows, N (from the bottom up).

d = 5.25 inches

n = 1 per row

N = 1 rows

Aeff = 0.150 ft^2 per row

or

Aeff = 21.637 in^2 per row

From outflow hydrograph, the time where 50% of V_{BMP} has drained from the basin (24 hour minimum):

Time (50%) = 24.80 hrs

OK

From outflow hydrograph, the time where 100% V_{BMP} has drained from the basin(within 72 hours):

Time (100 %) = 70.15 hrs

OK

Headwater Elev. / Stage (ft)	Discharge (cfs)	Volume (acre-ft)	Δt (hrs.)
0	0.0000	0.0000	
0.33	0.4592	0.530	27.93
0.67	0.6499	1.060	11.56
1.00	0.7958	1.600	9.04
1.33	0.9188	2.160	7.90
1.67	1.0275	2.730	7.09
2.00	1.1255	3.320	6.63
2.33	*1.2155*	*3.920*	
2.67	*1.2996*	*4.550*	
3.00	*1.3784*	*5.190*	
3.33	*1.4529*	*5.860*	
3.67	*1.5239*	*6.540*	
4.00	*1.5916*	*7.240*	
4.33	*1.6566*	*7.970*	
4.67	*1.7192*	*8.750*	
5.00	*1.7795*	*9.570*	
5.33			
5.67			
6.00			
6.33			
6.67			
7.00			
7.33			
7.67			
8.00			
8.33			
8.67			
9.00			
9.33			
9.67			
10.00			
		∑ =	70.15

Notes:

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Proactive Engineering Consultants West, Inc.	Date	4/26/2023
Designed by	A. Baylon	Case No	TBD
Company Project Number/Name	Beaumont Pointe		

BMP Identification

BMP NAME / ID: DMA 17 / Basin 5

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.75 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, V_{BMP} (cubic feet)	Proposed Volume on Plans (cubic feet)
Streets Imperv.	144682	Concrete or Asphalt	1	0.89	129056.3			
Streets Pervious	61102	Ornamental Landscaping	0.1	0.11	6749.2			
BMP Basin	32386	Ornamental Landscaping	0.1	0.11	3577.3			
	238170	Total			139382.8	0.75	8711.4	36191

Notes:

Bioretention Facility - Design Procedure	BMP ID: DMA 17	Legend:	Required Entries / Calculated Cells

Company Name:	PEC West, Inc.	Date:	5/3/2023
Designed by:	A. Baylon	County/City Case No.:	

Design Volume

Enter the area tributary to this feature	A_T=	5.47	acres
Enter V_{BMP} determined from Section 2.1 of this Handbook	V_{BMP}=	8,711	ft^3

Type of Bioretention Facility Design

(●) Side slopes required (parallel to parking spaces or adjacent to walkways)

( ) No side slopes required (perpendicular to parking space or Planter Boxes)

Bioretention Facility Surface Area

Depth of Soil Filter Media Layer	d_S =	3.0	ft
Top Width of Bioretention Facility, excluding curb	w_T =	30.0	ft
Total Effective Depth, d_E $d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$	d_E =	1.78	ft
Minimum Surface Area, A_m $A_M\ (ft^2) = \frac{V_{BMP}\ (ft^3)}{d_E\ (ft)}$	A_M =	4,904	ft^2
Proposed Surface Area	A=	17,897	ft^2

Bioretention Facility Properties

Side Slopes in Bioretention Facility	z =	4	:1
Diameter of Underdrain		8	inches
Longitudinal Slope of Site (3% maximum)		0	%
6" Check Dam Spacing		0	feet

Describe Vegetation: Natural Grasses

Notes:

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Proactive Engineering Consultants West, Inc.	Date	4/26/2023
Designed by	A. Baylon	Case No	TBD
Company Project Number/Name	Beaumont Pointe		

BMP Identification

BMP NAME / ID: PA-1

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.75 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
Pervious Undeveloped	*915140*	*Natural (D Soil)*	*0.4*	*0.28*	*255975.6*			
	915140	*Total*			255975.6	0.75	*15998.5*	*16035*

Notes:

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	Proactive Engineering Consultants West, Inc.	Date	4/26/2023
Designed by	A. Baylon	Case No	TBD
Company Project Number/Name	Beaumont Pointe		

BMP Identification

BMP NAME / ID: PA-2

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.75 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
Pervious Undeveloped	*92898*	*Natural (D Soil)*	*0.4*	*0.28*	*25984.7*			
	92898	*Total*			25984.7	0.75	*1624*	*1629*

Notes:

3.6 Extended Detention Basin

Type of BMP	LID - Biotreatment
Treatment Mechanisms	Sedimentation, Infiltration, Biofiltration, Evapotranspiration, and Evaporation
Minimum Tributary Drainage Area	5 acres
Other Names	Enhanced Water Quality Basin

Overview

The Extended Detention Basin (EDB) is designed to detain the design volume of stormwater, V_{BMP}, and maximize opportunities for volume losses through infiltration, evaporation, evapotranspiration and surface wetting. Additional pollutant removal is provided through sedimentation, in which pollutants can attach to sediment accumulated in the basin through the process of settling. Stormwater enters the EDB through a *forebay* where any trash, debris, and sediment accumulate for easy removal. Flows from the forebay enter the basin which is vegetated with native grasses that enhance infiltration and evapotranspiration, and which is interspersed with gravel-filled trenches that help further enhance infiltration. Water that does not get infiltrated or evapotranspired is conveyed to the *bottom stage* of the basin. At the bottom stage of the basin, low or incidental dry weather flows will be treated through a sand filter and collected in a subdrain structure. Any additional flows will be detained in the basin for an extended period by incorporating an outlet structure that is more restrictive than a traditional detention basin outlet. The restrictive outlet structure extends the drawdown time of the basin which further allows particles and associated pollutants to settle out before exiting the basin, while maximizing opportunities for additional incidental volume losses.

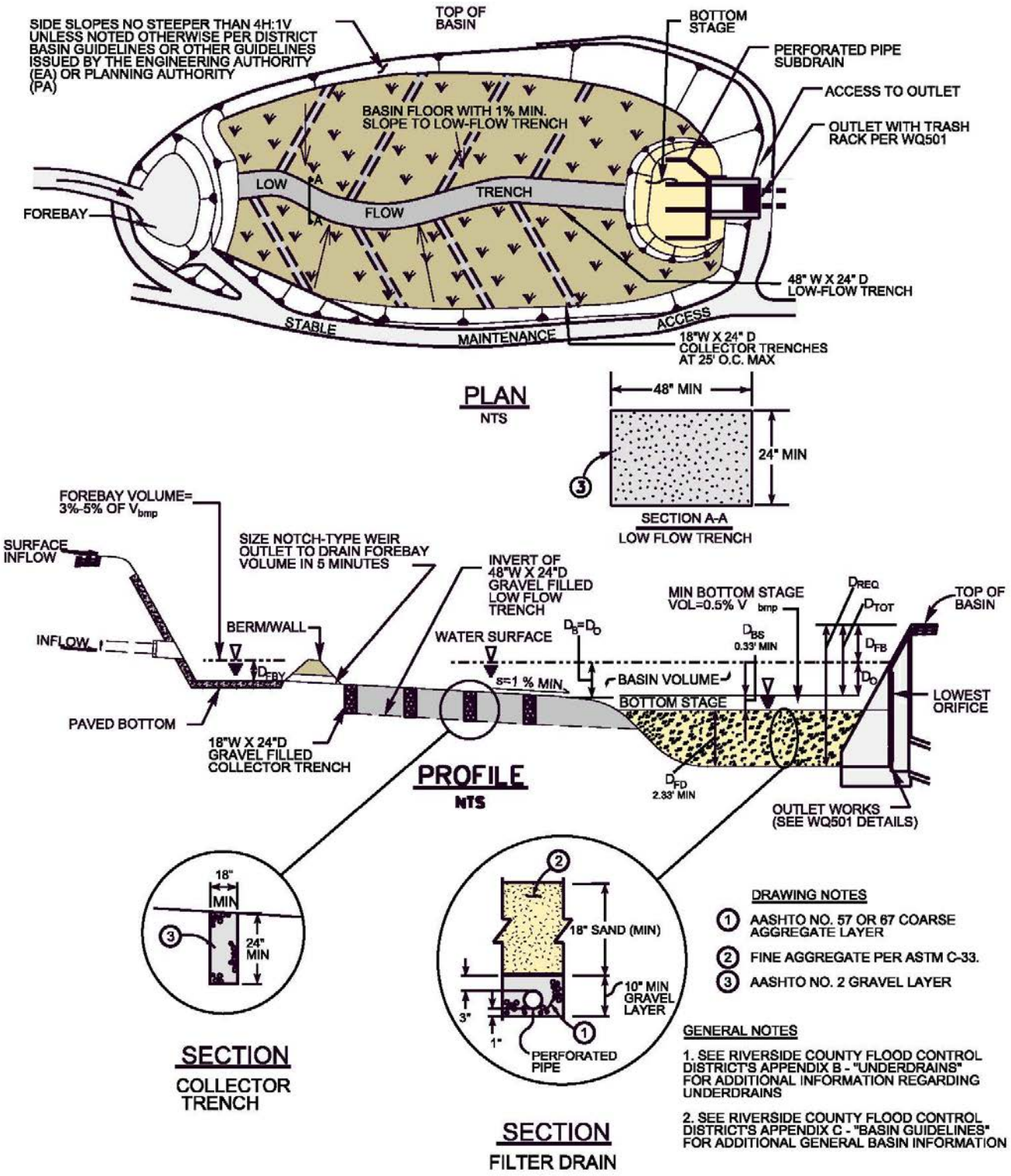


Figure 1 – Extended Detention Basin

Siting Considerations

Soils: EDBs can be used with almost all soils and geology. However, pollutant removal effectiveness is greatly improved when the underlying soil permits at least some infiltration.

Tributary Area: EDBs should only be used where the tributary drainage area is at least 5 acres, since meeting the draw-down requirements (discussed below) for smaller areas would result in very small outlet orifice diameters which would be prone to clogging.

Proximity to Receiving Waters: All site runoff must be treated to the MEP with appropriate BMPs *before* being discharged into Receiving Waters; as such the EDB cannot be constructed in-line within Receiving Waters.

Setbacks: Due to the infiltration characteristics incorporated into the EDB design, the lowest pervious point (beneath the filter drain) of the extended detention facility should be a minimum of 10' above the seasonal high groundwater table. All other setbacks shall be in accordance with applicable standards of the "Basin Guidelines" (Appendix C) or other guidelines issued by the Engineering Authority (EA).

Basin Guidelines: See Section 1 of the "Basin Guidelines" (Appendix C) for additional requirements (i.e., fencing, maintenance access, etc.) that may be required by the Engineering Authority (EA).

Landscaping Requirements

Basin vegetation provides erosion protection, enhances evapotranspiration and infiltration, and improves pollutant removal. The upper stage basin surface, berms and side slopes shall be planted with native grasses. Proper landscape management is also required to ensure that the vegetation does not contribute to water pollution through the use of pesticides, herbicides, or fertilizers. Landscaping shall be in accordance with applicable standards of the "Basin Guidelines" (Appendix C) or other guidelines issued by the EA.

Maintenance Guidelines

Schedule	Inspection and Maintenance Activity
During every scheduled maintenance check (per below), and *as needed* at other times	• Maintain vegetation as needed. Use of fertilizers, pesticides and herbicides should be strongly avoided to ensure they don't contribute to water pollution. If appropriate native plant selections and other IPM methods are used, such products shouldn't be needed. If such projects are used: o Care should be taken to avoid contact with the low-flow or other trenches, and the media filter in the bottom stage. o Products shall be applied in accordance with their labeling, especially in relation to application to water, and in areas subjected to flooding. o Fertilizers should not be applied within 15 days before, after, or during the rainy season. • No ponded water should be present for more than 72 hours to avoid nuisance or vector problems. No algae formation should be visible. Correct problems as needed.
Annually. If possible, schedule these inspections before the beginning of the rain season to allow for any repairs to occur before rains occur.	• Remove debris and litter from the entire basin • Inspect hydraulic and structural facilities. Examine the outlet for clogging, the embankment and spillway integrity, as well as damage to any structural element. • Check for erosion, slumping and overgrowth. Repair as needed. • Inspect sand media at the filter drain to verify it is allowing acceptable infiltration. **Scarify top 3 inches by raking the filter drain's sand surface annually.** • Check the media filter underdrains (via the cleanout) for damage or clogging. Repair as needed. • Remove accumulated sediment and debris from the forebay, and ensure that the notch weir is clear and will allow proper drainage. • Check gravel filled low flow and collector trenches for sediment buildup and repair as needed.
Every 5 years or sooner (depending on whether observed drain times to empty the basin are less than 72 hours).	• Remove the top 3 inches of sand from the filter drain and backfill with 3 inches of new sand to return the sand layer to its original depth. When scarification or removal of the top 3 inches of sand is no longer effective, remove and replace sand filter layer.
Whenever substantial sediment accumulation has occurred.	• Remove accumulated sediment from the bottom of the basin. Removal should extend to original basin depth.

EXTENDED DETENTION BASIN BMP FACT SHEET

Design Summary

Design Parameter	Extended Detention Basin
Drawdown time (total)	72 hours [2,3]
Minimum drawdown time for 50% V_{BMP}	24 hours [2]
Minimum tributary area	5 acres [2]
Outlet erosion control	Energy dissipaters to reduce velocities[1]
Forebay volume	3 to 5 % of V_{BMP} [3]
Basin Invert Longitudinal Slope (min.)	1%
Basin Invert Transverse (cross) Slope (min)	1%
Low-flow trench width (min.)	48 inches
Low-flow trench depth (min.)	24 inches
Slope of low-flow trench along bottom excavated Surface (max.)	1%
Slope of gravel collector trenches along bottom excavated surface (max.)	1 %
Length to width ratio (min.)	1.5:1
Basin depth (min.)	1 foot [3]
Bottom stage volume	0.5 % of V_{BMP} [3]
Bottom stage depth (min)	0.33 feet [3]
Filter drain depth (min)	2.33 feet [3]

1. **Ventura County's Technical Guidance Manual for Stormwater Quality Control Measures**
2. **CA Stormwater BMP Handbook for New Development and Significant Redevelopment**
3. **Denver, Colorado's UDFCD Drainage Criteria Manual, Volume 3**

Note: The information contained in this BMP Factsheet is intended to be a summary of design considerations and requirements. Additional information which applies to all detention basins may be found in the "Basin Guidelines" (Appendix C). In addition, information herein may be superseded by other guidelines issued by the Engineering Authority.

Design Procedure

These steps correspond to and provide a description of the information required in the EDB Design Worksheet.

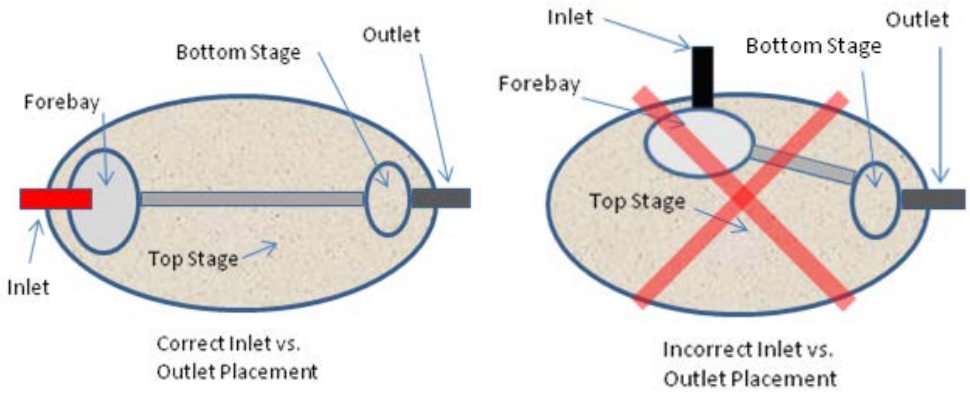
1. Find the Design Volume, V_{BMP}.

a) Enter the tributary area, A_T to the BMP. The minimum tributary area is 5 acres.

b) Enter the Design Volume, V_{BMP}, determined from Section 2.1 of this Handbook.

2. Basin Footprint

a) Enter the length and width of the EDB. The length shall be measured between the inlet to the basin and the outlet structure; and the width shall be measured at the widest point of the basin invert. The length to width ratio should be 1.5:1 or longer to prevent short-circuiting and increase the overall effectiveness of the BMP.



b) Enter the internal basin side slopes. See the "Basin Guidelines" (Appendix C) for side slope requirements. If variable internal side-slopes are used, enter the steepest slope that will be used.

c) Using Figure 1 as a guide, enter the proposed basin depth, D_B, and the freeboard depth, D_{FB}. Based on the information provided, the spreadsheet will calculate the minimum total depth required, D_{REQ}, for this BMP. D_{REQ} is the depth from the bottom of the underdrain layer in the bottom stage (see step 5c), to the top of the freeboard. This calculated minimum required depth can be used to determine if enough elevation difference is available within the design topography to allow for use of this BMP.

d) Additionally, the basin depth D_B is equal to $D_{O,}$ which is the depth from the design pond water surface elevation to the lowest orifice in the outlet structure. D_O is confirmed by the spreadsheet and is used in the Basin Outlet Design described in step 6 below. It should be noted that this lowest orifice is a critical elevation in the design of this BMP. The Volume of the Basin V_{Basin} described in step 3d) is the volume of water above this lowest orifice. This lowest-orifice also represents the dry weather ponded water surface discussed in step 5c below. Below this elevation there must be a minimum of a 4-inch drop down to the surface of the Sand Filter in the bottom stage.

3. Basin Design

a) The Total Basin Depth, D_{TOT}, is calculated automatically, and is the sum of the basin depth D_B plus the freeboard depth D_{FB}.

b) Enter the longitudinal slope of the basin invert. This slope must be at least 1% and is measured along the low flow trench between the forebay and the bottom stage. Note that the surface of the sand layer in the bottom stage must be level (see Figure 1).

c) Enter the transverse slope of the basin invert. This transverse (cross sectional) slope must be at least 1% sloped toward the low flow trench.

d) Enter the Volume of the Basin, V_{Basin}. This volume must be the actual volume of water held within the basin as substantiated by modeling or appropriate volumetric calculations, and must be equal to or greater than V_{BMP}. This volume must be held above the lowest orifice in the Basin Outlet Design described in step 6 below.

4. Forebay Design

All flows must enter the basin through the forebay. The forebay provides a location for the settlement and collection of larger particles, and any other trash or debris. A relatively smooth and level concrete bottom surface should be provided to facilitate mechanical removal of any accumulated sediment, trash and debris.



Figure 2: Forebay filled with storm water

a) Enter the Forebay Volume VFB. This volume must be from 3 to 5 percent of V_{BMP}.

b) A rock or concrete berm must be constructed to detain water before it drains into the basin. The top of the berm shall be set no higher than the invert of the inlet conveyance. Enter the Forebay Depth, D_{FBY}.

c) The spreadsheet will calculate the minimum surface area of the forebay, A_{FB}, based on the provided Forebay Volume and Depth. Ensure that the plans provide for a forbay area at least this large.

d) Although the forebay will be well submerged in the design event, a full height rectangular notch-type weir shall be constructed through the berm to prevent permanent ponding in the forebay, and allow water to slowly and fully drain to the main body of the basin. This notch should be offset from the inflow streamline to prevent low-flows from short circuiting. Enter the width, W, of this rectangular notch weir. The width shall not be less than 1.5 inches to prevent clogging. Additionally,

immediately outside the notch construct a minimum 1-foot by 1-foot gravel pad to prevent vegetative growth within the basin invert from blocking the notch.

5. Dry Weather and Low-Flow Management

The basin shall have both a low-flow gravel trench and a network of gravel collector trenches across the invert of the basin, as well as a bottom stage sand filter to treat low flows and dry weather flows (see Figure 1).

a) Low Flow Trench: The low-flow gravel trench conveys flow from the forebay to the bottom stage, while allowing for maximum incidental infiltration and volume loss. The trench shall be a minimum of 48 inches wide by 24 inches deep. This trench shall be unlined and backfilled with AASHTO No. 2 gravel (or similar) to the finished surface of the basin invert, and shall not use underdrains. The bottom excavated surface of the low-flow trench shall be 1 percent or flatter to promote infiltration.



Figure 3: Gravel filled low-flow trench

b) Collector Trenches: Gravel collector trenches beneath the top stage shall be arranged as illustrated in Figure 1 of Appendix C with minimal slope (1% maximum) along their bottom excavated surface to promote infiltration, and must extend from the low-flow trench to the toe of the basin side slopes. They shall be a minimum of 18-inches wide by 24-inches deep, unlined and backfilled with AASHTO No. 2 gravel (or similar) to the finished basin invert surface. The gravel collector trenches shall not use underdrains and shall be constructed with a maximum spacing of 25 feet, center to center. See Figure 1 of Appendix C.

c) Bottom Stage: A depressed sand filter drain area, referred to as the bottom stage, must be constructed adjacent to the outlet structure to treat any dry weather flows. To ensure that dry weather flows are treated through the sand filter and not discharged through the orifice plate, the top surface of the sand filter must be depressed at least 4 inches below the lowest orifice in the outlet structure. This depressed area will create a micro pool of water that is then filtered down through the sand filter and out through underdrains. Based on the minimum dimensions described below, the minimum depth of excavation below the lowest orifice in the outlet structure is 2.33 feet.

   i. Enter the Depth of the bottom stage, D_{BS}. As mentioned above, this depth must be at least 4 inches, and extend down below the lowest orifice in the outlet structure.

   ii. Enter the area of the bottom stage, A_{BS}.

iii. Based on the D_{BS} and A_{BS} entered, the spreadsheet will calculate V_{BS}. This volume is the volume of ponded water that will be held below the lowest orifice in the outlet structure, and above the surface of the sand filter. This volume must be at least 0.5% of V_{BMP}.

iv. Enter the thickness of the ASTM C-33 sand layer that will be provided, D_S. A minimum thickness of 18 inches is required.

v. Below the sand layer, a minimum 10-inch thick layer of gravel shall be installed with underdrains to drain the water that has been treated through the sand filter. The underdrains shall connect into the outlet structure. See Appendix B for standard underdrain construction. Enter the diameter of the underdrain pipe (minimum 6" dia.), and the spacing of the underdrains. The maximum spacing of the underdrains is 20 feet on center, however where the area of the bottom stage is particularly small (less than 500 square feet), the underdrain pipes shall be placed at no more than a 10-foot separation on center.

6. Basin Outlet Design

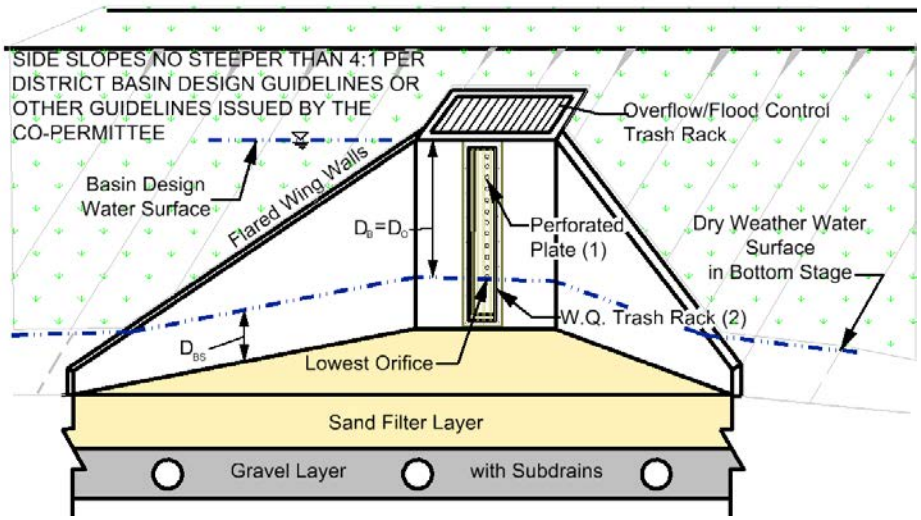


Figure 4: Basin Outlet Structure with Bottom Stage Shown

Outlet structures for publicly maintained basins shall conform to District Standard Drawings WQ501 unless approved in advance by the local Engineering Authority (EA). This standardization is to provide for efficient maintenance. The basin outlet should be sized to release the design volume, VBMP, within a 72-hour period but 50 percent of VBMP within 24 hours. This is an iterative design process where an appropriate control orifice can be selected using the following steps:

a. Develop a Stage vs. Discharge Curve for the Outlet Structure

Estimate the orifice size and outlet plate configuration (number per row, etc.). Based on D_O provided in the Basin Footprint section, the spreadsheet will automatically generate the stage vs. discharge relationship for this outlet:

$$Q = C*A*[2*g*(H-H_o)]^{0.5}$$

Where:

Q = discharge (ft^3/s)

C = orifice coefficient

A = area of the orifice (ft)

g = gravitational constant (32.2 ft2/s)

H = water surface elevation (ft)

H_o = orifice elevation (ft)

The lowest orifice shall be located with its centerline at the top of the bottom stage; at least 4 inches above the surface of the sand filter drain. To help avoid clogging, the minimum orifice diameter is limited to 3/8 inch. Since the 1/4 inch thickness of the orifice plate will be less than the orifice diameter, a value for C of 0.66 may be used. If another value for C is used, justification may be required.

b. Develop a Discharge/Volume vs. Stage Table for the Basin

Based on the shape and size of the basin, develop a relationship between the stage and the volume of water in the basin. Since the orifice spacing is 4 inches on center for the standard orifice plate, the stage intervals must also be 4 inches. Enter the basin volume at each interval starting at the centerline of the lowest orifice.

c. Route the Design Volume through the Basin

The spreadsheet assumes that the Design Volume, $V_{BMP,}$ enters the basin instantaneously and as such, no inflow/outflow hydrograph is necessary. The drawdown time for each stage becomes:

$$\Delta t = V_i/Q$$

Where:

Δt = drawdown time for each stage

V_i = the volume at each stage

Q = the flow rate corresponding to the headwater elevation at each stage.

The spreadsheet automatically determines the drawdown time from the sum of the Δt values for each stage. If the orifice size and plate configuration estimate meets the

hydraulic retention time requirements (50% of the volume empties in not less than 24 hours, 100% of the volume empties in no more than 72 hours), the outlet is correctly sized. If these requirements are not met, select a new orifice size or configuration and repeat the process starting at Step 6a.

7. Outlet Protection

To prevent the orifices from clogging, trash racks are required where perforated vertical outlet control plates are used. This allows for easier access to outlet orifices for inspection and cleaning. Trash racks shall be sized to prevent clogging of the primary water quality outlet without restricting the hydraulic capacity of the outlet control orifices. The orifice plate shall be protected with a trash rack conforming to Standard Drawing WQ501 (at end of this section) with at least six square feet of open surface area or 25 times the total orifice area, whichever is greater. The rack shall be adequately secured to prevent it from being removed or opened when maintenance is not occurring.

Overflow Structure Similar to Standard Drawing Number WQ 501
(Photo courtesy of Colorado Association of Stormwater Floodplain Managers)



Trash rack with screen



8. Overflow Outlet

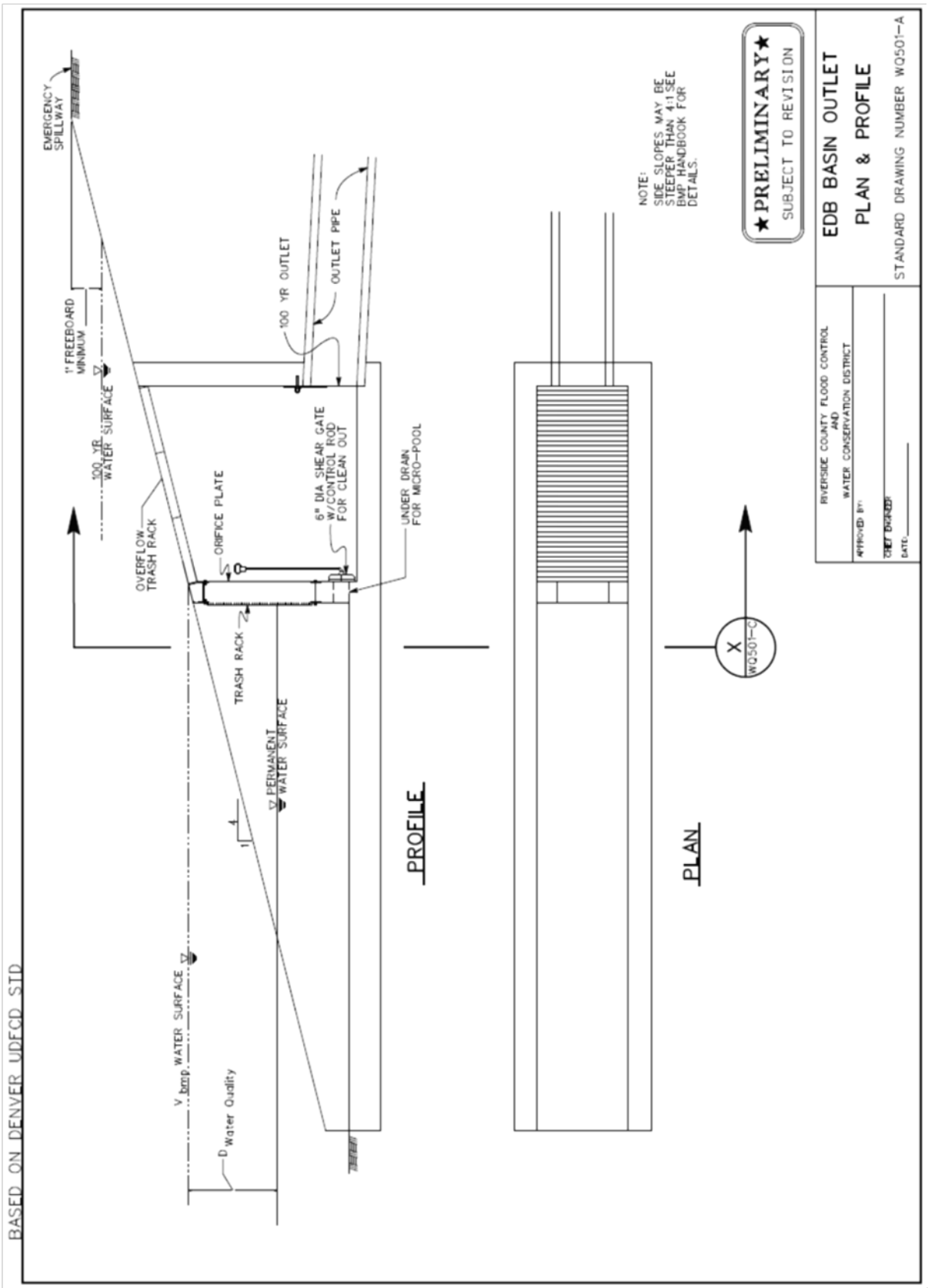
Overflow outlets for publicly maintained basins shall conform to Standard Drawing WQ501 (at end of this section) unless approved in advance by the Engineering Authority (EA).

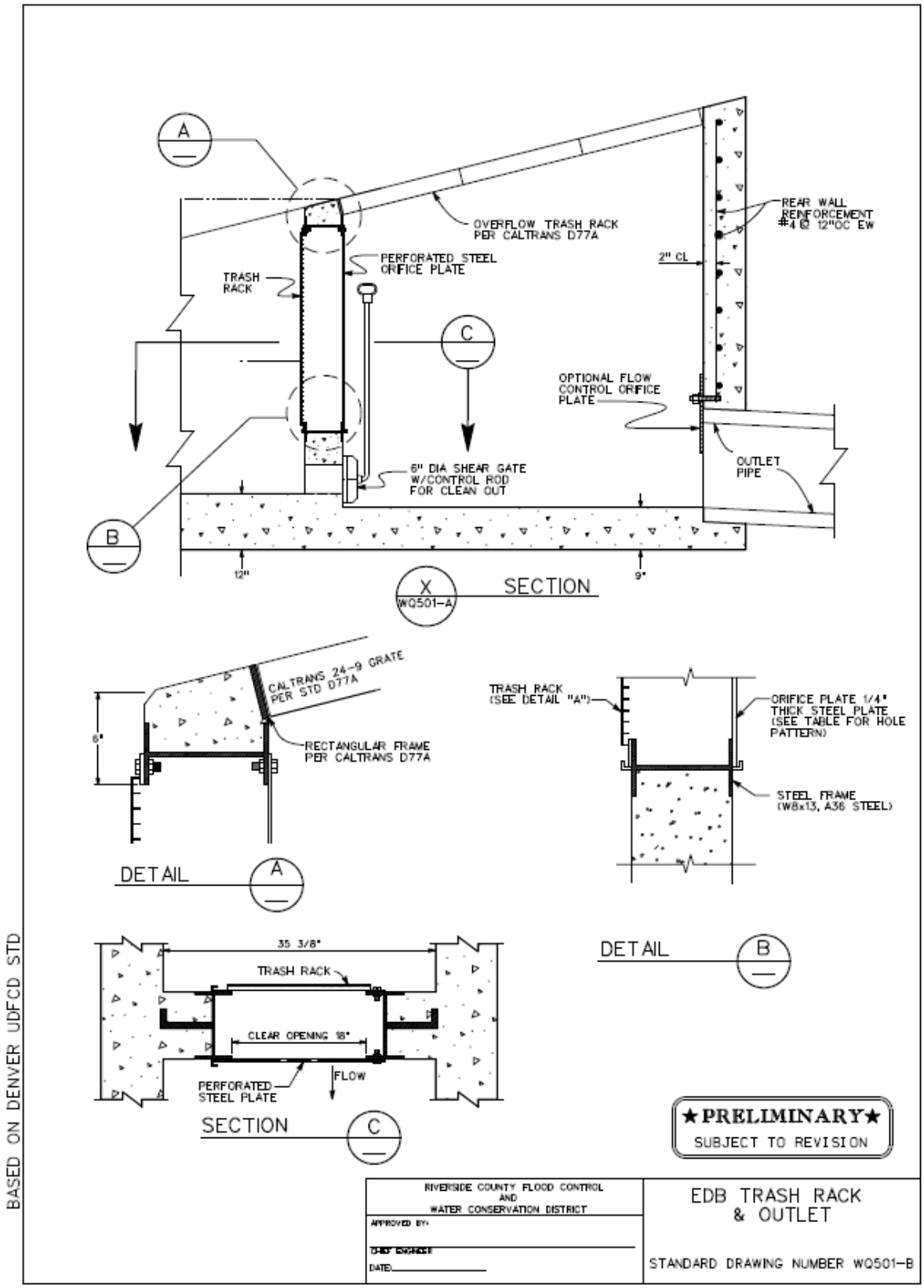
9. Embankment

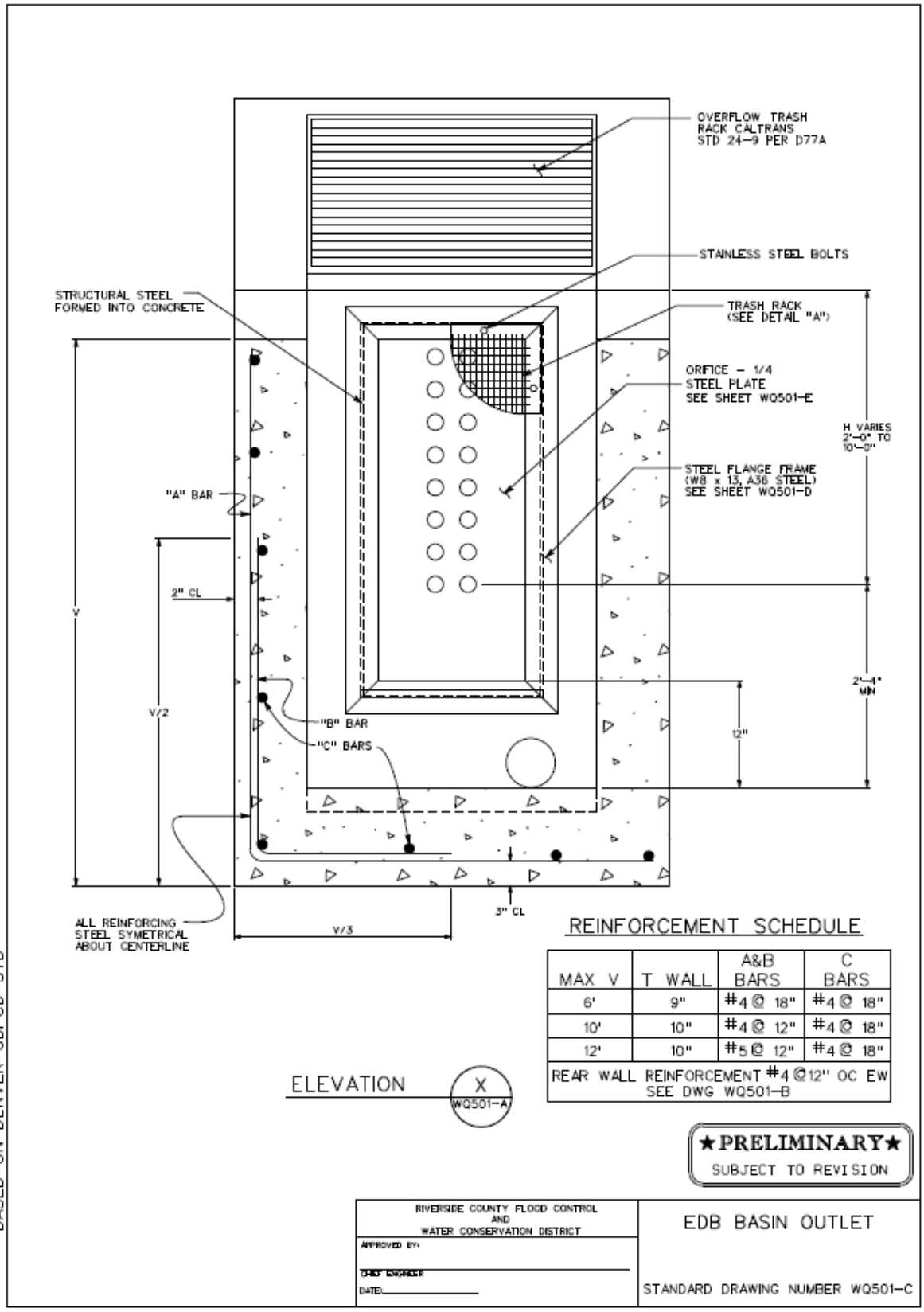
Embankments shall be designed in accordance with applicable standards of Riverside County Flood Control District's "Basin Guidelines" (Appendix C) or other guidelines issued by the Engineering Authority (EA). Where applicable, embankment designs must additionally conform to the requirements of the State of California Division of Safety of Dams.

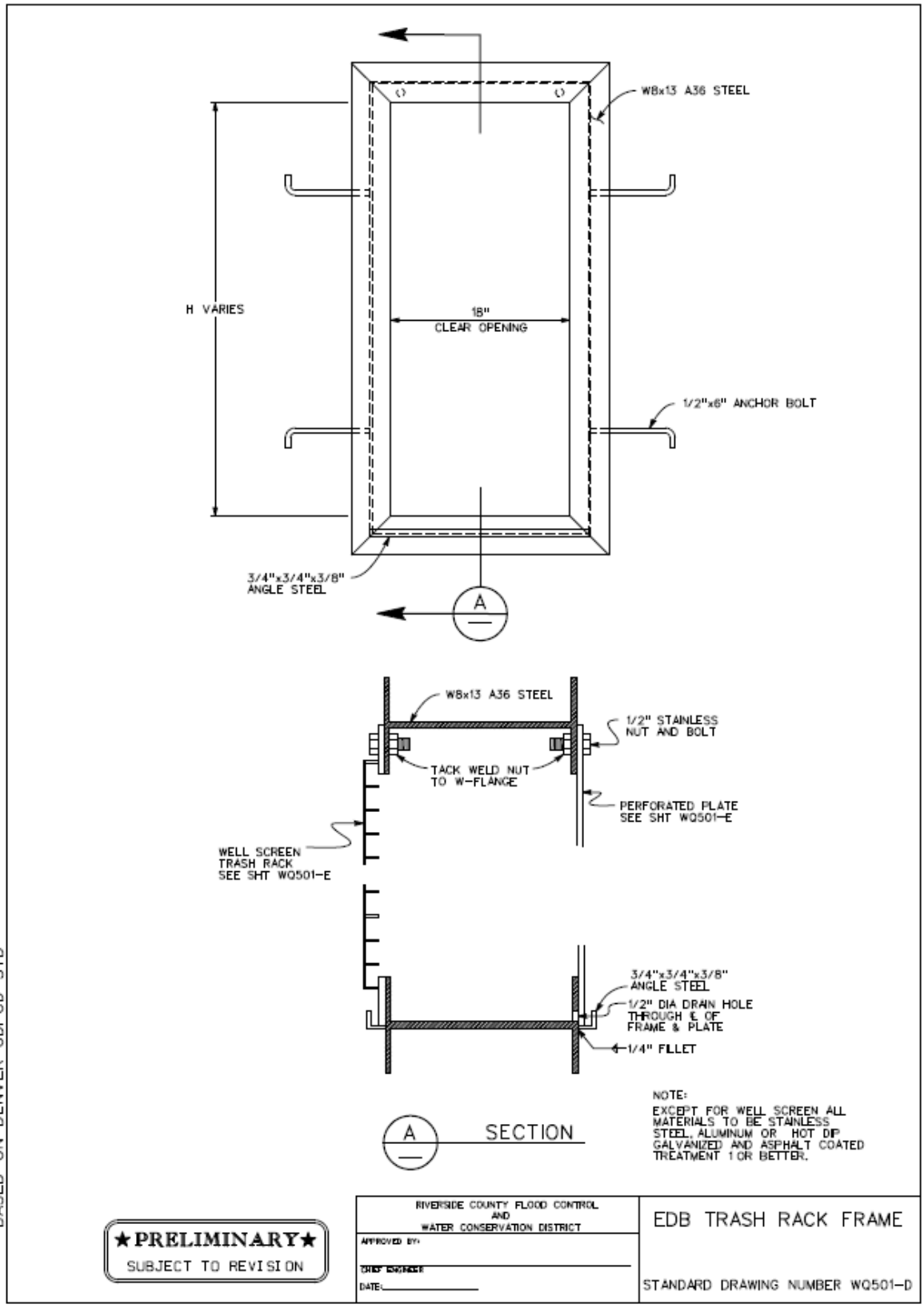
10. Spillway and Overflow Structures

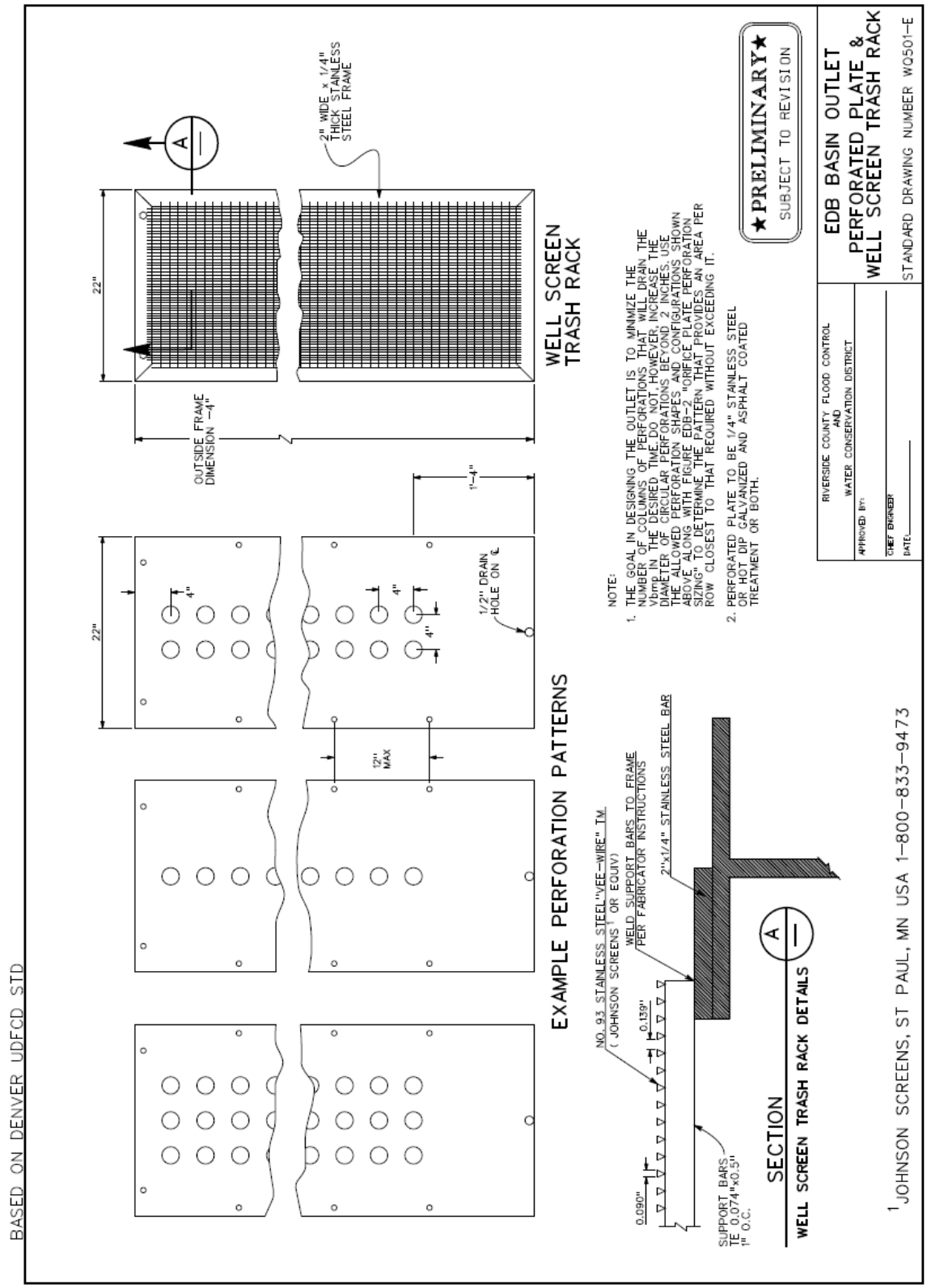
Spillway and overflow structures should be designed in accordance with applicable standards of the "Basin Guidelines" (Appendix C) or other guidelines issued by the Engineering Authority (EA).

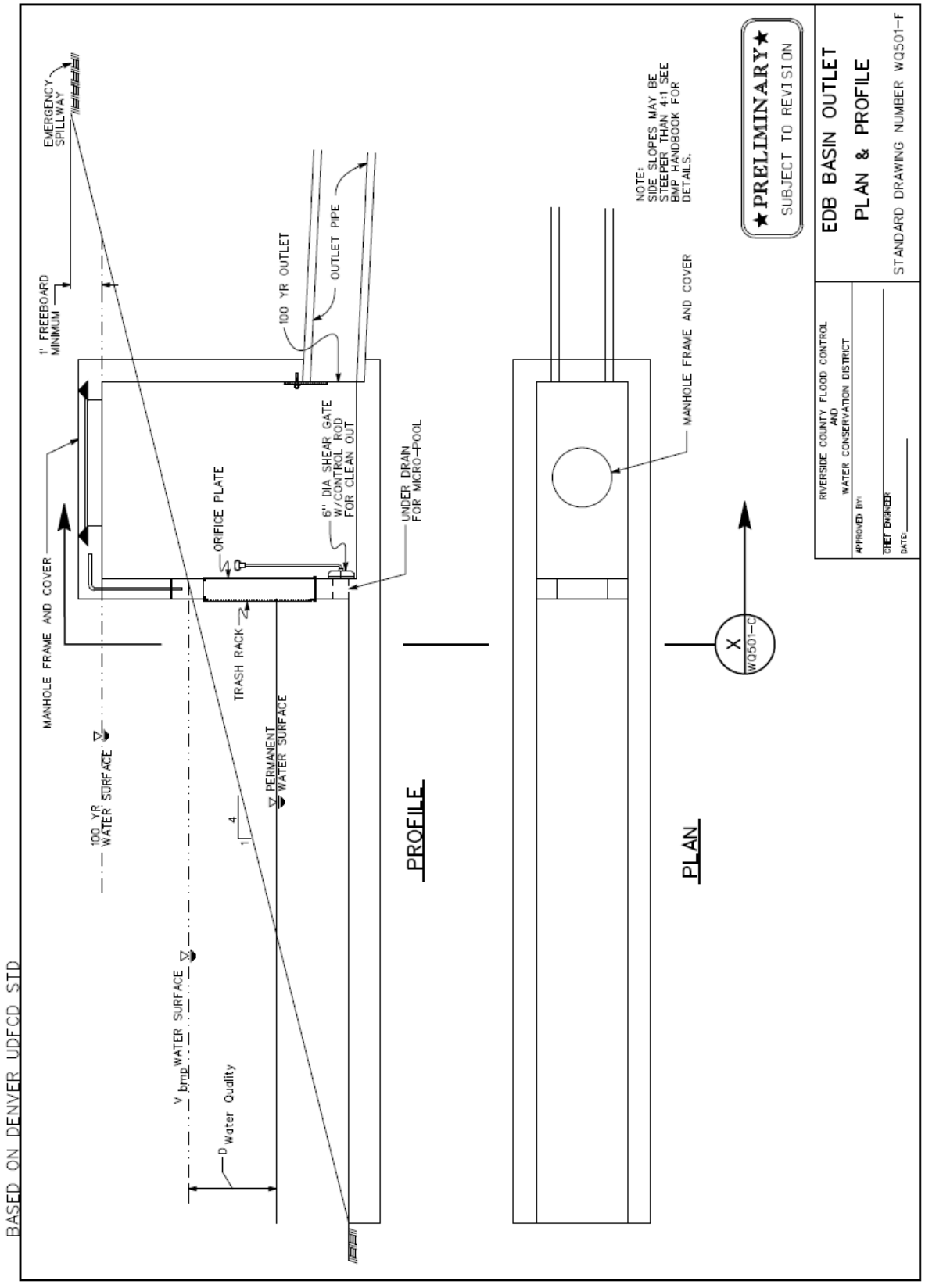

EMERGENCY SPILLWAY
1' FREEBOARD MINIMUM
100 YR WATER SURFACE
OVERFLOW TRASH RACK
ORIFICE PLATE
6" DIA SHEAR GATE W/CONTROL ROD FOR CLEAN OUT
100 YR OUTLET
OUTLET PIPE
UNDER DRAIN FOR MICRO-POOL
TRASH RACK
PERMANENT WATER SURFACE
WATER SURFACE
Water Quality
PROFILE
PLAN
NOTE:
SIDE SLOPES MAY BE STEEPER THAN 4:1 SEE BMP HANDBOOK FOR DETAILS.
★PRELIMINARY★
SUBJECT TO REVISION
EDB BASIN OUTLET
PLAN & PROFILE
STANDARD DRAWING NUMBER WQ501-A
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
BASED ON DENVER UDFCD STD

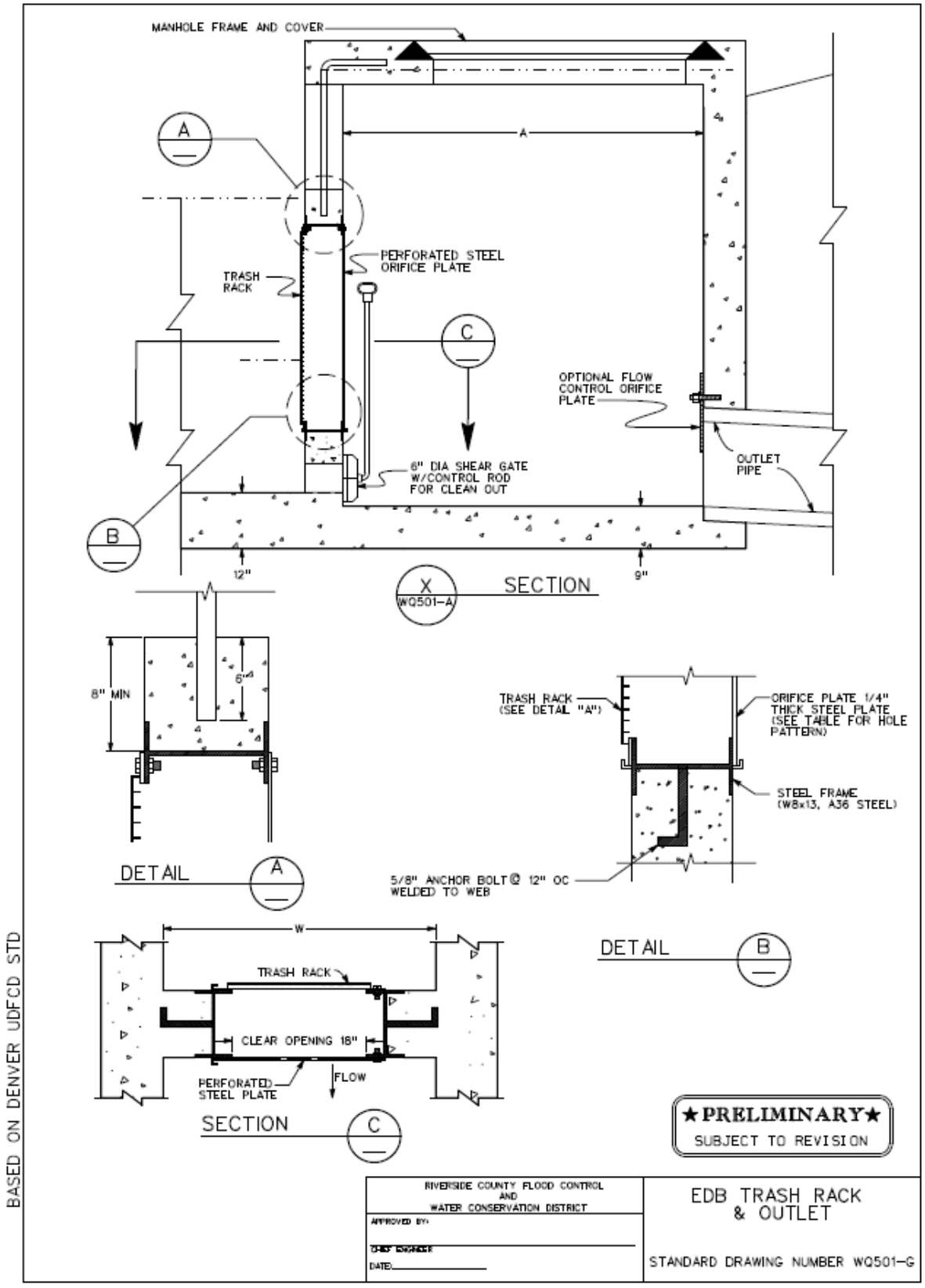

A
B
C
OVERFLOW TRASH RACK PER CALTRANS D77A
REAR WALL REINFORCEMENT #4 @ 12"OC EW
PERFORATED STEEL ORIFICE PLATE
TRASH RACK
2" CL
OPTIONAL FLOW CONTROL ORIFICE PLATE
6" DIA SHEAR GATE W/CONTROL ROD FOR CLEAN OUT
OUTLET PIPE
12"
9"
X
WQ501-A
SECTION
CALTRANS 24-9 GRATE PER STD D77A
6"
RECTANGULAR FRAME PER CALTRANS D77A
DETAIL A
TRASH RACK (SEE DETAIL "A")
ORIFICE PLATE 1/4" THICK STEEL PLATE (SEE TABLE FOR HOLE PATTERN)
STEEL FRAME (W8x13, A36 STEEL)
DETAIL B
35 3/8"
TRASH RACK
CLEAR OPENING 18"
FLOW
PERFORATED STEEL PLATE
SECTION C
★PRELIMINARY★
SUBJECT TO REVISION
BASED ON DENVER UDFCD STD
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
DATE:
EDB TRASH RACK & OUTLET
STANDARD DRAWING NUMBER WQ501-B

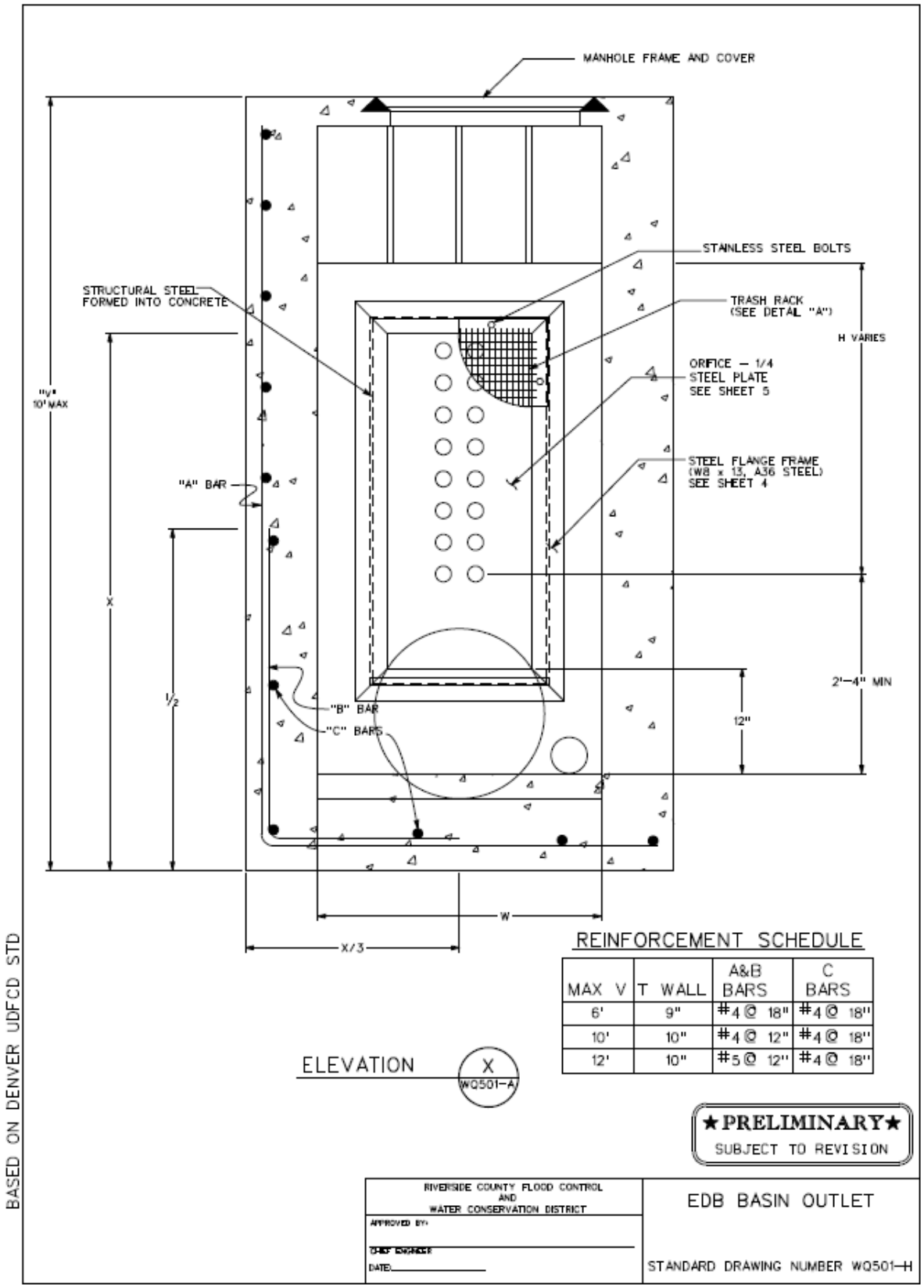

OVERFLOW TRASH RACK CALTRANS STD 24-9 PER D77A
STAINLESS STEEL BOLTS
STRUCTURAL STEEL FORMED INTO CONCRETE
TRASH RACK (SEE DETAIL "A")
ORIFICE - 1/4 STEEL PLATE SEE SHEET WQ501-E
H VARIES 2'-0" TO 10'-0"
STEEL FLANGE FRAME (W8 x 13, A36 STEEL) SEE SHEET WQ501-D
"A" BAR
2" CL
V
V/2
"B" BAR
"C" BARS
2'-4" MIN
12"
3" CL
ALL REINFORCING STEEL SYMETRICAL ABOUT CENTERLINE
V/3
ELEVATION
X
WQ501-A
REINFORCEMENT SCHEDULE
MAX V | T WALL | A&B BARS | C BARS
6' | 9" | #4 @ 18" | #4 @ 18"
10' | 10" | #4 @ 12" | #4 @ 18"
12' | 10" | #5 @ 12" | #4 @ 18"
REAR WALL REINFORCEMENT #4 @12" OC EW SEE DWG WQ501-B
★PRELIMINARY★
SUBJECT TO REVISION
BASED ON DENVER UDFCD STD
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
EDB BASIN OUTLET
STANDARD DRAWING NUMBER WQ501-C


W8x13 A36 STEEL
H VARIES
18"
CLEAR OPENING
1/2"x6" ANCHOR BOLT
3/4"x3/4"x3/8"
ANGLE STEEL
A
W8x13 A36 STEEL
1/2" STAINLESS
NUT AND BOLT
TACK WELD NUT
TO W-FLANGE
PERFORATED PLATE
SEE SHT WQ501-E
WELL SCREEN
TRASH RACK
SEE SHT WQ501-E
3/4"x3/4"x3/8"
ANGLE STEEL
1/2" DIA DRAIN HOLE
THROUGH ℄ OF
FRAME & PLATE
1/4" FILLET
A
SECTION
NOTE:
EXCEPT FOR WELL SCREEN ALL
MATERIALS TO BE STAINLESS
STEEL, ALUMINUM OR HOT DIP
GALVANIZED AND ASPHALT COATED
TREATMENT 1 OR BETTER.
BASED ON DENVER UDFCD STD
★PRELIMINARY★
SUBJECT TO REVISION
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
EDB TRASH RACK FRAME
STANDARD DRAWING NUMBER WQ501-D


BASED ON DENVER UDFCD STD
WELL SCREEN TRASH RACK
2" WIDE x 1/4" THICK STAINLESS STEEL FRAME
22"
OUTSIDE FRAME DIMENSION -4"
EXAMPLE PERFORATION PATTERNS
4"
1/2" DRAIN HOLE ON ℄
12" MAX
1'-4"
NOTE:
1. THE GOAL IN DESIGNING THE OUTLET IS TO MINIMIZE THE NUMBER OF COLUMNS OF PERFORATIONS THAT WILL DRAIN THE VOLUME WITHIN THE WQCV. HOWEVER, IN ORDER TO MAINTAIN THE DIAMETER OF CIRCULAR PERFORATIONS LESS THAN 2 INCHES, USE THE ALLOWED PERFORATION SHAPES AND CONFIGURATIONS SHOWN ABOVE ALONG WITH FIGURE EDB-2 "ORIFICE PLATE PERFORATION SIZING" TO DETERMINE THE PATTERN THAT PROVIDES AN AREA PER ROW CLOSEST TO THAT REQUIRED WITHOUT EXCEEDING IT.
2. PERFORATED PLATE TO BE 1/4" STAINLESS STEEL OR HOT DIP GALVANIZED AND ASPHALT COATED TREATMENT OR BOTH.
★PRELIMINARY★
SUBJECT TO REVISION
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
EDB BASIN OUTLET
PERFORATED PLATE & WELL SCREEN TRASH RACK
STANDARD DRAWING NUMBER WQ501-E
NO. 93 STAINLESS STEEL "VEE-WIRE" TM (JOHNSON SCREENS[1] OR EQUIV)
WELD SUPPORT BARS TO FRAME PER FABRICATOR INSTRUCTIONS
2"x1/4" STAINLESS STEEL BAR
0.139"
0.090"
SUPPORT BARS TE 0.074"x0.5" 1" O.C.
SECTION
WELL SCREEN TRASH RACK DETAILS
[1] JOHNSON SCREENS, ST PAUL, MN USA 1-800-833-9473


BASED ON DENVER UDFCD STD
EMERGENCY SPILLWAY
1' FREEBOARD MINIMUM
100 YR OUTLET
OUTLET PIPE
6" DIA SHEAR GATE W/CONTROL ROD FOR CLEAN OUT
ORIFICE PLATE
UNDER DRAIN FOR MICRO-POOL
MANHOLE FRAME AND COVER
TRASH RACK
100 YR WATER SURFACE
PERMANENT WATER SURFACE
4
1
V bmp WATER SURFACE
D Water Quality
PROFILE
PLAN
MANHOLE FRAME AND COVER
NOTE:
SIDE SLOPES MAY BE STEEPER THAN 4:1 SEE BMP HANDBOOK FOR DETAILS.
X
WQ501-C
★PRELIMINARY★
SUBJECT TO REVISION
EDB BASIN OUTLET
PLAN & PROFILE
STANDARD DRAWING NUMBER WQ501-F
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:


MANHOLE FRAME AND COVER
A
A
PERFORATED STEEL ORIFICE PLATE
TRASH RACK
C
OPTIONAL FLOW CONTROL ORIFICE PLATE
OUTLET PIPE
6" DIA SHEAR GATE W/CONTROL ROD FOR CLEAN OUT
B
12"
9"
X
WQ501-A
SECTION
8" MIN
6"
DETAIL
A
TRASH RACK (SEE DETAIL "A")
ORIFICE PLATE 1/4" THICK STEEL PLATE (SEE TABLE FOR HOLE PATTERN)
STEEL FRAME (W8x13, A36 STEEL)
5/8" ANCHOR BOLT @ 12" OC WELDED TO WEB
DETAIL
B
W
TRASH RACK
CLEAR OPENING 18"
PERFORATED STEEL PLATE
FLOW
SECTION
C
★PRELIMINARY★
SUBJECT TO REVISION
BASED ON DENVER UDFCD STD
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
DATE:
EDB TRASH RACK & OUTLET
STANDARD DRAWING NUMBER WQ501-G


MANHOLE FRAME AND COVER
STAINLESS STEEL BOLTS
STRUCTURAL STEEL FORMED INTO CONCRETE
TRASH RACK (SEE DETAIL "A")
H VARIES
ORIFICE – 1/4 STEEL PLATE SEE SHEET 5
"y" 10' MAX
STEEL FLANGE FRAME (W8 x 13, A36 STEEL) SEE SHEET 4
"A" BAR
X
1/2
"B" BAR
"C" BARS
2'–4" MIN
12"
W
X/3
BASED ON DENVER UDFCD STD
REINFORCEMENT SCHEDULE
MAX V | T WALL | A&B BARS | C BARS
6' | 9" | #4 @ 18" | #4 @ 18"
10' | 10" | #4 @ 12" | #4 @ 18"
12' | 10" | #5 @ 12" | #4 @ 18"
ELEVATION X WQ501-A
★PRELIMINARY★
SUBJECT TO REVISION
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
APPROVED BY:
CHIEF ENGINEER
DATE:
EDB BASIN OUTLET
STANDARD DRAWING NUMBER WQ501–H

3.5 Bioretention Facility

Type of BMP	LID – Bioretention
Treatment Mechanisms	Infiltration, Evapotranspiration, Evaporation, Biofiltration
Maximum Drainage Area	This BMP is intended to be integrated into a project's landscaped area in a distributed manner. Typically, contributing drainage areas to Bioretention Facilities range from less than 1 acre to a maximum of around 10 acres.
Other Names	Rain Garden, Bioretention Cell, Bioretention Basin, Biofiltration Basin, Landscaped Filter Basin, Porous Landscape Detention

Description

Bioretention Facilities are shallow, vegetated basins underlain by an engineered soil media. Healthy plant and biological activity in the root zone maintain and renew the macro-pore space in the soil and maximize plant uptake of pollutants and runoff. This keeps the Best Management Practice (BMP) from becoming clogged and allows more of the soil column to function as both a sponge (retaining water) and a highly effective and self-maintaining biofilter. In most cases, the bottom of a Bioretention Facility is unlined, which also provides an opportunity for infiltration to the extent the underlying onsite soil can accommodate. When the infiltration rate of the underlying soil is exceeded, fully biotreated flows are discharged via underdrains. Bioretention Facilities therefore will inherently achieve the maximum feasible level of infiltration and evapotranspiration and achieve the minimum feasible (but highly biotreated) discharge to the storm drain system.

Siting Considerations

These facilities work best when they are designed in a relatively level area. Unlike other BMPs, Bioretention Facilities can be used in smaller landscaped spaces on the site, such as:

- ✓ Parking islands
- ✓ Medians
- ✓ Site entrances

Landscaped areas on the site (such as may otherwise be required through minimum landscaping ordinances), can often be designed as Bioretention Facilities. This can be accomplished by:

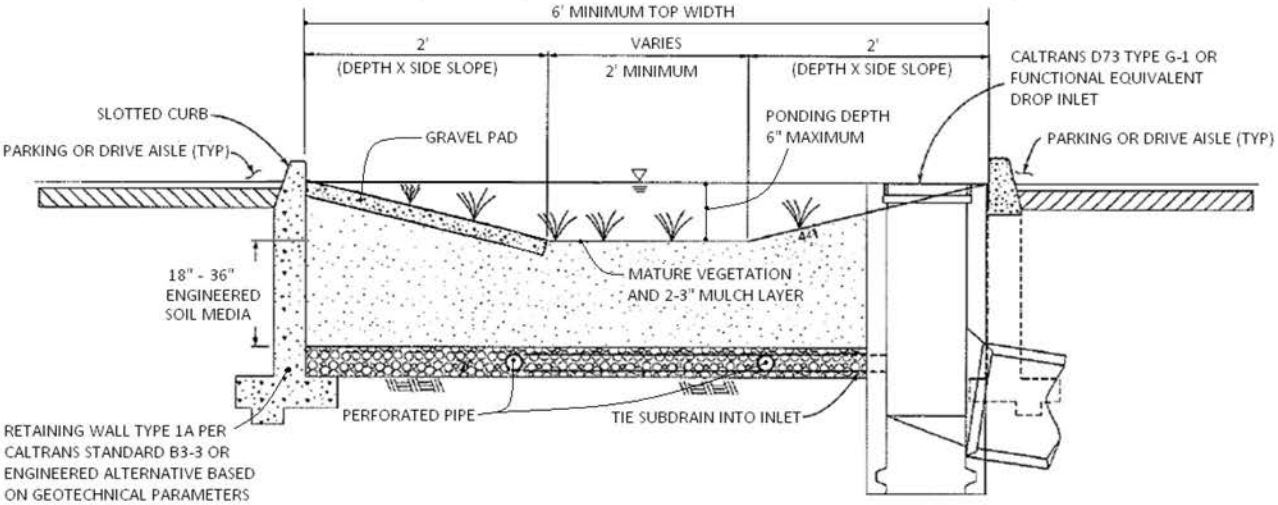
- *Depressing* landscaped areas below adjacent impervious surfaces, rather than elevating those areas
- Grading the site to direct runoff from those impervious surfaces *into* the Bioretention Facility, rather than away from the landscaping
- Sizing and designing the depressed landscaped area as a Bioretention Facility as described in this Fact Sheet

Bioretention Facilities should however not be used downstream of areas where large amounts of sediment can clog the system. Placing a Bioretention Facility at the toe of a steep slope should also be avoided due to the potential for clogging the engineered soil media with erosion from the slope, as well as the potential for damaging the vegetation.

Design and Sizing Criteria

The recommended cross section necessary for a Bioretention Facility includes:

- Vegetated area
- 18' minimum depth of engineered soil media
- 12' minimum gravel layer depth with 6' perforated pipes (added flow control features such as orifice plates may be required to mitigate for HCOC conditions)



While the 18-inch minimum engineered soil media depth can be used in some cases, it is recommended to use 24 inches or a preferred 36 inches to provide an adequate root zone for the chosen plant palate. Such a design also provides for improved removal effectiveness for nutrients. The recommended ponding depth inside of a Bioretention Facility is 6 inches; measured from the flat bottom surface to the top of the water surface as shown in Figure 1.

Because this BMP is filled with an engineered soil media, pore space in the soil and gravel layer is assumed to provide storage volume. However, several considerations must be noted:

- Surcharge storage above the soil surface (6 inches) is important to assure that design flows do not bypass the BMP when runoff exceeds the soil's absorption rate.
- In cases where the Bioretention Facility contains engineered soil media deeper than 36 inches, the pore space within the engineered soil media can only be counted to the 36-inch depth.
- A maximum of 30 percent pore space can be used for the soil media whereas a maximum of 40 percent pore space can be use for the gravel layer.

Figure 1: Standard Layout for a Bioretention Facility

Engineered Soil Media Requirements

The engineered soil media shall be comprised of 85 percent mineral component and 15 percent organic component, by volume, drum mixed prior to placement. The mineral component shall be a Class A sandy loam topsoil that meets the range specified in Table 1 below. The organic component shall be nitrogen stabilized compost[1], such that nitrogen does not leach from the media.

Table 1: Mineral Component Range Requirements

Percent Range	Component
70-80	Sand
15-20	Silt
5-10	Clay

The trip ticket, or certificate of compliance, shall be made available to the inspector to prove the engineered mix meets this specification.

Vegetation Requirements

Vegetative cover is important to minimize erosion and ensure that treatment occurs in the Bioretention Facility. The area should be designed for at least 70 percent mature coverage throughout the Bioretention Facility. To prevent the BMP from being used as walkways, Bioretention Facilities shall be planted with a combination of small trees, densely planted shrubs, and natural grasses. Grasses shall be native or ornamental; preferably ones that do not need to be mowed. The application of fertilizers and pesticides should be minimal. To maintain oxygen levels for the vegetation and promote biodegradation, it is important that vegetation not be completely submerged for any extended period of time. Therefore, a maximum of 6 inches of ponded water shall be used in the design to ensure that plants within the Bioretention Facility remain healthy.

A 2 to 3-inch layer of standard shredded aged hardwood mulch shall be placed as the top layer inside the Bioretention Facility. The 6-inch ponding depth shown in Figure 1 above shall be measured from the top surface of the 2 to 3-inch mulch layer.

Curb Cuts

To allow water to flow into the Bioretention Facility, 1-foot-wide (minimum) curb cuts should be placed approximately every 10 feet around the perimeter of the Bioretention Facility. Figure 2 shows a curb cut in a Bioretention Facility. Curb cut flow lines must be at or above the V_{BMP} water surface level.

[1] For more information on compost, visit the US Composting Council website at: http://compostingcouncil.org/



Figure 2: Curb Cut located in a Bioretention Facility

To reduce erosion, a gravel pad shall be placed at each inlet point to the Bioretention Facility. The gravel should be 1- to 1.5-inch diameter in size. The gravel should overlap the curb cut opening a minimum of 6 inches. The gravel pad inside the Bioretention Facility should be flush with the finished surface at the curb cut and extend to the bottom of the slope.

In addition, place an apron of stone or concrete, a foot square or larger, inside each inlet to prevent vegetation from growing up and blocking the inlet. See Figure 3.

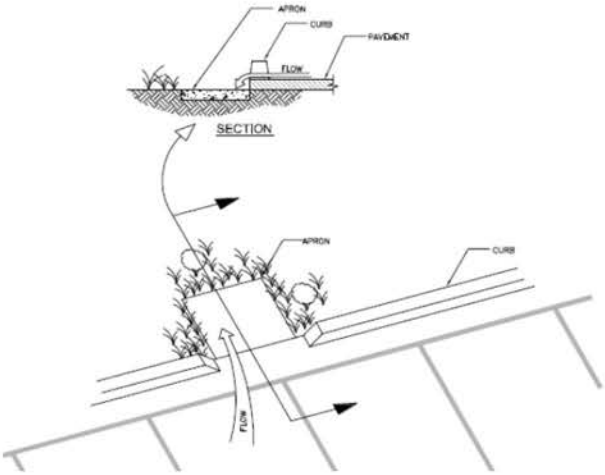


Figure 3: Apron located in a Bioretention Facility

Terracing the Landscaped Filter Basin

It is recommended that Bioretention Facilities be level. In the event the facility site slopes and lacks proper design, water would fill the lowest point of the BMP and then discharge from the basin without being treated. To ensure that the water will be held within the Bioretention Facility on sloped sites, the BMP must be terraced with nonporous check dams to provide the required storage and treatment capacity.

The terraced version of this BMP shall be used on non-flat sites with no more than a 3 percent slope. The surcharge depth cannot exceed 0.5 feet, and side slopes shall not exceed 4:1. Table 2 below shows the spacing of the check dams, and slopes shall be rounded up (i.e., 2.5 percent slope shall use 10' spacing for check dams).

Table 2: Check Dam Spacing

6" Check Dam Spacing	
Slope	**Spacing**
1%	*25'*
2%	*15'*
3%	*10'*

Roof Runoff

Roof downspouts may be directed towards Bioretention Facilities. However, the downspouts must discharge onto a concrete splash block to protect the Bioretention Facility from erosion.

Retaining Walls

It is recommended that Retaining Wall Type 1A, per Caltrans Standard B3-3 or equivalent, be constructed around the entire perimeter of the Bioretention Facility. This practice will protect the sides of the Bioretention Facility from collapsing during construction and maintenance or from high service loads adjacent to the BMP. Where such service loads would not exist adjacent to the BMP, an engineered alternative may be used if signed by a licensed civil engineer.

Side Slope Requirements

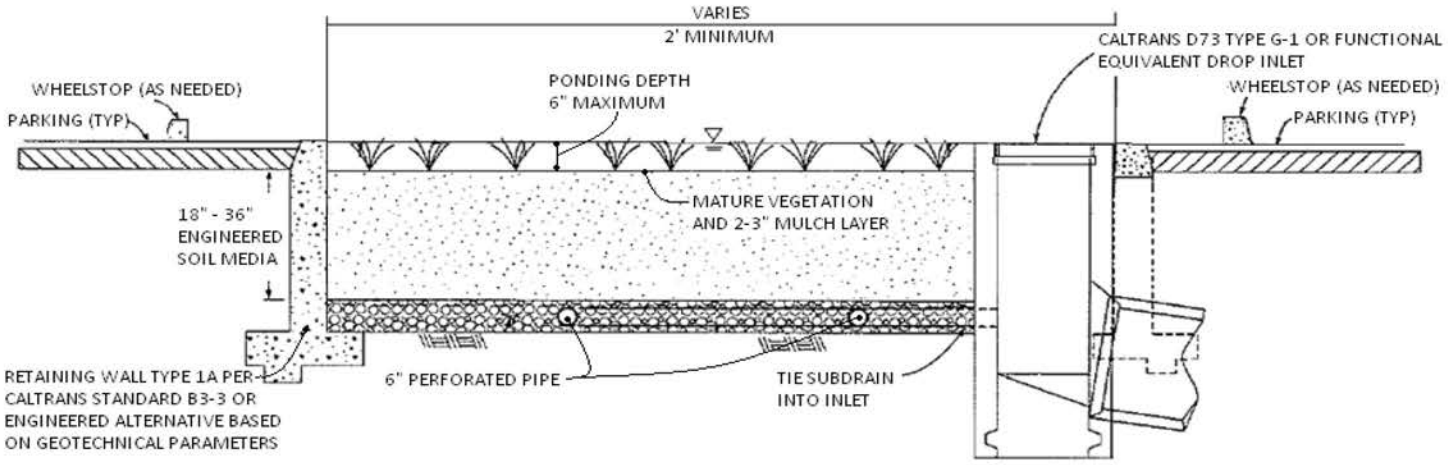
Bioretention Facilities Requiring Side Slopes

The design should assure that the Bioretention Facility does not present a tripping hazard. Bioretention Facilities proposed near pedestrian areas, such as areas parallel to parking spaces or along a walkway, must have a gentle slope to the bottom of the facility. Side slopes inside of a Bioretention Facility shall be 4:1. A typical cross section for the Bioretention Facility is shown in Figure 1.

Bioretention Facilities Not Requiring Side Slopes

Where cars park perpendicular to the Bioretention Facility, side slopes are not required. A 6-inch maximum drop may be used, and the Bioretention Facility must be planted with trees and shrubs to prevent pedestrian access. In this case, a curb is not placed around the Bioretention Facility,

but wheel stops shall be used to prevent vehicles from entering the Bioretention Facility, as shown in Figure 4.



Planter Boxes

Bioretention Facilities can also be placed above ground as planter boxes. Planter boxes must have a minimum width of 2 feet, a maximum surcharge depth of 6 inches, and no side slopes are necessary. Planter boxes must be constructed so as to ensure that the top surface of the engineered soil media will remain level. This option may be constructed of concrete, brick, stone or other stable materials that will not warp or bend. Chemically treated wood or galvanized steel, which has the ability to contaminate stormwater, should not be used. Planter boxes must be lined with an impermeable liner on all sides, including the bottom. Due to the impermeable liner, the inside bottom of the planter box shall be designed and constructed with a cross fall, directing treated flows within the subdrain layer toward the point where subdrain exits the planter box, and subdrains shall be oriented with drain holes oriented down. These provisions will help avoid excessive stagnant water within the gravel underdrain layer. Similar to the in-ground Bioretention Facility versions, this BMP benefits from healthy plants and biological activity in the root zone. Planter boxes should be planted with appropriately selected vegetation.



Figure 5: Planter Box
Source: LA Team Effort

Overflow

An overflow route is needed in the Bioretention Facility design to bypass stored runoff from storm events larger than V_{BMP} or in the event of facility or subdrain clogging. Overflow systems must connect to an acceptable discharge point, such as a downstream conveyance system as shown in Figure 1 and Figure 4. The inlet to the overflow structure shall be elevated inside the Bioretention Facility to be flush with the ponding surface for the design capture volume (V_{BMP}) as shown in Figure 4. This will allow the design capture volume to be fully treated by the Bioretention Facility, and for larger events to safely be conveyed to downstream systems. The overflow inlet shall **not** be located in the entrance of a Bioretention Facility, as shown in Figure 6.

Underdrain Gravel and Pipes

An underdrain gravel layer and pipes shall be provided in accordance with Appendix B – Underdrains.



Figure 6: Incorrect Placement of an Overflow Inlet.

Inspection and Maintenance Schedule

The Bioretention Facility area shall be inspected for erosion, dead vegetation, soggy soils, or standing water. The use of fertilizers and pesticides on the plants inside the Bioretention Facility should be minimized.

Schedule	Activity
Ongoing	• Keep adjacent landscape areas maintained. Remove clippings from landscape maintenance activities. • Remove trash and debris • Replace damaged grass and/or plants • Replace surface mulch layer as needed to maintain a 2-3 inch soil cover.
After storm events	• Inspect areas for ponding
Annually	• Inspect/clean inlets and outlets

Bioretention Facility Design Procedure

1) Enter the area tributary, A_T, to the Bioretention Facility.

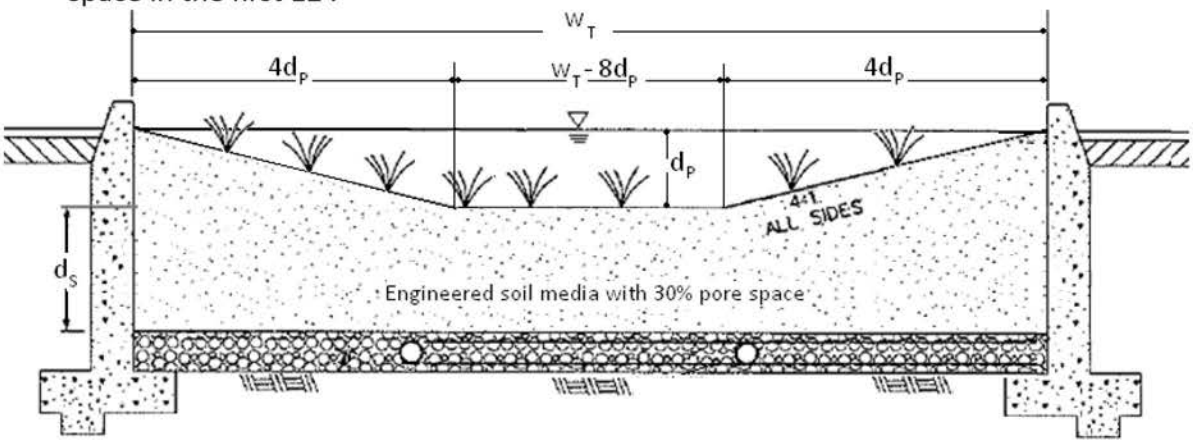
2) Enter the Design Volume, V_{BMP}, determined from Section 2.1 of this Handbook.

3) Select the type of design used. There are two types of Bioretention Facility designs: the standard design used for most project sites that include side slopes, and the modified design used when the BMP is located perpendicular to the parking spaces or with planter boxes that do not use side slopes.

4) Enter the depth of the engineered soil media, d_S. The minimum depth for the engineered soil media can be 18' in limited cases, but it is recommended to use 24' or a preferred 36' to provide an adequate root zone for the chosen plant palette. Engineered soil media deeper than 36' will only get credit for the pore space in the first 36'.

5) Enter the top width of the Bioretention Facility.

6) Calculate the total effective depth, d_E, within the Bioretention Facility. The maximum allowable pore space of the soil media is 30% while the maximum allowable pore space for the gravel layer is 40%. Gravel layer deeper than 12' will only get credit for the pore space in the first 12'.



a. For the design with side slopes the following equation shall be used to determine the total effective depth. Where, d_P is the depth of ponding within the basin.

$$d_E(\text{ft}) = \frac{0.3 \times \left[\left(w_T(\text{ft}) \times d_S(\text{ft})\right) + 4\left(d_P(\text{ft})\right)^2\right] + 0.4 \times 1(\text{ft}) + d_P(\text{ft})\left[4d_P(\text{ft}) + \left(w_T(\text{ft}) - 8d_P(\text{ft})\right)\right]}{w_T(\text{ft})}$$

This above equation can be simplified if the maximum ponding depth of 0.5' is used. The equation below is used on the worksheet to find the minimum area required for the Bioretention Facility:

$$d_E(\text{ft}) = (0.3 \times d_S(\text{ft}) + 0.4 \text{ x } 1(\text{ft})) - \left(\frac{0.7\ (\text{ft}^2)}{w_T(\text{ft})}\right) + 0.5(\text{ft})$$

b. For the design without side slopes the following equation shall be used to determine the total effective depth:

$$d_E(\text{ft}) = d_P(\text{ft}) + [(0.3) \times d_S(\text{ft}) + (0.4) \times 1(\text{ft})]$$

The equation below, using the maximum ponding depth of 0.5', is used on the worksheet to find the minimum area required for the Bioretention Facility:

$$d_E(\text{ft}) = 0.5\ (\text{ft}) + [(0.3) \times d_S(\text{ft}) + (0.4) \times 1(\text{ft})]$$

7) Calculate the minimum surface area, A_M, required for the Bioretention Facility. This does not include the curb surrounding the Bioretention Facility or side slopes.

$$A_M(\text{ft}^2) = \frac{V_{BMP}(\text{ft}^3)}{d_E\ (\text{ft})}$$

8) Enter the proposed surface area. This area shall not be less than the minimum required surface area.

9) Verify that side slopes are no steeper than 4:1 in the standard design, and are not required in the modified design.

10) Provide the diameter, minimum 6 inches, of the perforated underdrain used in the Bioretention Facility. See Appendix B for specific information regarding perforated pipes.

11) Provide the slope of the site around the Bioretention Facility, if used. The maximum slope is 3 percent for a standard design.

12) Provide the check dam spacing, if the site around the Bioretention Facility is sloped.

13) Describe the vegetation used within the Bioretention Facility.

References Used to Develop this Fact Sheet

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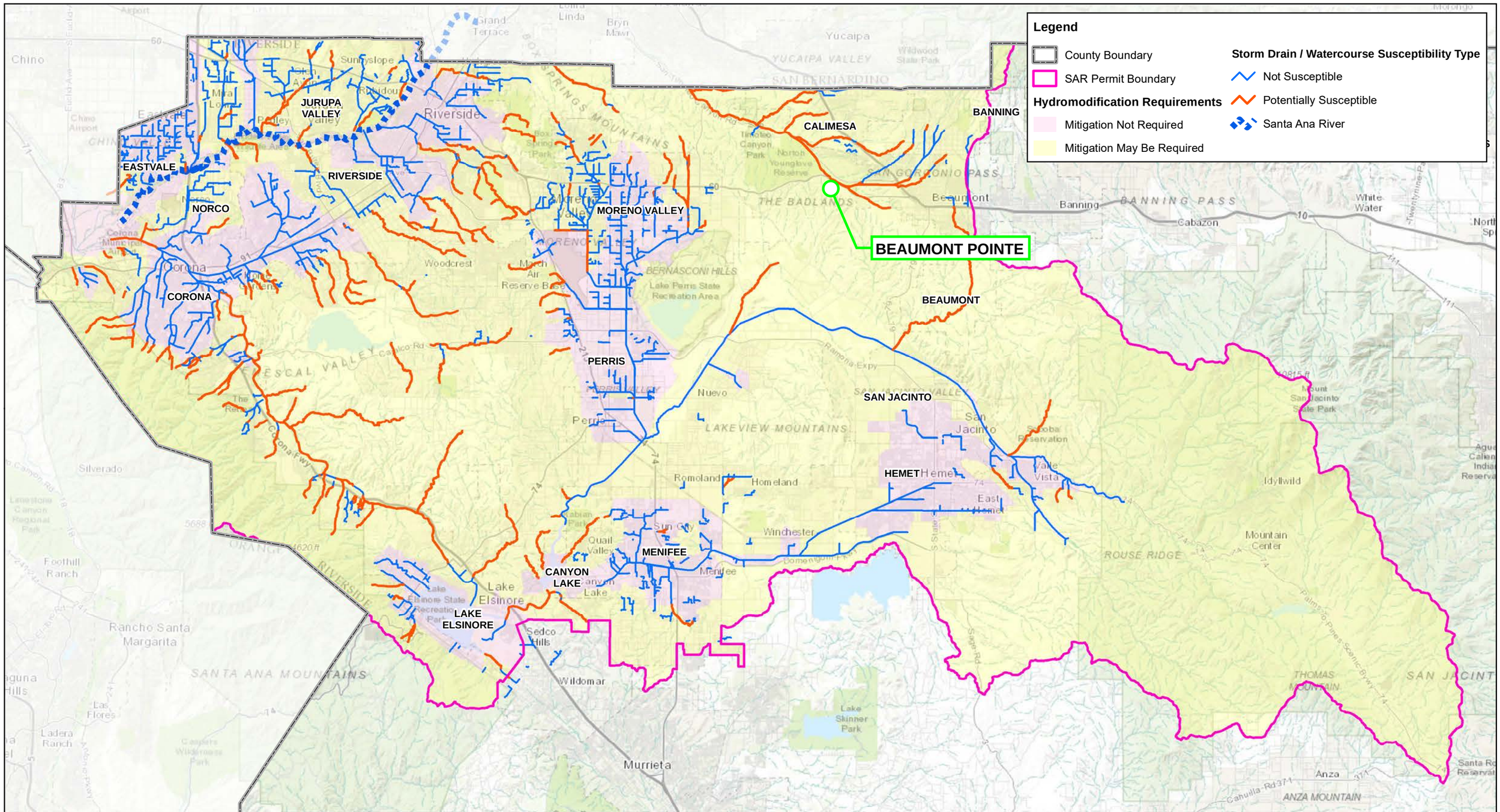
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Appendix 7: Hydromodification

Supporting Detail Relating to Hydrologic Conditions of Concern



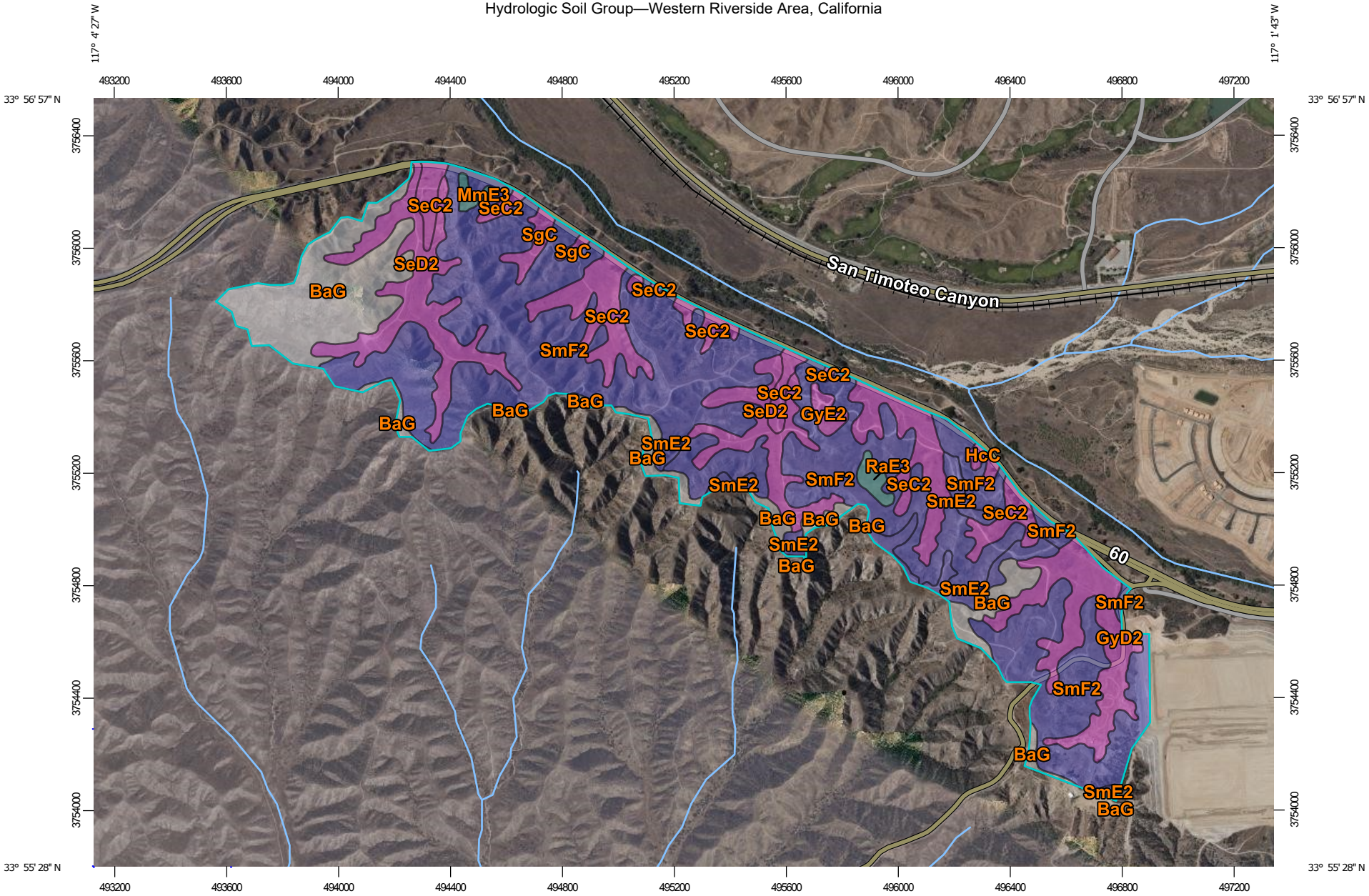
N

0 2.5 5 10 Miles

Updated February 2017

HCOC Applicability Map
SAR Permittees

Map 2


117° 4' 27" W
117° 1' 43" W
493200
493600
494000
494400
494800
495200
495600
496000
496400
496800
497200
33° 56' 57" N
33° 55' 28" N
3756400
3756000
3755600
3755200
3754800
3754400
3754000
San Timoteo Canyon
60
MmE3
SeC2
SgC
SeD2
BaG
SmF2
SmE2
SeD2
GyE2
HcC
RaE3
GyD2
Map Scale: 1:19,300 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 250 500 1000 1500
Feet
0 500 1000 2000 3000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 13, May 27, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2018—Aug 31, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BaG	Badland		69.2	13.1%
GyC2	Greenfield sandy loam, 2 to 8 percent slopes, eroded	A	0.7	0.1%
GyD2	Greenfield sandy loam, 8 to 15 percent slopes, eroded	A	32.7	6.2%
GyE2	Greenfield sandy loam, 15 to 25 percent slopes, eroded	A	3.3	0.6%
HcC	Hanford coarse sandy loam, 2 to 8 percent slopes	A	2.2	0.4%
MmE3	Monserate sandy loam, 15 to 25 percent slopes, severely eroded	C	1.9	0.4%
RaE3	Ramona sandy loam, 15 to 25 percent slopes, severely eroded	C	3.3	0.6%
SeC2	San Emigdio fine sandy loam, 2 to 8 percent slopes, eroded	A	58.4	11.1%
SeD2	San Emigdio fine sandy loam, 8 to 15 percent slopes, eroded	A	54.7	10.4%
SgC	San Emigdio loam, 2 to 8 percent slopes	A	5.3	1.0%
SmE2	San Timoteo loam, 8 to 25 percent slopes, eroded	B	20.9	4.0%
SmF2	San Timoteo loam, 25 to 50 percent slopes, eroded	B	273.7	52.0%
Totals for Area of Interest			**526.6**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

NOAA Atlas 14, Volume 6, Version 2
Location name: Beaumont, California, USA*
Latitude: 33.9382°, Longitude: -117.051°
Elevation: 2359.04 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.112** (0.093-0.136)	**0.146** (0.121-0.177)	**0.194** (0.161-0.236)	**0.236** (0.194-0.289)	**0.299** (0.238-0.379)	**0.352** (0.274-0.457)	**0.412** (0.312-0.548)	**0.479** (0.353-0.656)	**0.582** (0.411-0.832)	**0.672** (0.459-0.996)
10-min	**0.161** (0.134-0.195)	**0.209** (0.174-0.253)	**0.278** (0.230-0.338)	**0.338** (0.278-0.415)	**0.428** (0.340-0.544)	**0.505** (0.393-0.655)	**0.590** (0.448-0.785)	**0.687** (0.506-0.941)	**0.834** (0.589-1.19)	**0.964** (0.657-1.43)
15-min	**0.194** (0.162-0.235)	**0.253** (0.210-0.307)	**0.336** (0.279-0.408)	**0.409** (0.336-0.501)	**0.518** (0.412-0.657)	**0.610** (0.475-0.792)	**0.713** (0.541-0.949)	**0.830** (0.612-1.14)	**1.01** (0.713-1.44)	**1.17** (0.795-1.73)
30-min	**0.288** (0.240-0.349)	**0.375** (0.312-0.455)	**0.499** (0.414-0.607)	**0.607** (0.500-0.745)	**0.769** (0.612-0.976)	**0.907** (0.706-1.18)	**1.06** (0.804-1.41)	**1.23** (0.909-1.69)	**1.50** (1.06-2.14)	**1.73** (1.18-2.57)
60-min	**0.423** (0.353-0.513)	**0.551** (0.458-0.668)	**0.731** (0.607-0.890)	**0.890** (0.733-1.09)	**1.13** (0.897-1.43)	**1.33** (1.03-1.73)	**1.56** (1.18-2.07)	**1.81** (1.33-2.48)	**2.20** (1.55-3.14)	**2.54** (1.73-3.76)
2-hr	**0.613** (0.511-0.742)	**0.777** (0.647-0.943)	**1.01** (0.835-1.22)	**1.20** (0.991-1.48)	**1.49** (1.19-1.90)	**1.73** (1.35-2.25)	**1.99** (1.51-2.65)	**2.28** (1.68-3.12)	**2.70** (1.91-3.86)	**3.05** (2.08-4.52)
3-hr	**0.757** (0.631-0.917)	**0.952** (0.792-1.16)	**1.22** (1.01-1.49)	**1.45** (1.19-1.78)	**1.78** (1.42-2.26)	**2.05** (1.60-2.66)	**2.34** (1.78-3.12)	**2.66** (1.96-3.64)	**3.12** (2.20-4.45)	**3.50** (2.38-5.18)
6-hr	**1.09** (0.910-1.32)	**1.37** (1.14-1.66)	**1.74** (1.44-2.11)	**2.05** (1.69-2.52)	**2.49** (1.98-3.17)	**2.85** (2.22-3.70)	**3.22** (2.45-4.29)	**3.62** (2.67-4.96)	**4.19** (2.96-5.99)	**4.64** (3.17-6.88)
12-hr	**1.47** (1.23-1.78)	**1.86** (1.55-2.26)	**2.39** (1.99-2.91)	**2.83** (2.33-3.47)	**3.43** (2.73-4.36)	**3.91** (3.04-5.07)	**4.40** (3.34-5.86)	**4.92** (3.62-6.73)	**5.63** (3.97-8.04)	**6.19** (4.22-9.17)
24-hr	**1.95** (1.73-2.25)	**2.54** (2.24-2.93)	**3.31** (2.92-3.83)	**3.94** (3.45-4.60)	**4.82** (4.08-5.80)	**5.49** (4.56-6.75)	**6.18** (5.01-7.79)	**6.90** (5.44-8.94)	**7.89** (5.98-10.6)	**8.66** (6.34-12.1)
2-day	**2.36** (2.09-2.72)	**3.13** (2.77-3.61)	**4.17** (3.67-4.82)	**5.03** (4.40-5.87)	**6.25** (5.29-7.53)	**7.22** (5.99-8.88)	**8.23** (6.67-10.4)	**9.30** (7.33-12.0)	**10.8** (8.18-14.6)	**12.0** (8.79-16.7)
3-day	**2.55** (2.25-2.94)	**3.41** (3.01-3.93)	**4.60** (4.05-5.32)	**5.61** (4.91-6.54)	**7.06** (5.98-8.50)	**8.23** (6.83-10.1)	**9.48** (7.68-11.9)	**10.8** (8.53-14.0)	**12.7** (9.65-17.2)	**14.3** (10.5-19.9)
4-day	**2.76** (2.44-3.18)	**3.72** (3.29-4.29)	**5.05** (4.45-5.84)	**6.19** (5.41-7.22)	**7.82** (6.62-9.42)	**9.15** (7.59-11.3)	**10.6** (8.56-13.3)	**12.1** (9.55-15.7)	**14.3** (10.8-19.3)	**16.1** (11.8-22.5)
7-day	**3.17** (2.81-3.66)	**4.30** (3.80-4.96)	**5.85** (5.16-6.77)	**7.17** (6.27-8.36)	**9.06** (7.67-10.9)	**10.6** (8.78-13.0)	**12.2** (9.89-15.4)	**13.9** (11.0-18.0)	**16.4** (12.4-22.1)	**18.5** (13.5-25.7)
10-day	**3.45** (3.05-3.98)	**4.69** (4.14-5.41)	**6.39** (5.63-7.39)	**7.83** (6.85-9.14)	**9.89** (8.37-11.9)	**11.5** (9.58-14.2)	**13.3** (10.8-16.7)	**15.2** (12.0-19.6)	**17.8** (13.5-24.0)	**20.0** (14.6-27.9)
20-day	**4.26** (3.77-4.92)	**5.84** (5.17-6.74)	**8.00** (7.05-9.26)	**9.82** (8.59-11.5)	**12.4** (10.5-14.9)	**14.5** (12.0-17.8)	**16.6** (13.5-21.0)	**19.0** (14.9-24.5)	**22.2** (16.8-29.9)	**24.8** (18.2-34.6)
30-day	**5.04** (4.47-5.82)	**6.92** (6.12-7.99)	**9.48** (8.36-11.0)	**11.6** (10.2-13.6)	**14.7** (12.4-17.7)	**17.1** (14.2-21.1)	**19.7** (15.9-24.8)	**22.4** (17.7-29.0)	**26.2** (19.8-35.3)	**29.3** (21.4-40.8)
45-day	**6.05** (5.35-6.97)	**8.27** (7.31-9.54)	**11.3** (9.95-13.1)	**13.8** (12.1-16.1)	**17.4** (14.7-21.0)	**20.2** (16.8-24.9)	**23.2** (18.8-29.3)	**26.4** (20.8-34.2)	**30.9** (23.4-41.6)	**34.4** (25.2-48.0)
60-day	**7.07** (6.26-8.15)	**9.59** (8.48-11.1)	**13.0** (11.5-15.1)	**15.9** (13.9-18.5)	**19.9** (16.9-24.0)	**23.2** (19.2-28.5)	**26.5** (21.5-33.4)	**30.1** (23.7-39.0)	**35.1** (26.6-47.4)	**39.2** (28.7-54.6)

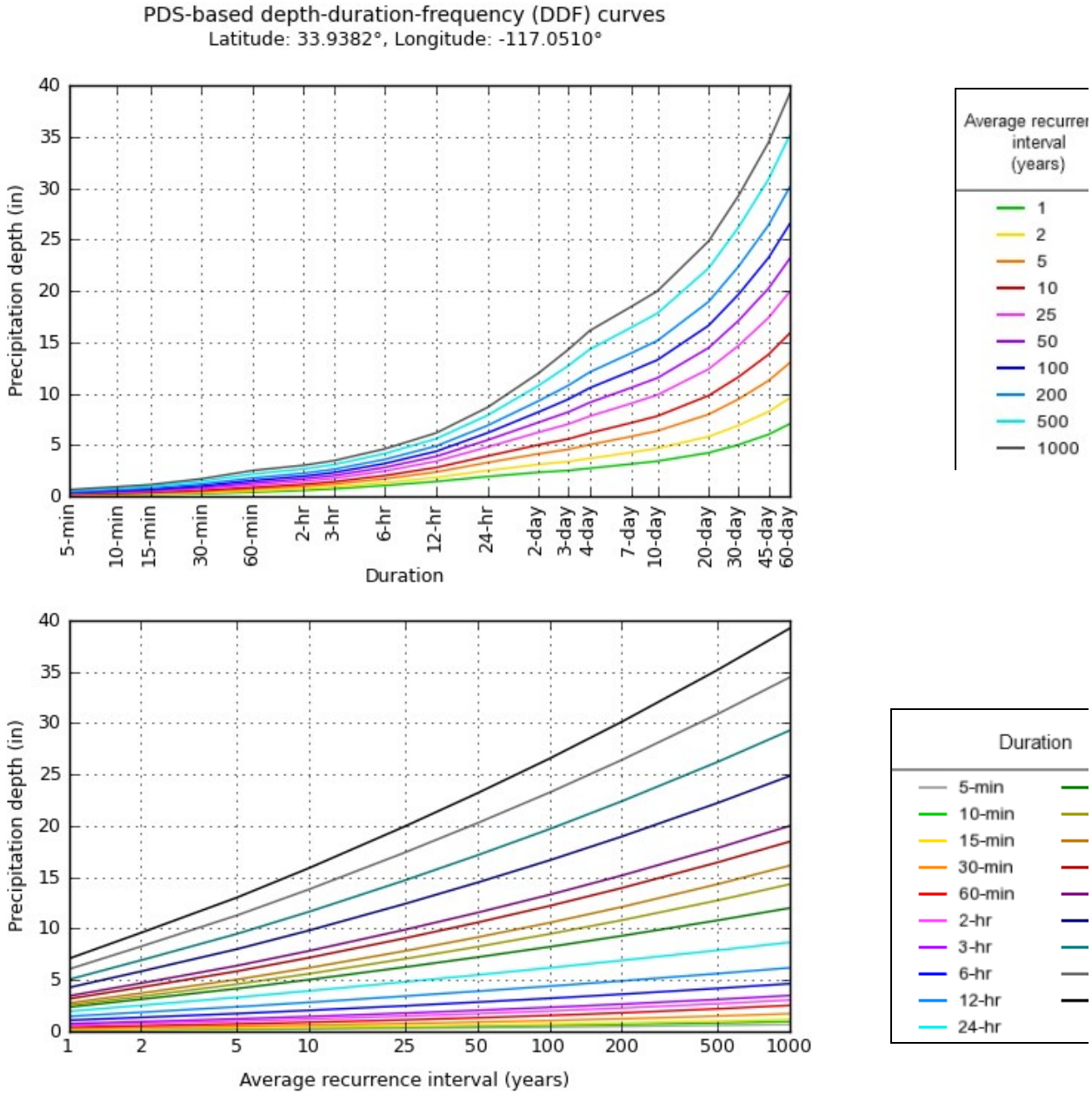
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



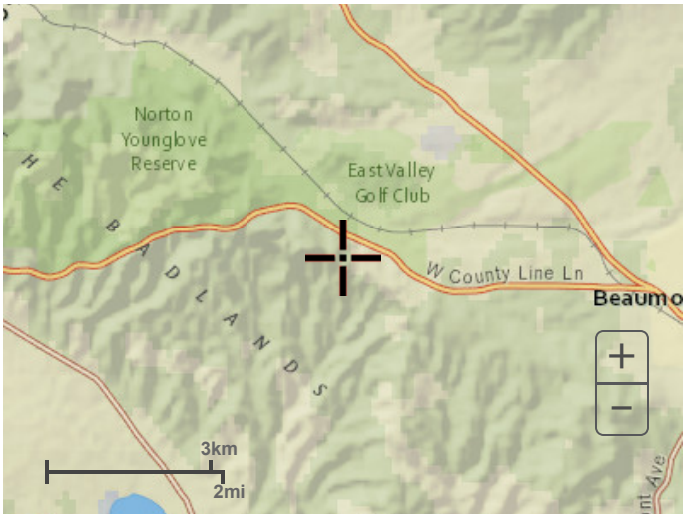
NOAA Atlas 14, Volume 6, Version 2

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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

(Method obtained from Urban Hydrology for Small Watersheds TR-55, Chapter 2 - Estimating Runoff, pg. 2-1)

HCOC RUNOFF VOLUME

PROJECT: Beaumont Pointe
Hydrologic Soils G A, B, C, & D *(per TR-55)*
2-Year, 24 hr Rainf 2.54 in

Total Site Area: 622.50 acres
Protected Site Area: 367.10 acres
Managed Area: 543.50 acres

Existing Conditions:

Cover Type/Condition	Soil Type	Area (sf)	Area (ac)	CN	S	Ia (0.2*S) (in)	$Q_{in/ft}$ Runoff[1]	Q Runoff[2] $(ft)^3$
Pasture, Dryland (Annual Grasses) [Poor]	A	6,851,988	157.30	68.0	4.71	0.94	0.41	231,510.97
Pasture, Dryland (Annual Grasses) [Poor]	B	12,832,776	294.60	79.0	2.66	0.53	0.86	924,317.46
Barren (Roackland, eroded and graded land)	C	226,512	5.20	91.0	0.99	0.20	1.65	31,085.31
Barren (Roackland, eroded and graded land)	D	3,014,352	69.20	94.0	0.64	0.13	1.91	479,180.56
TOTAL:		22,925,628	526.30	32.68326				1,666,094

1 Runoff Index Number per Table 2-2d of TR-55 (Ch. 2) - Sagebrush with grass understory (see site photo)
CN is a composite number see TR 55 Worksheet 2 for corresponding DMA

Developed Conditions:

Cover Type/Condition	Soil Type	Area (sf)	Area (ac)	CN	S	Ia (0.2*S) (in)	$Q_{in/ft}$ Runoff[1]	Q Runoff[2] $(ft)^3$
Commercial Developed[1]	A	5,979,150	137.26	89.0	1.24	0.25	1.49	742,286.16
Grass Cover (Good)	A	1,096,767	25.18	39.0	15.64	3.13	0.02	2,100.74
Commercial Developed[1]	B	11,264,339	258.59	92.0	0.87	0.17	1.73	1,624,142.17
Grass Cover (Good)	B	1,987,825	45.63	61.0	6.39	1.28	0.21	34,427.88
Commercial Developed[1]	C	198,827	4.56	94.0	0.64	0.13	1.91	31,606.87
Grass Cover (Good)	C	35,087	0.81	74.0	3.51	0.70	0.63	1,844.62
Commercial Developed[1]	D	2,645,934	60.74	95.0	0.53	0.11	2.00	441,423.81
Grass Cover (Good)	D	466,930	10.72	80.0	2.50	0.50	0.92	35,667.66
TOTAL:		23,207,930	532.78	34.6				2,877,832

1 Runoff Index Number (CN) per Table 2-2a-d of TR-55 (Ch. 2) - Fully Developed Open Sapce Good Condition (grass > 75%)
CN is a composite number see TR 55 Worksheet 2 for corresponding DMA

2·Year Volume Increase (ft^3): **1,045,129**

2-Year Volume Increase = Developed Conditions Runoff Volume less 110% of the Existing Conditions Runoff Volume (Per Guidance Document)

1. Runoff (in) = Q = $(P - 0.2S)^2 / (P+ O.8S)$ where
P = 2·Year Rainfall (in)
S = (1000 / CN)-10
*Ia = 0.2 * S (Initial Absorbtion)*
2. Runoff Volume (CF) = Q x Area x 1/12
Q = Runoff (in)
Area = land use area (sq. ft)
Area = land use area (sq. ft)

PROPOSED POINT OF DISCHARGE
DMA 6

601
242.0

PROPOSED POINT OF DISCHARGE
DMA 1

101
289.0

AREA 100
49.16 ACRES

L=2,145.2'
L_C=1,223.0'

AREA 600
48.58 ACRES

L=2,040.3'
L_C=1,177.9'

100
514.0

600
484.0

LEGEND:

- MAJOR DRAINAGE BOUNDARY
- DRAINAGE BOUNDARY CENTROID
- PROPOSED FLOW PATH

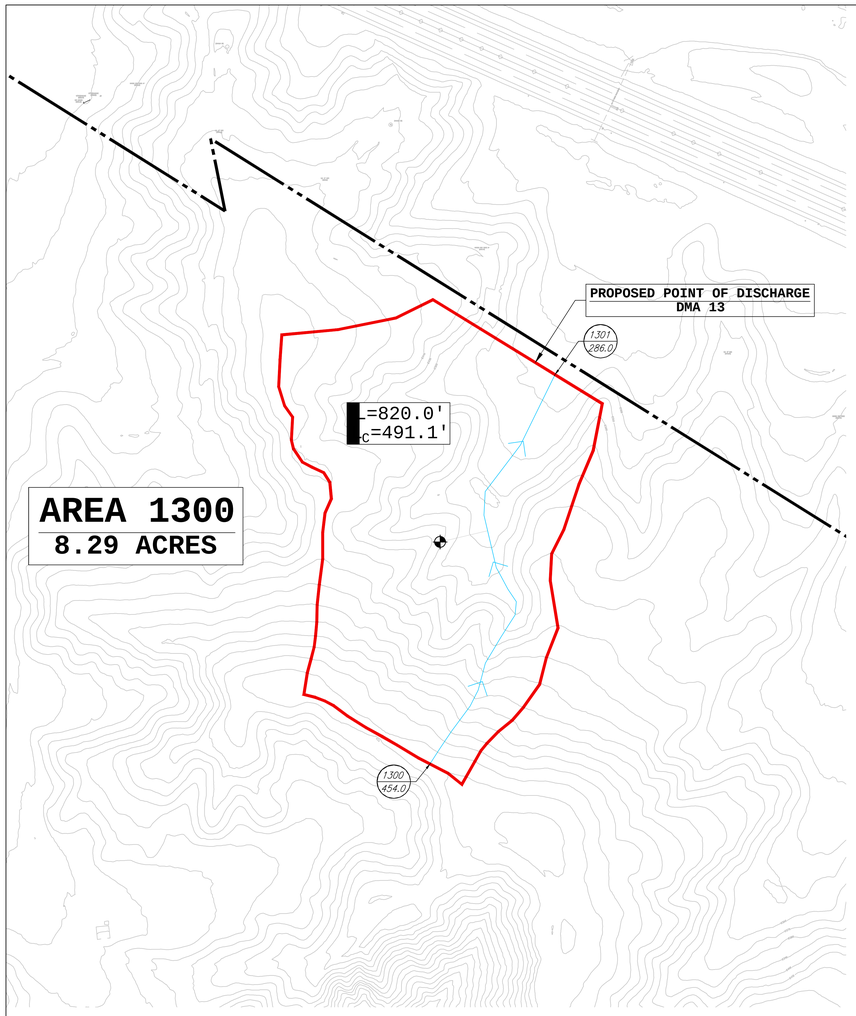
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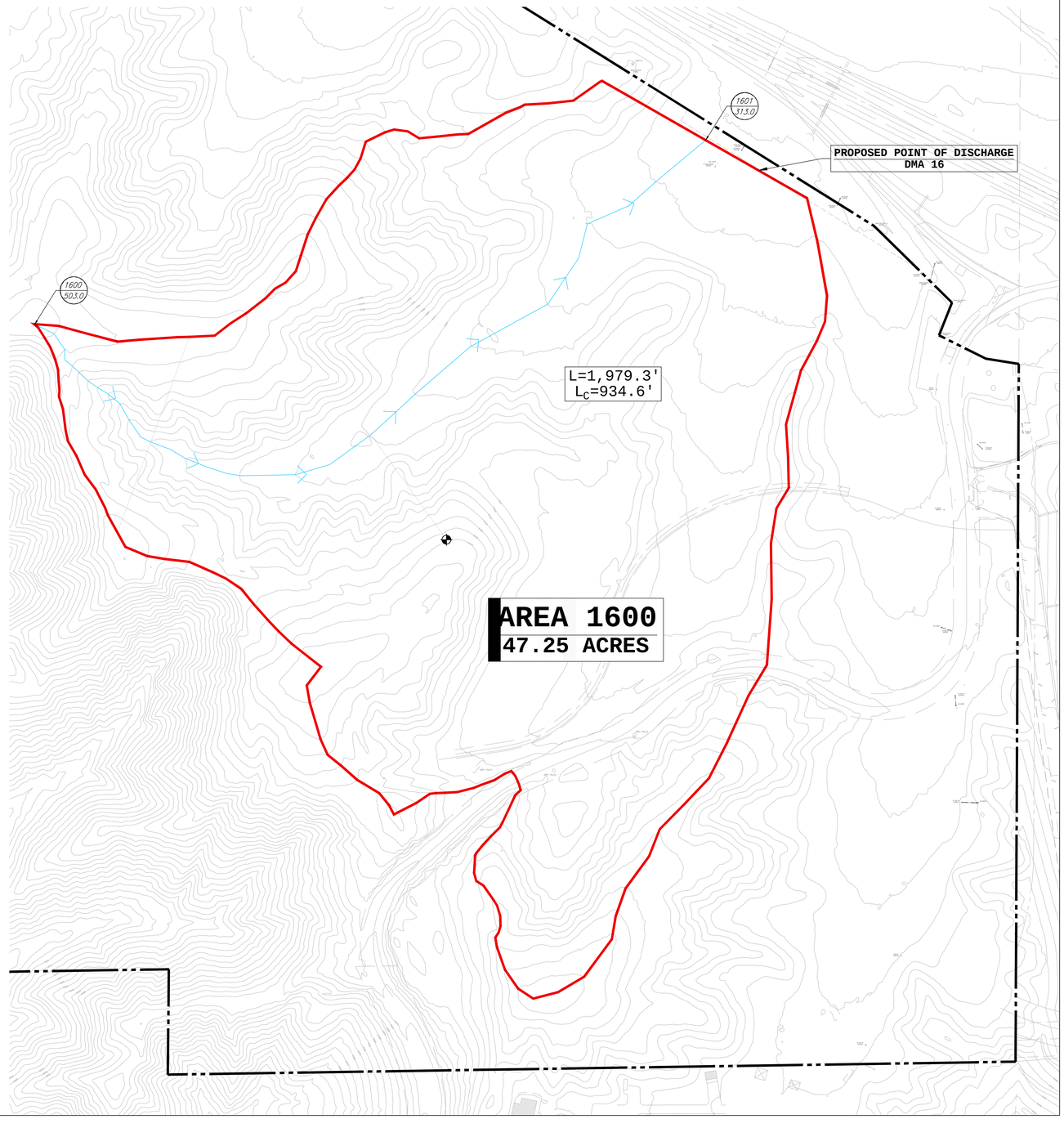
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SCALE: 1"=100'

BEAUMONT POINTE
UNDEVELOPED UNIT HYDROGRAPH KEY MAPS
AREAS 100 & 600

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951-200-6840
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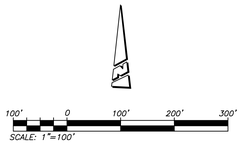
SHEET:
1 OF 2





LEGEND:

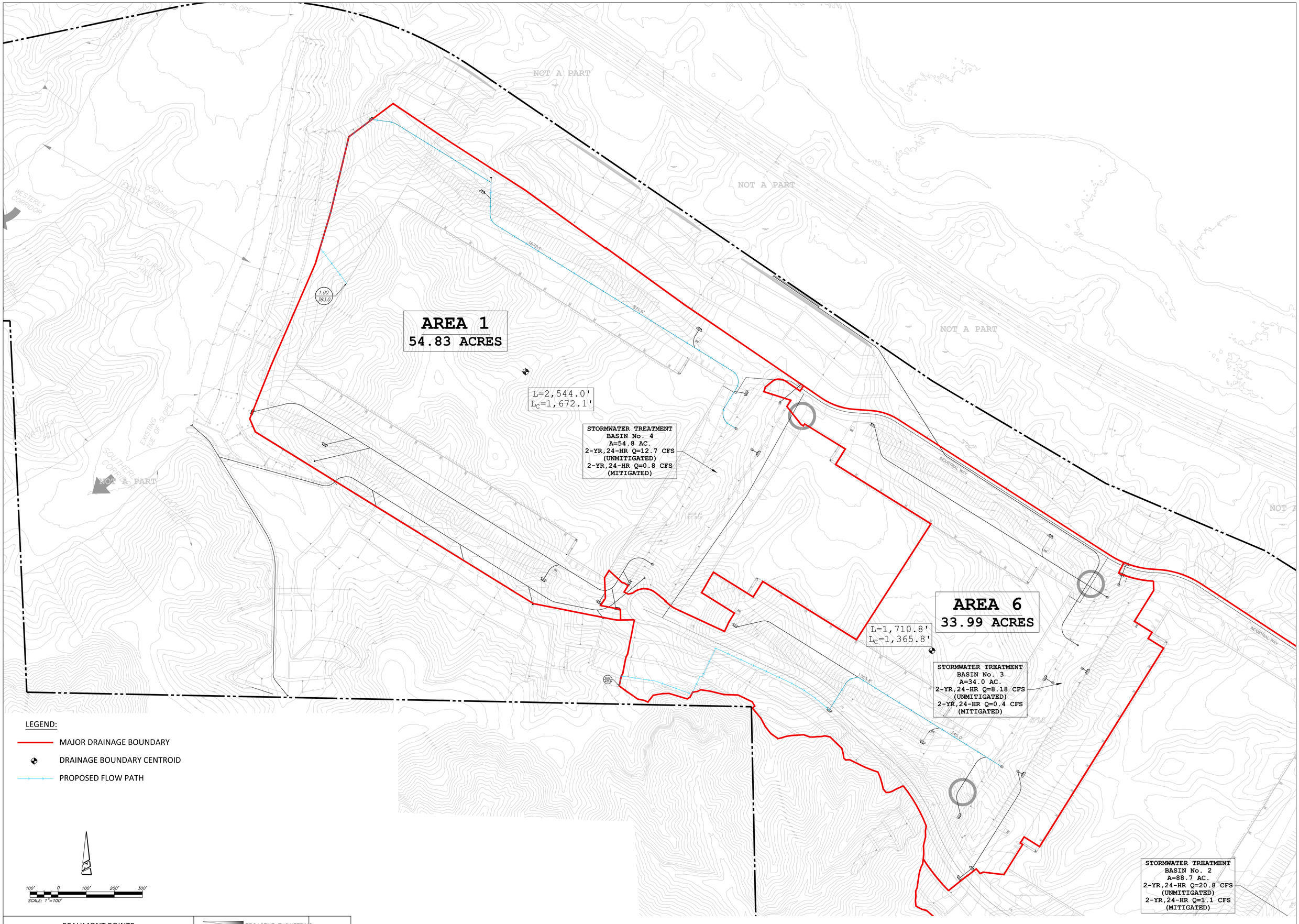
- MAJOR DRAINAGE BOUNDARY
- DRAINAGE BOUNDARY CENTROID
- PROPOSED FLOW PATH



BEAUMONT POINTE
UNDEVELOPED UNIT HYDROGRAPH KEY MAPS
AREAS 1300 & 1600

PROACTIVE ENGINEERING CONSULTANTS WEST,INC.
PROACTIVE ENGINEERING WEST

SHEET: 2 OF 2



LEGEND:

- MAJOR DRAINAGE BOUNDARY
- DRAINAGE BOUNDARY CENTROID
- PROPOSED FLOW PATH

100' 0 100' 200' 300'
SCALE: 1"=100'

BEAUMONT POINTE
DEVELOPED UNIT HYDROGRAPH KEY MAPS
AREAS 1 & 6

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PROACTIVE ENGINEERING WEST

SHEET: 1 OF 3

AREA 6
33.99 ACRES

L=1,710.8'
L_C=1,365.8'

STORMWATER TREATMENT
BASIN No. 3
A=34.0 AC.
2-YR,24-HR Q=8.18 CFS
(UNMITIGATED)
2-YR,24-HR Q=0.4 CFS
(MITIGATED)

STORMWATER TREATMENT
BASIN No. 2
A=88.7 AC.
2-YR,24-HR Q=20.8 CFS
(UNMITIGATED)
2-YR,24-HR Q=1.1 CFS
(MITIGATED)

AREA 13
88.70 ACRES

L=2,709.8'
L_C=2,203.8'

STORMWATER TREATMENT
BASIN No. 1
A=85.6 AC.
2-YR,24-HR Q=20.6 CFS
(UNMITIGATED)
2-YR,24-HR Q=0.9 CFS
(MITIGATED)

NOT A PART

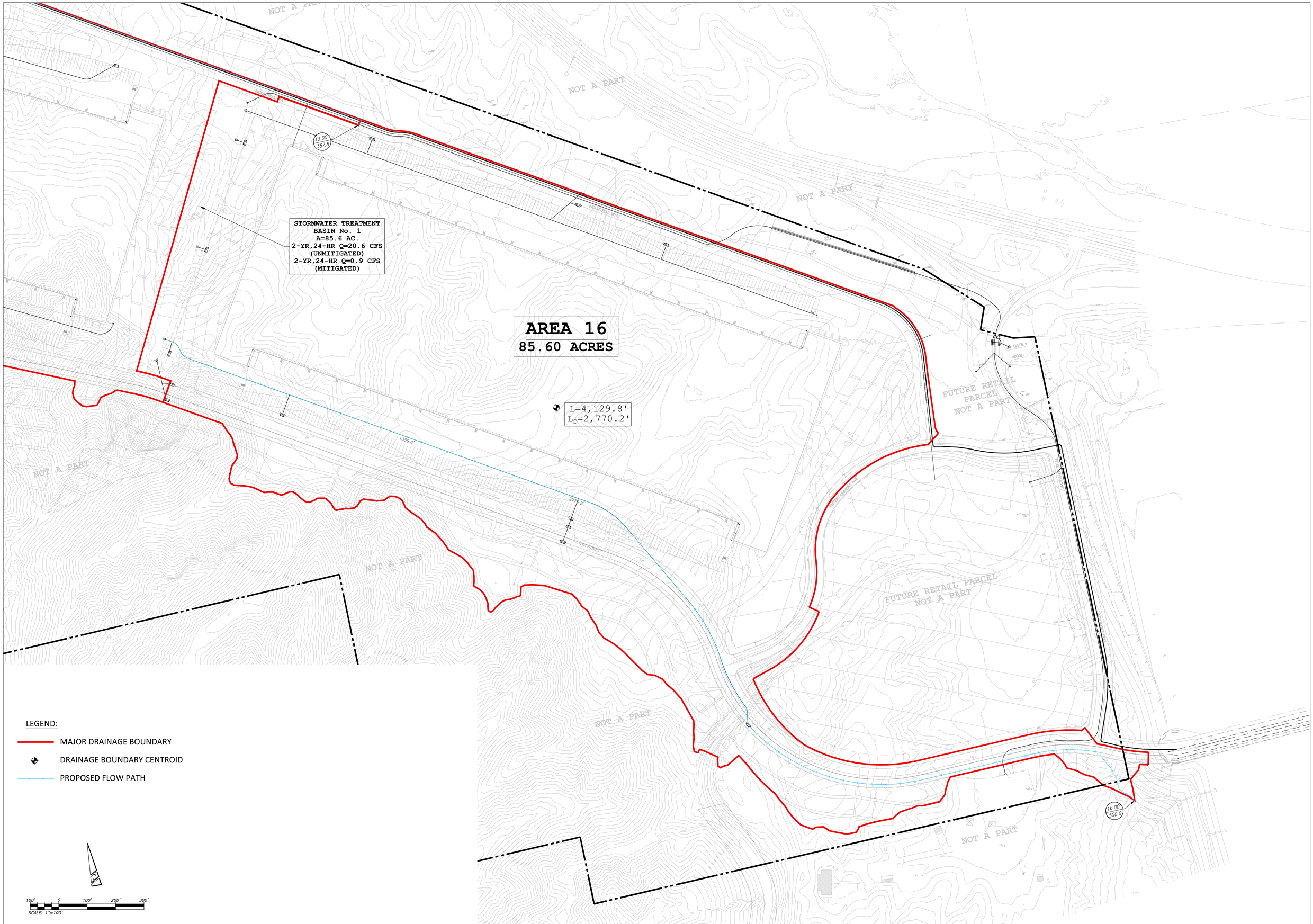
LEGEND:

- MAJOR DRAINAGE BOUNDARY
- DRAINAGE BOUNDARY CENTROID
- PROPOSED FLOW PATH

100' 0 100' 200' 300'
SCALE: 1"=100'

BEAUMONT POINTE
DEVELOPED UNIT HYDROGRAPH KEY MAPS
AREA 13

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BEAUMONT POINTE
DEVELOPED UNIT HYDROGRAPH KEY MAPS
AREA 16

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25189 JEFFERSON AVE. Suite 200
MURRIETA, CA 92562
951-698-6266
PROACTIVE ENGINEERING WEST

SHEET: 3 OF 3

U n i t H y d r o g r a p h A n a l y s i s

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Study date 05/03/23 File: Area100242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

BEAUMONT POINTE
DMA 100
UNDEVELOPED CONDITION

Drainage Area = 49.16(Ac.) = 0.077 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 49.16(Ac.) = 0.077 Sq. Mi.
Length along longest watercourse = 2040.30(Ft.)
Length along longest watercourse measured to centroid = 1177.90(Ft.)
Length along longest watercourse = 0.386 Mi.
Length along longest watercourse measured to centroid = 0.223 Mi.
Difference in elevation = 225.00(Ft.)
Slope along watercourse = 582.2673 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.085 Hr.
Lag time = 5.08 Min.
25% of lag time = 1.27 Min.
40% of lag time = 2.03 Min.
Unit time = 60.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

```
        Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
               49.16            2.54                  124.87

        100 YEAR Area rainfall data:


        Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
               49.16            6.18                  303.81

        STORM EVENT (YEAR) =    2.00
        Area Averaged 2-Year Rainfall =    2.540(In)
        Area Averaged 100-Year Rainfall =    6.180(In)

        Point rain (area averaged) =    2.540(In)
        Areal adjustment factor =   99.99 %
        Adjusted average point rain =    2.540(In)

        Sub-Area Data:
        Area(Ac.)         Runoff Index   Impervious %
            49.160           78.80         0.000
         Total Area Entered =     49.16(Ac.)


        RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
        AMC2 AMC-3     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
        78.8  90.3      0.126     0.000        0.126       1.000      0.126
                                                          Sum (F) =   0.126
        Area averaged mean soil loss (F) (In/Hr) =  0.126
        Minimum soil loss rate ((In/Hr)) =  0.063
        (for 24 hour storm duration)
        Soil low loss rate (decimal) =   0.900
        ------------------------------------------------------------------------

                        U n i t  H y d r o g r a p h
                                VALLEY S-Curve
        ------------------------------------------------------------------------
                        Unit Hydrograph Data
        ------------------------------------------------------------------------
        Unit time period   Time % of lag   Distribution   Unit Hydrograph
            (hrs)                           Graph %           (CFS)
        ------------------------------------------------------------------------
            1   1.000       1181.783        100.000            49.544
                                       Sum = 100.000   Sum=      49.544
------------------------------------------------------------------------


 The following loss rate calculations reflect use of the minimum calculated
loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain
value

  Unit Time   Pattern   Storm Rain     Loss rate(In./Hr)     Effective
       (Hr.)  Percent   (In/Hr)         Max   |   Low        (In/Hr)
   1   1.00     1.20      0.030       (  0.219)       0.027        0.003
```

2	2.00	1.30	0.033	(0.209)	0.030	0.003
3	3.00	1.80	0.046	(0.199)	0.041	0.005
4	4.00	2.10	0.053	(0.189)	0.048	0.005
5	5.00	2.80	0.071	(0.180)	0.064	0.007
6	6.00	2.90	0.074	(0.171)	0.066	0.007
7	7.00	3.80	0.097	(0.162)	0.087	0.010
8	8.00	4.60	0.117	(0.153)	0.105	0.012
9	9.00	6.30	0.160	(0.145)	0.144	0.016
10	10.00	8.20	0.208	0.137 (0.187)	0.071
11	11.00	7.00	0.178	0.129 (0.160)	0.049
12	12.00	7.30	0.185	0.122 (0.167)	0.064
13	13.00	10.80	0.274	0.115 (0.247)	0.160
14	14.00	11.40	0.290	0.108 (0.261)	0.182
15	15.00	10.40	0.264	0.102 (0.238)	0.163
16	16.00	8.50	0.216	0.095 (0.194)	0.120
17	17.00	1.40	0.036	(0.090)	0.032	0.004
18	18.00	1.90	0.048	(0.084)	0.043	0.005
19	19.00	1.30	0.033	(0.080)	0.030	0.003
20	20.00	1.20	0.030	(0.075)	0.027	0.003
21	21.00	1.10	0.028	(0.071)	0.025	0.003
22	22.00	1.00	0.025	(0.068)	0.023	0.003
23	23.00	0.90	0.023	(0.065)	0.021	0.002
24	24.00	0.80	0.020	(0.064)	0.018	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 0.9

Flood volume = Effective rainfall 0.90(In)
times area 49.2(Ac.)/[(In)/(Ft.)] = 3.7(Ac.Ft)
Total soil loss = 1.64(In)
Total soil loss = 6.718(Ac.Ft)
Total rainfall = 2.54(In)
Flood volume = 160592.1 Cubic Feet
Total soil loss = 292629.4 Cubic Feet

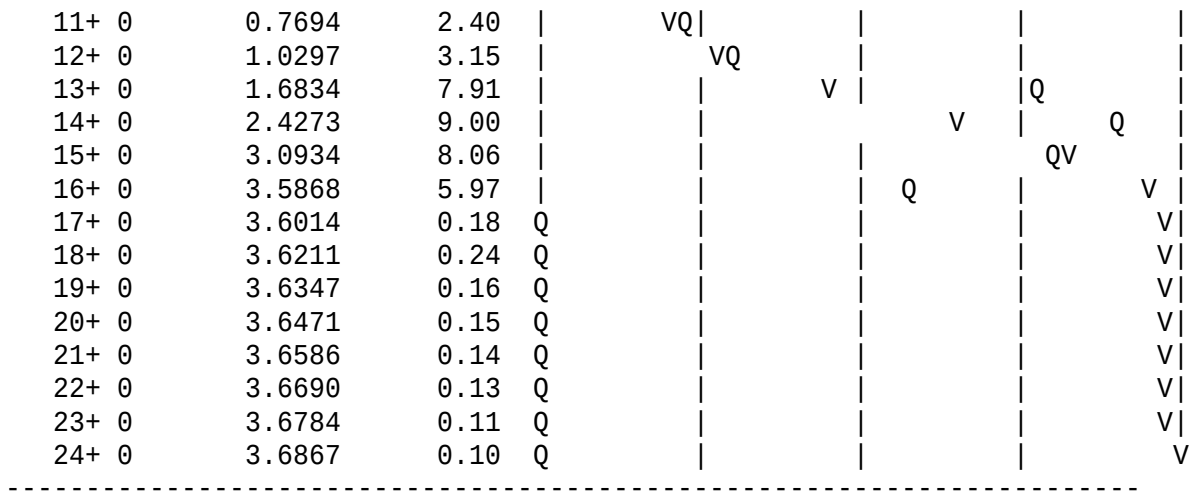
Peak flow rate of this hydrograph = 9.001(CFS)

++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 60 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
1+ 0	0.0125	0.15	Q				
2+ 0	0.0260	0.16	Q				
3+ 0	0.0447	0.23	Q				
4+ 0	0.0666	0.26	VQ				
5+ 0	0.0957	0.35	Q				
6+ 0	0.1259	0.37	|Q				
7+ 0	0.1654	0.48	|Q				
8+ 0	0.2133	0.58	| Q				
9+ 0	0.2788	0.79	| Q				
10+ 0	0.5707	3.53	| V	| Q			


11+ 0 0.7694 2.40
12+ 0 1.0297 3.15
13+ 0 1.6834 7.91
14+ 0 2.4273 9.00
15+ 0 3.0934 8.06
16+ 0 3.5868 5.97
17+ 0 3.6014 0.18
18+ 0 3.6211 0.24
19+ 0 3.6347 0.16
20+ 0 3.6471 0.15
21+ 0 3.6586 0.14
22+ 0 3.6690 0.13
23+ 0 3.6784 0.11
24+ 0 3.6867 0.10

U n i t H y d r o g r a p h A n a l y s i s

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Study date 05/03/23 File: Area600242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

BEAUMONT POINTE
DMA 600
UNDEVELOPED CONDITION

Drainage Area = 48.58(Ac.) = 0.076 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 48.58(Ac.) = 0.076 Sq. Mi.
Length along longest watercourse = 2145.20(Ft.)
Length along longest watercourse measured to centroid = 1223.00(Ft.)
Length along longest watercourse = 0.406 Mi.
Length along longest watercourse measured to centroid = 0.232 Mi.
Difference in elevation = 242.00(Ft.)
Slope along watercourse = 595.6368 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.087 Hr.
Lag time = 5.23 Min.
25% of lag time = 1.31 Min.
40% of lag time = 2.09 Min.
Unit time = 60.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

```
Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       48.58            2.54                 123.39

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       48.58            6.18                 300.22

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.540(In)
Area Averaged 100-Year Rainfall =    6.180(In)

Point rain (area averaged) =    2.540(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    2.540(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    48.580           74.60         0.000
 Total Area Entered =     48.58(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-3     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
74.6  87.8      0.156     0.000        0.156       1.000      0.156
                                                 Sum (F) =   0.156
Area averaged mean soil loss (F) (In/Hr) =  0.156
Minimum soil loss rate ((In/Hr)) =  0.078
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
    1   1.000       1147.984        100.000            48.960
                                Sum = 100.000   Sum=     48.960
------------------------------------------------------------------------


 The following loss rate calculations reflect use of the minimum calculated
loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain
value

  Unit Time   Pattern   Storm Rain     Loss rate(In./Hr)     Effective
       (Hr.)  Percent   (In/Hr)         Max   |   Low        (In/Hr)
   1   1.00     1.20      0.030       (  0.270)       0.027        0.003
```

2	2.00	1.30	0.033	(0.257)	0.030	0.003
3	3.00	1.80	0.046	(0.245)	0.041	0.005
4	4.00	2.10	0.053	(0.233)	0.048	0.005
5	5.00	2.80	0.071	(0.222)	0.064	0.007
6	6.00	2.90	0.074	(0.210)	0.066	0.007
7	7.00	3.80	0.097	(0.199)	0.087	0.010
8	8.00	4.60	0.117	(0.189)	0.105	0.012
9	9.00	6.30	0.160	(0.179)	0.144	0.016
10	10.00	8.20	0.208	0.169	(0.187)	0.040
11	11.00	7.00	0.178	0.159	(0.160)	0.019
12	12.00	7.30	0.185	0.150	(0.167)	0.035
13	13.00	10.80	0.274	0.141	(0.247)	0.133
14	14.00	11.40	0.290	0.133	(0.261)	0.157
15	15.00	10.40	0.264	0.125	(0.238)	0.139
16	16.00	8.50	0.216	0.117	(0.194)	0.098
17	17.00	1.40	0.036	(0.110)	0.032	0.004
18	18.00	1.90	0.048	(0.104)	0.043	0.005
19	19.00	1.30	0.033	(0.098)	0.030	0.003
20	20.00	1.20	0.030	(0.093)	0.027	0.003
21	21.00	1.10	0.028	(0.088)	0.025	0.003
22	22.00	1.00	0.025	(0.084)	0.023	0.003
23	23.00	0.90	0.023	(0.080)	0.021	0.002
24	24.00	0.80	0.020	(0.078)	0.018	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 0.7

Flood volume = Effective rainfall 0.71(In)
times area 48.6(Ac.)/[(In)/(Ft.)] = 2.9(Ac.Ft)
Total soil loss = 1.83(In)
Total soil loss = 7.394(Ac.Ft)
Total rainfall = 2.54(In)
Flood volume = 125805.8 Cubic Feet
Total soil loss = 322069.0 Cubic Feet

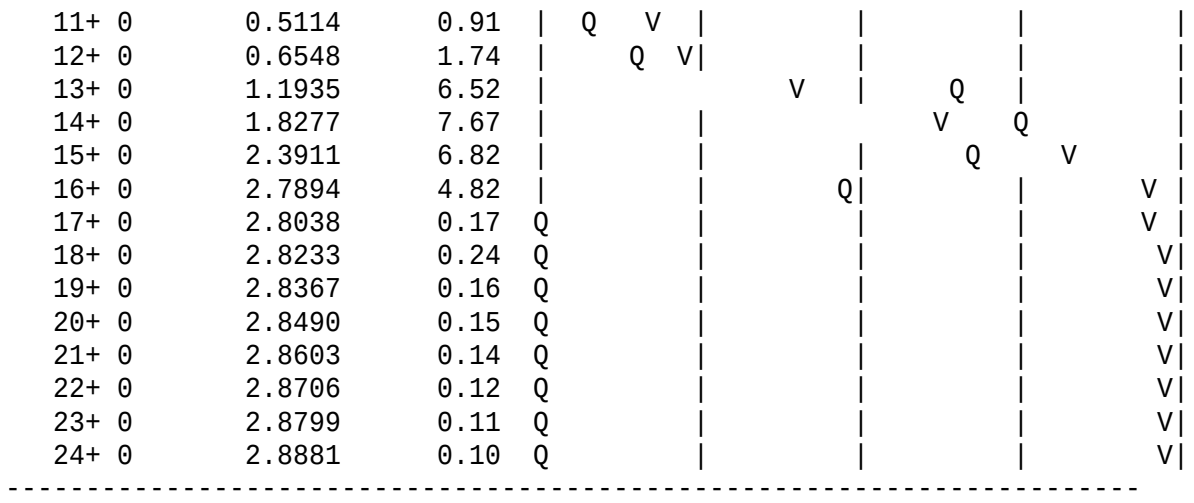
Peak flow rate of this hydrograph = 7.674(CFS)

++

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 60 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
1+ 0	0.0123	0.15	Q				
2+ 0	0.0257	0.16	Q				
3+ 0	0.0442	0.22	Q				
4+ 0	0.0658	0.26	VQ				
5+ 0	0.0946	0.35	Q				
6+ 0	0.1244	0.36	|Q				
7+ 0	0.1635	0.47	|QV				
8+ 0	0.2108	0.57	| Q				
9+ 0	0.2756	0.78	| Q				
10+ 0	0.4359	1.94	| VQ				


11+ 0 0.5114 0.91
12+ 0 0.6548 1.74
13+ 0 1.1935 6.52
14+ 0 1.8277 7.67
15+ 0 2.3911 6.82
16+ 0 2.7894 4.82
17+ 0 2.8038 0.17
18+ 0 2.8233 0.24
19+ 0 2.8367 0.16
20+ 0 2.8490 0.15
21+ 0 2.8603 0.14
22+ 0 2.8706 0.12
23+ 0 2.8799 0.11
24+ 0 2.8881 0.10

U n i t H y d r o g r a p h A n a l y s i s

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Study date 05/03/23 File: Area1300242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

BEAUMONT POINTE
DMA 1300
UNDEVELOPED CONDITION

Drainage Area = 8.29(Ac.) = 0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 8.29(Ac.) = 0.013 Sq. Mi.
Length along longest watercourse = 820.00(Ft.)
Length along longest watercourse measured to centroid = 491.10(Ft.)
Length along longest watercourse = 0.155 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 168.00(Ft.)
Slope along watercourse = 1081.7561 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.038 Hr.
Lag time = 2.29 Min.
25% of lag time = 0.57 Min.
40% of lag time = 0.92 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

```
Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.29            2.54                  21.06

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.29            6.18                  51.23

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.540(In)
Area Averaged 100-Year Rainfall =    6.180(In)

Point rain (area averaged) =    2.540(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.540(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.290           74.80         0.000
 Total Area Entered =      8.29(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-3     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
74.8  87.9      0.154     0.000        0.154       1.000      0.154
                                                 Sum (F) =   0.154
Area averaged mean soil loss (F) (In/Hr) =  0.154
Minimum soil loss rate ((In/Hr)) =  0.077
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        218.413         46.411              3.878
    2   0.167        436.826         42.103              3.518
    3   0.250        655.239          8.095              0.676
    4   0.333        873.653          3.391              0.283
                               Sum = 100.000   Sum=       8.355
------------------------------------------------------------------------


 The following loss rate calculations reflect use of the minimum calculated
loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain
value
```

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.020	(0.273)		0.018	0.002
2	0.17	0.07	0.020	(0.272)		0.018	0.002
3	0.25	0.07	0.020	(0.271)		0.018	0.002
4	0.33	0.10	0.030	(0.270)		0.027	0.003
5	0.42	0.10	0.030	(0.269)		0.027	0.003
6	0.50	0.10	0.030	(0.268)		0.027	0.003
7	0.58	0.10	0.030	(0.267)		0.027	0.003
8	0.67	0.10	0.030	(0.266)		0.027	0.003
9	0.75	0.10	0.030	(0.265)		0.027	0.003
10	0.83	0.13	0.041	(0.264)		0.037	0.004
11	0.92	0.13	0.041	(0.263)		0.037	0.004
12	1.00	0.13	0.041	(0.262)		0.037	0.004
13	1.08	0.10	0.030	(0.261)		0.027	0.003
14	1.17	0.10	0.030	(0.260)		0.027	0.003
15	1.25	0.10	0.030	(0.259)		0.027	0.003
16	1.33	0.10	0.030	(0.258)		0.027	0.003
17	1.42	0.10	0.030	(0.257)		0.027	0.003
18	1.50	0.10	0.030	(0.256)		0.027	0.003
19	1.58	0.10	0.030	(0.255)		0.027	0.003
20	1.67	0.10	0.030	(0.254)		0.027	0.003
21	1.75	0.10	0.030	(0.253)		0.027	0.003
22	1.83	0.13	0.041	(0.252)		0.037	0.004
23	1.92	0.13	0.041	(0.251)		0.037	0.004
24	2.00	0.13	0.041	(0.250)		0.037	0.004
25	2.08	0.13	0.041	(0.248)		0.037	0.004
26	2.17	0.13	0.041	(0.247)		0.037	0.004
27	2.25	0.13	0.041	(0.246)		0.037	0.004
28	2.33	0.13	0.041	(0.245)		0.037	0.004
29	2.42	0.13	0.041	(0.244)		0.037	0.004
30	2.50	0.13	0.041	(0.243)		0.037	0.004
31	2.58	0.17	0.051	(0.242)		0.046	0.005
32	2.67	0.17	0.051	(0.241)		0.046	0.005
33	2.75	0.17	0.051	(0.241)		0.046	0.005
34	2.83	0.17	0.051	(0.240)		0.046	0.005
35	2.92	0.17	0.051	(0.239)		0.046	0.005
36	3.00	0.17	0.051	(0.238)		0.046	0.005
37	3.08	0.17	0.051	(0.237)		0.046	0.005
38	3.17	0.17	0.051	(0.236)		0.046	0.005
39	3.25	0.17	0.051	(0.235)		0.046	0.005
40	3.33	0.17	0.051	(0.234)		0.046	0.005
41	3.42	0.17	0.051	(0.233)		0.046	0.005
42	3.50	0.17	0.051	(0.232)		0.046	0.005
43	3.58	0.17	0.051	(0.231)		0.046	0.005
44	3.67	0.17	0.051	(0.230)		0.046	0.005
45	3.75	0.17	0.051	(0.229)		0.046	0.005
46	3.83	0.20	0.061	(0.228)		0.055	0.006
47	3.92	0.20	0.061	(0.227)		0.055	0.006
48	4.00	0.20	0.061	(0.226)		0.055	0.006
49	4.08	0.20	0.061	(0.225)		0.055	0.006
50	4.17	0.20	0.061	(0.224)		0.055	0.006
51	4.25	0.20	0.061	(0.223)		0.055	0.006
52	4.33	0.23	0.071	(0.222)		0.064	0.007

53	4.42	0.23	0.071	(0.221)	0.064	0.007
54	4.50	0.23	0.071	(0.220)	0.064	0.007
55	4.58	0.23	0.071	(0.219)	0.064	0.007
56	4.67	0.23	0.071	(0.218)	0.064	0.007
57	4.75	0.23	0.071	(0.217)	0.064	0.007
58	4.83	0.27	0.081	(0.216)	0.073	0.008
59	4.92	0.27	0.081	(0.215)	0.073	0.008
60	5.00	0.27	0.081	(0.215)	0.073	0.008
61	5.08	0.20	0.061	(0.214)	0.055	0.006
62	5.17	0.20	0.061	(0.213)	0.055	0.006
63	5.25	0.20	0.061	(0.212)	0.055	0.006
64	5.33	0.23	0.071	(0.211)	0.064	0.007
65	5.42	0.23	0.071	(0.210)	0.064	0.007
66	5.50	0.23	0.071	(0.209)	0.064	0.007
67	5.58	0.27	0.081	(0.208)	0.073	0.008
68	5.67	0.27	0.081	(0.207)	0.073	0.008
69	5.75	0.27	0.081	(0.206)	0.073	0.008
70	5.83	0.27	0.081	(0.205)	0.073	0.008
71	5.92	0.27	0.081	(0.204)	0.073	0.008
72	6.00	0.27	0.081	(0.203)	0.073	0.008
73	6.08	0.30	0.091	(0.203)	0.082	0.009
74	6.17	0.30	0.091	(0.202)	0.082	0.009
75	6.25	0.30	0.091	(0.201)	0.082	0.009
76	6.33	0.30	0.091	(0.200)	0.082	0.009
77	6.42	0.30	0.091	(0.199)	0.082	0.009
78	6.50	0.30	0.091	(0.198)	0.082	0.009
79	6.58	0.33	0.102	(0.197)	0.091	0.010
80	6.67	0.33	0.102	(0.196)	0.091	0.010
81	6.75	0.33	0.102	(0.195)	0.091	0.010
82	6.83	0.33	0.102	(0.195)	0.091	0.010
83	6.92	0.33	0.102	(0.194)	0.091	0.010
84	7.00	0.33	0.102	(0.193)	0.091	0.010
85	7.08	0.33	0.102	(0.192)	0.091	0.010
86	7.17	0.33	0.102	(0.191)	0.091	0.010
87	7.25	0.33	0.102	(0.190)	0.091	0.010
88	7.33	0.37	0.112	(0.189)	0.101	0.011
89	7.42	0.37	0.112	(0.188)	0.101	0.011
90	7.50	0.37	0.112	(0.188)	0.101	0.011
91	7.58	0.40	0.122	(0.187)	0.110	0.012
92	7.67	0.40	0.122	(0.186)	0.110	0.012
93	7.75	0.40	0.122	(0.185)	0.110	0.012
94	7.83	0.43	0.132	(0.184)	0.119	0.013
95	7.92	0.43	0.132	(0.183)	0.119	0.013
96	8.00	0.43	0.132	(0.182)	0.119	0.013
97	8.08	0.50	0.152	(0.182)	0.137	0.015
98	8.17	0.50	0.152	(0.181)	0.137	0.015
99	8.25	0.50	0.152	(0.180)	0.137	0.015
100	8.33	0.50	0.152	(0.179)	0.137	0.015
101	8.42	0.50	0.152	(0.178)	0.137	0.015
102	8.50	0.50	0.152	(0.177)	0.137	0.015
103	8.58	0.53	0.163	(0.177)	0.146	0.016
104	8.67	0.53	0.163	(0.176)	0.146	0.016
105	8.75	0.53	0.163	(0.175)	0.146	0.016
106	8.83	0.57	0.173	(0.174)	0.155	0.017

107	8.92	0.57	0.173	(	0.173)	0.155		0.017
108	9.00	0.57	0.173	(	0.172)	0.155		0.017
109	9.08	0.63	0.193		0.172	(	0.174)	0.021
110	9.17	0.63	0.193		0.171	(	0.174)	0.022
111	9.25	0.63	0.193		0.170	(	0.174)	0.023
112	9.33	0.67	0.203		0.169	(	0.183)	0.034
113	9.42	0.67	0.203		0.168	(	0.183)	0.035
114	9.50	0.67	0.203		0.168	(	0.183)	0.036
115	9.58	0.70	0.213		0.167	(	0.192)	0.047
116	9.67	0.70	0.213		0.166	(	0.192)	0.047
117	9.75	0.70	0.213		0.165	(	0.192)	0.048
118	9.83	0.73	0.224		0.164	(	0.201)	0.059
119	9.92	0.73	0.224		0.164	(	0.201)	0.060
120	10.00	0.73	0.224		0.163	(	0.201)	0.061
121	10.08	0.50	0.152	(	0.162)	0.137		0.015
122	10.17	0.50	0.152	(	0.161)	0.137		0.015
123	10.25	0.50	0.152	(	0.160)	0.137		0.015
124	10.33	0.50	0.152	(	0.160)	0.137		0.015
125	10.42	0.50	0.152	(	0.159)	0.137		0.015
126	10.50	0.50	0.152	(	0.158)	0.137		0.015
127	10.58	0.67	0.203		0.157	(	0.183)	0.046
128	10.67	0.67	0.203		0.157	(	0.183)	0.047
129	10.75	0.67	0.203		0.156	(	0.183)	0.047
130	10.83	0.67	0.203		0.155	(	0.183)	0.048
131	10.92	0.67	0.203		0.154	(	0.183)	0.049
132	11.00	0.67	0.203		0.154	(	0.183)	0.050
133	11.08	0.63	0.193		0.153	(	0.174)	0.040
134	11.17	0.63	0.193		0.152	(	0.174)	0.041
135	11.25	0.63	0.193		0.151	(	0.174)	0.042
136	11.33	0.63	0.193		0.151	(	0.174)	0.043
137	11.42	0.63	0.193		0.150	(	0.174)	0.043
138	11.50	0.63	0.193		0.149	(	0.174)	0.044
139	11.58	0.57	0.173		0.148	(	0.155)	0.024
140	11.67	0.57	0.173		0.148	(	0.155)	0.025
141	11.75	0.57	0.173		0.147	(	0.155)	0.026
142	11.83	0.60	0.183		0.146	(	0.165)	0.037
143	11.92	0.60	0.183		0.145	(	0.165)	0.038
144	12.00	0.60	0.183		0.145	(	0.165)	0.038
145	12.08	0.83	0.254		0.144	(	0.229)	0.110
146	12.17	0.83	0.254		0.143	(	0.229)	0.111
147	12.25	0.83	0.254		0.142	(	0.229)	0.112
148	12.33	0.87	0.264		0.142	(	0.238)	0.122
149	12.42	0.87	0.264		0.141	(	0.238)	0.123
150	12.50	0.87	0.264		0.140	(	0.238)	0.124
151	12.58	0.93	0.284		0.140	(	0.256)	0.145
152	12.67	0.93	0.284		0.139	(	0.256)	0.146
153	12.75	0.93	0.284		0.138	(	0.256)	0.146
154	12.83	0.97	0.295		0.138	(	0.265)	0.157
155	12.92	0.97	0.295		0.137	(	0.265)	0.158
156	13.00	0.97	0.295		0.136	(	0.265)	0.158
157	13.08	1.13	0.345		0.135	(	0.311)	0.210
158	13.17	1.13	0.345		0.135	(	0.311)	0.211
159	13.25	1.13	0.345		0.134	(	0.311)	0.211
160	13.33	1.13	0.345		0.133	(	0.311)	0.212

161	13.42	1.13	0.345	0.133	(0.311)	0.213
162	13.50	1.13	0.345	0.132	(0.311)	0.213
163	13.58	0.77	0.234	0.131	(0.210)	0.102
164	13.67	0.77	0.234	0.131	(0.210)	0.103
165	13.75	0.77	0.234	0.130	(0.210)	0.104
166	13.83	0.77	0.234	0.129	(0.210)	0.104
167	13.92	0.77	0.234	0.129	(0.210)	0.105
168	14.00	0.77	0.234	0.128	(0.210)	0.106
169	14.08	0.90	0.274	0.127	(0.247)	0.147
170	14.17	0.90	0.274	0.127	(0.247)	0.148
171	14.25	0.90	0.274	0.126	(0.247)	0.148
172	14.33	0.87	0.264	0.125	(0.238)	0.139
173	14.42	0.87	0.264	0.125	(0.238)	0.139
174	14.50	0.87	0.264	0.124	(0.238)	0.140
175	14.58	0.87	0.264	0.124	(0.238)	0.141
176	14.67	0.87	0.264	0.123	(0.238)	0.141
177	14.75	0.87	0.264	0.122	(0.238)	0.142
178	14.83	0.83	0.254	0.122	(0.229)	0.132
179	14.92	0.83	0.254	0.121	(0.229)	0.133
180	15.00	0.83	0.254	0.120	(0.229)	0.134
181	15.08	0.80	0.244	0.120	(0.219)	0.124
182	15.17	0.80	0.244	0.119	(0.219)	0.125
183	15.25	0.80	0.244	0.119	(0.219)	0.125
184	15.33	0.77	0.234	0.118	(0.210)	0.116
185	15.42	0.77	0.234	0.117	(0.210)	0.116
186	15.50	0.77	0.234	0.117	(0.210)	0.117
187	15.58	0.63	0.193	0.116	(0.174)	0.077
188	15.67	0.63	0.193	0.116	(0.174)	0.077
189	15.75	0.63	0.193	0.115	(0.174)	0.078
190	15.83	0.63	0.193	0.114	(0.174)	0.079
191	15.92	0.63	0.193	0.114	(0.174)	0.079
192	16.00	0.63	0.193	0.113	(0.174)	0.080
193	16.08	0.13	0.041	(0.113)	0.037	0.004
194	16.17	0.13	0.041	(0.112)	0.037	0.004
195	16.25	0.13	0.041	(0.111)	0.037	0.004
196	16.33	0.13	0.041	(0.111)	0.037	0.004
197	16.42	0.13	0.041	(0.110)	0.037	0.004
198	16.50	0.13	0.041	(0.110)	0.037	0.004
199	16.58	0.10	0.030	(0.109)	0.027	0.003
200	16.67	0.10	0.030	(0.109)	0.027	0.003
201	16.75	0.10	0.030	(0.108)	0.027	0.003
202	16.83	0.10	0.030	(0.108)	0.027	0.003
203	16.92	0.10	0.030	(0.107)	0.027	0.003
204	17.00	0.10	0.030	(0.106)	0.027	0.003
205	17.08	0.17	0.051	(0.106)	0.046	0.005
206	17.17	0.17	0.051	(0.105)	0.046	0.005
207	17.25	0.17	0.051	(0.105)	0.046	0.005
208	17.33	0.17	0.051	(0.104)	0.046	0.005
209	17.42	0.17	0.051	(0.104)	0.046	0.005
210	17.50	0.17	0.051	(0.103)	0.046	0.005
211	17.58	0.17	0.051	(0.103)	0.046	0.005
212	17.67	0.17	0.051	(0.102)	0.046	0.005
213	17.75	0.17	0.051	(0.102)	0.046	0.005
214	17.83	0.13	0.041	(0.101)	0.037	0.004

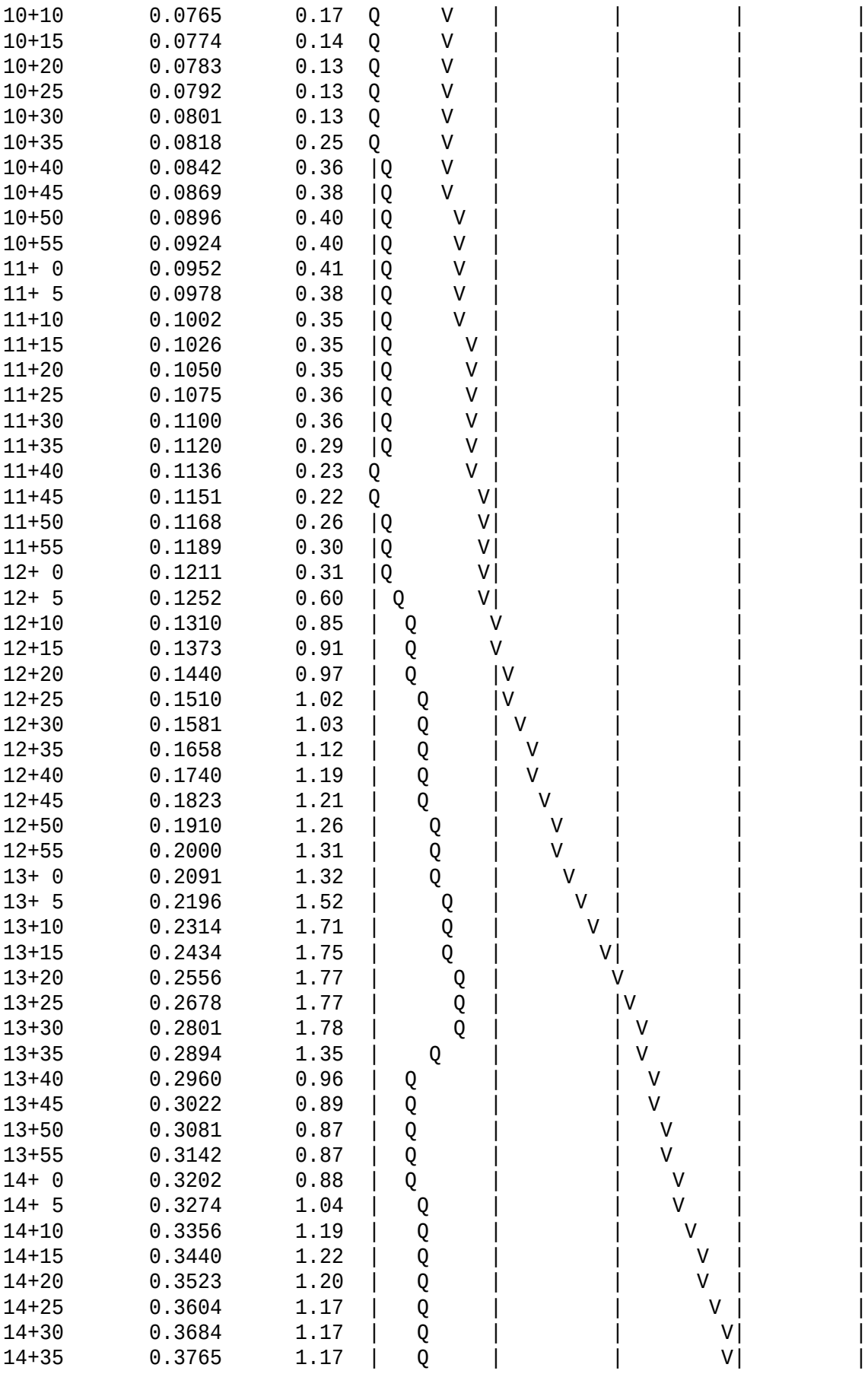
215	17.92	0.13	0.041	(0.101)	0.037	0.004
216	18.00	0.13	0.041	(0.100)	0.037	0.004
217	18.08	0.13	0.041	(0.100)	0.037	0.004
218	18.17	0.13	0.041	(0.099)	0.037	0.004
219	18.25	0.13	0.041	(0.099)	0.037	0.004
220	18.33	0.13	0.041	(0.098)	0.037	0.004
221	18.42	0.13	0.041	(0.098)	0.037	0.004
222	18.50	0.13	0.041	(0.097)	0.037	0.004
223	18.58	0.10	0.030	(0.097)	0.027	0.003
224	18.67	0.10	0.030	(0.096)	0.027	0.003
225	18.75	0.10	0.030	(0.096)	0.027	0.003
226	18.83	0.07	0.020	(0.096)	0.018	0.002
227	18.92	0.07	0.020	(0.095)	0.018	0.002
228	19.00	0.07	0.020	(0.095)	0.018	0.002
229	19.08	0.10	0.030	(0.094)	0.027	0.003
230	19.17	0.10	0.030	(0.094)	0.027	0.003
231	19.25	0.10	0.030	(0.093)	0.027	0.003
232	19.33	0.13	0.041	(0.093)	0.037	0.004
233	19.42	0.13	0.041	(0.092)	0.037	0.004
234	19.50	0.13	0.041	(0.092)	0.037	0.004
235	19.58	0.10	0.030	(0.092)	0.027	0.003
236	19.67	0.10	0.030	(0.091)	0.027	0.003
237	19.75	0.10	0.030	(0.091)	0.027	0.003
238	19.83	0.07	0.020	(0.090)	0.018	0.002
239	19.92	0.07	0.020	(0.090)	0.018	0.002
240	20.00	0.07	0.020	(0.090)	0.018	0.002
241	20.08	0.10	0.030	(0.089)	0.027	0.003
242	20.17	0.10	0.030	(0.089)	0.027	0.003
243	20.25	0.10	0.030	(0.088)	0.027	0.003
244	20.33	0.10	0.030	(0.088)	0.027	0.003
245	20.42	0.10	0.030	(0.088)	0.027	0.003
246	20.50	0.10	0.030	(0.087)	0.027	0.003
247	20.58	0.10	0.030	(0.087)	0.027	0.003
248	20.67	0.10	0.030	(0.086)	0.027	0.003
249	20.75	0.10	0.030	(0.086)	0.027	0.003
250	20.83	0.07	0.020	(0.086)	0.018	0.002
251	20.92	0.07	0.020	(0.085)	0.018	0.002
252	21.00	0.07	0.020	(0.085)	0.018	0.002
253	21.08	0.10	0.030	(0.085)	0.027	0.003
254	21.17	0.10	0.030	(0.084)	0.027	0.003
255	21.25	0.10	0.030	(0.084)	0.027	0.003
256	21.33	0.07	0.020	(0.084)	0.018	0.002
257	21.42	0.07	0.020	(0.083)	0.018	0.002
258	21.50	0.07	0.020	(0.083)	0.018	0.002
259	21.58	0.10	0.030	(0.083)	0.027	0.003
260	21.67	0.10	0.030	(0.083)	0.027	0.003
261	21.75	0.10	0.030	(0.082)	0.027	0.003
262	21.83	0.07	0.020	(0.082)	0.018	0.002
263	21.92	0.07	0.020	(0.082)	0.018	0.002
264	22.00	0.07	0.020	(0.081)	0.018	0.002
265	22.08	0.10	0.030	(0.081)	0.027	0.003
266	22.17	0.10	0.030	(0.081)	0.027	0.003
267	22.25	0.10	0.030	(0.081)	0.027	0.003
268	22.33	0.07	0.020	(0.080)	0.018	0.002

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269  22.42     0.07      0.020       (  0.080)       0.018        0.002
270  22.50     0.07      0.020       (  0.080)       0.018        0.002
271  22.58     0.07      0.020       (  0.080)       0.018        0.002
272  22.67     0.07      0.020       (  0.079)       0.018        0.002
273  22.75     0.07      0.020       (  0.079)       0.018        0.002
274  22.83     0.07      0.020       (  0.079)       0.018        0.002
275  22.92     0.07      0.020       (  0.079)       0.018        0.002
276  23.00     0.07      0.020       (  0.079)       0.018        0.002
277  23.08     0.07      0.020       (  0.078)       0.018        0.002
278  23.17     0.07      0.020       (  0.078)       0.018        0.002
279  23.25     0.07      0.020       (  0.078)       0.018        0.002
280  23.33     0.07      0.020       (  0.078)       0.018        0.002
281  23.42     0.07      0.020       (  0.078)       0.018        0.002
282  23.50     0.07      0.020       (  0.078)       0.018        0.002
283  23.58     0.07      0.020       (  0.078)       0.018        0.002
284  23.67     0.07      0.020       (  0.077)       0.018        0.002
285  23.75     0.07      0.020       (  0.077)       0.018        0.002
286  23.83     0.07      0.020       (  0.077)       0.018        0.002
287  23.92     0.07      0.020       (  0.077)       0.018        0.002
288  24.00     0.07      0.020       (  0.077)       0.018        0.002
                (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     8.8
       Flood volume = Effective rainfall      0.73(In)
        times area       8.3(Ac.)/[(In)/(Ft.)] =       0.5(Ac.Ft)
       Total soil loss =      1.81(In)
       Total soil loss =     1.248(Ac.Ft)
       Total rainfall =      2.54(In)
       Flood volume =       22076.6 Cubic Feet
       Total soil loss =       54357.6 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =      1.780(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0001      0.01  Q         |         |         |         |
   0+10       0.0002      0.02  Q         |         |         |         |
   0+15       0.0003      0.02  Q         |         |         |         |
   0+20       0.0004      0.02  Q         |         |         |         |
   0+25       0.0006      0.02  Q         |         |         |         |
   0+30       0.0008      0.03  Q         |         |         |         |
   0+35       0.0009      0.03  Q         |         |         |         |
   0+40       0.0011      0.03  Q         |         |         |         |
   0+45       0.0013      0.03  Q         |         |         |         |
   0+50       0.0015      0.03  Q         |         |         |         |
   0+55       0.0017      0.03  Q         |         |         |         |
   1+ 0       0.0019      0.03  Q         |         |         |         |
   1+ 5       0.0022      0.03  Q         |         |         |         |
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1+10	0.0023	0.03	Q				
1+15	0.0025	0.03	Q				
1+20	0.0027	0.03	Q				
1+25	0.0029	0.03	Q				
1+30	0.0030	0.03	Q				
1+35	0.0032	0.03	Q				
1+40	0.0034	0.03	Q				
1+45	0.0036	0.03	Q				
1+50	0.0038	0.03	Q				
1+55	0.0040	0.03	Q				
2+ 0	0.0042	0.03	Q				
2+ 5	0.0045	0.03	Q				
2+10	0.0047	0.03	Q				
2+15	0.0049	0.03	Q				
2+20	0.0052	0.03	Q				
2+25	0.0054	0.03	Q				
2+30	0.0056	0.03	Q				
2+35	0.0059	0.04	Q				
2+40	0.0062	0.04	Q				
2+45	0.0065	0.04	Q				
2+50	0.0068	0.04	Q				
2+55	0.0071	0.04	Q				
3+ 0	0.0073	0.04	Q				
3+ 5	0.0076	0.04	Q				
3+10	0.0079	0.04	Q				
3+15	0.0082	0.04	Q				
3+20	0.0085	0.04	Q				
3+25	0.0088	0.04	Q				
3+30	0.0091	0.04	Q				
3+35	0.0094	0.04	Q				
3+40	0.0097	0.04	Q				
3+45	0.0100	0.04	Q				
3+50	0.0103	0.05	Q				
3+55	0.0106	0.05	Q				
4+ 0	0.0110	0.05	Q				
4+ 5	0.0113	0.05	Q				
4+10	0.0117	0.05	Q				
4+15	0.0120	0.05	Q				
4+20	0.0124	0.05	Q				
4+25	0.0128	0.06	QV				
4+30	0.0132	0.06	QV				
4+35	0.0136	0.06	QV				
4+40	0.0140	0.06	QV				
4+45	0.0145	0.06	QV				
4+50	0.0149	0.06	QV				
4+55	0.0154	0.07	QV				
5+ 0	0.0158	0.07	QV				
5+ 5	0.0162	0.06	QV				
5+10	0.0166	0.05	QV				
5+15	0.0170	0.05	QV				
5+20	0.0173	0.05	QV				
5+25	0.0177	0.06	QV				
5+30	0.0181	0.06	QV				
5+35	0.0186	0.06	QV				

5+40	0.0190	0.07	QV	|	|	|	|
5+45	0.0195	0.07	QV	|	|	|	|
5+50	0.0200	0.07	QV	|	|	|	|
5+55	0.0204	0.07	QV	|	|	|	|
6+ 0	0.0209	0.07	QV	|	|	|	|
6+ 5	0.0214	0.07	QV	|	|	|	|
6+10	0.0219	0.08	QV	|	|	|	|
6+15	0.0225	0.08	QV	|	|	|	|
6+20	0.0230	0.08	QV	|	|	|	|
6+25	0.0235	0.08	QV	|	|	|	|
6+30	0.0240	0.08	QV	|	|	|	|
6+35	0.0246	0.08	QV	|	|	|	|
6+40	0.0252	0.08	QV	|	|	|	|
6+45	0.0257	0.08	Q V	|	|	|	|
6+50	0.0263	0.08	Q V	|	|	|	|
6+55	0.0269	0.08	Q V	|	|	|	|
7+ 0	0.0275	0.08	Q V	|	|	|	|
7+ 5	0.0281	0.08	Q V	|	|	|	|
7+10	0.0287	0.08	Q V	|	|	|	|
7+15	0.0293	0.08	Q V	|	|	|	|
7+20	0.0299	0.09	Q V	|	|	|	|
7+25	0.0305	0.09	Q V	|	|	|	|
7+30	0.0311	0.09	Q V	|	|	|	|
7+35	0.0318	0.10	Q V	|	|	|	|
7+40	0.0325	0.10	Q V	|	|	|	|
7+45	0.0332	0.10	Q V	|	|	|	|
7+50	0.0339	0.11	Q V	|	|	|	|
7+55	0.0347	0.11	Q V	|	|	|	|
8+ 0	0.0355	0.11	Q V	|	|	|	|
8+ 5	0.0363	0.12	Q V	|	|	|	|
8+10	0.0371	0.13	Q V	|	|	|	|
8+15	0.0380	0.13	Q V	|	|	|	|
8+20	0.0389	0.13	Q V	|	|	|	|
8+25	0.0398	0.13	Q V	|	|	|	|
8+30	0.0406	0.13	Q V	|	|	|	|
8+35	0.0415	0.13	Q V	|	|	|	|
8+40	0.0425	0.13	Q V	|	|	|	|
8+45	0.0434	0.14	Q V	|	|	|	|
8+50	0.0444	0.14	Q V	|	|	|	|
8+55	0.0454	0.14	Q V	|	|	|	|
9+ 0	0.0463	0.14	Q V	|	|	|	|
9+ 5	0.0474	0.16	Q V	|	|	|	|
9+10	0.0487	0.18	Q V	|	|	|	|
9+15	0.0500	0.19	Q V	|	|	|	|
9+20	0.0516	0.23	Q V	|	|	|	|
9+25	0.0535	0.28	|Q V	|	|	|	|
9+30	0.0555	0.29	|Q V	|	|	|	|
9+35	0.0578	0.34	|Q V	|	|	|	|
9+40	0.0604	0.38	|Q V	|	|	|	|
9+45	0.0632	0.40	|Q V	|	|	|	|
9+50	0.0662	0.44	|Q V	|	|	|	|
9+55	0.0696	0.49	|Q V	|	|	|	|
10+ 0	0.0730	0.50	| Q V	|	|	|	|
10+ 5	0.0753	0.33	|Q V	|	|	|	|



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14+40       0.3846      1.18  |   Q     |         |         V         |
14+45       0.3927      1.18  |   Q     |         |         V         |
14+50       0.4006      1.15  |   Q     |         |         |V        |
14+55       0.4083      1.12  |   Q     |         |         | V       |
15+ 0       0.4160      1.12  |   Q     |         |         | V       |
15+ 5       0.4235      1.08  |   Q     |         |         |  V      |
15+10       0.4307      1.05  |   Q     |         |         |  V      |
15+15       0.4379      1.05  |   Q     |         |         |   V     |
15+20       0.4448      1.01  |   Q     |         |         |    V    |
15+25       0.4516      0.98  |  Q      |         |         |    V    |
15+30       0.4583      0.98  |  Q      |         |         |     V   |
15+35       0.4640      0.82  |  Q      |         |         |     V   |
15+40       0.4687      0.68  | Q       |         |         |     V   |
15+45       0.4732      0.66  | Q       |         |         |      V  |
15+50       0.4777      0.65  | Q       |         |         |      V  |
15+55       0.4823      0.66  | Q       |         |         |       V |
16+ 0       0.4868      0.66  | Q       |         |         |       V |
16+ 5       0.4894      0.37  |Q        |         |         |       V |
16+10       0.4901      0.11  Q         |         |         |       V |
16+15       0.4905      0.06  Q         |         |         |       V |
16+20       0.4907      0.03  Q         |         |         |       V |
16+25       0.4910      0.03  Q         |         |         |       V |
16+30       0.4912      0.03  Q         |         |         |       V |
16+35       0.4914      0.03  Q         |         |         |       V |
16+40       0.4916      0.03  Q         |         |         |       V |
16+45       0.4918      0.03  Q         |         |         |       V |
16+50       0.4919      0.03  Q         |         |         |       V |
16+55       0.4921      0.03  Q         |         |         |       V |
17+ 0       0.4923      0.03  Q         |         |         |       V |
17+ 5       0.4925      0.03  Q         |         |         |       V |
17+10       0.4928      0.04  Q         |         |         |       V |
17+15       0.4931      0.04  Q         |         |         |       V |
17+20       0.4934      0.04  Q         |         |         |       V |
17+25       0.4937      0.04  Q         |         |         |       V |
17+30       0.4940      0.04  Q         |         |         |       V |
17+35       0.4943      0.04  Q         |         |         |        V|
17+40       0.4946      0.04  Q         |         |         |        V|
17+45       0.4949      0.04  Q         |         |         |        V|
17+50       0.4951      0.04  Q         |         |         |        V|
17+55       0.4954      0.03  Q         |         |         |        V|
18+ 0       0.4956      0.03  Q         |         |         |        V|
18+ 5       0.4958      0.03  Q         |         |         |        V|
18+10       0.4961      0.03  Q         |         |         |        V|
18+15       0.4963      0.03  Q         |         |         |        V|
18+20       0.4965      0.03  Q         |         |         |        V|
18+25       0.4968      0.03  Q         |         |         |        V|
18+30       0.4970      0.03  Q         |         |         |        V|
18+35       0.4972      0.03  Q         |         |         |        V|
18+40       0.4974      0.03  Q         |         |         |        V|
18+45       0.4976      0.03  Q         |         |         |        V|
18+50       0.4977      0.02  Q         |         |         |        V|
18+55       0.4978      0.02  Q         |         |         |        V|
19+ 0       0.4980      0.02  Q         |         |         |        V|
19+ 5       0.4981      0.02  Q         |         |         |        V|
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19+10	0.4983	0.02	Q	|	|	|	V|
19+15	0.4984	0.03	Q	|	|	|	V|
19+20	0.4986	0.03	Q	|	|	|	V|
19+25	0.4989	0.03	Q	|	|	|	V|
19+30	0.4991	0.03	Q	|	|	|	V|
19+35	0.4993	0.03	Q	|	|	|	V|
19+40	0.4995	0.03	Q	|	|	|	V|
19+45	0.4997	0.03	Q	|	|	|	V|
19+50	0.4998	0.02	Q	|	|	|	V|
19+55	0.4999	0.02	Q	|	|	|	V|
20+ 0	0.5001	0.02	Q	|	|	|	V|
20+ 5	0.5002	0.02	Q	|	|	|	V|
20+10	0.5004	0.02	Q	|	|	|	V|
20+15	0.5005	0.03	Q	|	|	|	V|
20+20	0.5007	0.03	Q	|	|	|	V|
20+25	0.5009	0.03	Q	|	|	|	V|
20+30	0.5011	0.03	Q	|	|	|	V|
20+35	0.5012	0.03	Q	|	|	|	V|
20+40	0.5014	0.03	Q	|	|	|	V|
20+45	0.5016	0.03	Q	|	|	|	V|
20+50	0.5017	0.02	Q	|	|	|	V|
20+55	0.5019	0.02	Q	|	|	|	V|
21+ 0	0.5020	0.02	Q	|	|	|	V|
21+ 5	0.5021	0.02	Q	|	|	|	V|
21+10	0.5023	0.02	Q	|	|	|	V|
21+15	0.5025	0.03	Q	|	|	|	V|
21+20	0.5026	0.02	Q	|	|	|	V|
21+25	0.5027	0.02	Q	|	|	|	V|
21+30	0.5029	0.02	Q	|	|	|	V|
21+35	0.5030	0.02	Q	|	|	|	V|
21+40	0.5032	0.02	Q	|	|	|	V|
21+45	0.5034	0.03	Q	|	|	|	V|
21+50	0.5035	0.02	Q	|	|	|	V|
21+55	0.5036	0.02	Q	|	|	|	V|
22+ 0	0.5037	0.02	Q	|	|	|	V|
22+ 5	0.5039	0.02	Q	|	|	|	V|
22+10	0.5041	0.02	Q	|	|	|	V|
22+15	0.5042	0.03	Q	|	|	|	V|
22+20	0.5044	0.02	Q	|	|	|	V|
22+25	0.5045	0.02	Q	|	|	|	V|
22+30	0.5046	0.02	Q	|	|	|	V|
22+35	0.5047	0.02	Q	|	|	|	V|
22+40	0.5049	0.02	Q	|	|	|	V|
22+45	0.5050	0.02	Q	|	|	|	V|
22+50	0.5051	0.02	Q	|	|	|	V|
22+55	0.5052	0.02	Q	|	|	|	V|
23+ 0	0.5053	0.02	Q	|	|	|	V|
23+ 5	0.5054	0.02	Q	|	|	|	V|
23+10	0.5056	0.02	Q	|	|	|	V|
23+15	0.5057	0.02	Q	|	|	|	V|
23+20	0.5058	0.02	Q	|	|	|	V|
23+25	0.5059	0.02	Q	|	|	|	V|
23+30	0.5060	0.02	Q	|	|	|	V|
23+35	0.5061	0.02	Q	|	|	|	V|

```
   23+40       0.5063      0.02  Q          |          |          |         V|
   23+45       0.5064      0.02  Q          |          |          |         V|
   23+50       0.5065      0.02  Q          |          |          |         V|
   23+55       0.5066      0.02  Q          |          |          |         V|
   24+ 0       0.5067      0.02  Q          |          |          |         V|
   24+ 5       0.5068      0.01  Q          |          |          |         V|
   24+10       0.5068      0.00  Q          |          |          |         V|
   24+15       0.5068      0.00  Q          |          |          |          V
-------------------------------------------------------------------------------
```

U n i t H y d r o g r a p h A n a l y s i s

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Study date 05/03/23 File: Area1600242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

BEAUMONT POINTE
DMA 1600
UNDEVELOPED CONDITION

Drainage Area = 47.25(Ac.) = 0.074 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 47.25(Ac.) = 0.074 Sq. Mi.
Length along longest watercourse = 1979.30(Ft.)
Length along longest watercourse measured to centroid = 934.60(Ft.)
Length along longest watercourse = 0.375 Mi.
Length along longest watercourse measured to centroid = 0.177 Mi.
Difference in elevation = 190.00(Ft.)
Slope along watercourse = 506.8459 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.079 Hr.
Lag time = 4.72 Min.
25% of lag time = 1.18 Min.
40% of lag time = 1.89 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

```
Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       47.25            2.54                 120.02

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       47.25            6.18                 292.01

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.540(In)
Area Averaged 100-Year Rainfall =    6.180(In)

Point rain (area averaged) =    2.540(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    2.540(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    47.250           75.10          0.000
 Total Area Entered =     47.25(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-3     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
75.1  88.1      0.152     0.000        0.152       1.000      0.152
                                                 Sum (F) =   0.152
Area averaged mean soil loss (F) (In/Hr) =  0.152
Minimum soil loss rate ((In/Hr)) =  0.076
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        105.950         21.018             10.008
    2   0.167        211.901         48.733             23.206
    3   0.250        317.851         14.803              7.049
    4   0.333        423.801          6.752              3.215
    5   0.417        529.752          3.757              1.789
    6   0.500        635.702          2.394              1.140
    7   0.583        741.652          1.426              0.679
    8   0.667        847.603          1.117              0.532
                              Sum = 100.000   Sum=      47.619
------------------------------------------------------------------------

 The following loss rate calculations reflect use of the minimum calculated
```

loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.020	(0.270)		0.018	0.002
2	0.17	0.07	0.020	(0.269)		0.018	0.002
3	0.25	0.07	0.020	(0.268)		0.018	0.002
4	0.33	0.10	0.030	(0.267)		0.027	0.003
5	0.42	0.10	0.030	(0.266)		0.027	0.003
6	0.50	0.10	0.030	(0.264)		0.027	0.003
7	0.58	0.10	0.030	(0.263)		0.027	0.003
8	0.67	0.10	0.030	(0.262)		0.027	0.003
9	0.75	0.10	0.030	(0.261)		0.027	0.003
10	0.83	0.13	0.041	(0.260)		0.037	0.004
11	0.92	0.13	0.041	(0.259)		0.037	0.004
12	1.00	0.13	0.041	(0.258)		0.037	0.004
13	1.08	0.10	0.030	(0.257)		0.027	0.003
14	1.17	0.10	0.030	(0.256)		0.027	0.003
15	1.25	0.10	0.030	(0.255)		0.027	0.003
16	1.33	0.10	0.030	(0.254)		0.027	0.003
17	1.42	0.10	0.030	(0.253)		0.027	0.003
18	1.50	0.10	0.030	(0.252)		0.027	0.003
19	1.58	0.10	0.030	(0.251)		0.027	0.003
20	1.67	0.10	0.030	(0.250)		0.027	0.003
21	1.75	0.10	0.030	(0.249)		0.027	0.003
22	1.83	0.13	0.041	(0.248)		0.037	0.004
23	1.92	0.13	0.041	(0.247)		0.037	0.004
24	2.00	0.13	0.041	(0.246)		0.037	0.004
25	2.08	0.13	0.041	(0.245)		0.037	0.004
26	2.17	0.13	0.041	(0.244)		0.037	0.004
27	2.25	0.13	0.041	(0.243)		0.037	0.004
28	2.33	0.13	0.041	(0.242)		0.037	0.004
29	2.42	0.13	0.041	(0.241)		0.037	0.004
30	2.50	0.13	0.041	(0.240)		0.037	0.004
31	2.58	0.17	0.051	(0.239)		0.046	0.005
32	2.67	0.17	0.051	(0.238)		0.046	0.005
33	2.75	0.17	0.051	(0.237)		0.046	0.005
34	2.83	0.17	0.051	(0.236)		0.046	0.005
35	2.92	0.17	0.051	(0.235)		0.046	0.005
36	3.00	0.17	0.051	(0.234)		0.046	0.005
37	3.08	0.17	0.051	(0.233)		0.046	0.005
38	3.17	0.17	0.051	(0.232)		0.046	0.005
39	3.25	0.17	0.051	(0.231)		0.046	0.005
40	3.33	0.17	0.051	(0.231)		0.046	0.005
41	3.42	0.17	0.051	(0.230)		0.046	0.005
42	3.50	0.17	0.051	(0.229)		0.046	0.005
43	3.58	0.17	0.051	(0.228)		0.046	0.005
44	3.67	0.17	0.051	(0.227)		0.046	0.005
45	3.75	0.17	0.051	(0.226)		0.046	0.005
46	3.83	0.20	0.061	(0.225)		0.055	0.006
47	3.92	0.20	0.061	(0.224)		0.055	0.006
48	4.00	0.20	0.061	(0.223)		0.055	0.006

49	4.08	0.20	0.061	(0.222)	0.055	0.006
50	4.17	0.20	0.061	(0.221)	0.055	0.006
51	4.25	0.20	0.061	(0.220)	0.055	0.006
52	4.33	0.23	0.071	(0.219)	0.064	0.007
53	4.42	0.23	0.071	(0.218)	0.064	0.007
54	4.50	0.23	0.071	(0.217)	0.064	0.007
55	4.58	0.23	0.071	(0.216)	0.064	0.007
56	4.67	0.23	0.071	(0.215)	0.064	0.007
57	4.75	0.23	0.071	(0.214)	0.064	0.007
58	4.83	0.27	0.081	(0.214)	0.073	0.008
59	4.92	0.27	0.081	(0.213)	0.073	0.008
60	5.00	0.27	0.081	(0.212)	0.073	0.008
61	5.08	0.20	0.061	(0.211)	0.055	0.006
62	5.17	0.20	0.061	(0.210)	0.055	0.006
63	5.25	0.20	0.061	(0.209)	0.055	0.006
64	5.33	0.23	0.071	(0.208)	0.064	0.007
65	5.42	0.23	0.071	(0.207)	0.064	0.007
66	5.50	0.23	0.071	(0.206)	0.064	0.007
67	5.58	0.27	0.081	(0.205)	0.073	0.008
68	5.67	0.27	0.081	(0.204)	0.073	0.008
69	5.75	0.27	0.081	(0.203)	0.073	0.008
70	5.83	0.27	0.081	(0.203)	0.073	0.008
71	5.92	0.27	0.081	(0.202)	0.073	0.008
72	6.00	0.27	0.081	(0.201)	0.073	0.008
73	6.08	0.30	0.091	(0.200)	0.082	0.009
74	6.17	0.30	0.091	(0.199)	0.082	0.009
75	6.25	0.30	0.091	(0.198)	0.082	0.009
76	6.33	0.30	0.091	(0.197)	0.082	0.009
77	6.42	0.30	0.091	(0.196)	0.082	0.009
78	6.50	0.30	0.091	(0.195)	0.082	0.009
79	6.58	0.33	0.102	(0.195)	0.091	0.010
80	6.67	0.33	0.102	(0.194)	0.091	0.010
81	6.75	0.33	0.102	(0.193)	0.091	0.010
82	6.83	0.33	0.102	(0.192)	0.091	0.010
83	6.92	0.33	0.102	(0.191)	0.091	0.010
84	7.00	0.33	0.102	(0.190)	0.091	0.010
85	7.08	0.33	0.102	(0.189)	0.091	0.010
86	7.17	0.33	0.102	(0.189)	0.091	0.010
87	7.25	0.33	0.102	(0.188)	0.091	0.010
88	7.33	0.37	0.112	(0.187)	0.101	0.011
89	7.42	0.37	0.112	(0.186)	0.101	0.011
90	7.50	0.37	0.112	(0.185)	0.101	0.011
91	7.58	0.40	0.122	(0.184)	0.110	0.012
92	7.67	0.40	0.122	(0.183)	0.110	0.012
93	7.75	0.40	0.122	(0.183)	0.110	0.012
94	7.83	0.43	0.132	(0.182)	0.119	0.013
95	7.92	0.43	0.132	(0.181)	0.119	0.013
96	8.00	0.43	0.132	(0.180)	0.119	0.013
97	8.08	0.50	0.152	(0.179)	0.137	0.015
98	8.17	0.50	0.152	(0.178)	0.137	0.015
99	8.25	0.50	0.152	(0.178)	0.137	0.015
100	8.33	0.50	0.152	(0.177)	0.137	0.015
101	8.42	0.50	0.152	(0.176)	0.137	0.015
102	8.50	0.50	0.152	(0.175)	0.137	0.015

103	8.58	0.53	0.163	(0.174)	0.146	0.016
104	8.67	0.53	0.163	(0.173)	0.146	0.016
105	8.75	0.53	0.163	(0.173)	0.146	0.016
106	8.83	0.57	0.173	(0.172)	0.155	0.017
107	8.92	0.57	0.173	(0.171)	0.155	0.017
108	9.00	0.57	0.173	(0.170)	0.155	0.017
109	9.08	0.63	0.193	0.169	(0.174)	0.024
110	9.17	0.63	0.193	0.169	(0.174)	0.024
111	9.25	0.63	0.193	0.168	(0.174)	0.025
112	9.33	0.67	0.203	0.167	(0.183)	0.036
113	9.42	0.67	0.203	0.166	(0.183)	0.037
114	9.50	0.67	0.203	0.165	(0.183)	0.038
115	9.58	0.70	0.213	0.165	(0.192)	0.049
116	9.67	0.70	0.213	0.164	(0.192)	0.050
117	9.75	0.70	0.213	0.163	(0.192)	0.050
118	9.83	0.73	0.223	0.162	(0.201)	0.061
119	9.92	0.73	0.223	0.161	(0.201)	0.062
120	10.00	0.73	0.223	0.161	(0.201)	0.063
121	10.08	0.50	0.152	(0.160)	0.137	0.015
122	10.17	0.50	0.152	(0.159)	0.137	0.015
123	10.25	0.50	0.152	(0.158)	0.137	0.015
124	10.33	0.50	0.152	(0.158)	0.137	0.015
125	10.42	0.50	0.152	(0.157)	0.137	0.015
126	10.50	0.50	0.152	(0.156)	0.137	0.015
127	10.58	0.67	0.203	0.155	(0.183)	0.048
128	10.67	0.67	0.203	0.154	(0.183)	0.049
129	10.75	0.67	0.203	0.154	(0.183)	0.049
130	10.83	0.67	0.203	0.153	(0.183)	0.050
131	10.92	0.67	0.203	0.152	(0.183)	0.051
132	11.00	0.67	0.203	0.151	(0.183)	0.052
133	11.08	0.63	0.193	0.151	(0.174)	0.042
134	11.17	0.63	0.193	0.150	(0.174)	0.043
135	11.25	0.63	0.193	0.149	(0.174)	0.044
136	11.33	0.63	0.193	0.149	(0.174)	0.045
137	11.42	0.63	0.193	0.148	(0.174)	0.045
138	11.50	0.63	0.193	0.147	(0.174)	0.046
139	11.58	0.57	0.173	0.146	(0.155)	0.026
140	11.67	0.57	0.173	0.146	(0.155)	0.027
141	11.75	0.57	0.173	0.145	(0.155)	0.028
142	11.83	0.60	0.183	0.144	(0.165)	0.039
143	11.92	0.60	0.183	0.143	(0.165)	0.039
144	12.00	0.60	0.183	0.143	(0.165)	0.040
145	12.08	0.83	0.254	0.142	(0.229)	0.112
146	12.17	0.83	0.254	0.141	(0.229)	0.113
147	12.25	0.83	0.254	0.141	(0.229)	0.113
148	12.33	0.87	0.264	0.140	(0.238)	0.124
149	12.42	0.87	0.264	0.139	(0.238)	0.125
150	12.50	0.87	0.264	0.138	(0.238)	0.126
151	12.58	0.93	0.284	0.138	(0.256)	0.147
152	12.67	0.93	0.284	0.137	(0.256)	0.147
153	12.75	0.93	0.284	0.136	(0.256)	0.148
154	12.83	0.97	0.295	0.136	(0.265)	0.159
155	12.92	0.97	0.295	0.135	(0.265)	0.160
156	13.00	0.97	0.295	0.134	(0.265)	0.160

157	13.08	1.13	0.345	0.134	(0.311)	0.212
158	13.17	1.13	0.345	0.133	(0.311)	0.212
159	13.25	1.13	0.345	0.132	(0.311)	0.213
160	13.33	1.13	0.345	0.132	(0.311)	0.214
161	13.42	1.13	0.345	0.131	(0.311)	0.214
162	13.50	1.13	0.345	0.130	(0.311)	0.215
163	13.58	0.77	0.234	0.130	(0.210)	0.104
164	13.67	0.77	0.234	0.129	(0.210)	0.105
165	13.75	0.77	0.234	0.128	(0.210)	0.105
166	13.83	0.77	0.234	0.128	(0.210)	0.106
167	13.92	0.77	0.234	0.127	(0.210)	0.107
168	14.00	0.77	0.234	0.126	(0.210)	0.107
169	14.08	0.90	0.274	0.126	(0.247)	0.149
170	14.17	0.90	0.274	0.125	(0.247)	0.149
171	14.25	0.90	0.274	0.124	(0.247)	0.150
172	14.33	0.87	0.264	0.124	(0.238)	0.140
173	14.42	0.87	0.264	0.123	(0.238)	0.141
174	14.50	0.87	0.264	0.123	(0.238)	0.142
175	14.58	0.87	0.264	0.122	(0.238)	0.142
176	14.67	0.87	0.264	0.121	(0.238)	0.143
177	14.75	0.87	0.264	0.121	(0.238)	0.143
178	14.83	0.83	0.254	0.120	(0.229)	0.134
179	14.92	0.83	0.254	0.119	(0.229)	0.135
180	15.00	0.83	0.254	0.119	(0.229)	0.135
181	15.08	0.80	0.244	0.118	(0.219)	0.126
182	15.17	0.80	0.244	0.118	(0.219)	0.126
183	15.25	0.80	0.244	0.117	(0.219)	0.127
184	15.33	0.77	0.234	0.116	(0.210)	0.117
185	15.42	0.77	0.234	0.116	(0.210)	0.118
186	15.50	0.77	0.234	0.115	(0.210)	0.118
187	15.58	0.63	0.193	0.115	(0.174)	0.078
188	15.67	0.63	0.193	0.114	(0.174)	0.079
189	15.75	0.63	0.193	0.113	(0.174)	0.080
190	15.83	0.63	0.193	0.113	(0.174)	0.080
191	15.92	0.63	0.193	0.112	(0.174)	0.081
192	16.00	0.63	0.193	0.112	(0.174)	0.081
193	16.08	0.13	0.041	(0.111)	0.037	0.004
194	16.17	0.13	0.041	(0.111)	0.037	0.004
195	16.25	0.13	0.041	(0.110)	0.037	0.004
196	16.33	0.13	0.041	(0.109)	0.037	0.004
197	16.42	0.13	0.041	(0.109)	0.037	0.004
198	16.50	0.13	0.041	(0.108)	0.037	0.004
199	16.58	0.10	0.030	(0.108)	0.027	0.003
200	16.67	0.10	0.030	(0.107)	0.027	0.003
201	16.75	0.10	0.030	(0.107)	0.027	0.003
202	16.83	0.10	0.030	(0.106)	0.027	0.003
203	16.92	0.10	0.030	(0.106)	0.027	0.003
204	17.00	0.10	0.030	(0.105)	0.027	0.003
205	17.08	0.17	0.051	(0.105)	0.046	0.005
206	17.17	0.17	0.051	(0.104)	0.046	0.005
207	17.25	0.17	0.051	(0.103)	0.046	0.005
208	17.33	0.17	0.051	(0.103)	0.046	0.005
209	17.42	0.17	0.051	(0.102)	0.046	0.005
210	17.50	0.17	0.051	(0.102)	0.046	0.005

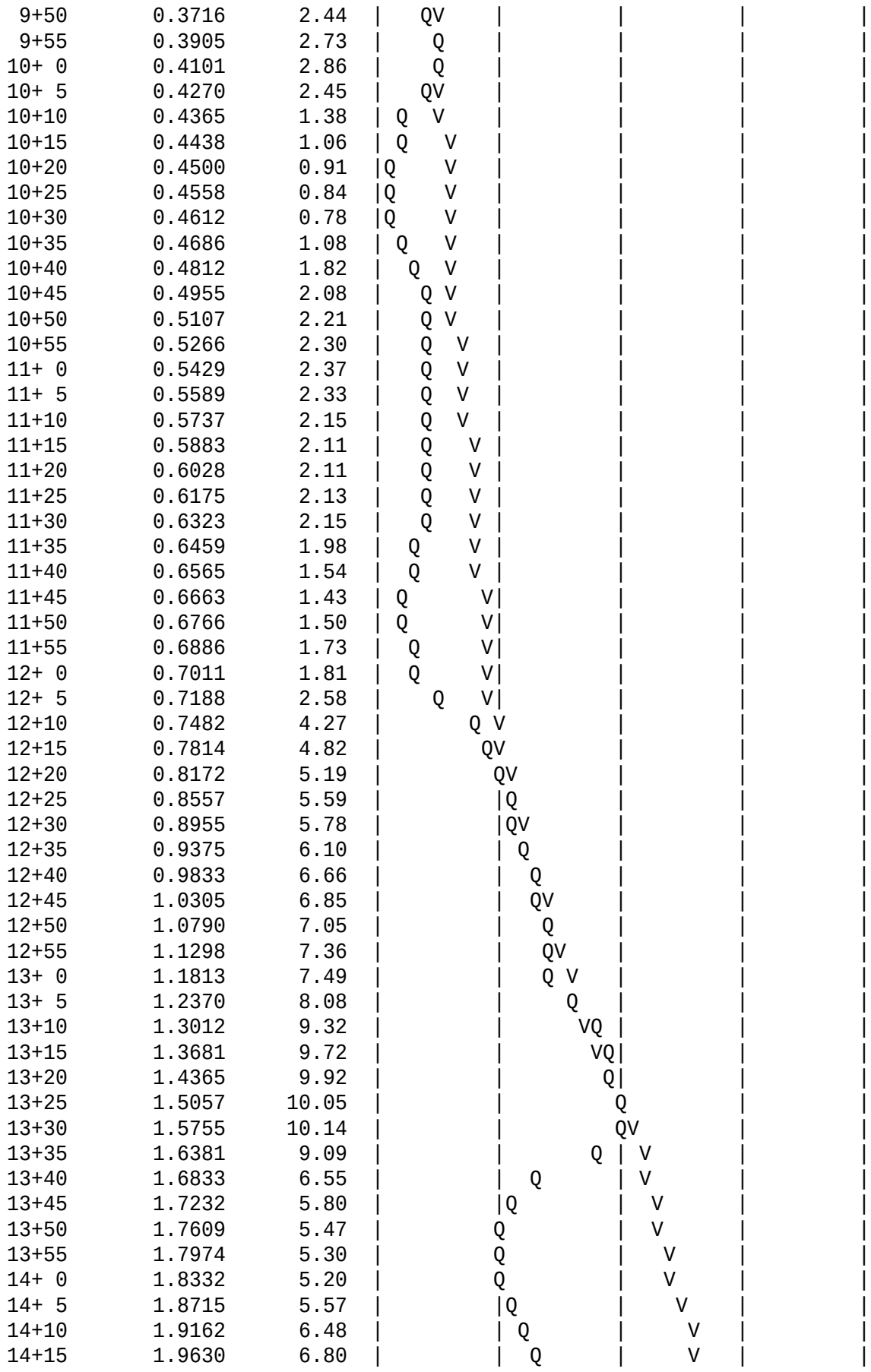
211	17.58	0.17	0.051	(0.101)	0.046	0.005
212	17.67	0.17	0.051	(0.101)	0.046	0.005
213	17.75	0.17	0.051	(0.100)	0.046	0.005
214	17.83	0.13	0.041	(0.100)	0.037	0.004
215	17.92	0.13	0.041	(0.099)	0.037	0.004
216	18.00	0.13	0.041	(0.099)	0.037	0.004
217	18.08	0.13	0.041	(0.098)	0.037	0.004
218	18.17	0.13	0.041	(0.098)	0.037	0.004
219	18.25	0.13	0.041	(0.097)	0.037	0.004
220	18.33	0.13	0.041	(0.097)	0.037	0.004
221	18.42	0.13	0.041	(0.097)	0.037	0.004
222	18.50	0.13	0.041	(0.096)	0.037	0.004
223	18.58	0.10	0.030	(0.096)	0.027	0.003
224	18.67	0.10	0.030	(0.095)	0.027	0.003
225	18.75	0.10	0.030	(0.095)	0.027	0.003
226	18.83	0.07	0.020	(0.094)	0.018	0.002
227	18.92	0.07	0.020	(0.094)	0.018	0.002
228	19.00	0.07	0.020	(0.093)	0.018	0.002
229	19.08	0.10	0.030	(0.093)	0.027	0.003
230	19.17	0.10	0.030	(0.092)	0.027	0.003
231	19.25	0.10	0.030	(0.092)	0.027	0.003
232	19.33	0.13	0.041	(0.092)	0.037	0.004
233	19.42	0.13	0.041	(0.091)	0.037	0.004
234	19.50	0.13	0.041	(0.091)	0.037	0.004
235	19.58	0.10	0.030	(0.090)	0.027	0.003
236	19.67	0.10	0.030	(0.090)	0.027	0.003
237	19.75	0.10	0.030	(0.090)	0.027	0.003
238	19.83	0.07	0.020	(0.089)	0.018	0.002
239	19.92	0.07	0.020	(0.089)	0.018	0.002
240	20.00	0.07	0.020	(0.088)	0.018	0.002
241	20.08	0.10	0.030	(0.088)	0.027	0.003
242	20.17	0.10	0.030	(0.088)	0.027	0.003
243	20.25	0.10	0.030	(0.087)	0.027	0.003
244	20.33	0.10	0.030	(0.087)	0.027	0.003
245	20.42	0.10	0.030	(0.086)	0.027	0.003
246	20.50	0.10	0.030	(0.086)	0.027	0.003
247	20.58	0.10	0.030	(0.086)	0.027	0.003
248	20.67	0.10	0.030	(0.085)	0.027	0.003
249	20.75	0.10	0.030	(0.085)	0.027	0.003
250	20.83	0.07	0.020	(0.085)	0.018	0.002
251	20.92	0.07	0.020	(0.084)	0.018	0.002
252	21.00	0.07	0.020	(0.084)	0.018	0.002
253	21.08	0.10	0.030	(0.084)	0.027	0.003
254	21.17	0.10	0.030	(0.083)	0.027	0.003
255	21.25	0.10	0.030	(0.083)	0.027	0.003
256	21.33	0.07	0.020	(0.083)	0.018	0.002
257	21.42	0.07	0.020	(0.082)	0.018	0.002
258	21.50	0.07	0.020	(0.082)	0.018	0.002
259	21.58	0.10	0.030	(0.082)	0.027	0.003
260	21.67	0.10	0.030	(0.081)	0.027	0.003
261	21.75	0.10	0.030	(0.081)	0.027	0.003
262	21.83	0.07	0.020	(0.081)	0.018	0.002
263	21.92	0.07	0.020	(0.081)	0.018	0.002
264	22.00	0.07	0.020	(0.080)	0.018	0.002

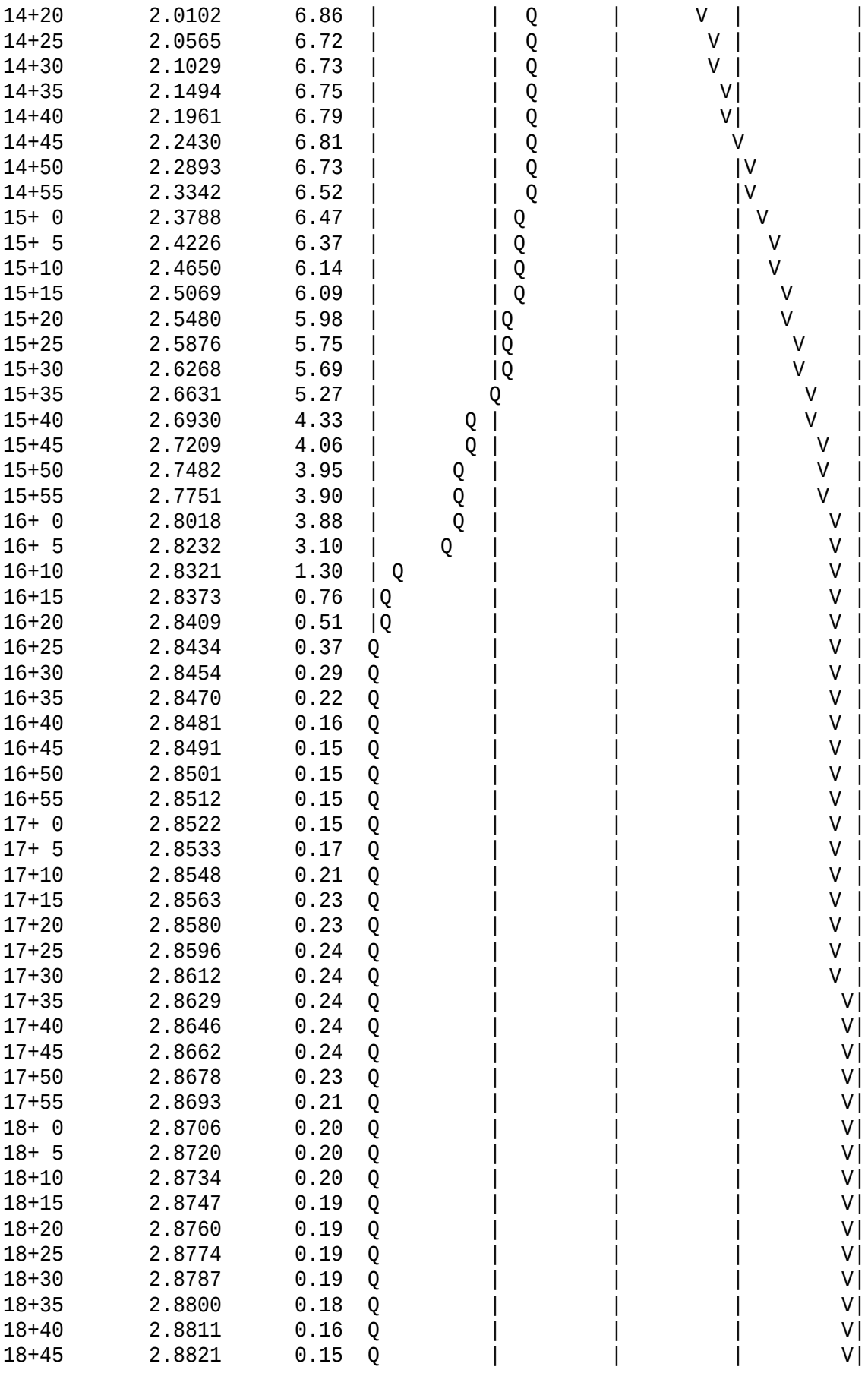
```
265  22.08     0.10      0.030       (  0.080)       0.027        0.003
266  22.17     0.10      0.030       (  0.080)       0.027        0.003
267  22.25     0.10      0.030       (  0.080)       0.027        0.003
268  22.33     0.07      0.020       (  0.079)       0.018        0.002
269  22.42     0.07      0.020       (  0.079)       0.018        0.002
270  22.50     0.07      0.020       (  0.079)       0.018        0.002
271  22.58     0.07      0.020       (  0.079)       0.018        0.002
272  22.67     0.07      0.020       (  0.078)       0.018        0.002
273  22.75     0.07      0.020       (  0.078)       0.018        0.002
274  22.83     0.07      0.020       (  0.078)       0.018        0.002
275  22.92     0.07      0.020       (  0.078)       0.018        0.002
276  23.00     0.07      0.020       (  0.078)       0.018        0.002
277  23.08     0.07      0.020       (  0.077)       0.018        0.002
278  23.17     0.07      0.020       (  0.077)       0.018        0.002
279  23.25     0.07      0.020       (  0.077)       0.018        0.002
280  23.33     0.07      0.020       (  0.077)       0.018        0.002
281  23.42     0.07      0.020       (  0.077)       0.018        0.002
282  23.50     0.07      0.020       (  0.077)       0.018        0.002
283  23.58     0.07      0.020       (  0.076)       0.018        0.002
284  23.67     0.07      0.020       (  0.076)       0.018        0.002
285  23.75     0.07      0.020       (  0.076)       0.018        0.002
286  23.83     0.07      0.020       (  0.076)       0.018        0.002
287  23.92     0.07      0.020       (  0.076)       0.018        0.002
288  24.00     0.07      0.020       (  0.076)       0.018        0.002
                (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     8.9
       Flood volume = Effective rainfall      0.75(In)
        times area      47.3(Ac.)/[(In)/(Ft.)] =      2.9(Ac.Ft)
       Total soil loss =      1.79(In)
       Total soil loss =     7.065(Ac.Ft)
       Total rainfall =      2.54(In)
       Flood volume =      127874.7 Cubic Feet
       Total soil loss =      307739.6 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =     10.142(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                       R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                    Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        5.0      10.0      15.0      20.0
 ---------------------------------------------------------------------------
   0+ 5       0.0001      0.02  Q         |         |         |         |
   0+10       0.0006      0.07  Q         |         |         |         |
   0+15       0.0012      0.08  Q         |         |         |         |
   0+20       0.0018      0.10  Q         |         |         |         |
   0+25       0.0027      0.13  Q         |         |         |         |
   0+30       0.0036      0.14  Q         |         |         |         |
   0+35       0.0046      0.14  Q         |         |         |         |
   0+40       0.0056      0.14  Q         |         |         |         |
   0+45       0.0066      0.14  Q         |         |         |         |
```

0+50	0.0077	0.15	Q				
0+55	0.0089	0.18	Q				
1+ 0	0.0102	0.19	Q				
1+ 5	0.0114	0.18	Q				
1+10	0.0125	0.16	Q				
1+15	0.0135	0.15	Q				
1+20	0.0146	0.15	Q				
1+25	0.0156	0.15	Q				
1+30	0.0166	0.15	Q				
1+35	0.0176	0.15	Q				
1+40	0.0186	0.15	Q				
1+45	0.0196	0.15	Q				
1+50	0.0207	0.16	Q				
1+55	0.0219	0.18	Q				
2+ 0	0.0232	0.19	Q				
2+ 5	0.0245	0.19	Q				
2+10	0.0258	0.19	Q				
2+15	0.0271	0.19	Q				
2+20	0.0284	0.19	Q				
2+25	0.0298	0.19	Q				
2+30	0.0311	0.19	Q				
2+35	0.0325	0.20	Q				
2+40	0.0341	0.23	Q				
2+45	0.0357	0.23	Q				
2+50	0.0373	0.24	Q				
2+55	0.0390	0.24	Q				
3+ 0	0.0406	0.24	Q				
3+ 5	0.0423	0.24	Q				
3+10	0.0440	0.24	Q				
3+15	0.0456	0.24	Q				
3+20	0.0473	0.24	Q				
3+25	0.0490	0.24	Q				
3+30	0.0506	0.24	Q				
3+35	0.0523	0.24	Q				
3+40	0.0540	0.24	Q				
3+45	0.0556	0.24	Q				
3+50	0.0574	0.25	Q				
3+55	0.0593	0.28	Q				
4+ 0	0.0612	0.28	Q				
4+ 5	0.0632	0.29	Q				
4+10	0.0652	0.29	Q				
4+15	0.0672	0.29	Q				
4+20	0.0692	0.30	Q				
4+25	0.0715	0.32	Q				
4+30	0.0737	0.33	QV				
4+35	0.0761	0.33	QV				
4+40	0.0784	0.34	QV				
4+45	0.0807	0.34	QV				
4+50	0.0831	0.35	QV				
4+55	0.0857	0.37	QV				
5+ 0	0.0883	0.38	QV				
5+ 5	0.0908	0.36	QV				
5+10	0.0930	0.32	QV				
5+15	0.0951	0.30	QV				

5+20	0.0972	0.31	QV	|	|	|	|
5+25	0.0994	0.33	QV	|	|	|	|
5+30	0.1017	0.33	QV	|	|	|	|
5+35	0.1041	0.35	QV	|	|	|	|
5+40	0.1067	0.37	QV	|	|	|	|
5+45	0.1093	0.38	QV	|	|	|	|
5+50	0.1119	0.38	QV	|	|	|	|
5+55	0.1146	0.38	QV	|	|	|	|
6+ 0	0.1172	0.39	QV	|	|	|	|
6+ 5	0.1200	0.40	QV	|	|	|	|
6+10	0.1229	0.42	QV	|	|	|	|
6+15	0.1258	0.43	QV	|	|	|	|
6+20	0.1288	0.43	QV	|	|	|	|
6+25	0.1318	0.43	QV	|	|	|	|
6+30	0.1347	0.43	QV	|	|	|	|
6+35	0.1378	0.45	QV	|	|	|	|
6+40	0.1410	0.47	QV	|	|	|	|
6+45	0.1443	0.48	QV	|	|	|	|
6+50	0.1476	0.48	Q V	|	|	|	|
6+55	0.1510	0.48	Q V	|	|	|	|
7+ 0	0.1543	0.48	Q V	|	|	|	|
7+ 5	0.1576	0.48	Q V	|	|	|	|
7+10	0.1609	0.48	Q V	|	|	|	|
7+15	0.1643	0.48	Q V	|	|	|	|
7+20	0.1677	0.49	Q V	|	|	|	|
7+25	0.1712	0.52	|QV	|	|	|	|
7+30	0.1749	0.52	|QV	|	|	|	|
7+35	0.1786	0.54	|QV	|	|	|	|
7+40	0.1824	0.56	|QV	|	|	|	|
7+45	0.1864	0.57	|QV	|	|	|	|
7+50	0.1904	0.59	|QV	|	|	|	|
7+55	0.1946	0.61	|QV	|	|	|	|
8+ 0	0.1989	0.62	|QV	|	|	|	|
8+ 5	0.2034	0.64	|QV	|	|	|	|
8+10	0.2081	0.69	|QV	|	|	|	|
8+15	0.2130	0.71	|QV	|	|	|	|
8+20	0.2180	0.72	|QV	|	|	|	|
8+25	0.2229	0.72	|Q V	|	|	|	|
8+30	0.2279	0.72	|Q V	|	|	|	|
8+35	0.2330	0.74	|Q V	|	|	|	|
8+40	0.2382	0.76	|Q V	|	|	|	|
8+45	0.2435	0.77	|Q V	|	|	|	|
8+50	0.2489	0.78	|Q V	|	|	|	|
8+55	0.2544	0.81	|Q V	|	|	|	|
9+ 0	0.2600	0.81	|Q V	|	|	|	|
9+ 5	0.2661	0.88	|Q V	|	|	|	|
9+10	0.2733	1.04	| QV	|	|	|	|
9+15	0.2809	1.11	| QV	|	|	|	|
9+20	0.2897	1.27	| QV	|	|	|	|
9+25	0.3004	1.55	| QV	|	|	|	|
9+30	0.3119	1.67	| QV	|	|	|	|
9+35	0.3246	1.84	| QV	|	|	|	|
9+40	0.3393	2.14	| Q	|	|	|	|
9+45	0.3548	2.26	| Q	|	|	|	|




14+20 2.0102 6.86
14+25 2.0565 6.72
14+30 2.1029 6.73
14+35 2.1494 6.75
14+40 2.1961 6.79
14+45 2.2430 6.81
14+50 2.2893 6.73
14+55 2.3342 6.52
15+ 0 2.3788 6.47
15+ 5 2.4226 6.37
15+10 2.4650 6.14
15+15 2.5069 6.09
15+20 2.5480 5.98
15+25 2.5876 5.75
15+30 2.6268 5.69
15+35 2.6631 5.27
15+40 2.6930 4.33
15+45 2.7209 4.06
15+50 2.7482 3.95
15+55 2.7751 3.90
16+ 0 2.8018 3.88
16+ 5 2.8232 3.10
16+10 2.8321 1.30
16+15 2.8373 0.76
16+20 2.8409 0.51
16+25 2.8434 0.37
16+30 2.8454 0.29
16+35 2.8470 0.22
16+40 2.8481 0.16
16+45 2.8491 0.15
16+50 2.8501 0.15
16+55 2.8512 0.15
17+ 0 2.8522 0.15
17+ 5 2.8533 0.17
17+10 2.8548 0.21
17+15 2.8563 0.23
17+20 2.8580 0.23
17+25 2.8596 0.24
17+30 2.8612 0.24
17+35 2.8629 0.24
17+40 2.8646 0.24
17+45 2.8662 0.24
17+50 2.8678 0.23
17+55 2.8693 0.21
18+ 0 2.8706 0.20
18+ 5 2.8720 0.20
18+10 2.8734 0.20
18+15 2.8747 0.19
18+20 2.8760 0.19
18+25 2.8774 0.19
18+30 2.8787 0.19
18+35 2.8800 0.18
18+40 2.8811 0.16
18+45 2.8821 0.15

18+50	2.8831	0.14	Q	|	|	|	V|
18+55	2.8839	0.11	Q	|	|	|	V|
19+ 0	2.8846	0.11	Q	|	|	|	V|
19+ 5	2.8854	0.11	Q	|	|	|	V|
19+10	2.8863	0.13	Q	|	|	|	V|
19+15	2.8872	0.14	Q	|	|	|	V|
19+20	2.8883	0.15	Q	|	|	|	V|
19+25	2.8895	0.18	Q	|	|	|	V|
19+30	2.8908	0.18	Q	|	|	|	V|
19+35	2.8920	0.18	Q	|	|	|	V|
19+40	2.8931	0.16	Q	|	|	|	V|
19+45	2.8941	0.15	Q	|	|	|	V|
19+50	2.8951	0.14	Q	|	|	|	V|
19+55	2.8959	0.11	Q	|	|	|	V|
20+ 0	2.8966	0.11	Q	|	|	|	V|
20+ 5	2.8974	0.11	Q	|	|	|	V|
20+10	2.8983	0.13	Q	|	|	|	V|
20+15	2.8992	0.14	Q	|	|	|	V|
20+20	2.9002	0.14	Q	|	|	|	V|
20+25	2.9012	0.14	Q	|	|	|	V|
20+30	2.9022	0.14	Q	|	|	|	V|
20+35	2.9032	0.14	Q	|	|	|	V|
20+40	2.9042	0.15	Q	|	|	|	V|
20+45	2.9052	0.15	Q	|	|	|	V|
20+50	2.9061	0.14	Q	|	|	|	V|
20+55	2.9069	0.11	Q	|	|	|	V|
21+ 0	2.9076	0.10	Q	|	|	|	V|
21+ 5	2.9084	0.11	Q	|	|	|	V|
21+10	2.9093	0.13	Q	|	|	|	V|
21+15	2.9102	0.14	Q	|	|	|	V|
21+20	2.9111	0.13	Q	|	|	|	V|
21+25	2.9119	0.11	Q	|	|	|	V|
21+30	2.9126	0.10	Q	|	|	|	V|
21+35	2.9134	0.11	Q	|	|	|	V|
21+40	2.9143	0.13	Q	|	|	|	V|
21+45	2.9152	0.14	Q	|	|	|	V|
21+50	2.9161	0.13	Q	|	|	|	V|
21+55	2.9169	0.11	Q	|	|	|	V|
22+ 0	2.9176	0.10	Q	|	|	|	V|
22+ 5	2.9184	0.11	Q	|	|	|	V|
22+10	2.9193	0.13	Q	|	|	|	V|
22+15	2.9202	0.14	Q	|	|	|	V|
22+20	2.9211	0.13	Q	|	|	|	V|
22+25	2.9219	0.11	Q	|	|	|	V|
22+30	2.9226	0.10	Q	|	|	|	V|
22+35	2.9233	0.10	Q	|	|	|	V|
22+40	2.9240	0.10	Q	|	|	|	V|
22+45	2.9246	0.10	Q	|	|	|	V|
22+50	2.9253	0.10	Q	|	|	|	V|
22+55	2.9260	0.10	Q	|	|	|	V|
23+ 0	2.9267	0.10	Q	|	|	|	V|
23+ 5	2.9273	0.10	Q	|	|	|	V|
23+10	2.9280	0.10	Q	|	|	|	V|
23+15	2.9287	0.10	Q	|	|	|	V|

23+20	2.9293	0.10	Q	|	|	|	V|
23+25	2.9300	0.10	Q	|	|	|	V|
23+30	2.9307	0.10	Q	|	|	|	V|
23+35	2.9313	0.10	Q	|	|	|	V|
23+40	2.9320	0.10	Q	|	|	|	V|
23+45	2.9327	0.10	Q	|	|	|	V|
23+50	2.9333	0.10	Q	|	|	|	V|
23+55	2.9340	0.10	Q	|	|	|	V|
24+ 0	2.9347	0.10	Q	|	|	|	V|
24+ 5	2.9352	0.08	Q	|	|	|	V|
24+10	2.9354	0.03	Q	|	|	|	V|
24+15	2.9355	0.01	Q	|	|	|	V|
24+20	2.9355	0.01	Q	|	|	|	V|
24+25	2.9356	0.00	Q	|	|	|	V|
24+30	2.9356	0.00	Q	|	|	|	V|
24+35	2.9356	0.00	Q	|	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

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Study date 05/02/23 File: Area01242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

BEAUMONT POINTE
DMA 01
DEVELOPED CONDITION

Drainage Area = 54.80(Ac.) = 0.086 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 54.80(Ac.) = 0.086 Sq. Mi.
Length along longest watercourse = 2544.00(Ft.)
Length along longest watercourse measured to centroid = 1672.10(Ft.)
Length along longest watercourse = 0.482 Mi.
Length along longest watercourse measured to centroid = 0.317 Mi.
Difference in elevation = 18.00(Ft.)
Slope along watercourse = 37.3585 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.089 Hr.
Lag time = 5.31 Min.
25% of lag time = 1.33 Min.
40% of lag time = 2.13 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

```
Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       54.80            2.54                 139.19

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       54.80            6.18                 338.66

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.540(In)
Area Averaged 100-Year Rainfall =    6.180(In)

Point rain (area averaged) =    2.540(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    2.540(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    54.800           69.20         0.344
 Total Area Entered =     54.80(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-3     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.2  84.5      0.192     0.344        0.133       1.000      0.133
                                                 Sum (F) =   0.133
Area averaged mean soil loss (F) (In/Hr) =  0.133
Minimum soil loss rate ((In/Hr)) =  0.066
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.625
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        FOOTHILL S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         94.088         12.433              6.866
    2   0.167        188.177         54.787             30.258
    3   0.250        282.265         19.667             10.862
    4   0.333        376.353          8.109              4.478
    5   0.417        470.442          3.134              1.731
    6   0.500        564.530          0.960              0.530
    7   0.583        658.618          0.630              0.348
    8   0.667        752.707          0.281              0.155
                               Sum = 100.000   Sum=      55.228
------------------------------------------------------------------------

 The following loss rate calculations reflect use of the minimum calculated
```

loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.020	(0.236)	0.013	0.008
2	0.17	0.07	0.020	(0.235)	0.013	0.008
3	0.25	0.07	0.020	(0.234)	0.013	0.008
4	0.33	0.10	0.030	(0.233)	0.019	0.011
5	0.42	0.10	0.030	(0.232)	0.019	0.011
6	0.50	0.10	0.030	(0.231)	0.019	0.011
7	0.58	0.10	0.030	(0.230)	0.019	0.011
8	0.67	0.10	0.030	(0.229)	0.019	0.011
9	0.75	0.10	0.030	(0.228)	0.019	0.011
10	0.83	0.13	0.041	(0.227)	0.025	0.015
11	0.92	0.13	0.041	(0.227)	0.025	0.015
12	1.00	0.13	0.041	(0.226)	0.025	0.015
13	1.08	0.10	0.030	(0.225)	0.019	0.011
14	1.17	0.10	0.030	(0.224)	0.019	0.011
15	1.25	0.10	0.030	(0.223)	0.019	0.011
16	1.33	0.10	0.030	(0.222)	0.019	0.011
17	1.42	0.10	0.030	(0.221)	0.019	0.011
18	1.50	0.10	0.030	(0.220)	0.019	0.011
19	1.58	0.10	0.030	(0.219)	0.019	0.011
20	1.67	0.10	0.030	(0.219)	0.019	0.011
21	1.75	0.10	0.030	(0.218)	0.019	0.011
22	1.83	0.13	0.041	(0.217)	0.025	0.015
23	1.92	0.13	0.041	(0.216)	0.025	0.015
24	2.00	0.13	0.041	(0.215)	0.025	0.015
25	2.08	0.13	0.041	(0.214)	0.025	0.015
26	2.17	0.13	0.041	(0.213)	0.025	0.015
27	2.25	0.13	0.041	(0.212)	0.025	0.015
28	2.33	0.13	0.041	(0.212)	0.025	0.015
29	2.42	0.13	0.041	(0.211)	0.025	0.015
30	2.50	0.13	0.041	(0.210)	0.025	0.015
31	2.58	0.17	0.051	(0.209)	0.032	0.019
32	2.67	0.17	0.051	(0.208)	0.032	0.019
33	2.75	0.17	0.051	(0.207)	0.032	0.019
34	2.83	0.17	0.051	(0.206)	0.032	0.019
35	2.92	0.17	0.051	(0.206)	0.032	0.019
36	3.00	0.17	0.051	(0.205)	0.032	0.019
37	3.08	0.17	0.051	(0.204)	0.032	0.019
38	3.17	0.17	0.051	(0.203)	0.032	0.019
39	3.25	0.17	0.051	(0.202)	0.032	0.019
40	3.33	0.17	0.051	(0.201)	0.032	0.019
41	3.42	0.17	0.051	(0.201)	0.032	0.019
42	3.50	0.17	0.051	(0.200)	0.032	0.019
43	3.58	0.17	0.051	(0.199)	0.032	0.019
44	3.67	0.17	0.051	(0.198)	0.032	0.019
45	3.75	0.17	0.051	(0.197)	0.032	0.019
46	3.83	0.20	0.061	(0.196)	0.038	0.023
47	3.92	0.20	0.061	(0.196)	0.038	0.023
48	4.00	0.20	0.061	(0.195)	0.038	0.023

49	4.08	0.20	0.061	(0.194)	0.038	0.023
50	4.17	0.20	0.061	(0.193)	0.038	0.023
51	4.25	0.20	0.061	(0.192)	0.038	0.023
52	4.33	0.23	0.071	(0.191)	0.044	0.027
53	4.42	0.23	0.071	(0.191)	0.044	0.027
54	4.50	0.23	0.071	(0.190)	0.044	0.027
55	4.58	0.23	0.071	(0.189)	0.044	0.027
56	4.67	0.23	0.071	(0.188)	0.044	0.027
57	4.75	0.23	0.071	(0.187)	0.044	0.027
58	4.83	0.27	0.081	(0.187)	0.051	0.030
59	4.92	0.27	0.081	(0.186)	0.051	0.030
60	5.00	0.27	0.081	(0.185)	0.051	0.030
61	5.08	0.20	0.061	(0.184)	0.038	0.023
62	5.17	0.20	0.061	(0.183)	0.038	0.023
63	5.25	0.20	0.061	(0.183)	0.038	0.023
64	5.33	0.23	0.071	(0.182)	0.044	0.027
65	5.42	0.23	0.071	(0.181)	0.044	0.027
66	5.50	0.23	0.071	(0.180)	0.044	0.027
67	5.58	0.27	0.081	(0.179)	0.051	0.030
68	5.67	0.27	0.081	(0.179)	0.051	0.030
69	5.75	0.27	0.081	(0.178)	0.051	0.030
70	5.83	0.27	0.081	(0.177)	0.051	0.030
71	5.92	0.27	0.081	(0.176)	0.051	0.030
72	6.00	0.27	0.081	(0.175)	0.051	0.030
73	6.08	0.30	0.091	(0.175)	0.057	0.034
74	6.17	0.30	0.091	(0.174)	0.057	0.034
75	6.25	0.30	0.091	(0.173)	0.057	0.034
76	6.33	0.30	0.091	(0.172)	0.057	0.034
77	6.42	0.30	0.091	(0.172)	0.057	0.034
78	6.50	0.30	0.091	(0.171)	0.057	0.034
79	6.58	0.33	0.102	(0.170)	0.063	0.038
80	6.67	0.33	0.102	(0.169)	0.063	0.038
81	6.75	0.33	0.102	(0.168)	0.063	0.038
82	6.83	0.33	0.102	(0.168)	0.063	0.038
83	6.92	0.33	0.102	(0.167)	0.063	0.038
84	7.00	0.33	0.102	(0.166)	0.063	0.038
85	7.08	0.33	0.102	(0.165)	0.063	0.038
86	7.17	0.33	0.102	(0.165)	0.063	0.038
87	7.25	0.33	0.102	(0.164)	0.063	0.038
88	7.33	0.37	0.112	(0.163)	0.070	0.042
89	7.42	0.37	0.112	(0.162)	0.070	0.042
90	7.50	0.37	0.112	(0.162)	0.070	0.042
91	7.58	0.40	0.122	(0.161)	0.076	0.046
92	7.67	0.40	0.122	(0.160)	0.076	0.046
93	7.75	0.40	0.122	(0.159)	0.076	0.046
94	7.83	0.43	0.132	(0.159)	0.083	0.050
95	7.92	0.43	0.132	(0.158)	0.083	0.050
96	8.00	0.43	0.132	(0.157)	0.083	0.050
97	8.08	0.50	0.152	(0.157)	0.095	0.057
98	8.17	0.50	0.152	(0.156)	0.095	0.057
99	8.25	0.50	0.152	(0.155)	0.095	0.057
100	8.33	0.50	0.152	(0.154)	0.095	0.057
101	8.42	0.50	0.152	(0.154)	0.095	0.057
102	8.50	0.50	0.152	(0.153)	0.095	0.057

103	8.58	0.53	0.163	(0.152)	0.102	0.061
104	8.67	0.53	0.163	(0.151)	0.102	0.061
105	8.75	0.53	0.163	(0.151)	0.102	0.061
106	8.83	0.57	0.173	(0.150)	0.108	0.065
107	8.92	0.57	0.173	(0.149)	0.108	0.065
108	9.00	0.57	0.173	(0.149)	0.108	0.065
109	9.08	0.63	0.193	(0.148)	0.121	0.072
110	9.17	0.63	0.193	(0.147)	0.121	0.072
111	9.25	0.63	0.193	(0.147)	0.121	0.072
112	9.33	0.67	0.203	(0.146)	0.127	0.076
113	9.42	0.67	0.203	(0.145)	0.127	0.076
114	9.50	0.67	0.203	(0.144)	0.127	0.076
115	9.58	0.70	0.213	(0.144)	0.133	0.080
116	9.67	0.70	0.213	(0.143)	0.133	0.080
117	9.75	0.70	0.213	(0.142)	0.133	0.080
118	9.83	0.73	0.223	(0.142)	0.140	0.084
119	9.92	0.73	0.223	(0.141)	0.140	0.084
120	10.00	0.73	0.223	(0.140)	0.140	0.084
121	10.08	0.50	0.152	(0.140)	0.095	0.057
122	10.17	0.50	0.152	(0.139)	0.095	0.057
123	10.25	0.50	0.152	(0.138)	0.095	0.057
124	10.33	0.50	0.152	(0.138)	0.095	0.057
125	10.42	0.50	0.152	(0.137)	0.095	0.057
126	10.50	0.50	0.152	(0.136)	0.095	0.057
127	10.58	0.67	0.203	(0.136)	0.127	0.076
128	10.67	0.67	0.203	(0.135)	0.127	0.076
129	10.75	0.67	0.203	(0.134)	0.127	0.076
130	10.83	0.67	0.203	(0.134)	0.127	0.076
131	10.92	0.67	0.203	(0.133)	0.127	0.076
132	11.00	0.67	0.203	(0.132)	0.127	0.076
133	11.08	0.63	0.193	(0.132)	0.121	0.072
134	11.17	0.63	0.193	(0.131)	0.121	0.072
135	11.25	0.63	0.193	(0.130)	0.121	0.072
136	11.33	0.63	0.193	(0.130)	0.121	0.072
137	11.42	0.63	0.193	(0.129)	0.121	0.072
138	11.50	0.63	0.193	(0.128)	0.121	0.072
139	11.58	0.57	0.173	(0.128)	0.108	0.065
140	11.67	0.57	0.173	(0.127)	0.108	0.065
141	11.75	0.57	0.173	(0.127)	0.108	0.065
142	11.83	0.60	0.183	(0.126)	0.114	0.069
143	11.92	0.60	0.183	(0.125)	0.114	0.069
144	12.00	0.60	0.183	(0.125)	0.114	0.069
145	12.08	0.83	0.254	0.124	(0.159)	0.130
146	12.17	0.83	0.254	0.123	(0.159)	0.131
147	12.25	0.83	0.254	0.123	(0.159)	0.131
148	12.33	0.87	0.264	0.122	(0.165)	0.142
149	12.42	0.87	0.264	0.122	(0.165)	0.143
150	12.50	0.87	0.264	0.121	(0.165)	0.143
151	12.58	0.93	0.284	0.120	(0.178)	0.164
152	12.67	0.93	0.284	0.120	(0.178)	0.165
153	12.75	0.93	0.284	0.119	(0.178)	0.165
154	12.83	0.97	0.295	0.119	(0.184)	0.176
155	12.92	0.97	0.295	0.118	(0.184)	0.177
156	13.00	0.97	0.295	0.117	(0.184)	0.177

157	13.08	1.13	0.345	0.117	(0.216)	0.229
158	13.17	1.13	0.345	0.116	(0.216)	0.229
159	13.25	1.13	0.345	0.116	(0.216)	0.230
160	13.33	1.13	0.345	0.115	(0.216)	0.230
161	13.42	1.13	0.345	0.114	(0.216)	0.231
162	13.50	1.13	0.345	0.114	(0.216)	0.232
163	13.58	0.77	0.234	0.113	(0.146)	0.120
164	13.67	0.77	0.234	0.113	(0.146)	0.121
165	13.75	0.77	0.234	0.112	(0.146)	0.122
166	13.83	0.77	0.234	0.112	(0.146)	0.122
167	13.92	0.77	0.234	0.111	(0.146)	0.123
168	14.00	0.77	0.234	0.110	(0.146)	0.123
169	14.08	0.90	0.274	0.110	(0.171)	0.164
170	14.17	0.90	0.274	0.109	(0.171)	0.165
171	14.25	0.90	0.274	0.109	(0.171)	0.166
172	14.33	0.87	0.264	0.108	(0.165)	0.156
173	14.42	0.87	0.264	0.108	(0.165)	0.157
174	14.50	0.87	0.264	0.107	(0.165)	0.157
175	14.58	0.87	0.264	0.106	(0.165)	0.158
176	14.67	0.87	0.264	0.106	(0.165)	0.158
177	14.75	0.87	0.264	0.105	(0.165)	0.159
178	14.83	0.83	0.254	0.105	(0.159)	0.149
179	14.92	0.83	0.254	0.104	(0.159)	0.150
180	15.00	0.83	0.254	0.104	(0.159)	0.150
181	15.08	0.80	0.244	0.103	(0.152)	0.141
182	15.17	0.80	0.244	0.103	(0.152)	0.141
183	15.25	0.80	0.244	0.102	(0.152)	0.142
184	15.33	0.77	0.234	0.102	(0.146)	0.132
185	15.42	0.77	0.234	0.101	(0.146)	0.133
186	15.50	0.77	0.234	0.101	(0.146)	0.133
187	15.58	0.63	0.193	0.100	(0.121)	0.093
188	15.67	0.63	0.193	0.100	(0.121)	0.093
189	15.75	0.63	0.193	0.099	(0.121)	0.094
190	15.83	0.63	0.193	0.099	(0.121)	0.094
191	15.92	0.63	0.193	0.098	(0.121)	0.095
192	16.00	0.63	0.193	0.098	(0.121)	0.095
193	16.08	0.13	0.041	(0.097)	0.025	0.015
194	16.17	0.13	0.041	(0.097)	0.025	0.015
195	16.25	0.13	0.041	(0.096)	0.025	0.015
196	16.33	0.13	0.041	(0.096)	0.025	0.015
197	16.42	0.13	0.041	(0.095)	0.025	0.015
198	16.50	0.13	0.041	(0.095)	0.025	0.015
199	16.58	0.10	0.030	(0.094)	0.019	0.011
200	16.67	0.10	0.030	(0.094)	0.019	0.011
201	16.75	0.10	0.030	(0.093)	0.019	0.011
202	16.83	0.10	0.030	(0.093)	0.019	0.011
203	16.92	0.10	0.030	(0.092)	0.019	0.011
204	17.00	0.10	0.030	(0.092)	0.019	0.011
205	17.08	0.17	0.051	(0.091)	0.032	0.019
206	17.17	0.17	0.051	(0.091)	0.032	0.019
207	17.25	0.17	0.051	(0.090)	0.032	0.019
208	17.33	0.17	0.051	(0.090)	0.032	0.019
209	17.42	0.17	0.051	(0.090)	0.032	0.019
210	17.50	0.17	0.051	(0.089)	0.032	0.019

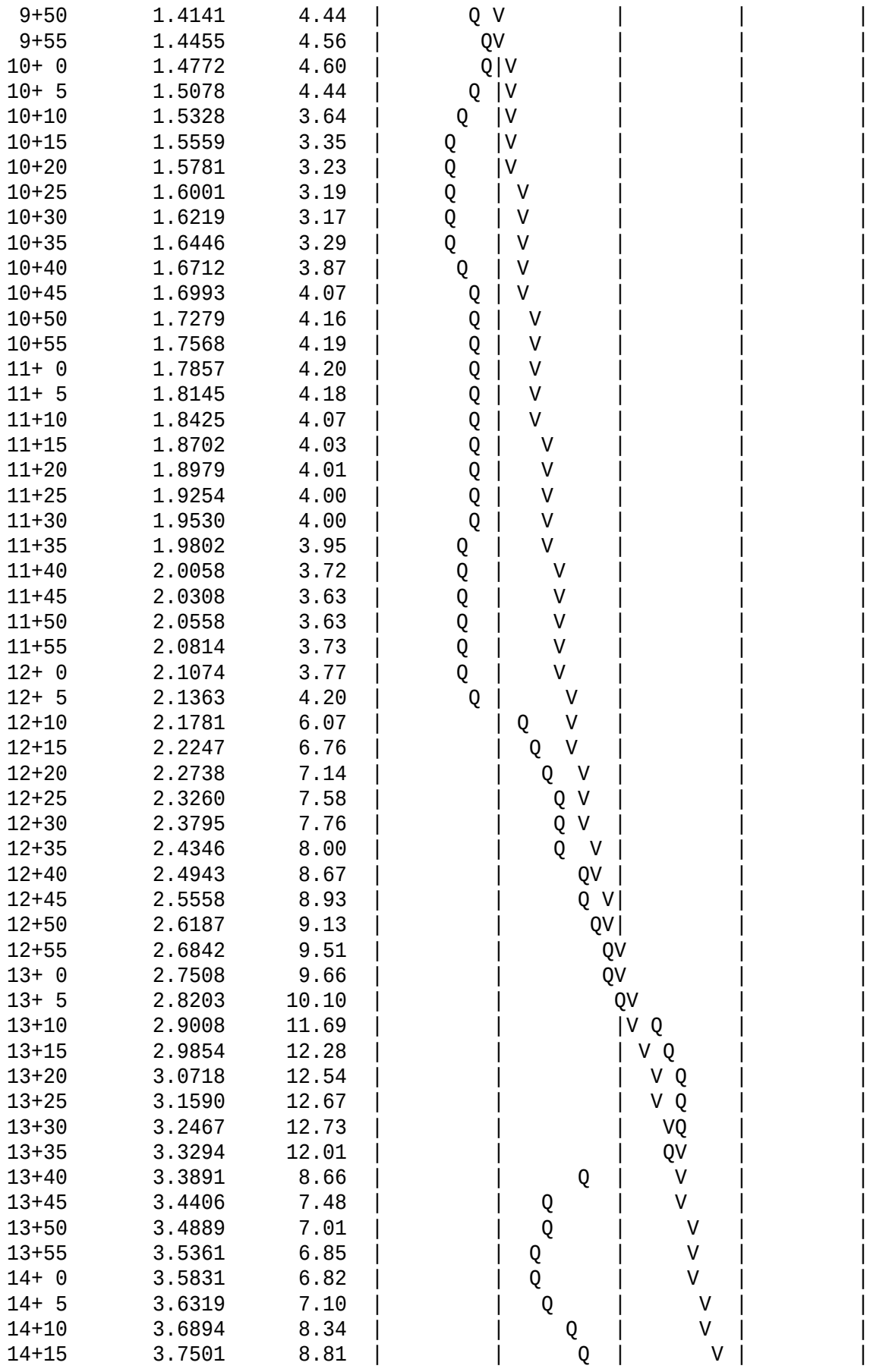
211	17.58	0.17	0.051	(0.089)	0.032	0.019
212	17.67	0.17	0.051	(0.088)	0.032	0.019
213	17.75	0.17	0.051	(0.088)	0.032	0.019
214	17.83	0.13	0.041	(0.087)	0.025	0.015
215	17.92	0.13	0.041	(0.087)	0.025	0.015
216	18.00	0.13	0.041	(0.086)	0.025	0.015
217	18.08	0.13	0.041	(0.086)	0.025	0.015
218	18.17	0.13	0.041	(0.086)	0.025	0.015
219	18.25	0.13	0.041	(0.085)	0.025	0.015
220	18.33	0.13	0.041	(0.085)	0.025	0.015
221	18.42	0.13	0.041	(0.084)	0.025	0.015
222	18.50	0.13	0.041	(0.084)	0.025	0.015
223	18.58	0.10	0.030	(0.084)	0.019	0.011
224	18.67	0.10	0.030	(0.083)	0.019	0.011
225	18.75	0.10	0.030	(0.083)	0.019	0.011
226	18.83	0.07	0.020	(0.082)	0.013	0.008
227	18.92	0.07	0.020	(0.082)	0.013	0.008
228	19.00	0.07	0.020	(0.082)	0.013	0.008
229	19.08	0.10	0.030	(0.081)	0.019	0.011
230	19.17	0.10	0.030	(0.081)	0.019	0.011
231	19.25	0.10	0.030	(0.080)	0.019	0.011
232	19.33	0.13	0.041	(0.080)	0.025	0.015
233	19.42	0.13	0.041	(0.080)	0.025	0.015
234	19.50	0.13	0.041	(0.079)	0.025	0.015
235	19.58	0.10	0.030	(0.079)	0.019	0.011
236	19.67	0.10	0.030	(0.079)	0.019	0.011
237	19.75	0.10	0.030	(0.078)	0.019	0.011
238	19.83	0.07	0.020	(0.078)	0.013	0.008
239	19.92	0.07	0.020	(0.078)	0.013	0.008
240	20.00	0.07	0.020	(0.077)	0.013	0.008
241	20.08	0.10	0.030	(0.077)	0.019	0.011
242	20.17	0.10	0.030	(0.076)	0.019	0.011
243	20.25	0.10	0.030	(0.076)	0.019	0.011
244	20.33	0.10	0.030	(0.076)	0.019	0.011
245	20.42	0.10	0.030	(0.075)	0.019	0.011
246	20.50	0.10	0.030	(0.075)	0.019	0.011
247	20.58	0.10	0.030	(0.075)	0.019	0.011
248	20.67	0.10	0.030	(0.075)	0.019	0.011
249	20.75	0.10	0.030	(0.074)	0.019	0.011
250	20.83	0.07	0.020	(0.074)	0.013	0.008
251	20.92	0.07	0.020	(0.074)	0.013	0.008
252	21.00	0.07	0.020	(0.073)	0.013	0.008
253	21.08	0.10	0.030	(0.073)	0.019	0.011
254	21.17	0.10	0.030	(0.073)	0.019	0.011
255	21.25	0.10	0.030	(0.072)	0.019	0.011
256	21.33	0.07	0.020	(0.072)	0.013	0.008
257	21.42	0.07	0.020	(0.072)	0.013	0.008
258	21.50	0.07	0.020	(0.072)	0.013	0.008
259	21.58	0.10	0.030	(0.071)	0.019	0.011
260	21.67	0.10	0.030	(0.071)	0.019	0.011
261	21.75	0.10	0.030	(0.071)	0.019	0.011
262	21.83	0.07	0.020	(0.071)	0.013	0.008
263	21.92	0.07	0.020	(0.070)	0.013	0.008
264	22.00	0.07	0.020	(0.070)	0.013	0.008

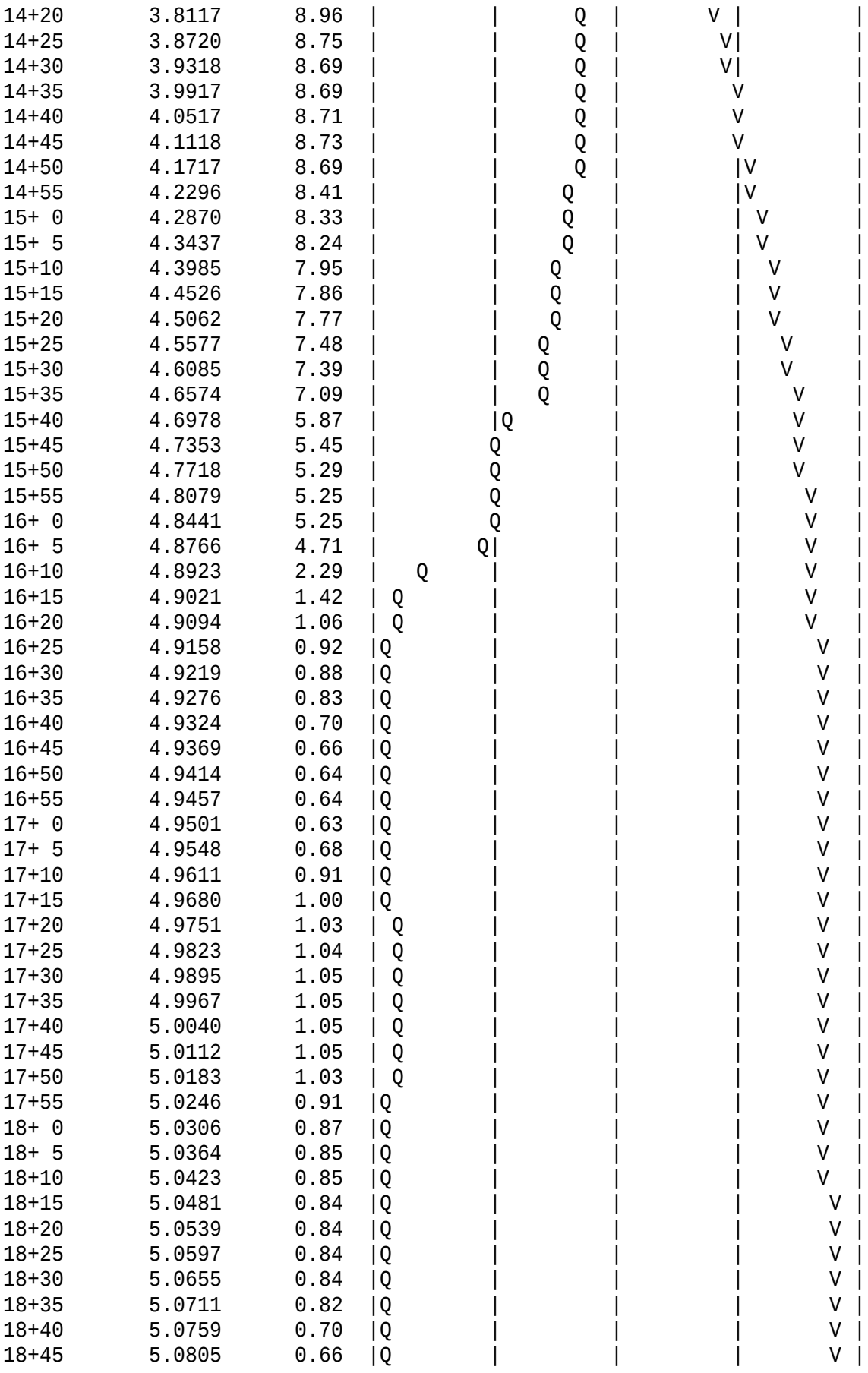
```
265  22.08     0.10      0.030       (  0.070)       0.019        0.011
266  22.17     0.10      0.030       (  0.070)       0.019        0.011
267  22.25     0.10      0.030       (  0.069)       0.019        0.011
268  22.33     0.07      0.020       (  0.069)       0.013        0.008
269  22.42     0.07      0.020       (  0.069)       0.013        0.008
270  22.50     0.07      0.020       (  0.069)       0.013        0.008
271  22.58     0.07      0.020       (  0.069)       0.013        0.008
272  22.67     0.07      0.020       (  0.068)       0.013        0.008
273  22.75     0.07      0.020       (  0.068)       0.013        0.008
274  22.83     0.07      0.020       (  0.068)       0.013        0.008
275  22.92     0.07      0.020       (  0.068)       0.013        0.008
276  23.00     0.07      0.020       (  0.068)       0.013        0.008
277  23.08     0.07      0.020       (  0.068)       0.013        0.008
278  23.17     0.07      0.020       (  0.067)       0.013        0.008
279  23.25     0.07      0.020       (  0.067)       0.013        0.008
280  23.33     0.07      0.020       (  0.067)       0.013        0.008
281  23.42     0.07      0.020       (  0.067)       0.013        0.008
282  23.50     0.07      0.020       (  0.067)       0.013        0.008
283  23.58     0.07      0.020       (  0.067)       0.013        0.008
284  23.67     0.07      0.020       (  0.067)       0.013        0.008
285  23.75     0.07      0.020       (  0.067)       0.013        0.008
286  23.83     0.07      0.020       (  0.067)       0.013        0.008
287  23.92     0.07      0.020       (  0.066)       0.013        0.008
288  24.00     0.07      0.020       (  0.066)       0.013        0.008
                (Loss Rate Not Used)
    Sum =     100.0                                    Sum =    14.0
       Flood volume = Effective rainfall      1.16(In)
        times area      54.8(Ac.)/[(In)/(Ft.)] =       5.3(Ac.Ft)
       Total soil loss =      1.38(In)
       Total soil loss =     6.285(Ac.Ft)
       Total rainfall =      2.54(In)
       Flood volume =      231429.7 Cubic Feet
       Total soil loss =      273783.1 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =     12.725(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                       R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                    Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        5.0      10.0      15.0      20.0
 ---------------------------------------------------------------------------
   0+ 5       0.0004      0.05  Q         |         |         |         |
   0+10       0.0023      0.28  Q         |         |         |         |
   0+15       0.0048      0.37  Q         |         |         |         |
   0+20       0.0078      0.43  Q         |         |         |         |
   0+25       0.0116      0.55  VQ        |         |         |         |
   0+30       0.0157      0.60  VQ        |         |         |         |
   0+35       0.0200      0.62  VQ        |         |         |         |
   0+40       0.0243      0.63  VQ        |         |         |         |
   0+45       0.0286      0.63  VQ        |         |         |         |
```

0+50	0.0332	0.66	VQ				
0+55	0.0385	0.77	VQ				
1+ 0	0.0441	0.81	VQ				
1+ 5	0.0496	0.81	VQ				
1+10	0.0544	0.70	VQ				
1+15	0.0590	0.66	VQ				
1+20	0.0634	0.64	VQ				
1+25	0.0678	0.64	VQ				
1+30	0.0721	0.63	VQ				
1+35	0.0765	0.63	VQ				
1+40	0.0808	0.63	VQ				
1+45	0.0852	0.63	VQ				
1+50	0.0897	0.66	VQ				
1+55	0.0950	0.77	VQ				
2+ 0	0.1006	0.81	VQ				
2+ 5	0.1064	0.83	VQ				
2+10	0.1121	0.84	VQ				
2+15	0.1179	0.84	VQ				
2+20	0.1237	0.84	VQ				
2+25	0.1295	0.84	VQ				
2+30	0.1353	0.84	|Q				
2+35	0.1413	0.87	|Q				
2+40	0.1481	0.98	|Q				
2+45	0.1551	1.02	|VQ				
2+50	0.1623	1.04	|VQ				
2+55	0.1695	1.05	|VQ				
3+ 0	0.1768	1.05	|VQ				
3+ 5	0.1840	1.05	|VQ				
3+10	0.1913	1.05	|VQ				
3+15	0.1985	1.05	|VQ				
3+20	0.2058	1.05	|VQ				
3+25	0.2130	1.05	|VQ				
3+30	0.2203	1.05	|VQ				
3+35	0.2275	1.05	|VQ				
3+40	0.2348	1.05	|VQ				
3+45	0.2420	1.05	|VQ				
3+50	0.2494	1.08	|VQ				
3+55	0.2577	1.19	|VQ				
4+ 0	0.2662	1.24	| Q				
4+ 5	0.2748	1.25	| Q				
4+10	0.2835	1.26	| Q				
4+15	0.2921	1.26	| Q				
4+20	0.3010	1.29	| Q				
4+25	0.3107	1.40	| Q				
4+30	0.3206	1.45	| Q				
4+35	0.3307	1.46	| Q				
4+40	0.3408	1.47	| Q				
4+45	0.3510	1.47	| Q				
4+50	0.3613	1.50	| Q				
4+55	0.3724	1.62	| VQ				
5+ 0	0.3838	1.66	| VQ				
5+ 5	0.3950	1.62	| VQ				
5+10	0.4046	1.40	| QV				
5+15	0.4137	1.32	| QV				

5+20	0.4227	1.31	QV				
5+25	0.4324	1.41	QV				
5+30	0.4424	1.45	QV				
5+35	0.4527	1.49	QV				
5+40	0.4638	1.61	Q				
5+45	0.4752	1.65	Q				
5+50	0.4867	1.67	Q				
5+55	0.4983	1.68	Q				
6+ 0	0.5099	1.68	Q				
6+ 5	0.5216	1.71	Q				
6+10	0.5342	1.83	QV				
6+15	0.5471	1.87	QV				
6+20	0.5600	1.88	QV				
6+25	0.5731	1.89	QV				
6+30	0.5861	1.89	QV				
6+35	0.5993	1.92	QV				
6+40	0.6133	2.04	Q				
6+45	0.6276	2.08	Q				
6+50	0.6421	2.09	Q				
6+55	0.6565	2.10	Q				
7+ 0	0.6710	2.10	QV				
7+ 5	0.6855	2.10	QV				
7+10	0.7000	2.11	QV				
7+15	0.7145	2.11	QV				
7+20	0.7292	2.13	QV				
7+25	0.7447	2.25	QV				
7+30	0.7604	2.29	QV				
7+35	0.7765	2.33	QV				
7+40	0.7934	2.45	QV				
7+45	0.8106	2.50	Q V				
7+50	0.8281	2.54	QV				
7+55	0.8464	2.66	QV				
8+ 0	0.8651	2.71	QV				
8+ 5	0.8842	2.78	QV				
8+10	0.9049	3.02	Q				
8+15	0.9263	3.10	Q				
8+20	0.9479	3.14	QV				
8+25	0.9696	3.15	QV				
8+30	0.9913	3.15	QV				
8+35	1.0132	3.18	QV				
8+40	1.0360	3.30	QV				
8+45	1.0590	3.34	QV				
8+50	1.0823	3.38	Q V				
8+55	1.1064	3.51	QV				
9+ 0	1.1308	3.55	QV				
9+ 5	1.1558	3.62	QV				
9+10	1.1823	3.86	QV				
9+15	1.2095	3.94	Q V				
9+20	1.2371	4.00	QV				
9+25	1.2655	4.13	QV				
9+30	1.2943	4.18	QV				
9+35	1.3234	4.22	QV				
9+40	1.3534	4.35	Q V				
9+45	1.3836	4.39	Q V				





18+50	5.0847	0.62	|Q	|	|	|	V |
18+55	5.0881	0.49	Q	|	|	|	V |
19+ 0	5.0912	0.45	Q	|	|	|	V |
19+ 5	5.0944	0.46	Q	|	|	|	V |
19+10	5.0983	0.57	|Q	|	|	|	V |
19+15	5.1024	0.61	|Q	|	|	|	V |
19+20	5.1069	0.65	|Q	|	|	|	V |
19+25	5.1122	0.77	|Q	|	|	|	V |
19+30	5.1178	0.81	|Q	|	|	|	V |
19+35	5.1233	0.80	|Q	|	|	|	V |
19+40	5.1281	0.70	|Q	|	|	|	V |
19+45	5.1327	0.66	|Q	|	|	|	V |
19+50	5.1369	0.62	|Q	|	|	|	V |
19+55	5.1403	0.49	Q	|	|	|	V |
20+ 0	5.1434	0.45	Q	|	|	|	V |
20+ 5	5.1466	0.46	Q	|	|	|	V |
20+10	5.1505	0.57	|Q	|	|	|	V |
20+15	5.1546	0.61	|Q	|	|	|	V |
20+20	5.1589	0.62	|Q	|	|	|	V |
20+25	5.1632	0.63	|Q	|	|	|	V |
20+30	5.1676	0.63	|Q	|	|	|	V |
20+35	5.1719	0.63	|Q	|	|	|	V |
20+40	5.1763	0.63	|Q	|	|	|	V |
20+45	5.1806	0.63	|Q	|	|	|	V|
20+50	5.1848	0.61	|Q	|	|	|	V|
20+55	5.1882	0.49	Q	|	|	|	V|
21+ 0	5.1912	0.45	Q	|	|	|	V|
21+ 5	5.1944	0.46	Q	|	|	|	V|
21+10	5.1983	0.57	|Q	|	|	|	V|
21+15	5.2025	0.61	|Q	|	|	|	V|
21+20	5.2066	0.60	|Q	|	|	|	V|
21+25	5.2099	0.49	Q	|	|	|	V|
21+30	5.2130	0.45	Q	|	|	|	V|
21+35	5.2161	0.46	Q	|	|	|	V|
21+40	5.2200	0.57	|Q	|	|	|	V|
21+45	5.2242	0.61	|Q	|	|	|	V|
21+50	5.2283	0.60	|Q	|	|	|	V|
21+55	5.2317	0.49	Q	|	|	|	V|
22+ 0	5.2347	0.45	Q	|	|	|	V|
22+ 5	5.2379	0.46	Q	|	|	|	V|
22+10	5.2418	0.57	|Q	|	|	|	V|
22+15	5.2460	0.61	|Q	|	|	|	V|
22+20	5.2501	0.60	|Q	|	|	|	V|
22+25	5.2534	0.49	Q	|	|	|	V|
22+30	5.2565	0.45	Q	|	|	|	V|
22+35	5.2595	0.43	Q	|	|	|	V|
22+40	5.2624	0.42	Q	|	|	|	V|
22+45	5.2653	0.42	Q	|	|	|	V|
22+50	5.2682	0.42	Q	|	|	|	V|
22+55	5.2711	0.42	Q	|	|	|	V|
23+ 0	5.2740	0.42	Q	|	|	|	V|
23+ 5	5.2769	0.42	Q	|	|	|	V|
23+10	5.2798	0.42	Q	|	|	|	V|
23+15	5.2827	0.42	Q	|	|	|	V|

```
   23+20       5.2856      0.42  Q          |          |          |         V|
   23+25       5.2885      0.42  Q          |          |          |         V|
   23+30       5.2914      0.42  Q          |          |          |         V|
   23+35       5.2943      0.42  Q          |          |          |         V|
   23+40       5.2972      0.42  Q          |          |          |         V|
   23+45       5.3001      0.42  Q          |          |          |         V|
   23+50       5.3030      0.42  Q          |          |          |         V|
   23+55       5.3059      0.42  Q          |          |          |         V|
   24+ 0       5.3088      0.42  Q          |          |          |         V|
   24+ 5       5.3113      0.37  Q          |          |          |         V|
   24+10       5.3123      0.14  Q          |          |          |         V|
   24+15       5.3127      0.06  Q          |          |          |         V|
   24+20       5.3128      0.02  Q          |          |          |         V|
   24+25       5.3129      0.01  Q          |          |          |         V|
   24+30       5.3129      0.00  Q          |          |          |         V|
   24+35       5.3129      0.00  Q          |          |          |          V
---------------------------------------------------------------------------
```

U n i t H y d r o g r a p h A n a l y s i s

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Study date 05/02/23 File: Area06242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

BEAUMONT POINTE
DMA 06
DEVELOPED CONDITION

Drainage Area = 34.00(Ac.) = 0.053 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 34.00(Ac.) = 0.053 Sq. Mi.
Length along longest watercourse = 1710.80(Ft.)
Length along longest watercourse measured to centroid = 1365.80(Ft.)
Length along longest watercourse = 0.324 Mi.
Length along longest watercourse measured to centroid = 0.259 Mi.
Difference in elevation = 122.50(Ft.)
Slope along watercourse = 378.0687 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.73 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.09 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

```
Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       34.00            2.54                  86.36

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       34.00            6.18                 210.12

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.540(In)
Area Averaged 100-Year Rainfall =    6.180(In)

Point rain (area averaged) =    2.540(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    2.540(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    34.000           60.60         0.584
 Total Area Entered =     34.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-3     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
60.6  78.5      0.262     0.584        0.124       1.000      0.124
                                                 Sum (F) =   0.124
Area averaged mean soil loss (F) (In/Hr) =  0.124
Minimum soil loss rate ((In/Hr)) =  0.062
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.433
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        FOOTHILL S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        183.398         38.785             13.290
    2   0.167        366.795         51.546             17.663
    3   0.250        550.193          8.138              2.789
    4   0.333        733.590          1.531              0.524
                               Sum = 100.000   Sum=      34.266
------------------------------------------------------------------------


 The following loss rate calculations reflect use of the minimum calculated
loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain
value
```

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.020	(0.220)		0.009	0.012
2	0.17	0.07	0.020	(0.219)		0.009	0.012
3	0.25	0.07	0.020	(0.219)		0.009	0.012
4	0.33	0.10	0.030	(0.218)		0.013	0.017
5	0.42	0.10	0.030	(0.217)		0.013	0.017
6	0.50	0.10	0.030	(0.216)		0.013	0.017
7	0.58	0.10	0.030	(0.215)		0.013	0.017
8	0.67	0.10	0.030	(0.214)		0.013	0.017
9	0.75	0.10	0.030	(0.214)		0.013	0.017
10	0.83	0.13	0.041	(0.213)		0.018	0.023
11	0.92	0.13	0.041	(0.212)		0.018	0.023
12	1.00	0.13	0.041	(0.211)		0.018	0.023
13	1.08	0.10	0.030	(0.210)		0.013	0.017
14	1.17	0.10	0.030	(0.209)		0.013	0.017
15	1.25	0.10	0.030	(0.209)		0.013	0.017
16	1.33	0.10	0.030	(0.208)		0.013	0.017
17	1.42	0.10	0.030	(0.207)		0.013	0.017
18	1.50	0.10	0.030	(0.206)		0.013	0.017
19	1.58	0.10	0.030	(0.205)		0.013	0.017
20	1.67	0.10	0.030	(0.204)		0.013	0.017
21	1.75	0.10	0.030	(0.204)		0.013	0.017
22	1.83	0.13	0.041	(0.203)		0.018	0.023
23	1.92	0.13	0.041	(0.202)		0.018	0.023
24	2.00	0.13	0.041	(0.201)		0.018	0.023
25	2.08	0.13	0.041	(0.200)		0.018	0.023
26	2.17	0.13	0.041	(0.199)		0.018	0.023
27	2.25	0.13	0.041	(0.199)		0.018	0.023
28	2.33	0.13	0.041	(0.198)		0.018	0.023
29	2.42	0.13	0.041	(0.197)		0.018	0.023
30	2.50	0.13	0.041	(0.196)		0.018	0.023
31	2.58	0.17	0.051	(0.195)		0.022	0.029
32	2.67	0.17	0.051	(0.195)		0.022	0.029
33	2.75	0.17	0.051	(0.194)		0.022	0.029
34	2.83	0.17	0.051	(0.193)		0.022	0.029
35	2.92	0.17	0.051	(0.192)		0.022	0.029
36	3.00	0.17	0.051	(0.191)		0.022	0.029
37	3.08	0.17	0.051	(0.191)		0.022	0.029
38	3.17	0.17	0.051	(0.190)		0.022	0.029
39	3.25	0.17	0.051	(0.189)		0.022	0.029
40	3.33	0.17	0.051	(0.188)		0.022	0.029
41	3.42	0.17	0.051	(0.188)		0.022	0.029
42	3.50	0.17	0.051	(0.187)		0.022	0.029
43	3.58	0.17	0.051	(0.186)		0.022	0.029
44	3.67	0.17	0.051	(0.185)		0.022	0.029
45	3.75	0.17	0.051	(0.184)		0.022	0.029
46	3.83	0.20	0.061	(0.184)		0.026	0.035
47	3.92	0.20	0.061	(0.183)		0.026	0.035
48	4.00	0.20	0.061	(0.182)		0.026	0.035
49	4.08	0.20	0.061	(0.181)		0.026	0.035
50	4.17	0.20	0.061	(0.181)		0.026	0.035
51	4.25	0.20	0.061	(0.180)		0.026	0.035
52	4.33	0.23	0.071	(0.179)		0.031	0.040

53	4.42	0.23	0.071	(0.178)	0.031	0.040
54	4.50	0.23	0.071	(0.177)	0.031	0.040
55	4.58	0.23	0.071	(0.177)	0.031	0.040
56	4.67	0.23	0.071	(0.176)	0.031	0.040
57	4.75	0.23	0.071	(0.175)	0.031	0.040
58	4.83	0.27	0.081	(0.174)	0.035	0.046
59	4.92	0.27	0.081	(0.174)	0.035	0.046
60	5.00	0.27	0.081	(0.173)	0.035	0.046
61	5.08	0.20	0.061	(0.172)	0.026	0.035
62	5.17	0.20	0.061	(0.171)	0.026	0.035
63	5.25	0.20	0.061	(0.171)	0.026	0.035
64	5.33	0.23	0.071	(0.170)	0.031	0.040
65	5.42	0.23	0.071	(0.169)	0.031	0.040
66	5.50	0.23	0.071	(0.168)	0.031	0.040
67	5.58	0.27	0.081	(0.168)	0.035	0.046
68	5.67	0.27	0.081	(0.167)	0.035	0.046
69	5.75	0.27	0.081	(0.166)	0.035	0.046
70	5.83	0.27	0.081	(0.165)	0.035	0.046
71	5.92	0.27	0.081	(0.165)	0.035	0.046
72	6.00	0.27	0.081	(0.164)	0.035	0.046
73	6.08	0.30	0.091	(0.163)	0.040	0.052
74	6.17	0.30	0.091	(0.163)	0.040	0.052
75	6.25	0.30	0.091	(0.162)	0.040	0.052
76	6.33	0.30	0.091	(0.161)	0.040	0.052
77	6.42	0.30	0.091	(0.160)	0.040	0.052
78	6.50	0.30	0.091	(0.160)	0.040	0.052
79	6.58	0.33	0.102	(0.159)	0.044	0.058
80	6.67	0.33	0.102	(0.158)	0.044	0.058
81	6.75	0.33	0.102	(0.158)	0.044	0.058
82	6.83	0.33	0.102	(0.157)	0.044	0.058
83	6.92	0.33	0.102	(0.156)	0.044	0.058
84	7.00	0.33	0.102	(0.155)	0.044	0.058
85	7.08	0.33	0.102	(0.155)	0.044	0.058
86	7.17	0.33	0.102	(0.154)	0.044	0.058
87	7.25	0.33	0.102	(0.153)	0.044	0.058
88	7.33	0.37	0.112	(0.153)	0.048	0.063
89	7.42	0.37	0.112	(0.152)	0.048	0.063
90	7.50	0.37	0.112	(0.151)	0.048	0.063
91	7.58	0.40	0.122	(0.151)	0.053	0.069
92	7.67	0.40	0.122	(0.150)	0.053	0.069
93	7.75	0.40	0.122	(0.149)	0.053	0.069
94	7.83	0.43	0.132	(0.148)	0.057	0.075
95	7.92	0.43	0.132	(0.148)	0.057	0.075
96	8.00	0.43	0.132	(0.147)	0.057	0.075
97	8.08	0.50	0.152	(0.146)	0.066	0.086
98	8.17	0.50	0.152	(0.146)	0.066	0.086
99	8.25	0.50	0.152	(0.145)	0.066	0.086
100	8.33	0.50	0.152	(0.144)	0.066	0.086
101	8.42	0.50	0.152	(0.144)	0.066	0.086
102	8.50	0.50	0.152	(0.143)	0.066	0.086
103	8.58	0.53	0.163	(0.142)	0.070	0.092
104	8.67	0.53	0.163	(0.142)	0.070	0.092
105	8.75	0.53	0.163	(0.141)	0.070	0.092
106	8.83	0.57	0.173	(0.140)	0.075	0.098

107	8.92	0.57	0.173	(0.140)	0.075	0.098
108	9.00	0.57	0.173	(0.139)	0.075	0.098
109	9.08	0.63	0.193	(0.138)	0.084	0.109
110	9.17	0.63	0.193	(0.138)	0.084	0.109
111	9.25	0.63	0.193	(0.137)	0.084	0.109
112	9.33	0.67	0.203	(0.136)	0.088	0.115
113	9.42	0.67	0.203	(0.136)	0.088	0.115
114	9.50	0.67	0.203	(0.135)	0.088	0.115
115	9.58	0.70	0.213	(0.134)	0.092	0.121
116	9.67	0.70	0.213	(0.134)	0.092	0.121
117	9.75	0.70	0.213	(0.133)	0.092	0.121
118	9.83	0.73	0.224	(0.132)	0.097	0.127
119	9.92	0.73	0.224	(0.132)	0.097	0.127
120	10.00	0.73	0.224	(0.131)	0.097	0.127
121	10.08	0.50	0.152	(0.131)	0.066	0.086
122	10.17	0.50	0.152	(0.130)	0.066	0.086
123	10.25	0.50	0.152	(0.129)	0.066	0.086
124	10.33	0.50	0.152	(0.129)	0.066	0.086
125	10.42	0.50	0.152	(0.128)	0.066	0.086
126	10.50	0.50	0.152	(0.127)	0.066	0.086
127	10.58	0.67	0.203	(0.127)	0.088	0.115
128	10.67	0.67	0.203	(0.126)	0.088	0.115
129	10.75	0.67	0.203	(0.126)	0.088	0.115
130	10.83	0.67	0.203	(0.125)	0.088	0.115
131	10.92	0.67	0.203	(0.124)	0.088	0.115
132	11.00	0.67	0.203	(0.124)	0.088	0.115
133	11.08	0.63	0.193	(0.123)	0.084	0.109
134	11.17	0.63	0.193	(0.123)	0.084	0.109
135	11.25	0.63	0.193	(0.122)	0.084	0.109
136	11.33	0.63	0.193	(0.121)	0.084	0.109
137	11.42	0.63	0.193	(0.121)	0.084	0.109
138	11.50	0.63	0.193	(0.120)	0.084	0.109
139	11.58	0.57	0.173	(0.120)	0.075	0.098
140	11.67	0.57	0.173	(0.119)	0.075	0.098
141	11.75	0.57	0.173	(0.118)	0.075	0.098
142	11.83	0.60	0.183	(0.118)	0.079	0.104
143	11.92	0.60	0.183	(0.117)	0.079	0.104
144	12.00	0.60	0.183	(0.117)	0.079	0.104
145	12.08	0.83	0.254	(0.116)	0.110	0.144
146	12.17	0.83	0.254	(0.115)	0.110	0.144
147	12.25	0.83	0.254	(0.115)	0.110	0.144
148	12.33	0.87	0.264	0.114	(0.114)	0.150
149	12.42	0.87	0.264	0.114	(0.114)	0.150
150	12.50	0.87	0.264	0.113	(0.114)	0.151
151	12.58	0.93	0.284	0.113	(0.123)	0.172
152	12.67	0.93	0.284	0.112	(0.123)	0.172
153	12.75	0.93	0.284	0.111	(0.123)	0.173
154	12.83	0.97	0.295	0.111	(0.128)	0.184
155	12.92	0.97	0.295	0.110	(0.128)	0.184
156	13.00	0.97	0.295	0.110	(0.128)	0.185
157	13.08	1.13	0.345	0.109	(0.150)	0.236
158	13.17	1.13	0.345	0.109	(0.150)	0.237
159	13.25	1.13	0.345	0.108	(0.150)	0.237
160	13.33	1.13	0.345	0.108	(0.150)	0.238

161	13.42	1.13	0.345		0.107	(	0.150)	0.238
162	13.50	1.13	0.345		0.106	(	0.150)	0.239
163	13.58	0.77	0.234	(	0.106)		0.101	0.132
164	13.67	0.77	0.234	(	0.105)		0.101	0.132
165	13.75	0.77	0.234	(	0.105)		0.101	0.132
166	13.83	0.77	0.234	(	0.104)		0.101	0.132
167	13.92	0.77	0.234	(	0.104)		0.101	0.132
168	14.00	0.77	0.234	(	0.103)		0.101	0.132
169	14.08	0.90	0.274		0.103	(	0.119)	0.172
170	14.17	0.90	0.274		0.102	(	0.119)	0.172
171	14.25	0.90	0.274		0.102	(	0.119)	0.173
172	14.33	0.87	0.264		0.101	(	0.114)	0.163
173	14.42	0.87	0.264		0.101	(	0.114)	0.164
174	14.50	0.87	0.264		0.100	(	0.114)	0.164
175	14.58	0.87	0.264		0.100	(	0.114)	0.165
176	14.67	0.87	0.264		0.099	(	0.114)	0.165
177	14.75	0.87	0.264		0.099	(	0.114)	0.166
178	14.83	0.83	0.254		0.098	(	0.110)	0.156
179	14.92	0.83	0.254		0.098	(	0.110)	0.156
180	15.00	0.83	0.254		0.097	(	0.110)	0.157
181	15.08	0.80	0.244		0.097	(	0.106)	0.147
182	15.17	0.80	0.244		0.096	(	0.106)	0.148
183	15.25	0.80	0.244		0.096	(	0.106)	0.148
184	15.33	0.77	0.234		0.095	(	0.101)	0.139
185	15.42	0.77	0.234		0.095	(	0.101)	0.139
186	15.50	0.77	0.234		0.094	(	0.101)	0.140
187	15.58	0.63	0.193	(	0.094)		0.084	0.109
188	15.67	0.63	0.193	(	0.093)		0.084	0.109
189	15.75	0.63	0.193	(	0.093)		0.084	0.109
190	15.83	0.63	0.193	(	0.092)		0.084	0.109
191	15.92	0.63	0.193	(	0.092)		0.084	0.109
192	16.00	0.63	0.193	(	0.091)		0.084	0.109
193	16.08	0.13	0.041	(	0.091)		0.018	0.023
194	16.17	0.13	0.041	(	0.090)		0.018	0.023
195	16.25	0.13	0.041	(	0.090)		0.018	0.023
196	16.33	0.13	0.041	(	0.089)		0.018	0.023
197	16.42	0.13	0.041	(	0.089)		0.018	0.023
198	16.50	0.13	0.041	(	0.088)		0.018	0.023
199	16.58	0.10	0.030	(	0.088)		0.013	0.017
200	16.67	0.10	0.030	(	0.088)		0.013	0.017
201	16.75	0.10	0.030	(	0.087)		0.013	0.017
202	16.83	0.10	0.030	(	0.087)		0.013	0.017
203	16.92	0.10	0.030	(	0.086)		0.013	0.017
204	17.00	0.10	0.030	(	0.086)		0.013	0.017
205	17.08	0.17	0.051	(	0.085)		0.022	0.029
206	17.17	0.17	0.051	(	0.085)		0.022	0.029
207	17.25	0.17	0.051	(	0.085)		0.022	0.029
208	17.33	0.17	0.051	(	0.084)		0.022	0.029
209	17.42	0.17	0.051	(	0.084)		0.022	0.029
210	17.50	0.17	0.051	(	0.083)		0.022	0.029
211	17.58	0.17	0.051	(	0.083)		0.022	0.029
212	17.67	0.17	0.051	(	0.082)		0.022	0.029
213	17.75	0.17	0.051	(	0.082)		0.022	0.029
214	17.83	0.13	0.041	(	0.082)		0.018	0.023

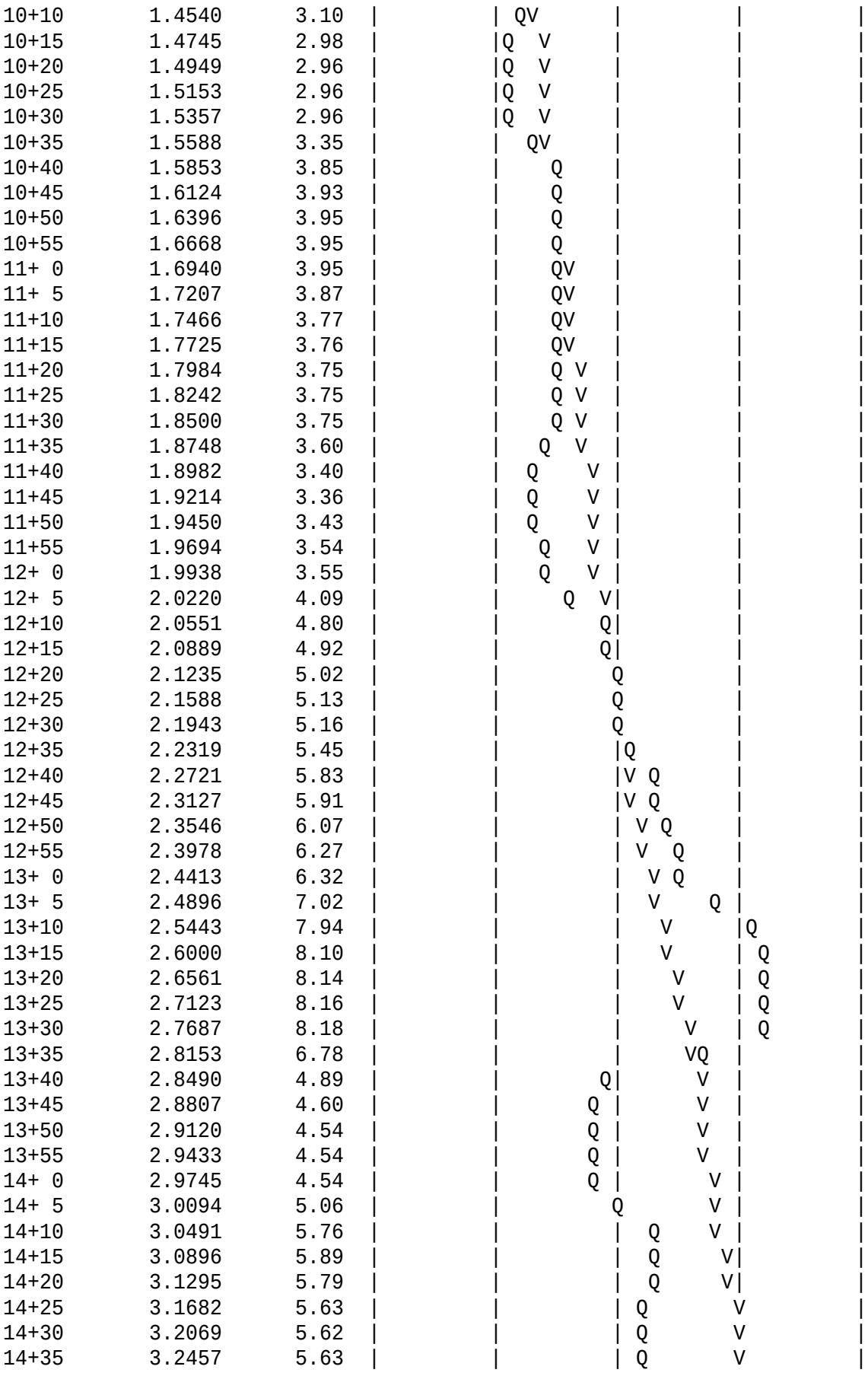
215	17.92	0.13	0.041	(0.081)	0.018	0.023
216	18.00	0.13	0.041	(0.081)	0.018	0.023
217	18.08	0.13	0.041	(0.080)	0.018	0.023
218	18.17	0.13	0.041	(0.080)	0.018	0.023
219	18.25	0.13	0.041	(0.080)	0.018	0.023
220	18.33	0.13	0.041	(0.079)	0.018	0.023
221	18.42	0.13	0.041	(0.079)	0.018	0.023
222	18.50	0.13	0.041	(0.078)	0.018	0.023
223	18.58	0.10	0.030	(0.078)	0.013	0.017
224	18.67	0.10	0.030	(0.078)	0.013	0.017
225	18.75	0.10	0.030	(0.077)	0.013	0.017
226	18.83	0.07	0.020	(0.077)	0.009	0.012
227	18.92	0.07	0.020	(0.077)	0.009	0.012
228	19.00	0.07	0.020	(0.076)	0.009	0.012
229	19.08	0.10	0.030	(0.076)	0.013	0.017
230	19.17	0.10	0.030	(0.076)	0.013	0.017
231	19.25	0.10	0.030	(0.075)	0.013	0.017
232	19.33	0.13	0.041	(0.075)	0.018	0.023
233	19.42	0.13	0.041	(0.074)	0.018	0.023
234	19.50	0.13	0.041	(0.074)	0.018	0.023
235	19.58	0.10	0.030	(0.074)	0.013	0.017
236	19.67	0.10	0.030	(0.073)	0.013	0.017
237	19.75	0.10	0.030	(0.073)	0.013	0.017
238	19.83	0.07	0.020	(0.073)	0.009	0.012
239	19.92	0.07	0.020	(0.072)	0.009	0.012
240	20.00	0.07	0.020	(0.072)	0.009	0.012
241	20.08	0.10	0.030	(0.072)	0.013	0.017
242	20.17	0.10	0.030	(0.072)	0.013	0.017
243	20.25	0.10	0.030	(0.071)	0.013	0.017
244	20.33	0.10	0.030	(0.071)	0.013	0.017
245	20.42	0.10	0.030	(0.071)	0.013	0.017
246	20.50	0.10	0.030	(0.070)	0.013	0.017
247	20.58	0.10	0.030	(0.070)	0.013	0.017
248	20.67	0.10	0.030	(0.070)	0.013	0.017
249	20.75	0.10	0.030	(0.069)	0.013	0.017
250	20.83	0.07	0.020	(0.069)	0.009	0.012
251	20.92	0.07	0.020	(0.069)	0.009	0.012
252	21.00	0.07	0.020	(0.069)	0.009	0.012
253	21.08	0.10	0.030	(0.068)	0.013	0.017
254	21.17	0.10	0.030	(0.068)	0.013	0.017
255	21.25	0.10	0.030	(0.068)	0.013	0.017
256	21.33	0.07	0.020	(0.068)	0.009	0.012
257	21.42	0.07	0.020	(0.067)	0.009	0.012
258	21.50	0.07	0.020	(0.067)	0.009	0.012
259	21.58	0.10	0.030	(0.067)	0.013	0.017
260	21.67	0.10	0.030	(0.067)	0.013	0.017
261	21.75	0.10	0.030	(0.066)	0.013	0.017
262	21.83	0.07	0.020	(0.066)	0.009	0.012
263	21.92	0.07	0.020	(0.066)	0.009	0.012
264	22.00	0.07	0.020	(0.066)	0.009	0.012
265	22.08	0.10	0.030	(0.065)	0.013	0.017
266	22.17	0.10	0.030	(0.065)	0.013	0.017
267	22.25	0.10	0.030	(0.065)	0.013	0.017
268	22.33	0.07	0.020	(0.065)	0.009	0.012

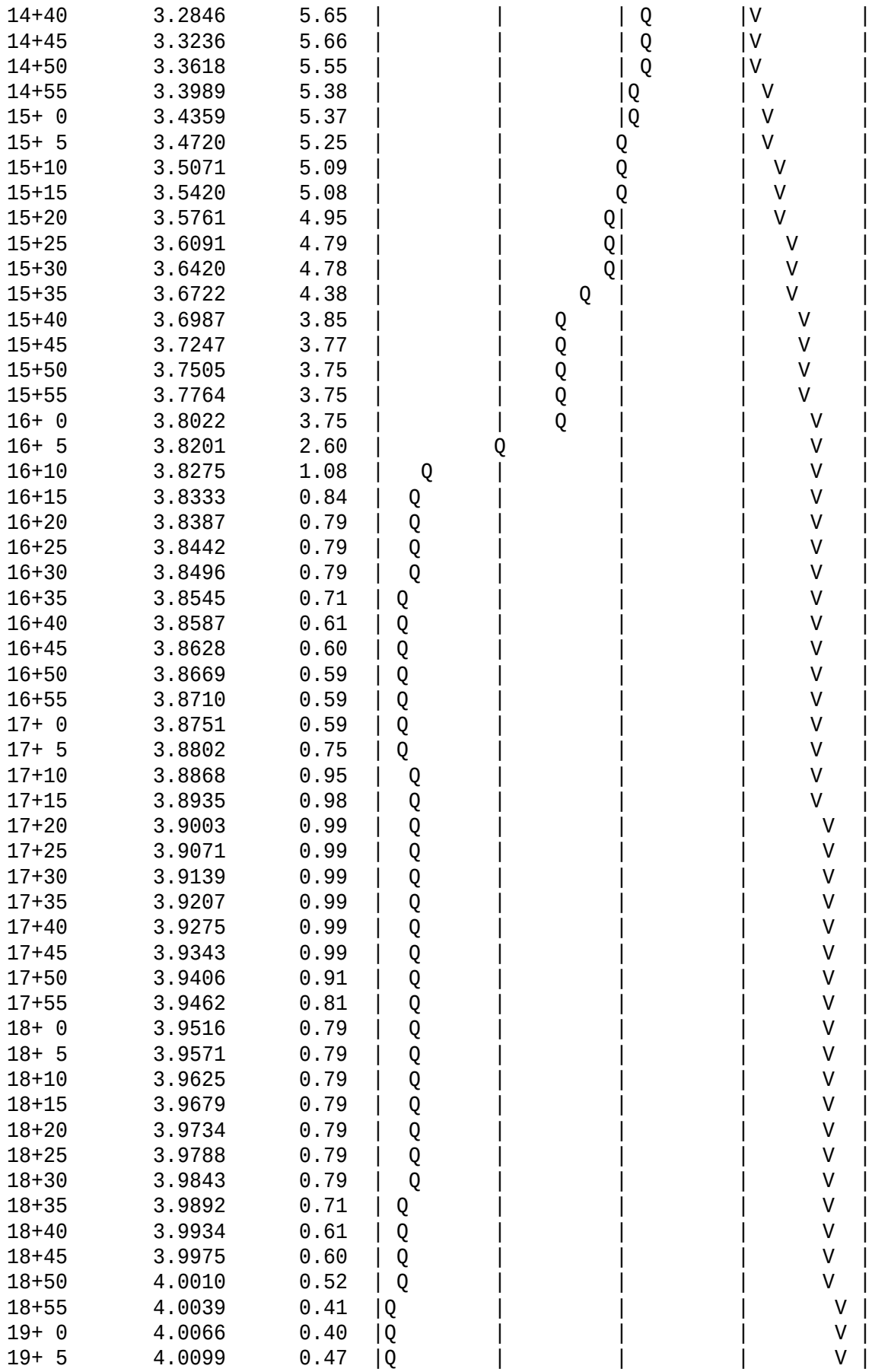
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269  22.42     0.07      0.020       (  0.065)       0.009        0.012
270  22.50     0.07      0.020       (  0.064)       0.009        0.012
271  22.58     0.07      0.020       (  0.064)       0.009        0.012
272  22.67     0.07      0.020       (  0.064)       0.009        0.012
273  22.75     0.07      0.020       (  0.064)       0.009        0.012
274  22.83     0.07      0.020       (  0.064)       0.009        0.012
275  22.92     0.07      0.020       (  0.064)       0.009        0.012
276  23.00     0.07      0.020       (  0.063)       0.009        0.012
277  23.08     0.07      0.020       (  0.063)       0.009        0.012
278  23.17     0.07      0.020       (  0.063)       0.009        0.012
279  23.25     0.07      0.020       (  0.063)       0.009        0.012
280  23.33     0.07      0.020       (  0.063)       0.009        0.012
281  23.42     0.07      0.020       (  0.063)       0.009        0.012
282  23.50     0.07      0.020       (  0.063)       0.009        0.012
283  23.58     0.07      0.020       (  0.062)       0.009        0.012
284  23.67     0.07      0.020       (  0.062)       0.009        0.012
285  23.75     0.07      0.020       (  0.062)       0.009        0.012
286  23.83     0.07      0.020       (  0.062)       0.009        0.012
287  23.92     0.07      0.020       (  0.062)       0.009        0.012
288  24.00     0.07      0.020       (  0.062)       0.009        0.012
                (Loss Rate Not Used)
    Sum =     100.0                                    Sum =    17.8
       Flood volume = Effective rainfall      1.49(In)
        times area      34.0(Ac.)/[(In)/(Ft.)] =       4.2(Ac.Ft)
       Total soil loss =      1.05(In)
       Total soil loss =     2.984(Ac.Ft)
       Total rainfall =      2.54(In)
       Flood volume =      183501.4 Cubic Feet
       Total soil loss =      129964.6 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =      8.180(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0011      0.15  Q         |         |         |         |
   0+10       0.0035      0.36  VQ        |         |         |         |
   0+15       0.0062      0.39  VQ        |         |         |         |
   0+20       0.0094      0.47  VQ        |         |         |         |
   0+25       0.0134      0.57  V Q       |         |         |         |
   0+30       0.0174      0.59  V Q       |         |         |         |
   0+35       0.0215      0.59  V Q       |         |         |         |
   0+40       0.0256      0.59  V Q       |         |         |         |
   0+45       0.0297      0.59  V Q       |         |         |         |
   0+50       0.0343      0.67  V Q       |         |         |         |
   0+55       0.0396      0.77  V  Q      |         |         |         |
   1+ 0       0.0450      0.79  V  Q      |         |         |         |
   1+ 5       0.0499      0.71  V Q       |         |         |         |
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1+10       0.0541      0.61  V Q       |          |          |          |
1+15       0.0582      0.60  V Q       |          |          |          |
1+20       0.0623      0.59  V Q       |          |          |          |
1+25       0.0664      0.59  V Q       |          |          |          |
1+30       0.0705      0.59  V Q       |          |          |          |
1+35       0.0746      0.59  V Q       |          |          |          |
1+40       0.0787      0.59  V Q       |          |          |          |
1+45       0.0827      0.59  V Q       |          |          |          |
1+50       0.0873      0.67  V Q       |          |          |          |
1+55       0.0926      0.77  V  Q      |          |          |          |
2+ 0       0.0981      0.79  V  Q      |          |          |          |
2+ 5       0.1035      0.79  V  Q      |          |          |          |
2+10       0.1089      0.79  |V Q      |          |          |          |
2+15       0.1144      0.79  |V Q      |          |          |          |
2+20       0.1198      0.79  |V Q      |          |          |          |
2+25       0.1253      0.79  |V Q      |          |          |          |
2+30       0.1307      0.79  |V Q      |          |          |          |
2+35       0.1367      0.87  |V Q      |          |          |          |
2+40       0.1433      0.97  |V Q      |          |          |          |
2+45       0.1501      0.98  |V Q      |          |          |          |
2+50       0.1569      0.99  |V Q      |          |          |          |
2+55       0.1637      0.99  |V Q      |          |          |          |
3+ 0       0.1705      0.99  |V Q      |          |          |          |
3+ 5       0.1773      0.99  |V Q      |          |          |          |
3+10       0.1841      0.99  |V Q      |          |          |          |
3+15       0.1909      0.99  |V Q      |          |          |          |
3+20       0.1977      0.99  |V Q      |          |          |          |
3+25       0.2045      0.99  |V Q      |          |          |          |
3+30       0.2113      0.99  | VQ      |          |          |          |
3+35       0.2181      0.99  | VQ      |          |          |          |
3+40       0.2249      0.99  | VQ      |          |          |          |
3+45       0.2317      0.99  | VQ      |          |          |          |
3+50       0.2391      1.06  | V Q     |          |          |          |
3+55       0.2471      1.17  | V Q     |          |          |          |
4+ 0       0.2552      1.18  | V Q     |          |          |          |
4+ 5       0.2634      1.18  | V Q     |          |          |          |
4+10       0.2715      1.18  | V Q     |          |          |          |
4+15       0.2797      1.18  | V Q     |          |          |          |
4+20       0.2884      1.26  | V  Q    |          |          |          |
4+25       0.2978      1.36  | V  Q    |          |          |          |
4+30       0.3073      1.38  | V  Q    |          |          |          |
4+35       0.3168      1.38  |  V Q    |          |          |          |
4+40       0.3263      1.38  |  V Q    |          |          |          |
4+45       0.3358      1.38  |  V Q    |          |          |          |
4+50       0.3459      1.46  |  V Q    |          |          |          |
4+55       0.3566      1.56  |  V  Q   |          |          |          |
5+ 0       0.3675      1.58  |  V  Q   |          |          |          |
5+ 5       0.3773      1.43  |  V Q    |          |          |          |
5+10       0.3858      1.22  |  VQ     |          |          |          |
5+15       0.3940      1.19  |  VQ     |          |          |          |
5+20       0.4026      1.26  |  V Q    |          |          |          |
5+25       0.4120      1.36  |  V Q    |          |          |          |
5+30       0.4215      1.38  |   VQ    |          |          |          |
5+35       0.4316      1.46  |   VQ    |          |          |          |
```

5+40	0.4423	1.56	V Q				
5+45	0.4532	1.58	V Q				
5+50	0.4641	1.58	V Q				
5+55	0.4749	1.58	V Q				
6+ 0	0.4858	1.58	V Q				
6+ 5	0.4972	1.66	V Q				
6+10	0.5093	1.76	V Q				
6+15	0.5216	1.77	V Q				
6+20	0.5338	1.78	V Q				
6+25	0.5460	1.78	V Q				
6+30	0.5583	1.78	V Q				
6+35	0.5711	1.85	V Q				
6+40	0.5845	1.96	V Q				
6+45	0.5981	1.97	V Q				
6+50	0.6117	1.97	V Q				
6+55	0.6253	1.97	V Q				
7+ 0	0.6389	1.97	VQ				
7+ 5	0.6525	1.97	VQ				
7+10	0.6661	1.97	VQ				
7+15	0.6797	1.97	VQ				
7+20	0.6938	2.05	V Q				
7+25	0.7087	2.15	V Q				
7+30	0.7236	2.17	V Q				
7+35	0.7391	2.25	VQ				
7+40	0.7553	2.35	V Q				
7+45	0.7716	2.37	V Q				
7+50	0.7884	2.45	V Q				
7+55	0.8060	2.55	V Q				
8+ 0	0.8236	2.56	V Q				
8+ 5	0.8424	2.72	V Q				
8+10	0.8625	2.92	V Q				
8+15	0.8829	2.96	V Q				
8+20	0.9033	2.96	V Q				
8+25	0.9237	2.96	V Q				
8+30	0.9441	2.96	V Q				
8+35	0.9650	3.04	V Q				
8+40	0.9866	3.14	V Q				
8+45	1.0084	3.16	V Q				
8+50	1.0307	3.24	V Q				
8+55	1.0537	3.34	V Q				
9+ 0	1.0768	3.35	V Q				
9+ 5	1.1009	3.51	V Q				
9+10	1.1265	3.71	V Q				
9+15	1.1523	3.75	V Q				
9+20	1.1787	3.83	V Q				
9+25	1.2058	3.93	V Q				
9+30	1.2329	3.95	V Q				
9+35	1.2607	4.03	V Q				
9+40	1.2891	4.13	V Q				
9+45	1.3176	4.14	V Q				
9+50	1.3467	4.22	V Q				
9+55	1.3765	4.33	V Q				
10+ 0	1.4064	4.34	V Q				
10+ 5	1.4326	3.81	V Q				





19+10	4.0138	0.57	| Q	|	|	|	V |
19+15	4.0179	0.59	| Q	|	|	|	V |
19+20	4.0225	0.67	| Q	|	|	|	V |
19+25	4.0278	0.77	| Q	|	|	|	V |
19+30	4.0332	0.79	| Q	|	|	|	V |
19+35	4.0381	0.71	| Q	|	|	|	V |
19+40	4.0423	0.61	| Q	|	|	|	V |
19+45	4.0464	0.60	| Q	|	|	|	V |
19+50	4.0500	0.52	| Q	|	|	|	V |
19+55	4.0529	0.41	|Q	|	|	|	V |
20+ 0	4.0556	0.40	|Q	|	|	|	V |
20+ 5	4.0588	0.47	|Q	|	|	|	V |
20+10	4.0628	0.57	| Q	|	|	|	V |
20+15	4.0668	0.59	| Q	|	|	|	V |
20+20	4.0709	0.59	| Q	|	|	|	V |
20+25	4.0750	0.59	| Q	|	|	|	V |
20+30	4.0791	0.59	| Q	|	|	|	V |
20+35	4.0832	0.59	| Q	|	|	|	V |
20+40	4.0873	0.59	| Q	|	|	|	V |
20+45	4.0913	0.59	| Q	|	|	|	V |
20+50	4.0949	0.52	| Q	|	|	|	V |
20+55	4.0977	0.41	|Q	|	|	|	V |
21+ 0	4.1005	0.40	|Q	|	|	|	V |
21+ 5	4.1037	0.47	|Q	|	|	|	V |
21+10	4.1077	0.57	| Q	|	|	|	V|
21+15	4.1117	0.59	| Q	|	|	|	V|
21+20	4.1153	0.52	| Q	|	|	|	V|
21+25	4.1181	0.41	|Q	|	|	|	V|
21+30	4.1209	0.40	|Q	|	|	|	V|
21+35	4.1241	0.47	|Q	|	|	|	V|
21+40	4.1281	0.57	| Q	|	|	|	V|
21+45	4.1321	0.59	| Q	|	|	|	V|
21+50	4.1357	0.52	| Q	|	|	|	V|
21+55	4.1385	0.41	|Q	|	|	|	V|
22+ 0	4.1413	0.40	|Q	|	|	|	V|
22+ 5	4.1445	0.47	|Q	|	|	|	V|
22+10	4.1485	0.57	| Q	|	|	|	V|
22+15	4.1525	0.59	| Q	|	|	|	V|
22+20	4.1561	0.52	| Q	|	|	|	V|
22+25	4.1589	0.41	|Q	|	|	|	V|
22+30	4.1617	0.40	|Q	|	|	|	V|
22+35	4.1644	0.39	|Q	|	|	|	V|
22+40	4.1671	0.39	|Q	|	|	|	V|
22+45	4.1698	0.39	|Q	|	|	|	V|
22+50	4.1726	0.39	|Q	|	|	|	V|
22+55	4.1753	0.39	|Q	|	|	|	V|
23+ 0	4.1780	0.39	|Q	|	|	|	V|
23+ 5	4.1807	0.39	|Q	|	|	|	V|
23+10	4.1834	0.39	|Q	|	|	|	V|
23+15	4.1862	0.39	|Q	|	|	|	V|
23+20	4.1889	0.39	|Q	|	|	|	V|
23+25	4.1916	0.39	|Q	|	|	|	V|
23+30	4.1943	0.39	|Q	|	|	|	V|
23+35	4.1970	0.39	|Q	|	|	|	V|

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   23+40       4.1998      0.39  |Q        |         |         |        V|
   23+45       4.2025      0.39  |Q        |         |         |        V|
   23+50       4.2052      0.39  |Q        |         |         |        V|
   23+55       4.2079      0.39  |Q        |         |         |        V|
   24+ 0       4.2106      0.39  |Q        |         |         |        V|
   24+ 5       4.2123      0.24  Q         |         |         |        V|
   24+10       4.2126      0.04  Q         |         |         |        V|
   24+15       4.2126      0.01  Q         |         |         |        V|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

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Study date 05/02/23 File: Area13242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

BEAUMONT POINTE
DMA 13
DEVELOPED CONDITION

Drainage Area = 88.72(Ac.) = 0.139 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 88.72(Ac.) = 0.139 Sq. Mi.
Length along longest watercourse = 2709.80(Ft.)
Length along longest watercourse measured to centroid = 2303.80(Ft.)
Length along longest watercourse = 0.513 Mi.
Length along longest watercourse measured to centroid = 0.436 Mi.
Difference in elevation = 32.80(Ft.)
Slope along watercourse = 63.9103 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.093 Hr.
Lag time = 5.55 Min.
25% of lag time = 1.39 Min.
40% of lag time = 2.22 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

```
Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       88.72            2.54                 225.35

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       88.72            6.18                 548.29

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.540(In)
Area Averaged 100-Year Rainfall =    6.180(In)

Point rain (area averaged) =    2.540(In)
Areal adjustment factor =   99.98 %
Adjusted average point rain =    2.540(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    88.720           58.20         0.603
 Total Area Entered =     88.72(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-3     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
58.2  76.6      0.285     0.603        0.130       1.000      0.130
                                                 Sum (F) =   0.130
Area averaged mean soil loss (F) (In/Hr) =  0.130
Minimum soil loss rate ((In/Hr)) =  0.065
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.418
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        FOOTHILL S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         90.060         11.290             10.095
    2   0.167        180.120         53.524             47.858
    3   0.250        270.180         20.793             18.592
    4   0.333        360.239          8.570              7.663
    5   0.417        450.299          3.631              3.247
    6   0.500        540.359          1.109              0.991
    7   0.583        630.419          0.646              0.578
    8   0.667        720.479          0.436              0.390
                               Sum = 100.000   Sum=      89.413
------------------------------------------------------------------------

 The following loss rate calculations reflect use of the minimum calculated
```

loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.020	(0.231)		0.008	0.012
2	0.17	0.07	0.020	(0.230)		0.008	0.012
3	0.25	0.07	0.020	(0.229)		0.008	0.012
4	0.33	0.10	0.030	(0.228)		0.013	0.018
5	0.42	0.10	0.030	(0.227)		0.013	0.018
6	0.50	0.10	0.030	(0.226)		0.013	0.018
7	0.58	0.10	0.030	(0.225)		0.013	0.018
8	0.67	0.10	0.030	(0.225)		0.013	0.018
9	0.75	0.10	0.030	(0.224)		0.013	0.018
10	0.83	0.13	0.041	(0.223)		0.017	0.024
11	0.92	0.13	0.041	(0.222)		0.017	0.024
12	1.00	0.13	0.041	(0.221)		0.017	0.024
13	1.08	0.10	0.030	(0.220)		0.013	0.018
14	1.17	0.10	0.030	(0.219)		0.013	0.018
15	1.25	0.10	0.030	(0.218)		0.013	0.018
16	1.33	0.10	0.030	(0.218)		0.013	0.018
17	1.42	0.10	0.030	(0.217)		0.013	0.018
18	1.50	0.10	0.030	(0.216)		0.013	0.018
19	1.58	0.10	0.030	(0.215)		0.013	0.018
20	1.67	0.10	0.030	(0.214)		0.013	0.018
21	1.75	0.10	0.030	(0.213)		0.013	0.018
22	1.83	0.13	0.041	(0.212)		0.017	0.024
23	1.92	0.13	0.041	(0.211)		0.017	0.024
24	2.00	0.13	0.041	(0.211)		0.017	0.024
25	2.08	0.13	0.041	(0.210)		0.017	0.024
26	2.17	0.13	0.041	(0.209)		0.017	0.024
27	2.25	0.13	0.041	(0.208)		0.017	0.024
28	2.33	0.13	0.041	(0.207)		0.017	0.024
29	2.42	0.13	0.041	(0.206)		0.017	0.024
30	2.50	0.13	0.041	(0.206)		0.017	0.024
31	2.58	0.17	0.051	(0.205)		0.021	0.030
32	2.67	0.17	0.051	(0.204)		0.021	0.030
33	2.75	0.17	0.051	(0.203)		0.021	0.030
34	2.83	0.17	0.051	(0.202)		0.021	0.030
35	2.92	0.17	0.051	(0.201)		0.021	0.030
36	3.00	0.17	0.051	(0.201)		0.021	0.030
37	3.08	0.17	0.051	(0.200)		0.021	0.030
38	3.17	0.17	0.051	(0.199)		0.021	0.030
39	3.25	0.17	0.051	(0.198)		0.021	0.030
40	3.33	0.17	0.051	(0.197)		0.021	0.030
41	3.42	0.17	0.051	(0.196)		0.021	0.030
42	3.50	0.17	0.051	(0.196)		0.021	0.030
43	3.58	0.17	0.051	(0.195)		0.021	0.030
44	3.67	0.17	0.051	(0.194)		0.021	0.030
45	3.75	0.17	0.051	(0.193)		0.021	0.030
46	3.83	0.20	0.061	(0.192)		0.025	0.035
47	3.92	0.20	0.061	(0.191)		0.025	0.035
48	4.00	0.20	0.061	(0.191)		0.025	0.035

49	4.08	0.20	0.061	(0.190)	0.025	0.035
50	4.17	0.20	0.061	(0.189)	0.025	0.035
51	4.25	0.20	0.061	(0.188)	0.025	0.035
52	4.33	0.23	0.071	(0.187)	0.030	0.041
53	4.42	0.23	0.071	(0.187)	0.030	0.041
54	4.50	0.23	0.071	(0.186)	0.030	0.041
55	4.58	0.23	0.071	(0.185)	0.030	0.041
56	4.67	0.23	0.071	(0.184)	0.030	0.041
57	4.75	0.23	0.071	(0.183)	0.030	0.041
58	4.83	0.27	0.081	(0.183)	0.034	0.047
59	4.92	0.27	0.081	(0.182)	0.034	0.047
60	5.00	0.27	0.081	(0.181)	0.034	0.047
61	5.08	0.20	0.061	(0.180)	0.025	0.035
62	5.17	0.20	0.061	(0.180)	0.025	0.035
63	5.25	0.20	0.061	(0.179)	0.025	0.035
64	5.33	0.23	0.071	(0.178)	0.030	0.041
65	5.42	0.23	0.071	(0.177)	0.030	0.041
66	5.50	0.23	0.071	(0.176)	0.030	0.041
67	5.58	0.27	0.081	(0.176)	0.034	0.047
68	5.67	0.27	0.081	(0.175)	0.034	0.047
69	5.75	0.27	0.081	(0.174)	0.034	0.047
70	5.83	0.27	0.081	(0.173)	0.034	0.047
71	5.92	0.27	0.081	(0.173)	0.034	0.047
72	6.00	0.27	0.081	(0.172)	0.034	0.047
73	6.08	0.30	0.091	(0.171)	0.038	0.053
74	6.17	0.30	0.091	(0.170)	0.038	0.053
75	6.25	0.30	0.091	(0.170)	0.038	0.053
76	6.33	0.30	0.091	(0.169)	0.038	0.053
77	6.42	0.30	0.091	(0.168)	0.038	0.053
78	6.50	0.30	0.091	(0.167)	0.038	0.053
79	6.58	0.33	0.102	(0.166)	0.042	0.059
80	6.67	0.33	0.102	(0.166)	0.042	0.059
81	6.75	0.33	0.102	(0.165)	0.042	0.059
82	6.83	0.33	0.102	(0.164)	0.042	0.059
83	6.92	0.33	0.102	(0.164)	0.042	0.059
84	7.00	0.33	0.102	(0.163)	0.042	0.059
85	7.08	0.33	0.102	(0.162)	0.042	0.059
86	7.17	0.33	0.102	(0.161)	0.042	0.059
87	7.25	0.33	0.102	(0.161)	0.042	0.059
88	7.33	0.37	0.112	(0.160)	0.047	0.065
89	7.42	0.37	0.112	(0.159)	0.047	0.065
90	7.50	0.37	0.112	(0.158)	0.047	0.065
91	7.58	0.40	0.122	(0.158)	0.051	0.071
92	7.67	0.40	0.122	(0.157)	0.051	0.071
93	7.75	0.40	0.122	(0.156)	0.051	0.071
94	7.83	0.43	0.132	(0.155)	0.055	0.077
95	7.92	0.43	0.132	(0.155)	0.055	0.077
96	8.00	0.43	0.132	(0.154)	0.055	0.077
97	8.08	0.50	0.152	(0.153)	0.064	0.089
98	8.17	0.50	0.152	(0.153)	0.064	0.089
99	8.25	0.50	0.152	(0.152)	0.064	0.089
100	8.33	0.50	0.152	(0.151)	0.064	0.089
101	8.42	0.50	0.152	(0.150)	0.064	0.089
102	8.50	0.50	0.152	(0.150)	0.064	0.089

103	8.58	0.53	0.163	(0.149)	0.068	0.095
104	8.67	0.53	0.163	(0.148)	0.068	0.095
105	8.75	0.53	0.163	(0.148)	0.068	0.095
106	8.83	0.57	0.173	(0.147)	0.072	0.101
107	8.92	0.57	0.173	(0.146)	0.072	0.101
108	9.00	0.57	0.173	(0.146)	0.072	0.101
109	9.08	0.63	0.193	(0.145)	0.081	0.112
110	9.17	0.63	0.193	(0.144)	0.081	0.112
111	9.25	0.63	0.193	(0.144)	0.081	0.112
112	9.33	0.67	0.203	(0.143)	0.085	0.118
113	9.42	0.67	0.203	(0.142)	0.085	0.118
114	9.50	0.67	0.203	(0.141)	0.085	0.118
115	9.58	0.70	0.213	(0.141)	0.089	0.124
116	9.67	0.70	0.213	(0.140)	0.089	0.124
117	9.75	0.70	0.213	(0.139)	0.089	0.124
118	9.83	0.73	0.223	(0.139)	0.093	0.130
119	9.92	0.73	0.223	(0.138)	0.093	0.130
120	10.00	0.73	0.223	(0.137)	0.093	0.130
121	10.08	0.50	0.152	(0.137)	0.064	0.089
122	10.17	0.50	0.152	(0.136)	0.064	0.089
123	10.25	0.50	0.152	(0.135)	0.064	0.089
124	10.33	0.50	0.152	(0.135)	0.064	0.089
125	10.42	0.50	0.152	(0.134)	0.064	0.089
126	10.50	0.50	0.152	(0.133)	0.064	0.089
127	10.58	0.67	0.203	(0.133)	0.085	0.118
128	10.67	0.67	0.203	(0.132)	0.085	0.118
129	10.75	0.67	0.203	(0.132)	0.085	0.118
130	10.83	0.67	0.203	(0.131)	0.085	0.118
131	10.92	0.67	0.203	(0.130)	0.085	0.118
132	11.00	0.67	0.203	(0.130)	0.085	0.118
133	11.08	0.63	0.193	(0.129)	0.081	0.112
134	11.17	0.63	0.193	(0.128)	0.081	0.112
135	11.25	0.63	0.193	(0.128)	0.081	0.112
136	11.33	0.63	0.193	(0.127)	0.081	0.112
137	11.42	0.63	0.193	(0.126)	0.081	0.112
138	11.50	0.63	0.193	(0.126)	0.081	0.112
139	11.58	0.57	0.173	(0.125)	0.072	0.101
140	11.67	0.57	0.173	(0.125)	0.072	0.101
141	11.75	0.57	0.173	(0.124)	0.072	0.101
142	11.83	0.60	0.183	(0.123)	0.076	0.106
143	11.92	0.60	0.183	(0.123)	0.076	0.106
144	12.00	0.60	0.183	(0.122)	0.076	0.106
145	12.08	0.83	0.254	(0.121)	0.106	0.148
146	12.17	0.83	0.254	(0.121)	0.106	0.148
147	12.25	0.83	0.254	(0.120)	0.106	0.148
148	12.33	0.87	0.264	(0.120)	0.110	0.154
149	12.42	0.87	0.264	(0.119)	0.110	0.154
150	12.50	0.87	0.264	(0.118)	0.110	0.154
151	12.58	0.93	0.284	0.118	(0.119)	0.167
152	12.67	0.93	0.284	0.117	(0.119)	0.167
153	12.75	0.93	0.284	0.117	(0.119)	0.168
154	12.83	0.97	0.295	0.116	(0.123)	0.178
155	12.92	0.97	0.295	0.116	(0.123)	0.179
156	13.00	0.97	0.295	0.115	(0.123)	0.180

157	13.08	1.13	0.345	0.114	(0.144)	0.231
158	13.17	1.13	0.345	0.114	(0.144)	0.232
159	13.25	1.13	0.345	0.113	(0.144)	0.232
160	13.33	1.13	0.345	0.113	(0.144)	0.233
161	13.42	1.13	0.345	0.112	(0.144)	0.233
162	13.50	1.13	0.345	0.111	(0.144)	0.234
163	13.58	0.77	0.234	(0.111)	0.098	0.136
164	13.67	0.77	0.234	(0.110)	0.098	0.136
165	13.75	0.77	0.234	(0.110)	0.098	0.136
166	13.83	0.77	0.234	(0.109)	0.098	0.136
167	13.92	0.77	0.234	(0.109)	0.098	0.136
168	14.00	0.77	0.234	(0.108)	0.098	0.136
169	14.08	0.90	0.274	0.108	(0.115)	0.167
170	14.17	0.90	0.274	0.107	(0.115)	0.167
171	14.25	0.90	0.274	0.106	(0.115)	0.168
172	14.33	0.87	0.264	0.106	(0.110)	0.158
173	14.42	0.87	0.264	0.105	(0.110)	0.159
174	14.50	0.87	0.264	0.105	(0.110)	0.159
175	14.58	0.87	0.264	0.104	(0.110)	0.160
176	14.67	0.87	0.264	0.104	(0.110)	0.160
177	14.75	0.87	0.264	0.103	(0.110)	0.161
178	14.83	0.83	0.254	0.103	(0.106)	0.151
179	14.92	0.83	0.254	0.102	(0.106)	0.152
180	15.00	0.83	0.254	0.102	(0.106)	0.152
181	15.08	0.80	0.244	0.101	(0.102)	0.143
182	15.17	0.80	0.244	0.101	(0.102)	0.143
183	15.25	0.80	0.244	0.100	(0.102)	0.144
184	15.33	0.77	0.234	(0.100)	0.098	0.136
185	15.42	0.77	0.234	(0.099)	0.098	0.136
186	15.50	0.77	0.234	(0.099)	0.098	0.136
187	15.58	0.63	0.193	(0.098)	0.081	0.112
188	15.67	0.63	0.193	(0.098)	0.081	0.112
189	15.75	0.63	0.193	(0.097)	0.081	0.112
190	15.83	0.63	0.193	(0.097)	0.081	0.112
191	15.92	0.63	0.193	(0.096)	0.081	0.112
192	16.00	0.63	0.193	(0.096)	0.081	0.112
193	16.08	0.13	0.041	(0.095)	0.017	0.024
194	16.17	0.13	0.041	(0.095)	0.017	0.024
195	16.25	0.13	0.041	(0.094)	0.017	0.024
196	16.33	0.13	0.041	(0.094)	0.017	0.024
197	16.42	0.13	0.041	(0.093)	0.017	0.024
198	16.50	0.13	0.041	(0.093)	0.017	0.024
199	16.58	0.10	0.030	(0.092)	0.013	0.018
200	16.67	0.10	0.030	(0.092)	0.013	0.018
201	16.75	0.10	0.030	(0.091)	0.013	0.018
202	16.83	0.10	0.030	(0.091)	0.013	0.018
203	16.92	0.10	0.030	(0.090)	0.013	0.018
204	17.00	0.10	0.030	(0.090)	0.013	0.018
205	17.08	0.17	0.051	(0.089)	0.021	0.030
206	17.17	0.17	0.051	(0.089)	0.021	0.030
207	17.25	0.17	0.051	(0.089)	0.021	0.030
208	17.33	0.17	0.051	(0.088)	0.021	0.030
209	17.42	0.17	0.051	(0.088)	0.021	0.030
210	17.50	0.17	0.051	(0.087)	0.021	0.030

211	17.58	0.17	0.051	(0.087)	0.021	0.030
212	17.67	0.17	0.051	(0.086)	0.021	0.030
213	17.75	0.17	0.051	(0.086)	0.021	0.030
214	17.83	0.13	0.041	(0.085)	0.017	0.024
215	17.92	0.13	0.041	(0.085)	0.017	0.024
216	18.00	0.13	0.041	(0.085)	0.017	0.024
217	18.08	0.13	0.041	(0.084)	0.017	0.024
218	18.17	0.13	0.041	(0.084)	0.017	0.024
219	18.25	0.13	0.041	(0.083)	0.017	0.024
220	18.33	0.13	0.041	(0.083)	0.017	0.024
221	18.42	0.13	0.041	(0.083)	0.017	0.024
222	18.50	0.13	0.041	(0.082)	0.017	0.024
223	18.58	0.10	0.030	(0.082)	0.013	0.018
224	18.67	0.10	0.030	(0.081)	0.013	0.018
225	18.75	0.10	0.030	(0.081)	0.013	0.018
226	18.83	0.07	0.020	(0.081)	0.008	0.012
227	18.92	0.07	0.020	(0.080)	0.008	0.012
228	19.00	0.07	0.020	(0.080)	0.008	0.012
229	19.08	0.10	0.030	(0.079)	0.013	0.018
230	19.17	0.10	0.030	(0.079)	0.013	0.018
231	19.25	0.10	0.030	(0.079)	0.013	0.018
232	19.33	0.13	0.041	(0.078)	0.017	0.024
233	19.42	0.13	0.041	(0.078)	0.017	0.024
234	19.50	0.13	0.041	(0.078)	0.017	0.024
235	19.58	0.10	0.030	(0.077)	0.013	0.018
236	19.67	0.10	0.030	(0.077)	0.013	0.018
237	19.75	0.10	0.030	(0.077)	0.013	0.018
238	19.83	0.07	0.020	(0.076)	0.008	0.012
239	19.92	0.07	0.020	(0.076)	0.008	0.012
240	20.00	0.07	0.020	(0.076)	0.008	0.012
241	20.08	0.10	0.030	(0.075)	0.013	0.018
242	20.17	0.10	0.030	(0.075)	0.013	0.018
243	20.25	0.10	0.030	(0.075)	0.013	0.018
244	20.33	0.10	0.030	(0.074)	0.013	0.018
245	20.42	0.10	0.030	(0.074)	0.013	0.018
246	20.50	0.10	0.030	(0.074)	0.013	0.018
247	20.58	0.10	0.030	(0.073)	0.013	0.018
248	20.67	0.10	0.030	(0.073)	0.013	0.018
249	20.75	0.10	0.030	(0.073)	0.013	0.018
250	20.83	0.07	0.020	(0.072)	0.008	0.012
251	20.92	0.07	0.020	(0.072)	0.008	0.012
252	21.00	0.07	0.020	(0.072)	0.008	0.012
253	21.08	0.10	0.030	(0.072)	0.013	0.018
254	21.17	0.10	0.030	(0.071)	0.013	0.018
255	21.25	0.10	0.030	(0.071)	0.013	0.018
256	21.33	0.07	0.020	(0.071)	0.008	0.012
257	21.42	0.07	0.020	(0.070)	0.008	0.012
258	21.50	0.07	0.020	(0.070)	0.008	0.012
259	21.58	0.10	0.030	(0.070)	0.013	0.018
260	21.67	0.10	0.030	(0.070)	0.013	0.018
261	21.75	0.10	0.030	(0.069)	0.013	0.018
262	21.83	0.07	0.020	(0.069)	0.008	0.012
263	21.92	0.07	0.020	(0.069)	0.008	0.012
264	22.00	0.07	0.020	(0.069)	0.008	0.012

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265  22.08     0.10      0.030       (  0.068)       0.013        0.018
266  22.17     0.10      0.030       (  0.068)       0.013        0.018
267  22.25     0.10      0.030       (  0.068)       0.013        0.018
268  22.33     0.07      0.020       (  0.068)       0.008        0.012
269  22.42     0.07      0.020       (  0.068)       0.008        0.012
270  22.50     0.07      0.020       (  0.067)       0.008        0.012
271  22.58     0.07      0.020       (  0.067)       0.008        0.012
272  22.67     0.07      0.020       (  0.067)       0.008        0.012
273  22.75     0.07      0.020       (  0.067)       0.008        0.012
274  22.83     0.07      0.020       (  0.067)       0.008        0.012
275  22.92     0.07      0.020       (  0.067)       0.008        0.012
276  23.00     0.07      0.020       (  0.066)       0.008        0.012
277  23.08     0.07      0.020       (  0.066)       0.008        0.012
278  23.17     0.07      0.020       (  0.066)       0.008        0.012
279  23.25     0.07      0.020       (  0.066)       0.008        0.012
280  23.33     0.07      0.020       (  0.066)       0.008        0.012
281  23.42     0.07      0.020       (  0.066)       0.008        0.012
282  23.50     0.07      0.020       (  0.066)       0.008        0.012
283  23.58     0.07      0.020       (  0.065)       0.008        0.012
284  23.67     0.07      0.020       (  0.065)       0.008        0.012
285  23.75     0.07      0.020       (  0.065)       0.008        0.012
286  23.83     0.07      0.020       (  0.065)       0.008        0.012
287  23.92     0.07      0.020       (  0.065)       0.008        0.012
288  24.00     0.07      0.020       (  0.065)       0.008        0.012
                (Loss Rate Not Used)
    Sum =     100.0                                          Sum =    18.0
       Flood volume = Effective rainfall      1.50(In)
        times area      88.7(Ac.)/[(In)/(Ft.)] =      11.1(Ac.Ft)
       Total soil loss =      1.04(In)
       Total soil loss =     7.669(Ac.Ft)
       Total rainfall =      2.54(In)
       Flood volume =      483793.7 Cubic Feet
       Total soil loss =      334080.7 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =     20.801(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                       R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                    Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        7.5      15.0      22.5      30.0
 ---------------------------------------------------------------------------
   0+ 5       0.0008      0.12  Q         |         |         |         |
   0+10       0.0055      0.69  Q         |         |         |         |
   0+15       0.0118      0.91  VQ        |         |         |         |
   0+20       0.0191      1.06  VQ        |         |         |         |
   0+25       0.0285      1.38  VQ        |         |         |         |
   0+30       0.0389      1.50  VQ        |         |         |         |
   0+35       0.0495      1.55  V Q       |         |         |         |
   0+40       0.0604      1.58  V Q       |         |         |         |
   0+45       0.0713      1.58  V Q       |         |         |         |
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0+50	0.0826	1.64	V Q	|	|	|	|
0+55	0.0959	1.93	V Q	|	|	|	|
1+ 0	0.1099	2.04	V Q	|	|	|	|
1+ 5	0.1239	2.03	V Q	|	|	|	|
1+10	0.1360	1.76	V Q	|	|	|	|
1+15	0.1474	1.66	V Q	|	|	|	|
1+20	0.1586	1.62	V Q	|	|	|	|
1+25	0.1696	1.60	V Q	|	|	|	|
1+30	0.1805	1.59	V Q	|	|	|	|
1+35	0.1915	1.59	V Q	|	|	|	|
1+40	0.2024	1.59	V Q	|	|	|	|
1+45	0.2133	1.59	V Q	|	|	|	|
1+50	0.2247	1.65	V Q	|	|	|	|
1+55	0.2380	1.93	V Q	|	|	|	|
2+ 0	0.2520	2.04	V Q	|	|	|	|
2+ 5	0.2664	2.08	V Q	|	|	|	|
2+10	0.2808	2.10	|VQ	|	|	|	|
2+15	0.2954	2.11	|VQ	|	|	|	|
2+20	0.3099	2.11	|VQ	|	|	|	|
2+25	0.3245	2.12	|VQ	|	|	|	|
2+30	0.3391	2.12	|VQ	|	|	|	|
2+35	0.3541	2.18	|VQ	|	|	|	|
2+40	0.3710	2.46	|V Q	|	|	|	|
2+45	0.3887	2.57	|V Q	|	|	|	|
2+50	0.4067	2.61	|V Q	|	|	|	|
2+55	0.4248	2.63	|V Q	|	|	|	|
3+ 0	0.4430	2.64	|V Q	|	|	|	|
3+ 5	0.4612	2.64	|V Q	|	|	|	|
3+10	0.4794	2.64	|V Q	|	|	|	|
3+15	0.4976	2.64	|V Q	|	|	|	|
3+20	0.5158	2.64	|V Q	|	|	|	|
3+25	0.5340	2.64	|V Q	|	|	|	|
3+30	0.5522	2.64	|V Q	|	|	|	|
3+35	0.5704	2.64	| VQ	|	|	|	|
3+40	0.5887	2.64	| VQ	|	|	|	|
3+45	0.6069	2.64	| VQ	|	|	|	|
3+50	0.6255	2.70	| VQ	|	|	|	|
3+55	0.6461	2.99	| VQ	|	|	|	|
4+ 0	0.6674	3.10	| V Q	|	|	|	|
4+ 5	0.6890	3.14	| V Q	|	|	|	|
4+10	0.7108	3.16	| V Q	|	|	|	|
4+15	0.7326	3.17	| V Q	|	|	|	|
4+20	0.7549	3.23	| V Q	|	|	|	|
4+25	0.7791	3.52	| V Q	|	|	|	|
4+30	0.8041	3.63	| V Q	|	|	|	|
4+35	0.8294	3.67	| V Q	|	|	|	|
4+40	0.8548	3.69	| VQ	|	|	|	|
4+45	0.8802	3.70	| VQ	|	|	|	|
4+50	0.9061	3.76	| V Q	|	|	|	|
4+55	0.9340	4.05	| V Q	|	|	|	|
5+ 0	0.9626	4.16	| V Q	|	|	|	|
5+ 5	0.9907	4.08	| V Q	|	|	|	|
5+10	1.0150	3.53	| VQ	|	|	|	|
5+15	1.0379	3.32	| VQ	|	|	|	|

5+20	1.0606	3.29	VQ				
5+25	1.0850	3.54	VQ				
5+30	1.1100	3.64	VQ				
5+35	1.1357	3.74	Q				
5+40	1.1635	4.03	VQ				
5+45	1.1921	4.15	VQ				
5+50	1.2210	4.20	VQ				
5+55	1.2501	4.22	VQ				
6+ 0	1.2792	4.23	VQ				
6+ 5	1.3087	4.29	VQ				
6+10	1.3402	4.57	V Q				
6+15	1.3725	4.68	V Q				
6+20	1.4050	4.73	VQ				
6+25	1.4377	4.75	VQ				
6+30	1.4705	4.75	VQ				
6+35	1.5037	4.82	VQ				
6+40	1.5388	5.10	VQ				
6+45	1.5747	5.21	VQ				
6+50	1.6109	5.26	V Q				
6+55	1.6473	5.28	V Q				
7+ 0	1.6836	5.28	VQ				
7+ 5	1.7201	5.29	VQ				
7+10	1.7565	5.29	VQ				
7+15	1.7929	5.29	VQ				
7+20	1.8297	5.35	VQ				
7+25	1.8685	5.63	VQ				
7+30	1.9081	5.74	VQ				
7+35	1.9483	5.85	Q				
7+40	1.9907	6.15	VQ				
7+45	2.0338	6.26	VQ				
7+50	2.0777	6.37	VQ				
7+55	2.1237	6.68	VQ				
8+ 0	2.1705	6.79	V Q				
8+ 5	2.2185	6.96	V Q				
8+10	2.2704	7.55	V Q				
8+15	2.3240	7.78	V Q				
8+20	2.3782	7.87	V Q				
8+25	2.4327	7.91	V Q				
8+30	2.4872	7.92	V Q				
8+35	2.5423	7.99	VQ				
8+40	2.5992	8.28	V|Q				
8+45	2.6570	8.39	V|Q				
8+50	2.7155	8.49	V|Q				
8+55	2.7760	8.79	V|Q				
9+ 0	2.8374	8.91	VQ				
9+ 5	2.8999	9.08	V Q				
9+10	2.9665	9.67	V Q				
9+15	3.0346	9.89	V Q				
9+20	3.1038	10.04	|V Q				
9+25	3.1752	10.37	|V Q				
9+30	3.2474	10.49	|V Q				
9+35	3.3205	10.60	|V Q				
9+40	3.3956	10.91	| V Q				
9+45	3.4715	11.02	| V Q				

9+50	3.5482	11.13	|	| V Q |	|	|
9+55	3.6270	11.44	|	| V Q |	|	|
10+ 0	3.7065	11.55	|	| V Q |	|	|
10+ 5	3.7836	11.18	|	| VQ |	|	|
10+10	3.8471	9.22	|	| QV |	|	|
10+15	3.9054	8.46	|	|Q V |	|	|
10+20	3.9615	8.15	|	Q V |	|	|
10+25	4.0167	8.01	|	Q V |	|	|
10+30	4.0716	7.97	|	Q V |	|	|
10+35	4.1284	8.25	|	Q V |	|	|
10+40	4.1948	9.65	|	| Q V |	|	|
10+45	4.2651	10.20	|	| Q V |	|	|
10+50	4.3368	10.42	|	| Q V |	|	|
10+55	4.4093	10.52	|	| QV |	|	|
11+ 0	4.4820	10.55	|	| Q V |	|	|
11+ 5	4.5543	10.51	|	| Q V |	|	|
11+10	4.6248	10.24	|	| Q V |	|	|
11+15	4.6945	10.13	|	| Q V |	|	|
11+20	4.7640	10.08	|	| Q V |	|	|
11+25	4.8332	10.06	|	| Q V |	|	|
11+30	4.9025	10.05	|	| Q V |	|	|
11+35	4.9709	9.93	|	| Q V |	|	|
11+40	5.0354	9.36	|	| Q V |	|	|
11+45	5.0983	9.14	|	| Q V |	|	|
11+50	5.1611	9.11	|	| Q V |	|	|
11+55	5.2255	9.36	|	| Q V |	|	|
12+ 0	5.2907	9.46	|	| Q V|	|	|
12+ 5	5.3589	9.91	|	| Q V|	|	|
12+10	5.4409	11.91	|	| Q V|	|	|
12+15	5.5283	12.68	|	| Q V|	|	|
12+20	5.6183	13.06	|	| Q V	|	|
12+25	5.7111	13.48	|	| Q V	|	|
12+30	5.8050	13.63	|	| Q V	|	|
12+35	5.9003	13.83	|	| Q |V	|	|
12+40	6.0001	14.49	|	| Q|V	|	|
12+45	6.1018	14.77	|	| Q|V	|	|
12+50	6.2053	15.02	|	| Q V	|	|
12+55	6.3127	15.60	|	| Q V	|	|
13+ 0	6.4219	15.85	|	| |Q V	|	|
13+ 5	6.5355	16.50	|	| | QV	|	|
13+10	6.6666	19.02	|	| | VQ	|	|
13+15	6.8045	20.03	|	| | V Q	|	|
13+20	6.9455	20.48	|	| | V Q	|	|
13+25	7.0881	20.70	|	| | V Q	|	|
13+30	7.2314	20.80	|	| | VQ	|	|
13+35	7.3683	19.89	|	| | Q	|	|
13+40	7.4732	15.23	|	| Q | V	|	|
13+45	7.5657	13.42	|	| Q | V	|	|
13+50	7.6529	12.67	|	| Q | V	|	|
13+55	7.7380	12.36	|	| Q | V	|	|
14+ 0	7.8225	12.26	|	| Q | V |	|	|
14+ 5	7.9086	12.51	|	| Q | V |	|	|
14+10	8.0047	13.95	|	| Q | V |	|	|
14+15	8.1050	14.56	|	| Q| V|	|	|

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14+20       8.2064     14.73  |          |         Q|         V|          |
14+25       8.3056     14.39  |          |         Q|         V|          |
14+30       8.4039     14.28  |          |         Q|          V          |
14+35       8.5022     14.27  |          |         Q|          V          |
14+40       8.6006     14.29  |          |         Q|          V          |
14+45       8.6993     14.33  |          |         Q|          |V         |
14+50       8.7976     14.27  |          |         Q|          |V         |
14+55       8.8928     13.83  |          |        Q |          | V        |
15+ 0       8.9871     13.69  |          |        Q |          | V        |
15+ 5       9.0804     13.55  |          |        Q |          | V        |
15+10       9.1705     13.08  |          |       Q  |          |  V       |
15+15       9.2596     12.93  |          |       Q  |          |  V       |
15+20       9.3478     12.81  |          |       Q  |          |  V       |
15+25       9.4333     12.42  |          |      Q   |          |  V       |
15+30       9.5178     12.27  |          |      Q   |          |   V      |
15+35       9.6002     11.97  |          |     Q    |          |   V      |
15+40       9.6746     10.81  |          |    Q     |          |   V      |
15+45       9.7460     10.36  |          |  Q       |          |    V     |
15+50       9.8161     10.18  |          |  Q       |          |    V     |
15+55       9.8856     10.10  |          |  Q       |          |    V     |
16+ 0       9.9550     10.07  |          |  Q       |          |    V     |
16+ 5      10.0181      9.16  |          | Q        |          |     V    |
16+10      10.0519      4.91  |      Q   |          |          |     V    |
16+15      10.0743      3.26  |    Q     |          |          |     V    |
16+20      10.0920      2.58  |  Q       |          |          |     V    |
16+25      10.1078      2.29  |  Q       |          |          |     V    |
16+30      10.1230      2.20  | Q        |          |          |     V    |
16+35      10.1374      2.09  | Q        |          |          |     V    |
16+40      10.1496      1.77  | Q        |          |          |     V    |
16+45      10.1610      1.66  | Q        |          |          |     V    |
16+50      10.1722      1.62  | Q        |          |          |     V    |
16+55      10.1832      1.60  | Q        |          |          |     V    |
17+ 0      10.1941      1.59  | Q        |          |          |     V    |
17+ 5      10.2059      1.71  | Q        |          |          |     V    |
17+10      10.2216      2.27  |  Q       |          |          |     V    |
17+15      10.2387      2.49  |  Q       |          |          |     V    |
17+20      10.2565      2.58  |  Q       |          |          |     V    |
17+25      10.2746      2.62  |  Q       |          |          |      V   |
17+30      10.2927      2.63  |  Q       |          |          |      V   |
17+35      10.3109      2.64  |  Q       |          |          |      V   |
17+40      10.3291      2.64  |  Q       |          |          |      V   |
17+45      10.3473      2.64  |  Q       |          |          |      V   |
17+50      10.3651      2.58  |  Q       |          |          |      V   |
17+55      10.3810      2.30  |  Q       |          |          |      V   |
18+ 0      10.3961      2.19  | Q        |          |          |      V   |
18+ 5      10.4108      2.15  | Q        |          |          |      V   |
18+10      10.4255      2.13  | Q        |          |          |      V   |
18+15      10.4401      2.12  | Q        |          |          |      V   |
18+20      10.4547      2.12  | Q        |          |          |      V   |
18+25      10.4693      2.12  | Q        |          |          |      V   |
18+30      10.4838      2.12  | Q        |          |          |      V   |
18+35      10.4980      2.06  | Q        |          |          |      V   |
18+40      10.5102      1.77  | Q        |          |          |      V   |
18+45      10.5216      1.66  | Q        |          |          |      V   |
```

18+50	10.5324	1.56	| Q	|	|	|	V |
18+55	10.5410	1.26	|Q	|	|	|	V |
19+ 0	10.5489	1.14	|Q	|	|	|	V |
19+ 5	10.5568	1.15	|Q	|	|	|	V |
19+10	10.5665	1.41	|Q	|	|	|	V |
19+15	10.5770	1.52	| Q	|	|	|	V |
19+20	10.5881	1.62	| Q	|	|	|	V |
19+25	10.6013	1.92	| Q	|	|	|	V |
19+30	10.6153	2.03	| Q	|	|	|	V |
19+35	10.6292	2.02	| Q	|	|	|	V |
19+40	10.6414	1.76	| Q	|	|	|	V |
19+45	10.6528	1.66	| Q	|	|	|	V |
19+50	10.6635	1.56	| Q	|	|	|	V |
19+55	10.6721	1.26	|Q	|	|	|	V |
20+ 0	10.6800	1.14	|Q	|	|	|	V |
20+ 5	10.6879	1.15	|Q	|	|	|	V |
20+10	10.6976	1.41	|Q	|	|	|	V |
20+15	10.7081	1.52	| Q	|	|	|	V |
20+20	10.7188	1.56	| Q	|	|	|	V |
20+25	10.7297	1.58	| Q	|	|	|	V |
20+30	10.7406	1.58	| Q	|	|	|	V |
20+35	10.7515	1.58	| Q	|	|	|	V |
20+40	10.7624	1.59	| Q	|	|	|	V |
20+45	10.7733	1.59	| Q	|	|	|	V |
20+50	10.7838	1.53	| Q	|	|	|	V |
20+55	10.7924	1.24	|Q	|	|	|	V |
21+ 0	10.8002	1.13	|Q	|	|	|	V |
21+ 5	10.8081	1.15	|Q	|	|	|	V |
21+10	10.8179	1.41	|Q	|	|	|	V |
21+15	10.8283	1.52	| Q	|	|	|	V |
21+20	10.8386	1.50	|Q	|	|	|	V|
21+25	10.8471	1.23	|Q	|	|	|	V|
21+30	10.8549	1.13	|Q	|	|	|	V|
21+35	10.8628	1.15	|Q	|	|	|	V|
21+40	10.8725	1.41	|Q	|	|	|	V|
21+45	10.8829	1.52	| Q	|	|	|	V|
21+50	10.8933	1.50	|Q	|	|	|	V|
21+55	10.9017	1.23	|Q	|	|	|	V|
22+ 0	10.9095	1.13	|Q	|	|	|	V|
22+ 5	10.9174	1.15	|Q	|	|	|	V|
22+10	10.9271	1.41	|Q	|	|	|	V|
22+15	10.9376	1.52	| Q	|	|	|	V|
22+20	10.9479	1.50	|Q	|	|	|	V|
22+25	10.9564	1.23	|Q	|	|	|	V|
22+30	10.9641	1.13	|Q	|	|	|	V|
22+35	10.9716	1.09	|Q	|	|	|	V|
22+40	10.9790	1.07	|Q	|	|	|	V|
22+45	10.9863	1.06	|Q	|	|	|	V|
22+50	10.9936	1.06	|Q	|	|	|	V|
22+55	11.0009	1.06	|Q	|	|	|	V|
23+ 0	11.0082	1.06	|Q	|	|	|	V|
23+ 5	11.0155	1.06	|Q	|	|	|	V|
23+10	11.0228	1.06	|Q	|	|	|	V|
23+15	11.0300	1.06	|Q	|	|	|	V|

```
   23+20      11.0373      1.06  |Q        |         |         |        V|
   23+25      11.0446      1.06  |Q        |         |         |        V|
   23+30      11.0519      1.06  |Q        |         |         |        V|
   23+35      11.0592      1.06  |Q        |         |         |        V|
   23+40      11.0665      1.06  |Q        |         |         |        V|
   23+45      11.0738      1.06  |Q        |         |         |        V|
   23+50      11.0810      1.06  |Q        |         |         |        V|
   23+55      11.0883      1.06  |Q        |         |         |        V|
   24+ 0      11.0956      1.06  |Q        |         |         |        V|
   24+ 5      11.1021      0.94  |Q        |         |         |        V|
   24+10      11.1046      0.37  Q         |         |         |        V|
   24+15      11.1057      0.15  Q         |         |         |        V|
   24+20      11.1061      0.06  Q         |         |         |        V|
   24+25      11.1063      0.02  Q         |         |         |        V|
   24+30      11.1063      0.01  Q         |         |         |        V|
   24+35      11.1064      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
```

U n i t H y d r o g r a p h A n a l y s i s

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Study date 05/02/23 File: Area16242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

BEAUMONT POINTE
DMA 16
DEVELOPED CONDITION

Drainage Area = 85.60(Ac.) = 0.134 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 85.60(Ac.) = 0.134 Sq. Mi.
Length along longest watercourse = 4129.80(Ft.)
Length along longest watercourse measured to centroid = 2770.20(Ft.)
Length along longest watercourse = 0.782 Mi.
Length along longest watercourse measured to centroid = 0.525 Mi.
Difference in elevation = 150.00(Ft.)
Slope along watercourse = 191.7768 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.095 Hr.
Lag time = 5.67 Min.
25% of lag time = 1.42 Min.
40% of lag time = 2.27 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

```
Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       85.60            2.54                 217.42

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       85.60            6.18                 529.01

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.540(In)
Area Averaged 100-Year Rainfall =    6.180(In)

Point rain (area averaged) =    2.540(In)
Areal adjustment factor =   99.98 %
Adjusted average point rain =    2.540(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    85.600           54.90         0.679
 Total Area Entered =     85.60(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-3     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
54.9  73.9      0.316     0.679        0.123       1.000      0.123
                                                 Sum (F) =   0.123
Area averaged mean soil loss (F) (In/Hr) =  0.123
Minimum soil loss rate ((In/Hr)) =  0.061
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.357
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        FOOTHILL S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         88.154         10.815              9.330
    2   0.167        176.308         52.730             45.490
    3   0.250        264.462         21.422             18.481
    4   0.333        352.616          8.785              7.578
    5   0.417        440.770          3.870              3.339
    6   0.500        528.924          1.206              1.040
    7   0.583        617.078          0.654              0.564
    8   0.667        705.232          0.518              0.447
                               Sum = 100.000   Sum=      86.269
------------------------------------------------------------------------

 The following loss rate calculations reflect use of the minimum calculated
```

loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain
value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.020	(0.218)	0.007	0.013
2	0.17	0.07	0.020	(0.217)	0.007	0.013
3	0.25	0.07	0.020	(0.216)	0.007	0.013
4	0.33	0.10	0.030	(0.215)	0.011	0.020
5	0.42	0.10	0.030	(0.214)	0.011	0.020
6	0.50	0.10	0.030	(0.213)	0.011	0.020
7	0.58	0.10	0.030	(0.213)	0.011	0.020
8	0.67	0.10	0.030	(0.212)	0.011	0.020
9	0.75	0.10	0.030	(0.211)	0.011	0.020
10	0.83	0.13	0.041	(0.210)	0.015	0.026
11	0.92	0.13	0.041	(0.209)	0.015	0.026
12	1.00	0.13	0.041	(0.209)	0.015	0.026
13	1.08	0.10	0.030	(0.208)	0.011	0.020
14	1.17	0.10	0.030	(0.207)	0.011	0.020
15	1.25	0.10	0.030	(0.206)	0.011	0.020
16	1.33	0.10	0.030	(0.205)	0.011	0.020
17	1.42	0.10	0.030	(0.204)	0.011	0.020
18	1.50	0.10	0.030	(0.204)	0.011	0.020
19	1.58	0.10	0.030	(0.203)	0.011	0.020
20	1.67	0.10	0.030	(0.202)	0.011	0.020
21	1.75	0.10	0.030	(0.201)	0.011	0.020
22	1.83	0.13	0.041	(0.200)	0.015	0.026
23	1.92	0.13	0.041	(0.200)	0.015	0.026
24	2.00	0.13	0.041	(0.199)	0.015	0.026
25	2.08	0.13	0.041	(0.198)	0.015	0.026
26	2.17	0.13	0.041	(0.197)	0.015	0.026
27	2.25	0.13	0.041	(0.196)	0.015	0.026
28	2.33	0.13	0.041	(0.196)	0.015	0.026
29	2.42	0.13	0.041	(0.195)	0.015	0.026
30	2.50	0.13	0.041	(0.194)	0.015	0.026
31	2.58	0.17	0.051	(0.193)	0.018	0.033
32	2.67	0.17	0.051	(0.192)	0.018	0.033
33	2.75	0.17	0.051	(0.192)	0.018	0.033
34	2.83	0.17	0.051	(0.191)	0.018	0.033
35	2.92	0.17	0.051	(0.190)	0.018	0.033
36	3.00	0.17	0.051	(0.189)	0.018	0.033
37	3.08	0.17	0.051	(0.188)	0.018	0.033
38	3.17	0.17	0.051	(0.188)	0.018	0.033
39	3.25	0.17	0.051	(0.187)	0.018	0.033
40	3.33	0.17	0.051	(0.186)	0.018	0.033
41	3.42	0.17	0.051	(0.185)	0.018	0.033
42	3.50	0.17	0.051	(0.185)	0.018	0.033
43	3.58	0.17	0.051	(0.184)	0.018	0.033
44	3.67	0.17	0.051	(0.183)	0.018	0.033
45	3.75	0.17	0.051	(0.182)	0.018	0.033
46	3.83	0.20	0.061	(0.181)	0.022	0.039
47	3.92	0.20	0.061	(0.181)	0.022	0.039
48	4.00	0.20	0.061	(0.180)	0.022	0.039

49	4.08	0.20	0.061	(0.179)	0.022	0.039
50	4.17	0.20	0.061	(0.178)	0.022	0.039
51	4.25	0.20	0.061	(0.178)	0.022	0.039
52	4.33	0.23	0.071	(0.177)	0.025	0.046
53	4.42	0.23	0.071	(0.176)	0.025	0.046
54	4.50	0.23	0.071	(0.175)	0.025	0.046
55	4.58	0.23	0.071	(0.175)	0.025	0.046
56	4.67	0.23	0.071	(0.174)	0.025	0.046
57	4.75	0.23	0.071	(0.173)	0.025	0.046
58	4.83	0.27	0.081	(0.172)	0.029	0.052
59	4.92	0.27	0.081	(0.172)	0.029	0.052
60	5.00	0.27	0.081	(0.171)	0.029	0.052
61	5.08	0.20	0.061	(0.170)	0.022	0.039
62	5.17	0.20	0.061	(0.169)	0.022	0.039
63	5.25	0.20	0.061	(0.169)	0.022	0.039
64	5.33	0.23	0.071	(0.168)	0.025	0.046
65	5.42	0.23	0.071	(0.167)	0.025	0.046
66	5.50	0.23	0.071	(0.166)	0.025	0.046
67	5.58	0.27	0.081	(0.166)	0.029	0.052
68	5.67	0.27	0.081	(0.165)	0.029	0.052
69	5.75	0.27	0.081	(0.164)	0.029	0.052
70	5.83	0.27	0.081	(0.164)	0.029	0.052
71	5.92	0.27	0.081	(0.163)	0.029	0.052
72	6.00	0.27	0.081	(0.162)	0.029	0.052
73	6.08	0.30	0.091	(0.161)	0.033	0.059
74	6.17	0.30	0.091	(0.161)	0.033	0.059
75	6.25	0.30	0.091	(0.160)	0.033	0.059
76	6.33	0.30	0.091	(0.159)	0.033	0.059
77	6.42	0.30	0.091	(0.159)	0.033	0.059
78	6.50	0.30	0.091	(0.158)	0.033	0.059
79	6.58	0.33	0.102	(0.157)	0.036	0.065
80	6.67	0.33	0.102	(0.156)	0.036	0.065
81	6.75	0.33	0.102	(0.156)	0.036	0.065
82	6.83	0.33	0.102	(0.155)	0.036	0.065
83	6.92	0.33	0.102	(0.154)	0.036	0.065
84	7.00	0.33	0.102	(0.154)	0.036	0.065
85	7.08	0.33	0.102	(0.153)	0.036	0.065
86	7.17	0.33	0.102	(0.152)	0.036	0.065
87	7.25	0.33	0.102	(0.151)	0.036	0.065
88	7.33	0.37	0.112	(0.151)	0.040	0.072
89	7.42	0.37	0.112	(0.150)	0.040	0.072
90	7.50	0.37	0.112	(0.149)	0.040	0.072
91	7.58	0.40	0.122	(0.149)	0.044	0.078
92	7.67	0.40	0.122	(0.148)	0.044	0.078
93	7.75	0.40	0.122	(0.147)	0.044	0.078
94	7.83	0.43	0.132	(0.147)	0.047	0.085
95	7.92	0.43	0.132	(0.146)	0.047	0.085
96	8.00	0.43	0.132	(0.145)	0.047	0.085
97	8.08	0.50	0.152	(0.145)	0.054	0.098
98	8.17	0.50	0.152	(0.144)	0.054	0.098
99	8.25	0.50	0.152	(0.143)	0.054	0.098
100	8.33	0.50	0.152	(0.143)	0.054	0.098
101	8.42	0.50	0.152	(0.142)	0.054	0.098
102	8.50	0.50	0.152	(0.141)	0.054	0.098

103	8.58	0.53	0.163	(0.141)	0.058	0.105
104	8.67	0.53	0.163	(0.140)	0.058	0.105
105	8.75	0.53	0.163	(0.139)	0.058	0.105
106	8.83	0.57	0.173	(0.139)	0.062	0.111
107	8.92	0.57	0.173	(0.138)	0.062	0.111
108	9.00	0.57	0.173	(0.137)	0.062	0.111
109	9.08	0.63	0.193	(0.137)	0.069	0.124
110	9.17	0.63	0.193	(0.136)	0.069	0.124
111	9.25	0.63	0.193	(0.135)	0.069	0.124
112	9.33	0.67	0.203	(0.135)	0.073	0.131
113	9.42	0.67	0.203	(0.134)	0.073	0.131
114	9.50	0.67	0.203	(0.133)	0.073	0.131
115	9.58	0.70	0.213	(0.133)	0.076	0.137
116	9.67	0.70	0.213	(0.132)	0.076	0.137
117	9.75	0.70	0.213	(0.132)	0.076	0.137
118	9.83	0.73	0.223	(0.131)	0.080	0.144
119	9.92	0.73	0.223	(0.130)	0.080	0.144
120	10.00	0.73	0.223	(0.130)	0.080	0.144
121	10.08	0.50	0.152	(0.129)	0.054	0.098
122	10.17	0.50	0.152	(0.128)	0.054	0.098
123	10.25	0.50	0.152	(0.128)	0.054	0.098
124	10.33	0.50	0.152	(0.127)	0.054	0.098
125	10.42	0.50	0.152	(0.127)	0.054	0.098
126	10.50	0.50	0.152	(0.126)	0.054	0.098
127	10.58	0.67	0.203	(0.125)	0.073	0.131
128	10.67	0.67	0.203	(0.125)	0.073	0.131
129	10.75	0.67	0.203	(0.124)	0.073	0.131
130	10.83	0.67	0.203	(0.123)	0.073	0.131
131	10.92	0.67	0.203	(0.123)	0.073	0.131
132	11.00	0.67	0.203	(0.122)	0.073	0.131
133	11.08	0.63	0.193	(0.122)	0.069	0.124
134	11.17	0.63	0.193	(0.121)	0.069	0.124
135	11.25	0.63	0.193	(0.120)	0.069	0.124
136	11.33	0.63	0.193	(0.120)	0.069	0.124
137	11.42	0.63	0.193	(0.119)	0.069	0.124
138	11.50	0.63	0.193	(0.119)	0.069	0.124
139	11.58	0.57	0.173	(0.118)	0.062	0.111
140	11.67	0.57	0.173	(0.118)	0.062	0.111
141	11.75	0.57	0.173	(0.117)	0.062	0.111
142	11.83	0.60	0.183	(0.116)	0.065	0.118
143	11.92	0.60	0.183	(0.116)	0.065	0.118
144	12.00	0.60	0.183	(0.115)	0.065	0.118
145	12.08	0.83	0.254	(0.115)	0.091	0.163
146	12.17	0.83	0.254	(0.114)	0.091	0.163
147	12.25	0.83	0.254	(0.113)	0.091	0.163
148	12.33	0.87	0.264	(0.113)	0.094	0.170
149	12.42	0.87	0.264	(0.112)	0.094	0.170
150	12.50	0.87	0.264	(0.112)	0.094	0.170
151	12.58	0.93	0.284	(0.111)	0.102	0.183
152	12.67	0.93	0.284	(0.111)	0.102	0.183
153	12.75	0.93	0.284	(0.110)	0.102	0.183
154	12.83	0.97	0.295	(0.110)	0.105	0.189
155	12.92	0.97	0.295	(0.109)	0.105	0.189
156	13.00	0.97	0.295	(0.108)	0.105	0.189

157	13.08	1.13	0.345	0.108	(0.123)	0.237
158	13.17	1.13	0.345	0.107	(0.123)	0.238
159	13.25	1.13	0.345	0.107	(0.123)	0.239
160	13.33	1.13	0.345	0.106	(0.123)	0.239
161	13.42	1.13	0.345	0.106	(0.123)	0.240
162	13.50	1.13	0.345	0.105	(0.123)	0.240
163	13.58	0.77	0.234	(0.105)	0.083	0.150
164	13.67	0.77	0.234	(0.104)	0.083	0.150
165	13.75	0.77	0.234	(0.104)	0.083	0.150
166	13.83	0.77	0.234	(0.103)	0.083	0.150
167	13.92	0.77	0.234	(0.103)	0.083	0.150
168	14.00	0.77	0.234	(0.102)	0.083	0.150
169	14.08	0.90	0.274	(0.101)	0.098	0.176
170	14.17	0.90	0.274	(0.101)	0.098	0.176
171	14.25	0.90	0.274	(0.100)	0.098	0.176
172	14.33	0.87	0.264	(0.100)	0.094	0.170
173	14.42	0.87	0.264	(0.099)	0.094	0.170
174	14.50	0.87	0.264	(0.099)	0.094	0.170
175	14.58	0.87	0.264	(0.098)	0.094	0.170
176	14.67	0.87	0.264	(0.098)	0.094	0.170
177	14.75	0.87	0.264	(0.097)	0.094	0.170
178	14.83	0.83	0.254	(0.097)	0.091	0.163
179	14.92	0.83	0.254	(0.096)	0.091	0.163
180	15.00	0.83	0.254	(0.096)	0.091	0.163
181	15.08	0.80	0.244	(0.095)	0.087	0.157
182	15.17	0.80	0.244	(0.095)	0.087	0.157
183	15.25	0.80	0.244	(0.094)	0.087	0.157
184	15.33	0.77	0.234	(0.094)	0.083	0.150
185	15.42	0.77	0.234	(0.093)	0.083	0.150
186	15.50	0.77	0.234	(0.093)	0.083	0.150
187	15.58	0.63	0.193	(0.093)	0.069	0.124
188	15.67	0.63	0.193	(0.092)	0.069	0.124
189	15.75	0.63	0.193	(0.092)	0.069	0.124
190	15.83	0.63	0.193	(0.091)	0.069	0.124
191	15.92	0.63	0.193	(0.091)	0.069	0.124
192	16.00	0.63	0.193	(0.090)	0.069	0.124
193	16.08	0.13	0.041	(0.090)	0.015	0.026
194	16.17	0.13	0.041	(0.089)	0.015	0.026
195	16.25	0.13	0.041	(0.089)	0.015	0.026
196	16.33	0.13	0.041	(0.088)	0.015	0.026
197	16.42	0.13	0.041	(0.088)	0.015	0.026
198	16.50	0.13	0.041	(0.087)	0.015	0.026
199	16.58	0.10	0.030	(0.087)	0.011	0.020
200	16.67	0.10	0.030	(0.087)	0.011	0.020
201	16.75	0.10	0.030	(0.086)	0.011	0.020
202	16.83	0.10	0.030	(0.086)	0.011	0.020
203	16.92	0.10	0.030	(0.085)	0.011	0.020
204	17.00	0.10	0.030	(0.085)	0.011	0.020
205	17.08	0.17	0.051	(0.084)	0.018	0.033
206	17.17	0.17	0.051	(0.084)	0.018	0.033
207	17.25	0.17	0.051	(0.084)	0.018	0.033
208	17.33	0.17	0.051	(0.083)	0.018	0.033
209	17.42	0.17	0.051	(0.083)	0.018	0.033
210	17.50	0.17	0.051	(0.082)	0.018	0.033

211	17.58	0.17	0.051	(0.082)	0.018	0.033
212	17.67	0.17	0.051	(0.081)	0.018	0.033
213	17.75	0.17	0.051	(0.081)	0.018	0.033
214	17.83	0.13	0.041	(0.081)	0.015	0.026
215	17.92	0.13	0.041	(0.080)	0.015	0.026
216	18.00	0.13	0.041	(0.080)	0.015	0.026
217	18.08	0.13	0.041	(0.079)	0.015	0.026
218	18.17	0.13	0.041	(0.079)	0.015	0.026
219	18.25	0.13	0.041	(0.079)	0.015	0.026
220	18.33	0.13	0.041	(0.078)	0.015	0.026
221	18.42	0.13	0.041	(0.078)	0.015	0.026
222	18.50	0.13	0.041	(0.078)	0.015	0.026
223	18.58	0.10	0.030	(0.077)	0.011	0.020
224	18.67	0.10	0.030	(0.077)	0.011	0.020
225	18.75	0.10	0.030	(0.076)	0.011	0.020
226	18.83	0.07	0.020	(0.076)	0.007	0.013
227	18.92	0.07	0.020	(0.076)	0.007	0.013
228	19.00	0.07	0.020	(0.075)	0.007	0.013
229	19.08	0.10	0.030	(0.075)	0.011	0.020
230	19.17	0.10	0.030	(0.075)	0.011	0.020
231	19.25	0.10	0.030	(0.074)	0.011	0.020
232	19.33	0.13	0.041	(0.074)	0.015	0.026
233	19.42	0.13	0.041	(0.074)	0.015	0.026
234	19.50	0.13	0.041	(0.073)	0.015	0.026
235	19.58	0.10	0.030	(0.073)	0.011	0.020
236	19.67	0.10	0.030	(0.073)	0.011	0.020
237	19.75	0.10	0.030	(0.072)	0.011	0.020
238	19.83	0.07	0.020	(0.072)	0.007	0.013
239	19.92	0.07	0.020	(0.072)	0.007	0.013
240	20.00	0.07	0.020	(0.071)	0.007	0.013
241	20.08	0.10	0.030	(0.071)	0.011	0.020
242	20.17	0.10	0.030	(0.071)	0.011	0.020
243	20.25	0.10	0.030	(0.070)	0.011	0.020
244	20.33	0.10	0.030	(0.070)	0.011	0.020
245	20.42	0.10	0.030	(0.070)	0.011	0.020
246	20.50	0.10	0.030	(0.069)	0.011	0.020
247	20.58	0.10	0.030	(0.069)	0.011	0.020
248	20.67	0.10	0.030	(0.069)	0.011	0.020
249	20.75	0.10	0.030	(0.069)	0.011	0.020
250	20.83	0.07	0.020	(0.068)	0.007	0.013
251	20.92	0.07	0.020	(0.068)	0.007	0.013
252	21.00	0.07	0.020	(0.068)	0.007	0.013
253	21.08	0.10	0.030	(0.068)	0.011	0.020
254	21.17	0.10	0.030	(0.067)	0.011	0.020
255	21.25	0.10	0.030	(0.067)	0.011	0.020
256	21.33	0.07	0.020	(0.067)	0.007	0.013
257	21.42	0.07	0.020	(0.066)	0.007	0.013
258	21.50	0.07	0.020	(0.066)	0.007	0.013
259	21.58	0.10	0.030	(0.066)	0.011	0.020
260	21.67	0.10	0.030	(0.066)	0.011	0.020
261	21.75	0.10	0.030	(0.066)	0.011	0.020
262	21.83	0.07	0.020	(0.065)	0.007	0.013
263	21.92	0.07	0.020	(0.065)	0.007	0.013
264	22.00	0.07	0.020	(0.065)	0.007	0.013

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265  22.08     0.10      0.030       (  0.065)       0.011        0.020
266  22.17     0.10      0.030       (  0.064)       0.011        0.020
267  22.25     0.10      0.030       (  0.064)       0.011        0.020
268  22.33     0.07      0.020       (  0.064)       0.007        0.013
269  22.42     0.07      0.020       (  0.064)       0.007        0.013
270  22.50     0.07      0.020       (  0.064)       0.007        0.013
271  22.58     0.07      0.020       (  0.063)       0.007        0.013
272  22.67     0.07      0.020       (  0.063)       0.007        0.013
273  22.75     0.07      0.020       (  0.063)       0.007        0.013
274  22.83     0.07      0.020       (  0.063)       0.007        0.013
275  22.92     0.07      0.020       (  0.063)       0.007        0.013
276  23.00     0.07      0.020       (  0.063)       0.007        0.013
277  23.08     0.07      0.020       (  0.062)       0.007        0.013
278  23.17     0.07      0.020       (  0.062)       0.007        0.013
279  23.25     0.07      0.020       (  0.062)       0.007        0.013
280  23.33     0.07      0.020       (  0.062)       0.007        0.013
281  23.42     0.07      0.020       (  0.062)       0.007        0.013
282  23.50     0.07      0.020       (  0.062)       0.007        0.013
283  23.58     0.07      0.020       (  0.062)       0.007        0.013
284  23.67     0.07      0.020       (  0.062)       0.007        0.013
285  23.75     0.07      0.020       (  0.062)       0.007        0.013
286  23.83     0.07      0.020       (  0.061)       0.007        0.013
287  23.92     0.07      0.020       (  0.061)       0.007        0.013
288  24.00     0.07      0.020       (  0.061)       0.007        0.013
                (Loss Rate Not Used)
    Sum =     100.0                                      Sum =    19.7
       Flood volume = Effective rainfall      1.64(In)
        times area      85.6(Ac.)/[(In)/(Ft.)] =      11.7(Ac.Ft)
       Total soil loss =      0.90(In)
       Total soil loss =     6.407(Ac.Ft)
       Total rainfall =      2.54(In)
       Flood volume =      510008.6 Cubic Feet
       Total soil loss =      279108.6 Cubic Feet
       ------------------------------------------------------------------
        Peak flow rate of this hydrograph =     20.615(CFS)
       ------------------------------------------------------------------
       ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
       ------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        7.5      15.0      22.5      30.0
 ------------------------------------------------------------------------
   0+ 5       0.0008      0.12  Q         |         |         |         |
   0+10       0.0058      0.72  Q         |         |         |         |
   0+15       0.0124      0.96  VQ        |         |         |         |
   0+20       0.0201      1.12  VQ        |         |         |         |
   0+25       0.0301      1.46  VQ        |         |         |         |
   0+30       0.0411      1.59  V Q       |         |         |         |
   0+35       0.0525      1.65  V Q       |         |         |         |
   0+40       0.0640      1.68  V Q       |         |         |         |
   0+45       0.0756      1.68  V Q       |         |         |         |
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0+50	0.0877	1.75	V Q	|	|	|	|
0+55	0.1018	2.05	V Q	|	|	|	|
1+ 0	0.1167	2.17	V Q	|	|	|	|
1+ 5	0.1316	2.16	V Q	|	|	|	|
1+10	0.1446	1.88	V Q	|	|	|	|
1+15	0.1568	1.77	V Q	|	|	|	|
1+20	0.1686	1.72	V Q	|	|	|	|
1+25	0.1804	1.70	V Q	|	|	|	|
1+30	0.1921	1.70	V Q	|	|	|	|
1+35	0.2037	1.69	V Q	|	|	|	|
1+40	0.2154	1.69	V Q	|	|	|	|
1+45	0.2270	1.69	V Q	|	|	|	|
1+50	0.2391	1.75	V Q	|	|	|	|
1+55	0.2532	2.05	V Q	|	|	|	|
2+ 0	0.2682	2.17	V Q	|	|	|	|
2+ 5	0.2834	2.22	V Q	|	|	|	|
2+10	0.2989	2.24	|VQ	|	|	|	|
2+15	0.3144	2.25	|VQ	|	|	|	|
2+20	0.3299	2.25	|V Q	|	|	|	|
2+25	0.3454	2.26	|V Q	|	|	|	|
2+30	0.3609	2.26	|V Q	|	|	|	|
2+35	0.3769	2.32	|V Q	|	|	|	|
2+40	0.3949	2.61	|V Q	|	|	|	|
2+45	0.4137	2.73	|V Q	|	|	|	|
2+50	0.4329	2.78	|V Q	|	|	|	|
2+55	0.4522	2.81	|V Q	|	|	|	|
3+ 0	0.4716	2.81	|V Q	|	|	|	|
3+ 5	0.4910	2.82	|V Q	|	|	|	|
3+10	0.5104	2.82	|V Q	|	|	|	|
3+15	0.5298	2.82	|V Q	|	|	|	|
3+20	0.5492	2.82	|V Q	|	|	|	|
3+25	0.5686	2.82	|V Q	|	|	|	|
3+30	0.5881	2.82	| VQ	|	|	|	|
3+35	0.6075	2.82	| VQ	|	|	|	|
3+40	0.6269	2.82	| VQ	|	|	|	|
3+45	0.6463	2.82	| VQ	|	|	|	|
3+50	0.6661	2.88	| VQ	|	|	|	|
3+55	0.6880	3.18	| V Q	|	|	|	|
4+ 0	0.7107	3.30	| V Q	|	|	|	|
4+ 5	0.7338	3.35	| V Q	|	|	|	|
4+10	0.7570	3.37	| V Q	|	|	|	|
4+15	0.7802	3.38	| V Q	|	|	|	|
4+20	0.8039	3.44	| V Q	|	|	|	|
4+25	0.8297	3.74	| V Q	|	|	|	|
4+30	0.8563	3.86	| V Q	|	|	|	|
4+35	0.8832	3.91	| V Q	|	|	|	|
4+40	0.9103	3.93	| V Q	|	|	|	|
4+45	0.9374	3.94	| V Q	|	|	|	|
4+50	0.9650	4.00	| V Q	|	|	|	|
4+55	0.9947	4.30	| V Q	|	|	|	|
5+ 0	1.0251	4.43	| V Q	|	|	|	|
5+ 5	1.0551	4.35	| V Q	|	|	|	|
5+10	1.0812	3.78	| V Q	|	|	|	|
5+15	1.1056	3.55	| VQ	|	|	|	|

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5+20       1.1298      3.51  |  VQ     |         |         |         |
5+25       1.1557      3.77  |  V Q    |         |         |         |
5+30       1.1824      3.87  |   VQ    |         |         |         |
5+35       1.2098      3.98  |   VQ    |         |         |         |
5+40       1.2394      4.29  |   VQ    |         |         |         |
5+45       1.2698      4.42  |   VQ    |         |         |         |
5+50       1.3006      4.47  |   VQ    |         |         |         |
5+55       1.3316      4.50  |   VQ    |         |         |         |
6+ 0       1.3626      4.50  |   V Q   |         |         |         |
6+ 5       1.3940      4.57  |   V Q   |         |         |         |
6+10       1.4276      4.87  |   V Q   |         |         |         |
6+15       1.4619      4.99  |   V Q   |         |         |         |
6+20       1.4966      5.04  |    VQ   |         |         |         |
6+25       1.5315      5.06  |    VQ   |         |         |         |
6+30       1.5664      5.07  |    VQ   |         |         |         |
6+35       1.6017      5.13  |    VQ   |         |         |         |
6+40       1.6391      5.43  |    V Q  |         |         |         |
6+45       1.6774      5.55  |    V Q  |         |         |         |
6+50       1.7160      5.60  |    V Q  |         |         |         |
6+55       1.7547      5.62  |    V Q  |         |         |         |
7+ 0       1.7935      5.63  |     VQ  |         |         |         |
7+ 5       1.8323      5.63  |     VQ  |         |         |         |
7+10       1.8711      5.64  |     VQ  |         |         |         |
7+15       1.9099      5.64  |     VQ  |         |         |         |
7+20       1.9492      5.70  |     VQ  |         |         |         |
7+25       1.9905      6.00  |     VQ  |         |         |         |
7+30       2.0326      6.12  |     V Q |         |         |         |
7+35       2.0755      6.23  |      VQ |         |         |         |
7+40       2.1206      6.55  |      VQ |         |         |         |
7+45       2.1666      6.67  |      VQ |         |         |         |
7+50       2.2133      6.79  |      V Q|         |         |         |
7+55       2.2623      7.11  |      V Q|         |         |         |
8+ 0       2.3121      7.24  |      V Q|         |         |         |
8+ 5       2.3632      7.41  |       VQ|         |         |         |
8+10       2.4185      8.03  |       V Q         |         |         |
8+15       2.4755      8.28  |       V |Q        |         |         |
8+20       2.5333      8.38  |       V |Q        |         |         |
8+25       2.5913      8.43  |       V |Q        |         |         |
8+30       2.6495      8.44  |        V|Q        |         |         |
8+35       2.7081      8.51  |        V|Q        |         |         |
8+40       2.7688      8.81  |        V|Q        |         |         |
8+45       2.8303      8.94  |        V|Q        |         |         |
8+50       2.8926      9.05  |        V| Q       |         |         |
8+55       2.9571      9.37  |         V Q       |         |         |
9+ 0       3.0225      9.49  |         V Q       |         |         |
9+ 5       3.0891      9.67  |         V Q       |         |         |
9+10       3.1600     10.29  |         V  Q      |         |         |
9+15       3.2325     10.54  |         |V  Q     |         |         |
9+20       3.3062     10.70  |         |V  Q     |         |         |
9+25       3.3823     11.04  |         |V  Q     |         |         |
9+30       3.4592     11.18  |         |V  Q     |         |         |
9+35       3.5370     11.30  |         | V  Q    |         |         |
9+40       3.6171     11.62  |         | V  Q    |         |         |
9+45       3.6980     11.75  |         | V  Q    |         |         |
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9+50	3.7797	11.86	|	| V Q |	|	|
9+55	3.8636	12.18	|	| V Q |	|	|
10+ 0	3.9484	12.31	|	| V Q |	|	|
10+ 5	4.0306	11.94	|	| V Q |	|	|
10+10	4.0986	9.88	|	| QV |	|	|
10+15	4.1609	9.04	|	| Q V |	|	|
10+20	4.2208	8.70	|	|Q V |	|	|
10+25	4.2797	8.55	|	|Q V |	|	|
10+30	4.3383	8.50	|	|Q V |	|	|
10+35	4.3988	8.78	|	|Q V |	|	|
10+40	4.4694	10.25	|	| Q V |	|	|
10+45	4.5441	10.85	|	| QV |	|	|
10+50	4.6205	11.10	|	| QV |	|	|
10+55	4.6977	11.21	|	| Q V |	|	|
11+ 0	4.7752	11.24	|	| Q V |	|	|
11+ 5	4.8523	11.20	|	| Q V |	|	|
11+10	4.9275	10.92	|	| Q V |	|	|
11+15	5.0018	10.80	|	| Q V |	|	|
11+20	5.0759	10.75	|	| Q V |	|	|
11+25	5.1497	10.73	|	| Q V |	|	|
11+30	5.2235	10.72	|	| Q V |	|	|
11+35	5.2965	10.59	|	| Q V |	|	|
11+40	5.3653	10.00	|	| Q V |	|	|
11+45	5.4325	9.75	|	| Q V |	|	|
11+50	5.4994	9.72	|	| Q V |	|	|
11+55	5.5681	9.97	|	| Q V|	|	|
12+ 0	5.6375	10.08	|	| Q V|	|	|
12+ 5	5.7101	10.55	|	| Q V|	|	|
12+10	5.7972	12.64	|	| Q V|	|	|
12+15	5.8901	13.49	|	| Q V |	|	|
12+20	5.9859	13.91	|	| Q V |	|	|
12+25	6.0848	14.36	|	| QV |	|	|
12+30	6.1848	14.53	|	| Q|V |	|	|
12+35	6.2862	14.72	|	| Q|V |	|	|
12+40	6.3920	15.36	|	| QV |	|	|
12+45	6.4995	15.61	|	| Q V |	|	|
12+50	6.6082	15.77	|	| |QV |	|	|
12+55	6.7192	16.12	|	| |QV |	|	|
13+ 0	6.8311	16.25	|	| |Q V |	|	|
13+ 5	6.9465	16.76	|	| | QV |	|	|
13+10	7.0772	18.98	|	| | VQ |	|	|
13+15	7.2143	19.90	|	| | V Q |	|	|
13+20	7.3542	20.31	|	| | V Q |	|	|
13+25	7.4955	20.52	|	| | V Q |	|	|
13+30	7.6375	20.62	|	| | VQ |	|	|
13+35	7.7741	19.84	|	| | Q |	|	|
13+40	7.8828	15.79	|	| |Q V |	|	|
13+45	7.9802	14.13	|	| Q | V |	|	|
13+50	8.0728	13.45	|	| Q | V |	|	|
13+55	8.1634	13.15	|	| Q | V |	|	|
14+ 0	8.2533	13.06	|	| Q | V |	|	|
14+ 5	8.3446	13.25	|	| Q | V |	|	|
14+10	8.4437	14.40	|	| Q| V |	|	|
14+15	8.5462	14.88	|	| Q| V|	|	|

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18+50      11.0960      1.67  | Q       |         |         |       V  |
18+55      11.1052      1.35  |Q        |         |         |       V  |
19+ 0      11.1136      1.22  |Q        |         |         |       V  |
19+ 5      11.1221      1.23  |Q        |         |         |       V  |
19+10      11.1324      1.50  |Q        |         |         |        V |
19+15      11.1435      1.61  | Q       |         |         |        V |
19+20      11.1554      1.72  | Q       |         |         |        V |
19+25      11.1694      2.04  | Q       |         |         |        V |
19+30      11.1843      2.16  | Q       |         |         |        V |
19+35      11.1991      2.16  | Q       |         |         |        V |
19+40      11.2121      1.88  | Q       |         |         |        V |
19+45      11.2243      1.77  | Q       |         |         |        V |
19+50      11.2357      1.66  | Q       |         |         |        V |
19+55      11.2450      1.35  |Q        |         |         |        V |
20+ 0      11.2534      1.22  |Q        |         |         |        V |
20+ 5      11.2619      1.23  |Q        |         |         |        V |
20+10      11.2722      1.50  |Q        |         |         |        V |
20+15      11.2833      1.61  | Q       |         |         |        V |
20+20      11.2947      1.66  | Q       |         |         |        V |
20+25      11.3063      1.68  | Q       |         |         |        V |
20+30      11.3179      1.68  | Q       |         |         |        V |
20+35      11.3295      1.69  | Q       |         |         |        V |
20+40      11.3411      1.69  | Q       |         |         |        V |
20+45      11.3528      1.69  | Q       |         |         |        V |
20+50      11.3640      1.63  | Q       |         |         |        V |
20+55      11.3732      1.33  |Q        |         |         |        V |
21+ 0      11.3816      1.21  |Q        |         |         |        V |
21+ 5      11.3900      1.22  |Q        |         |         |        V |
21+10      11.4003      1.50  |Q        |         |         |        V |
21+15      11.4114      1.61  | Q       |         |         |        V |
21+20      11.4224      1.60  | Q       |         |         |         V|
21+25      11.4315      1.32  |Q        |         |         |         V|
21+30      11.4398      1.21  |Q        |         |         |         V|
21+35      11.4482      1.22  |Q        |         |         |         V|
21+40      11.4586      1.50  |Q        |         |         |         V|
21+45      11.4697      1.61  | Q       |         |         |         V|
21+50      11.4807      1.60  | Q       |         |         |         V|
21+55      11.4898      1.32  |Q        |         |         |         V|
22+ 0      11.4981      1.21  |Q        |         |         |         V|
22+ 5      11.5065      1.22  |Q        |         |         |         V|
22+10      11.5168      1.50  |Q        |         |         |         V|
22+15      11.5279      1.61  | Q       |         |         |         V|
22+20      11.5389      1.60  | Q       |         |         |         V|
22+25      11.5480      1.32  |Q        |         |         |         V|
22+30      11.5563      1.21  |Q        |         |         |         V|
22+35      11.5643      1.16  |Q        |         |         |         V|
22+40      11.5721      1.14  |Q        |         |         |         V|
22+45      11.5800      1.13  |Q        |         |         |         V|
22+50      11.5877      1.13  |Q        |         |         |         V|
22+55      11.5955      1.13  |Q        |         |         |         V|
23+ 0      11.6033      1.13  |Q        |         |         |         V|
23+ 5      11.6110      1.13  |Q        |         |         |         V|
23+10      11.6188      1.13  |Q        |         |         |         V|
23+15      11.6266      1.13  |Q        |         |         |         V|
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   23+20      11.6343      1.13  |Q        |         |         |        V|
   23+25      11.6421      1.13  |Q        |         |         |        V|
   23+30      11.6499      1.13  |Q        |         |         |        V|
   23+35      11.6576      1.13  |Q        |         |         |        V|
   23+40      11.6654      1.13  |Q        |         |         |        V|
   23+45      11.6732      1.13  |Q        |         |         |        V|
   23+50      11.6809      1.13  |Q        |         |         |        V|
   23+55      11.6887      1.13  |Q        |         |         |        V|
   24+ 0      11.6965      1.13  |Q        |         |         |        V|
   24+ 5      11.7034      1.01  |Q        |         |         |        V|
   24+10      11.7062      0.41  Q         |         |         |        V|
   24+15      11.7074      0.17  Q         |         |         |        V|
   24+20      11.7079      0.07  Q         |         |         |        V|
   24+25      11.7081      0.03  Q         |         |         |        V|
   24+30      11.7081      0.01  Q         |         |         |        V|
   24+35      11.7082      0.01  Q         |         |         |        V|
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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 05/02/23

BEAUMONT POINTE
DMA 01
BMP BASIN 4
HYDROMODIFICATION

Program License Serial Number 6094

********** HYDROGRAPH INFORMATION **********

From study/file name: Area01242.rte
**********HYDROGRAPH DATA**********
Number of intervals = 295
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 12.725 (CFS)
Total volume = 5.313 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

++++++++++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

Program computation of outflow v. depth

CALCULATED OUTFLOW DATA AT DEPTH = 0.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.44(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.44(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter

Depth above pipe = 0.50(Ft.) Capacity = 0.80(CFS)

Total outflow at this depth = 0.80(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.44(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.44(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 1.00(Ft.) Capacity = 0.80(CFS)

Total outflow at this depth = 0.80(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.44(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.44(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 1.50(Ft.) Capacity = 0.80(CFS)

Total outflow at this depth = 0.80(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 2.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.44(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.44(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 2.00(Ft.) Capacity = 0.80(CFS)

Total outflow at this depth = 0.80(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 2.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.44(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.44(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 2.50(Ft.) Capacity = 0.80(CFS)

Total outflow at this depth = 0.80(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 3.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.44(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.44(Ft.) is greater than diameter of pipe,

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flow capacity is being calculated using depth = diameter
Depth above pipe =   3.00(Ft.)    Capacity =   0.80(CFS)

Total outflow at this depth =      0.80(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.44(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.44(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   3.50(Ft.)    Capacity =   0.80(CFS)

Total outflow at this depth =      0.80(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.00(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.44(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.44(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   4.00(Ft.)    Capacity =   0.80(CFS)

Total outflow at this depth =      0.80(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.44(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.44(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   4.50(Ft.)    Capacity =   0.80(CFS)

Total outflow at this depth =      0.80(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    5.00(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.44(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.44(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   5.00(Ft.)    Capacity =   0.80(CFS)

Total outflow at this depth =      0.80(CFS)

------------------------------------------------------------------
Total number of inflow hydrograph intervals = 295
Hydrograph time unit =  5.000 (Min.)
Initial depth in storage basin =   0.00(Ft.)
------------------------------------------------------------------
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Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.760	0.798	0.757	0.763
1.000	1.570	0.798	1.567	1.573
1.500	2.410	0.798	2.407	2.413
2.000	3.300	0.798	3.297	3.303
2.500	4.230	0.798	4.227	4.233
3.000	5.200	0.798	5.197	5.203
3.500	6.210	0.798	6.207	6.213
4.000	7.260	0.798	7.257	7.263
4.500	8.360	0.798	8.357	8.363
5.000	9.500	0.798	9.497	9.503

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 3.2 6.36 9.54 12.73	Depth (Ft.)
0.083	0.05	0.00	0.000	O	0.00
0.167	0.28	0.00	0.001	O	0.00
0.250	0.37	0.00	0.004	O	0.00
0.333	0.43	0.01	0.006	OI	0.00
0.417	0.55	0.01	0.010	OI	0.01
0.500	0.60	0.01	0.013	OI	0.01
0.583	0.62	0.02	0.018	OI	0.01
0.667	0.63	0.02	0.022	OI	0.01
0.750	0.63	0.03	0.026	OI	0.02
0.833	0.66	0.03	0.030	OI	0.02
0.917	0.77	0.04	0.035	OI	0.02
1.000	0.81	0.04	0.040	O I	0.03
1.083	0.81	0.05	0.045	O I	0.03
1.167	0.70	0.05	0.050	OI	0.03
1.250	0.66	0.06	0.054	OI	0.04
1.333	0.64	0.06	0.058	OI	0.04
1.417	0.64	0.07	0.062	OI	0.04
1.500	0.63	0.07	0.066	OI	0.04
1.583	0.63	0.07	0.070	OI	0.05
1.667	0.63	0.08	0.074	OI	0.05
1.750	0.63	0.08	0.078	OI	0.05
1.833	0.66	0.09	0.082	OI	0.05
1.917	0.77	0.09	0.086	OI	0.06
2.000	0.81	0.10	0.091	O I	0.06
2.083	0.83	0.10	0.096	O I	0.06

2.167	0.84	0.11	0.101	O I	|	|	|	0.07
2.250	0.84	0.11	0.106	O I	|	|	|	0.07
2.333	0.84	0.12	0.111	O I	|	|	|	0.07
2.417	0.84	0.12	0.116	O I	|	|	|	0.08
2.500	0.84	0.13	0.121	O I	|	|	|	0.08
2.583	0.87	0.13	0.126	O I	|	|	|	0.08
2.667	0.98	0.14	0.131	O I	|	|	|	0.09
2.750	1.02	0.14	0.137	O I	|	|	|	0.09
2.833	1.04	0.15	0.143	O I	|	|	|	0.09
2.917	1.05	0.16	0.149	O I	|	|	|	0.10
3.000	1.05	0.16	0.156	O I	|	|	|	0.10
3.083	1.05	0.17	0.162	O I	|	|	|	0.11
3.167	1.05	0.18	0.168	O I	|	|	|	0.11
3.250	1.05	0.18	0.174	O I	|	|	|	0.11
3.333	1.05	0.19	0.180	O I	|	|	|	0.12
3.417	1.05	0.19	0.186	O I	|	|	|	0.12
3.500	1.05	0.20	0.191	O I	|	|	|	0.13
3.583	1.05	0.21	0.197	O I	|	|	|	0.13
3.667	1.05	0.21	0.203	O I	|	|	|	0.13
3.750	1.05	0.22	0.209	O I	|	|	|	0.14
3.833	1.08	0.23	0.215	O I	|	|	|	0.14
3.917	1.19	0.23	0.221	O I	|	|	|	0.15
4.000	1.24	0.24	0.228	O I	|	|	|	0.15
4.083	1.25	0.25	0.235	O I	|	|	|	0.15
4.167	1.26	0.25	0.242	O I	|	|	|	0.16
4.250	1.26	0.26	0.248	O I	|	|	|	0.16
4.333	1.29	0.27	0.255	O I	|	|	|	0.17
4.417	1.40	0.28	0.263	O I	|	|	|	0.17
4.500	1.45	0.28	0.271	O I	|	|	|	0.18
4.583	1.46	0.29	0.279	O I	|	|	|	0.18
4.667	1.47	0.30	0.287	O I	|	|	|	0.19
4.750	1.47	0.31	0.295	O I	|	|	|	0.19
4.833	1.50	0.32	0.303	O I	|	|	|	0.20
4.917	1.62	0.33	0.311	O I	|	|	|	0.20
5.000	1.66	0.34	0.320	O I	|	|	|	0.21
5.083	1.62	0.35	0.329	O I	|	|	|	0.22
5.167	1.40	0.35	0.337	O I	|	|	|	0.22
5.250	1.32	0.36	0.344	O I	|	|	|	0.23
5.333	1.31	0.37	0.351	O I	|	|	|	0.23
5.417	1.41	0.38	0.357	O I	|	|	|	0.24
5.500	1.45	0.38	0.365	O I	|	|	|	0.24
5.583	1.49	0.39	0.372	O I	|	|	|	0.24
5.667	1.61	0.40	0.380	|O I	|	|	|	0.25
5.750	1.65	0.41	0.389	|O I	|	|	|	0.26
5.833	1.67	0.42	0.397	|O I	|	|	|	0.26
5.917	1.68	0.43	0.406	|O I	|	|	|	0.27
6.000	1.68	0.44	0.414	|O I	|	|	|	0.27
6.083	1.71	0.44	0.423	|O I	|	|	|	0.28
6.167	1.83	0.45	0.432	|O I	|	|	|	0.28
6.250	1.87	0.46	0.442	|O I	|	|	|	0.29
6.333	1.88	0.47	0.451	|O I	|	|	|	0.30
6.417	1.89	0.48	0.461	|O I	|	|	|	0.30
6.500	1.89	0.49	0.471	|O I	|	|	|	0.31
6.583	1.92	0.50	0.481	|O I	|	|	|	0.32

6.667	2.04	0.52	0.491	O I				0.32
6.750	2.08	0.53	0.501	O I				0.33
6.833	2.09	0.54	0.512	O I				0.34
6.917	2.10	0.55	0.523	O I				0.34
7.000	2.10	0.56	0.533	O I				0.35
7.083	2.10	0.57	0.544	O I				0.36
7.167	2.11	0.58	0.554	O I				0.36
7.250	2.11	0.59	0.565	O I				0.37
7.333	2.13	0.60	0.575	O I				0.38
7.417	2.25	0.62	0.586	O I				0.39
7.500	2.29	0.63	0.598	O I				0.39
7.583	2.33	0.64	0.609	O I				0.40
7.667	2.45	0.65	0.621	O I				0.41
7.750	2.50	0.67	0.634	O I				0.42
7.833	2.54	0.68	0.646	O I				0.43
7.917	2.66	0.69	0.660	O I				0.43
8.000	2.71	0.71	0.673	O I				0.44
8.083	2.78	0.72	0.687	O I				0.45
8.167	3.02	0.74	0.702	O I				0.46
8.250	3.10	0.75	0.718	O I				0.47
8.333	3.14	0.77	0.734	O I				0.48
8.417	3.15	0.79	0.751	O I				0.49
8.500	3.15	0.80	0.767	O I				0.50
8.583	3.18	0.80	0.783	O I				0.51
8.667	3.30	0.80	0.800	O I				0.52
8.750	3.34	0.80	0.817	O I				0.54
8.833	3.38	0.80	0.835	O I				0.55
8.917	3.51	0.80	0.853	O I				0.56
9.000	3.55	0.80	0.872	O I				0.57
9.083	3.62	0.80	0.891	O I				0.58
9.167	3.86	0.80	0.911	O I				0.59
9.250	3.94	0.80	0.933	O I				0.61
9.333	4.00	0.80	0.955	O I				0.62
9.417	4.13	0.80	0.977	O I				0.63
9.500	4.18	0.80	1.000	O I				0.65
9.583	4.22	0.80	1.024	O I				0.66
9.667	4.35	0.80	1.048	O I				0.68
9.750	4.39	0.80	1.072	O I				0.69
9.833	4.44	0.80	1.097	O I				0.71
9.917	4.56	0.80	1.123	O I				0.72
10.000	4.60	0.80	1.149	O I				0.74
10.083	4.44	0.80	1.174	O I				0.76
10.167	3.64	0.80	1.197	O I				0.77
10.250	3.35	0.80	1.215	O I				0.78
10.333	3.23	0.80	1.232	O I				0.79
10.417	3.19	0.80	1.249	O I				0.80
10.500	3.17	0.80	1.265	O I				0.81
10.583	3.29	0.80	1.282	O I				0.82
10.667	3.87	0.80	1.301	O I				0.83
10.750	4.07	0.80	1.323	O I				0.85
10.833	4.16	0.80	1.346	O I				0.86
10.917	4.19	0.80	1.369	O I				0.88
11.000	4.20	0.80	1.393	O I				0.89
11.083	4.18	0.80	1.416	O I				0.91

11.167	4.07	0.80	1.439	O	I				0.92
11.250	4.03	0.80	1.461	O	I				0.93
11.333	4.01	0.80	1.484	O	I				0.95
11.417	4.00	0.80	1.506	O	I				0.96
11.500	4.00	0.80	1.528	O	I				0.97
11.583	3.95	0.80	1.550	O	I				0.99
11.667	3.72	0.80	1.571	O	I				1.00
11.750	3.63	0.80	1.590	O	I				1.01
11.833	3.63	0.80	1.610	O	I				1.02
11.917	3.73	0.80	1.630	O	I				1.04
12.000	3.77	0.80	1.650	O	I				1.05
12.083	4.20	0.80	1.672	O	I				1.06
12.167	6.07	0.80	1.702	O	I				1.08
12.250	6.76	0.80	1.740	O	I				1.10
12.333	7.14	0.80	1.783	O	I				1.13
12.417	7.58	0.80	1.828	O	I				1.15
12.500	7.76	0.80	1.875	O	I				1.18
12.583	8.00	0.80	1.924	O	I				1.21
12.667	8.67	0.80	1.976	O	I				1.24
12.750	8.93	0.80	2.031	O	I				1.27
12.833	9.13	0.80	2.088	O	I				1.31
12.917	9.51	0.80	2.147	O	I				1.34
13.000	9.66	0.80	2.207	O	I				1.38
13.083	10.10	0.80	2.270	O	I				1.42
13.167	11.69	0.80	2.339	O	I				1.46
13.250	12.28	0.80	2.416	O	I				1.50
13.333	12.54	0.80	2.496	O	I				1.55
13.417	12.67	0.80	2.578	O	I				1.59
13.500	12.73	0.80	2.660	O	I				1.64
13.583	12.01	0.80	2.739	O	I				1.68
13.667	8.66	0.80	2.805	O	I				1.72
13.750	7.48	0.80	2.855	O	I				1.75
13.833	7.01	0.80	2.899	O	I				1.77
13.917	6.85	0.80	2.942	O	I				1.80
14.000	6.82	0.80	2.983	O	I				1.82
14.083	7.10	0.80	3.026	O	I				1.85
14.167	8.34	0.80	3.073	O	I				1.87
14.250	8.81	0.80	3.127	O	I				1.90
14.333	8.96	0.80	3.183	O	I				1.93
14.417	8.75	0.80	3.238	O	I				1.97
14.500	8.69	0.80	3.293	O	I				2.00
14.583	8.69	0.80	3.347	O	I				2.03
14.667	8.71	0.80	3.401	O	I				2.05
14.750	8.73	0.80	3.456	O	I				2.08
14.833	8.69	0.80	3.511	O	I				2.11
14.917	8.41	0.80	3.564	O	I				2.14
15.000	8.33	0.80	3.616	O	I				2.17
15.083	8.24	0.80	3.668	O	I				2.20
15.167	7.95	0.80	3.718	O	I				2.22
15.250	7.86	0.80	3.767	O	I				2.25
15.333	7.77	0.80	3.815	O	I				2.28
15.417	7.48	0.80	3.862	O	I				2.30
15.500	7.39	0.80	3.908	O	I				2.33
15.583	7.09	0.80	3.952	O	I				2.35

15.667	5.87	0.80	3.991	O		I			2.37
15.750	5.45	0.80	4.025	O		I			2.39
15.833	5.29	0.80	4.056	O		I			2.41
15.917	5.25	0.80	4.087	O		I			2.42
16.000	5.25	0.80	4.118	O		I			2.44
16.083	4.71	0.80	4.147	O	I				2.46
16.167	2.29	0.80	4.165	O I					2.47
16.250	1.42	0.80	4.173	OI					2.47
16.333	1.06	0.80	4.176	O					2.47
16.417	0.92	0.80	4.177	O					2.47
16.500	0.88	0.80	4.178	O					2.47
16.583	0.83	0.80	4.178	O					2.47
16.667	0.70	0.80	4.178	IO					2.47
16.750	0.66	0.80	4.177	IO					2.47
16.833	0.64	0.80	4.176	IO					2.47
16.917	0.64	0.80	4.175	IO					2.47
17.000	0.63	0.80	4.174	IO					2.47
17.083	0.68	0.80	4.173	IO					2.47
17.167	0.91	0.80	4.173	O					2.47
17.250	1.00	0.80	4.174	O					2.47
17.333	1.03	0.80	4.175	O					2.47
17.417	1.04	0.80	4.177	O					2.47
17.500	1.05	0.80	4.179	O					2.47
17.583	1.05	0.80	4.181	O					2.47
17.667	1.05	0.80	4.182	O					2.47
17.750	1.05	0.80	4.184	O					2.48
17.833	1.03	0.80	4.186	O					2.48
17.917	0.91	0.80	4.187	O					2.48
18.000	0.87	0.80	4.188	O					2.48
18.083	0.85	0.80	4.188	O					2.48
18.167	0.85	0.80	4.188	O					2.48
18.250	0.84	0.80	4.189	O					2.48
18.333	0.84	0.80	4.189	O					2.48
18.417	0.84	0.80	4.189	O					2.48
18.500	0.84	0.80	4.190	O					2.48
18.583	0.82	0.80	4.190	O					2.48
18.667	0.70	0.80	4.190	IO					2.48
18.750	0.66	0.80	4.189	IO					2.48
18.833	0.62	0.80	4.188	IO					2.48
18.917	0.49	0.80	4.186	IO					2.48
19.000	0.45	0.80	4.184	IO					2.48
19.083	0.46	0.80	4.181	IO					2.47
19.167	0.57	0.80	4.179	IO					2.47
19.250	0.61	0.80	4.178	IO					2.47
19.333	0.65	0.80	4.177	IO					2.47
19.417	0.77	0.80	4.176	IO					2.47
19.500	0.81	0.80	4.176	O					2.47
19.583	0.80	0.80	4.176	O					2.47
19.667	0.70	0.80	4.176	IO					2.47
19.750	0.66	0.80	4.175	IO					2.47
19.833	0.62	0.80	4.174	IO					2.47
19.917	0.49	0.80	4.172	IO					2.47
20.000	0.45	0.80	4.170	IO					2.47
20.083	0.46	0.80	4.168	IO					2.47

20.167	0.57	0.80	4.166	|IO	|	|	|	2.47
20.250	0.61	0.80	4.164	|IO	|	|	|	2.46
20.333	0.62	0.80	4.163	|IO	|	|	|	2.46
20.417	0.63	0.80	4.162	|IO	|	|	|	2.46
20.500	0.63	0.80	4.161	|IO	|	|	|	2.46
20.583	0.63	0.80	4.159	|IO	|	|	|	2.46
20.667	0.63	0.80	4.158	|IO	|	|	|	2.46
20.750	0.63	0.80	4.157	|IO	|	|	|	2.46
20.833	0.61	0.80	4.156	|IO	|	|	|	2.46
20.917	0.49	0.80	4.154	|IO	|	|	|	2.46
21.000	0.45	0.80	4.152	|IO	|	|	|	2.46
21.083	0.46	0.80	4.150	|IO	|	|	|	2.46
21.167	0.57	0.80	4.148	|IO	|	|	|	2.46
21.250	0.61	0.80	4.146	|IO	|	|	|	2.45
21.333	0.60	0.80	4.145	|IO	|	|	|	2.45
21.417	0.49	0.80	4.143	|IO	|	|	|	2.45
21.500	0.45	0.80	4.141	|IO	|	|	|	2.45
21.583	0.46	0.80	4.138	|IO	|	|	|	2.45
21.667	0.57	0.80	4.136	|IO	|	|	|	2.45
21.750	0.61	0.80	4.135	|IO	|	|	|	2.45
21.833	0.60	0.80	4.134	|IO	|	|	|	2.45
21.917	0.49	0.80	4.132	|IO	|	|	|	2.45
22.000	0.45	0.80	4.130	|IO	|	|	|	2.45
22.083	0.46	0.80	4.127	|IO	|	|	|	2.44
22.167	0.57	0.80	4.125	|IO	|	|	|	2.44
22.250	0.61	0.80	4.124	|IO	|	|	|	2.44
22.333	0.60	0.80	4.122	|IO	|	|	|	2.44
22.417	0.49	0.80	4.121	|IO	|	|	|	2.44
22.500	0.45	0.80	4.118	|IO	|	|	|	2.44
22.583	0.43	0.80	4.116	|IO	|	|	|	2.44
22.667	0.42	0.80	4.113	|IO	|	|	|	2.44
22.750	0.42	0.80	4.111	|IO	|	|	|	2.44
22.833	0.42	0.80	4.108	|IO	|	|	|	2.43
22.917	0.42	0.80	4.106	|IO	|	|	|	2.43
23.000	0.42	0.80	4.103	|IO	|	|	|	2.43
23.083	0.42	0.80	4.100	|IO	|	|	|	2.43
23.167	0.42	0.80	4.098	|IO	|	|	|	2.43
23.250	0.42	0.80	4.095	|IO	|	|	|	2.43
23.333	0.42	0.80	4.093	|IO	|	|	|	2.43
23.417	0.42	0.80	4.090	|IO	|	|	|	2.42
23.500	0.42	0.80	4.087	|IO	|	|	|	2.42
23.583	0.42	0.80	4.085	|IO	|	|	|	2.42
23.667	0.42	0.80	4.082	|IO	|	|	|	2.42
23.750	0.42	0.80	4.080	|IO	|	|	|	2.42
23.833	0.42	0.80	4.077	|IO	|	|	|	2.42
23.917	0.42	0.80	4.074	|IO	|	|	|	2.42
24.000	0.42	0.80	4.072	|IO	|	|	|	2.41
24.083	0.37	0.80	4.069	I O	|	|	|	2.41
24.167	0.14	0.80	4.065	I O	|	|	|	2.41
24.250	0.06	0.80	4.060	I O	|	|	|	2.41
24.333	0.02	0.80	4.055	I O	|	|	|	2.41
24.417	0.01	0.80	4.050	I O	|	|	|	2.40
24.500	0.00	0.80	4.044	I O	|	|	|	2.40
24.583	0.00	0.80	4.039	I O	|	|	|	2.40

24.667	0.00	0.80	4.033	I O	|	|	|	2.39
24.750	0.00	0.80	4.028	I O	|	|	|	2.39
24.833	0.00	0.80	4.022	I O	|	|	|	2.39
24.917	0.00	0.80	4.017	I O	|	|	|	2.39
25.000	0.00	0.80	4.011	I O	|	|	|	2.38
25.083	0.00	0.80	4.006	I O	|	|	|	2.38
25.167	0.00	0.80	4.000	I O	|	|	|	2.38
25.250	0.00	0.80	3.995	I O	|	|	|	2.37
25.333	0.00	0.80	3.989	I O	|	|	|	2.37
25.417	0.00	0.80	3.984	I O	|	|	|	2.37
25.500	0.00	0.80	3.978	I O	|	|	|	2.36
25.583	0.00	0.80	3.973	I O	|	|	|	2.36
25.667	0.00	0.80	3.967	I O	|	|	|	2.36
25.750	0.00	0.80	3.962	I O	|	|	|	2.36
25.833	0.00	0.80	3.956	I O	|	|	|	2.35
25.917	0.00	0.80	3.951	I O	|	|	|	2.35
26.000	0.00	0.80	3.945	I O	|	|	|	2.35
26.083	0.00	0.80	3.940	I O	|	|	|	2.34
26.167	0.00	0.80	3.934	I O	|	|	|	2.34
26.250	0.00	0.80	3.929	I O	|	|	|	2.34
26.333	0.00	0.80	3.923	I O	|	|	|	2.34
26.417	0.00	0.80	3.918	I O	|	|	|	2.33
26.500	0.00	0.80	3.913	I O	|	|	|	2.33
26.583	0.00	0.80	3.907	I O	|	|	|	2.33
26.667	0.00	0.80	3.902	I O	|	|	|	2.32
26.750	0.00	0.80	3.896	I O	|	|	|	2.32
26.833	0.00	0.80	3.891	I O	|	|	|	2.32
26.917	0.00	0.80	3.885	I O	|	|	|	2.31
27.000	0.00	0.80	3.880	I O	|	|	|	2.31
27.083	0.00	0.80	3.874	I O	|	|	|	2.31
27.167	0.00	0.80	3.869	I O	|	|	|	2.31
27.250	0.00	0.80	3.863	I O	|	|	|	2.30
27.333	0.00	0.80	3.858	I O	|	|	|	2.30
27.417	0.00	0.80	3.852	I O	|	|	|	2.30
27.500	0.00	0.80	3.847	I O	|	|	|	2.29
27.583	0.00	0.80	3.841	I O	|	|	|	2.29
27.667	0.00	0.80	3.836	I O	|	|	|	2.29
27.750	0.00	0.80	3.830	I O	|	|	|	2.28
27.833	0.00	0.80	3.825	I O	|	|	|	2.28
27.917	0.00	0.80	3.819	I O	|	|	|	2.28
28.000	0.00	0.80	3.814	I O	|	|	|	2.28
28.083	0.00	0.80	3.808	I O	|	|	|	2.27
28.167	0.00	0.80	3.803	I O	|	|	|	2.27
28.250	0.00	0.80	3.797	I O	|	|	|	2.27
28.333	0.00	0.80	3.792	I O	|	|	|	2.26
28.417	0.00	0.80	3.786	I O	|	|	|	2.26
28.500	0.00	0.80	3.781	I O	|	|	|	2.26
28.583	0.00	0.80	3.775	I O	|	|	|	2.26
28.667	0.00	0.80	3.770	I O	|	|	|	2.25
28.750	0.00	0.80	3.764	I O	|	|	|	2.25
28.833	0.00	0.80	3.759	I O	|	|	|	2.25
28.917	0.00	0.80	3.753	I O	|	|	|	2.24
29.000	0.00	0.80	3.748	I O	|	|	|	2.24
29.083	0.00	0.80	3.742	I O	|	|	|	2.24

29.167	0.00	0.80	3.737	I O	|	|	|	2.23
29.250	0.00	0.80	3.731	I O	|	|	|	2.23
29.333	0.00	0.80	3.726	I O	|	|	|	2.23
29.417	0.00	0.80	3.720	I O	|	|	|	2.23
29.500	0.00	0.80	3.715	I O	|	|	|	2.22
29.583	0.00	0.80	3.709	I O	|	|	|	2.22
29.667	0.00	0.80	3.704	I O	|	|	|	2.22
29.750	0.00	0.80	3.698	I O	|	|	|	2.21
29.833	0.00	0.80	3.693	I O	|	|	|	2.21
29.917	0.00	0.80	3.687	I O	|	|	|	2.21
30.000	0.00	0.80	3.682	I O	|	|	|	2.21
30.083	0.00	0.80	3.676	I O	|	|	|	2.20
30.167	0.00	0.80	3.671	I O	|	|	|	2.20
30.250	0.00	0.80	3.665	I O	|	|	|	2.20
30.333	0.00	0.80	3.660	I O	|	|	|	2.19
30.417	0.00	0.80	3.654	I O	|	|	|	2.19
30.500	0.00	0.80	3.649	I O	|	|	|	2.19
30.583	0.00	0.80	3.643	I O	|	|	|	2.18
30.667	0.00	0.80	3.638	I O	|	|	|	2.18
30.750	0.00	0.80	3.632	I O	|	|	|	2.18
30.833	0.00	0.80	3.627	I O	|	|	|	2.18
30.917	0.00	0.80	3.621	I O	|	|	|	2.17
31.000	0.00	0.80	3.616	I O	|	|	|	2.17
31.083	0.00	0.80	3.610	I O	|	|	|	2.17
31.167	0.00	0.80	3.605	I O	|	|	|	2.16
31.250	0.00	0.80	3.599	I O	|	|	|	2.16
31.333	0.00	0.80	3.594	I O	|	|	|	2.16
31.417	0.00	0.80	3.588	I O	|	|	|	2.16
31.500	0.00	0.80	3.583	I O	|	|	|	2.15
31.583	0.00	0.80	3.577	I O	|	|	|	2.15
31.667	0.00	0.80	3.572	I O	|	|	|	2.15
31.750	0.00	0.80	3.566	I O	|	|	|	2.14
31.833	0.00	0.80	3.561	I O	|	|	|	2.14
31.917	0.00	0.80	3.555	I O	|	|	|	2.14
32.000	0.00	0.80	3.550	I O	|	|	|	2.13
32.083	0.00	0.80	3.544	I O	|	|	|	2.13
32.167	0.00	0.80	3.539	I O	|	|	|	2.13
32.250	0.00	0.80	3.533	I O	|	|	|	2.13
32.333	0.00	0.80	3.528	I O	|	|	|	2.12
32.417	0.00	0.80	3.522	I O	|	|	|	2.12
32.500	0.00	0.80	3.517	I O	|	|	|	2.12
32.583	0.00	0.80	3.511	I O	|	|	|	2.11
32.667	0.00	0.80	3.506	I O	|	|	|	2.11
32.750	0.00	0.80	3.500	I O	|	|	|	2.11
32.833	0.00	0.80	3.495	I O	|	|	|	2.10
32.917	0.00	0.80	3.489	I O	|	|	|	2.10
33.000	0.00	0.80	3.484	I O	|	|	|	2.10
33.083	0.00	0.80	3.478	I O	|	|	|	2.10
33.167	0.00	0.80	3.473	I O	|	|	|	2.09
33.250	0.00	0.80	3.467	I O	|	|	|	2.09
33.333	0.00	0.80	3.462	I O	|	|	|	2.09
33.417	0.00	0.80	3.456	I O	|	|	|	2.08
33.500	0.00	0.80	3.451	I O	|	|	|	2.08
33.583	0.00	0.80	3.446	I O	|	|	|	2.08

33.667	0.00	0.80	3.440	I O	|	|	|	|	2.08
33.750	0.00	0.80	3.435	I O	|	|	|	|	2.07
33.833	0.00	0.80	3.429	I O	|	|	|	|	2.07
33.917	0.00	0.80	3.424	I O	|	|	|	|	2.07
34.000	0.00	0.80	3.418	I O	|	|	|	|	2.06
34.083	0.00	0.80	3.413	I O	|	|	|	|	2.06
34.167	0.00	0.80	3.407	I O	|	|	|	|	2.06
34.250	0.00	0.80	3.402	I O	|	|	|	|	2.05
34.333	0.00	0.80	3.396	I O	|	|	|	|	2.05
34.417	0.00	0.80	3.391	I O	|	|	|	|	2.05
34.500	0.00	0.80	3.385	I O	|	|	|	|	2.05
34.583	0.00	0.80	3.380	I O	|	|	|	|	2.04
34.667	0.00	0.80	3.374	I O	|	|	|	|	2.04
34.750	0.00	0.80	3.369	I O	|	|	|	|	2.04
34.833	0.00	0.80	3.363	I O	|	|	|	|	2.03
34.917	0.00	0.80	3.358	I O	|	|	|	|	2.03
35.000	0.00	0.80	3.352	I O	|	|	|	|	2.03
35.083	0.00	0.80	3.347	I O	|	|	|	|	2.03
35.167	0.00	0.80	3.341	I O	|	|	|	|	2.02
35.250	0.00	0.80	3.336	I O	|	|	|	|	2.02
35.333	0.00	0.80	3.330	I O	|	|	|	|	2.02
35.417	0.00	0.80	3.325	I O	|	|	|	|	2.01
35.500	0.00	0.80	3.319	I O	|	|	|	|	2.01
35.583	0.00	0.80	3.314	I O	|	|	|	|	2.01
35.667	0.00	0.80	3.308	I O	|	|	|	|	2.00
35.750	0.00	0.80	3.303	I O	|	|	|	|	2.00
35.833	0.00	0.80	3.297	I O	|	|	|	|	2.00
35.917	0.00	0.80	3.292	I O	|	|	|	|	2.00
36.000	0.00	0.80	3.286	I O	|	|	|	|	1.99
36.083	0.00	0.80	3.281	I O	|	|	|	|	1.99
36.167	0.00	0.80	3.275	I O	|	|	|	|	1.99
36.250	0.00	0.80	3.270	I O	|	|	|	|	1.98
36.333	0.00	0.80	3.264	I O	|	|	|	|	1.98
36.417	0.00	0.80	3.259	I O	|	|	|	|	1.98
36.500	0.00	0.80	3.253	I O	|	|	|	|	1.97
36.583	0.00	0.80	3.248	I O	|	|	|	|	1.97
36.667	0.00	0.80	3.242	I O	|	|	|	|	1.97
36.750	0.00	0.80	3.237	I O	|	|	|	|	1.96
36.833	0.00	0.80	3.231	I O	|	|	|	|	1.96
36.917	0.00	0.80	3.226	I O	|	|	|	|	1.96
37.000	0.00	0.80	3.220	I O	|	|	|	|	1.96
37.083	0.00	0.80	3.215	I O	|	|	|	|	1.95
37.167	0.00	0.80	3.209	I O	|	|	|	|	1.95
37.250	0.00	0.80	3.204	I O	|	|	|	|	1.95
37.333	0.00	0.80	3.198	I O	|	|	|	|	1.94
37.417	0.00	0.80	3.193	I O	|	|	|	|	1.94
37.500	0.00	0.80	3.187	I O	|	|	|	|	1.94
37.583	0.00	0.80	3.182	I O	|	|	|	|	1.93
37.667	0.00	0.80	3.176	I O	|	|	|	|	1.93
37.750	0.00	0.80	3.171	I O	|	|	|	|	1.93
37.833	0.00	0.80	3.165	I O	|	|	|	|	1.92
37.917	0.00	0.80	3.160	I O	|	|	|	|	1.92
38.000	0.00	0.80	3.154	I O	|	|	|	|	1.92
38.083	0.00	0.80	3.149	I O	|	|	|	|	1.92

38.167	0.00	0.80	3.143	I O	|	|	|	| 1.91
38.250	0.00	0.80	3.138	I O	|	|	|	| 1.91
38.333	0.00	0.80	3.132	I O	|	|	|	| 1.91
38.417	0.00	0.80	3.127	I O	|	|	|	| 1.90
38.500	0.00	0.80	3.121	I O	|	|	|	| 1.90
38.583	0.00	0.80	3.116	I O	|	|	|	| 1.90
38.667	0.00	0.80	3.110	I O	|	|	|	| 1.89
38.750	0.00	0.80	3.105	I O	|	|	|	| 1.89
38.833	0.00	0.80	3.099	I O	|	|	|	| 1.89
38.917	0.00	0.80	3.094	I O	|	|	|	| 1.88
39.000	0.00	0.80	3.088	I O	|	|	|	| 1.88
39.083	0.00	0.80	3.083	I O	|	|	|	| 1.88
39.167	0.00	0.80	3.077	I O	|	|	|	| 1.87
39.250	0.00	0.80	3.072	I O	|	|	|	| 1.87
39.333	0.00	0.80	3.066	I O	|	|	|	| 1.87
39.417	0.00	0.80	3.061	I O	|	|	|	| 1.87
39.500	0.00	0.80	3.055	I O	|	|	|	| 1.86
39.583	0.00	0.80	3.050	I O	|	|	|	| 1.86
39.667	0.00	0.80	3.044	I O	|	|	|	| 1.86
39.750	0.00	0.80	3.039	I O	|	|	|	| 1.85
39.833	0.00	0.80	3.033	I O	|	|	|	| 1.85
39.917	0.00	0.80	3.028	I O	|	|	|	| 1.85
40.000	0.00	0.80	3.022	I O	|	|	|	| 1.84
40.083	0.00	0.80	3.017	I O	|	|	|	| 1.84
40.167	0.00	0.80	3.011	I O	|	|	|	| 1.84
40.250	0.00	0.80	3.006	I O	|	|	|	| 1.83
40.333	0.00	0.80	3.000	I O	|	|	|	| 1.83
40.417	0.00	0.80	2.995	I O	|	|	|	| 1.83
40.500	0.00	0.80	2.989	I O	|	|	|	| 1.83
40.583	0.00	0.80	2.984	I O	|	|	|	| 1.82
40.667	0.00	0.80	2.979	I O	|	|	|	| 1.82
40.750	0.00	0.80	2.973	I O	|	|	|	| 1.82
40.833	0.00	0.80	2.968	I O	|	|	|	| 1.81
40.917	0.00	0.80	2.962	I O	|	|	|	| 1.81
41.000	0.00	0.80	2.957	I O	|	|	|	| 1.81
41.083	0.00	0.80	2.951	I O	|	|	|	| 1.80
41.167	0.00	0.80	2.946	I O	|	|	|	| 1.80
41.250	0.00	0.80	2.940	I O	|	|	|	| 1.80
41.333	0.00	0.80	2.935	I O	|	|	|	| 1.79
41.417	0.00	0.80	2.929	I O	|	|	|	| 1.79
41.500	0.00	0.80	2.924	I O	|	|	|	| 1.79
41.583	0.00	0.80	2.918	I O	|	|	|	| 1.79
41.667	0.00	0.80	2.913	I O	|	|	|	| 1.78
41.750	0.00	0.80	2.907	I O	|	|	|	| 1.78
41.833	0.00	0.80	2.902	I O	|	|	|	| 1.78
41.917	0.00	0.80	2.896	I O	|	|	|	| 1.77
42.000	0.00	0.80	2.891	I O	|	|	|	| 1.77
42.083	0.00	0.80	2.885	I O	|	|	|	| 1.77
42.167	0.00	0.80	2.880	I O	|	|	|	| 1.76
42.250	0.00	0.80	2.874	I O	|	|	|	| 1.76
42.333	0.00	0.80	2.869	I O	|	|	|	| 1.76
42.417	0.00	0.80	2.863	I O	|	|	|	| 1.75
42.500	0.00	0.80	2.858	I O	|	|	|	| 1.75
42.583	0.00	0.80	2.852	I O	|	|	|	| 1.75

42.667	0.00	0.80	2.847	I O	|	|	|	|	1.75
42.750	0.00	0.80	2.841	I O	|	|	|	|	1.74
42.833	0.00	0.80	2.836	I O	|	|	|	|	1.74
42.917	0.00	0.80	2.830	I O	|	|	|	|	1.74
43.000	0.00	0.80	2.825	I O	|	|	|	|	1.73
43.083	0.00	0.80	2.819	I O	|	|	|	|	1.73
43.167	0.00	0.80	2.814	I O	|	|	|	|	1.73
43.250	0.00	0.80	2.808	I O	|	|	|	|	1.72
43.333	0.00	0.80	2.803	I O	|	|	|	|	1.72
43.417	0.00	0.80	2.797	I O	|	|	|	|	1.72
43.500	0.00	0.80	2.792	I O	|	|	|	|	1.71
43.583	0.00	0.80	2.786	I O	|	|	|	|	1.71
43.667	0.00	0.80	2.781	I O	|	|	|	|	1.71
43.750	0.00	0.80	2.775	I O	|	|	|	|	1.71
43.833	0.00	0.80	2.770	I O	|	|	|	|	1.70
43.917	0.00	0.80	2.764	I O	|	|	|	|	1.70
44.000	0.00	0.80	2.759	I O	|	|	|	|	1.70
44.083	0.00	0.80	2.753	I O	|	|	|	|	1.69
44.167	0.00	0.80	2.748	I O	|	|	|	|	1.69
44.250	0.00	0.80	2.742	I O	|	|	|	|	1.69
44.333	0.00	0.80	2.737	I O	|	|	|	|	1.68
44.417	0.00	0.80	2.731	I O	|	|	|	|	1.68
44.500	0.00	0.80	2.726	I O	|	|	|	|	1.68
44.583	0.00	0.80	2.720	I O	|	|	|	|	1.67
44.667	0.00	0.80	2.715	I O	|	|	|	|	1.67
44.750	0.00	0.80	2.709	I O	|	|	|	|	1.67
44.833	0.00	0.80	2.704	I O	|	|	|	|	1.67
44.917	0.00	0.80	2.698	I O	|	|	|	|	1.66
45.000	0.00	0.80	2.693	I O	|	|	|	|	1.66
45.083	0.00	0.80	2.687	I O	|	|	|	|	1.66
45.167	0.00	0.80	2.682	I O	|	|	|	|	1.65
45.250	0.00	0.80	2.676	I O	|	|	|	|	1.65
45.333	0.00	0.80	2.671	I O	|	|	|	|	1.65
45.417	0.00	0.80	2.665	I O	|	|	|	|	1.64
45.500	0.00	0.80	2.660	I O	|	|	|	|	1.64
45.583	0.00	0.80	2.654	I O	|	|	|	|	1.64
45.667	0.00	0.80	2.649	I O	|	|	|	|	1.63
45.750	0.00	0.80	2.643	I O	|	|	|	|	1.63
45.833	0.00	0.80	2.638	I O	|	|	|	|	1.63
45.917	0.00	0.80	2.632	I O	|	|	|	|	1.62
46.000	0.00	0.80	2.627	I O	|	|	|	|	1.62
46.083	0.00	0.80	2.621	I O	|	|	|	|	1.62
46.167	0.00	0.80	2.616	I O	|	|	|	|	1.62
46.250	0.00	0.80	2.610	I O	|	|	|	|	1.61
46.333	0.00	0.80	2.605	I O	|	|	|	|	1.61
46.417	0.00	0.80	2.599	I O	|	|	|	|	1.61
46.500	0.00	0.80	2.594	I O	|	|	|	|	1.60
46.583	0.00	0.80	2.588	I O	|	|	|	|	1.60
46.667	0.00	0.80	2.583	I O	|	|	|	|	1.60
46.750	0.00	0.80	2.577	I O	|	|	|	|	1.59
46.833	0.00	0.80	2.572	I O	|	|	|	|	1.59
46.917	0.00	0.80	2.566	I O	|	|	|	|	1.59
47.000	0.00	0.80	2.561	I O	|	|	|	|	1.58
47.083	0.00	0.80	2.555	I O	|	|	|	|	1.58

47.167	0.00	0.80	2.550	I O	|	|	|	| 1.58
47.250	0.00	0.80	2.544	I O	|	|	|	| 1.58
47.333	0.00	0.80	2.539	I O	|	|	|	| 1.57
47.417	0.00	0.80	2.533	I O	|	|	|	| 1.57
47.500	0.00	0.80	2.528	I O	|	|	|	| 1.57
47.583	0.00	0.80	2.522	I O	|	|	|	| 1.56
47.667	0.00	0.80	2.517	I O	|	|	|	| 1.56
47.750	0.00	0.80	2.512	I O	|	|	|	| 1.56
47.833	0.00	0.80	2.506	I O	|	|	|	| 1.55
47.917	0.00	0.80	2.501	I O	|	|	|	| 1.55
48.000	0.00	0.80	2.495	I O	|	|	|	| 1.55
48.083	0.00	0.80	2.490	I O	|	|	|	| 1.54
48.167	0.00	0.80	2.484	I O	|	|	|	| 1.54
48.250	0.00	0.80	2.479	I O	|	|	|	| 1.54
48.333	0.00	0.80	2.473	I O	|	|	|	| 1.54
48.417	0.00	0.80	2.468	I O	|	|	|	| 1.53
48.500	0.00	0.80	2.462	I O	|	|	|	| 1.53
48.583	0.00	0.80	2.457	I O	|	|	|	| 1.53
48.667	0.00	0.80	2.451	I O	|	|	|	| 1.52
48.750	0.00	0.80	2.446	I O	|	|	|	| 1.52
48.833	0.00	0.80	2.440	I O	|	|	|	| 1.52
48.917	0.00	0.80	2.435	I O	|	|	|	| 1.51
49.000	0.00	0.80	2.429	I O	|	|	|	| 1.51
49.083	0.00	0.80	2.424	I O	|	|	|	| 1.51
49.167	0.00	0.80	2.418	I O	|	|	|	| 1.50
49.250	0.00	0.80	2.413	I O	|	|	|	| 1.50
49.333	0.00	0.80	2.407	I O	|	|	|	| 1.50
49.417	0.00	0.80	2.402	I O	|	|	|	| 1.50
49.500	0.00	0.80	2.396	I O	|	|	|	| 1.49
49.583	0.00	0.80	2.391	I O	|	|	|	| 1.49
49.667	0.00	0.80	2.385	I O	|	|	|	| 1.49
49.750	0.00	0.80	2.380	I O	|	|	|	| 1.48
49.833	0.00	0.80	2.374	I O	|	|	|	| 1.48
49.917	0.00	0.80	2.369	I O	|	|	|	| 1.48
50.000	0.00	0.80	2.363	I O	|	|	|	| 1.47
50.083	0.00	0.80	2.358	I O	|	|	|	| 1.47
50.167	0.00	0.80	2.352	I O	|	|	|	| 1.47
50.250	0.00	0.80	2.347	I O	|	|	|	| 1.46
50.333	0.00	0.80	2.341	I O	|	|	|	| 1.46
50.417	0.00	0.80	2.336	I O	|	|	|	| 1.46
50.500	0.00	0.80	2.330	I O	|	|	|	| 1.45
50.583	0.00	0.80	2.325	I O	|	|	|	| 1.45
50.667	0.00	0.80	2.319	I O	|	|	|	| 1.45
50.750	0.00	0.80	2.314	I O	|	|	|	| 1.44
50.833	0.00	0.80	2.308	I O	|	|	|	| 1.44
50.917	0.00	0.80	2.303	I O	|	|	|	| 1.44
51.000	0.00	0.80	2.297	I O	|	|	|	| 1.43
51.083	0.00	0.80	2.292	I O	|	|	|	| 1.43
51.167	0.00	0.80	2.286	I O	|	|	|	| 1.43
51.250	0.00	0.80	2.281	I O	|	|	|	| 1.42
51.333	0.00	0.80	2.275	I O	|	|	|	| 1.42
51.417	0.00	0.80	2.270	I O	|	|	|	| 1.42
51.500	0.00	0.80	2.264	I O	|	|	|	| 1.41
51.583	0.00	0.80	2.259	I O	|	|	|	| 1.41

51.667	0.00	0.80	2.253	I O	|	|	|	1.41
51.750	0.00	0.80	2.248	I O	|	|	|	1.40
51.833	0.00	0.80	2.242	I O	|	|	|	1.40
51.917	0.00	0.80	2.237	I O	|	|	|	1.40
52.000	0.00	0.80	2.231	I O	|	|	|	1.39
52.083	0.00	0.80	2.226	I O	|	|	|	1.39
52.167	0.00	0.80	2.220	I O	|	|	|	1.39
52.250	0.00	0.80	2.215	I O	|	|	|	1.38
52.333	0.00	0.80	2.209	I O	|	|	|	1.38
52.417	0.00	0.80	2.204	I O	|	|	|	1.38
52.500	0.00	0.80	2.198	I O	|	|	|	1.37
52.583	0.00	0.80	2.193	I O	|	|	|	1.37
52.667	0.00	0.80	2.187	I O	|	|	|	1.37
52.750	0.00	0.80	2.182	I O	|	|	|	1.36
52.833	0.00	0.80	2.176	I O	|	|	|	1.36
52.917	0.00	0.80	2.171	I O	|	|	|	1.36
53.000	0.00	0.80	2.165	I O	|	|	|	1.35
53.083	0.00	0.80	2.160	I O	|	|	|	1.35
53.167	0.00	0.80	2.154	I O	|	|	|	1.35
53.250	0.00	0.80	2.149	I O	|	|	|	1.34
53.333	0.00	0.80	2.143	I O	|	|	|	1.34
53.417	0.00	0.80	2.138	I O	|	|	|	1.34
53.500	0.00	0.80	2.132	I O	|	|	|	1.33
53.583	0.00	0.80	2.127	I O	|	|	|	1.33
53.667	0.00	0.80	2.121	I O	|	|	|	1.33
53.750	0.00	0.80	2.116	I O	|	|	|	1.32
53.833	0.00	0.80	2.110	I O	|	|	|	1.32
53.917	0.00	0.80	2.105	I O	|	|	|	1.32
54.000	0.00	0.80	2.099	I O	|	|	|	1.32
54.083	0.00	0.80	2.094	I O	|	|	|	1.31
54.167	0.00	0.80	2.088	I O	|	|	|	1.31
54.250	0.00	0.80	2.083	I O	|	|	|	1.31
54.333	0.00	0.80	2.077	I O	|	|	|	1.30
54.417	0.00	0.80	2.072	I O	|	|	|	1.30
54.500	0.00	0.80	2.066	I O	|	|	|	1.30
54.583	0.00	0.80	2.061	I O	|	|	|	1.29
54.667	0.00	0.80	2.055	I O	|	|	|	1.29
54.750	0.00	0.80	2.050	I O	|	|	|	1.29
54.833	0.00	0.80	2.045	I O	|	|	|	1.28
54.917	0.00	0.80	2.039	I O	|	|	|	1.28
55.000	0.00	0.80	2.034	I O	|	|	|	1.28
55.083	0.00	0.80	2.028	I O	|	|	|	1.27
55.167	0.00	0.80	2.023	I O	|	|	|	1.27
55.250	0.00	0.80	2.017	I O	|	|	|	1.27
55.333	0.00	0.80	2.012	I O	|	|	|	1.26
55.417	0.00	0.80	2.006	I O	|	|	|	1.26
55.500	0.00	0.80	2.001	I O	|	|	|	1.26
55.583	0.00	0.80	1.995	I O	|	|	|	1.25
55.667	0.00	0.80	1.990	I O	|	|	|	1.25
55.750	0.00	0.80	1.984	I O	|	|	|	1.25
55.833	0.00	0.80	1.979	I O	|	|	|	1.24
55.917	0.00	0.80	1.973	I O	|	|	|	1.24
56.000	0.00	0.80	1.968	I O	|	|	|	1.24
56.083	0.00	0.80	1.962	I O	|	|	|	1.23

56.167	0.00	0.80	1.957	I O	|	|	|	1.23
56.250	0.00	0.80	1.951	I O	|	|	|	1.23
56.333	0.00	0.80	1.946	I O	|	|	|	1.22
56.417	0.00	0.80	1.940	I O	|	|	|	1.22
56.500	0.00	0.80	1.935	I O	|	|	|	1.22
56.583	0.00	0.80	1.929	I O	|	|	|	1.21
56.667	0.00	0.80	1.924	I O	|	|	|	1.21
56.750	0.00	0.80	1.918	I O	|	|	|	1.21
56.833	0.00	0.80	1.913	I O	|	|	|	1.20
56.917	0.00	0.80	1.907	I O	|	|	|	1.20
57.000	0.00	0.80	1.902	I O	|	|	|	1.20
57.083	0.00	0.80	1.896	I O	|	|	|	1.19
57.167	0.00	0.80	1.891	I O	|	|	|	1.19
57.250	0.00	0.80	1.885	I O	|	|	|	1.19
57.333	0.00	0.80	1.880	I O	|	|	|	1.18
57.417	0.00	0.80	1.874	I O	|	|	|	1.18
57.500	0.00	0.80	1.869	I O	|	|	|	1.18
57.583	0.00	0.80	1.863	I O	|	|	|	1.17
57.667	0.00	0.80	1.858	I O	|	|	|	1.17
57.750	0.00	0.80	1.852	I O	|	|	|	1.17
57.833	0.00	0.80	1.847	I O	|	|	|	1.16
57.917	0.00	0.80	1.841	I O	|	|	|	1.16
58.000	0.00	0.80	1.836	I O	|	|	|	1.16
58.083	0.00	0.80	1.830	I O	|	|	|	1.15
58.167	0.00	0.80	1.825	I O	|	|	|	1.15
58.250	0.00	0.80	1.819	I O	|	|	|	1.15
58.333	0.00	0.80	1.814	I O	|	|	|	1.15
58.417	0.00	0.80	1.808	I O	|	|	|	1.14
58.500	0.00	0.80	1.803	I O	|	|	|	1.14
58.583	0.00	0.80	1.797	I O	|	|	|	1.14
58.667	0.00	0.80	1.792	I O	|	|	|	1.13
58.750	0.00	0.80	1.786	I O	|	|	|	1.13
58.833	0.00	0.80	1.781	I O	|	|	|	1.13
58.917	0.00	0.80	1.775	I O	|	|	|	1.12
59.000	0.00	0.80	1.770	I O	|	|	|	1.12
59.083	0.00	0.80	1.764	I O	|	|	|	1.12
59.167	0.00	0.80	1.759	I O	|	|	|	1.11
59.250	0.00	0.80	1.753	I O	|	|	|	1.11
59.333	0.00	0.80	1.748	I O	|	|	|	1.11
59.417	0.00	0.80	1.742	I O	|	|	|	1.10
59.500	0.00	0.80	1.737	I O	|	|	|	1.10
59.583	0.00	0.80	1.731	I O	|	|	|	1.10
59.667	0.00	0.80	1.726	I O	|	|	|	1.09
59.750	0.00	0.80	1.720	I O	|	|	|	1.09
59.833	0.00	0.80	1.715	I O	|	|	|	1.09
59.917	0.00	0.80	1.709	I O	|	|	|	1.08
60.000	0.00	0.80	1.704	I O	|	|	|	1.08
60.083	0.00	0.80	1.698	I O	|	|	|	1.08
60.167	0.00	0.80	1.693	I O	|	|	|	1.07
60.250	0.00	0.80	1.687	I O	|	|	|	1.07
60.333	0.00	0.80	1.682	I O	|	|	|	1.07
60.417	0.00	0.80	1.676	I O	|	|	|	1.06
60.500	0.00	0.80	1.671	I O	|	|	|	1.06
60.583	0.00	0.80	1.665	I O	|	|	|	1.06

60.667	0.00	0.80	1.660	I O	|	|	|	|	1.05
60.750	0.00	0.80	1.654	I O	|	|	|	|	1.05
60.833	0.00	0.80	1.649	I O	|	|	|	|	1.05
60.917	0.00	0.80	1.643	I O	|	|	|	|	1.04
61.000	0.00	0.80	1.638	I O	|	|	|	|	1.04
61.083	0.00	0.80	1.632	I O	|	|	|	|	1.04
61.167	0.00	0.80	1.627	I O	|	|	|	|	1.03
61.250	0.00	0.80	1.621	I O	|	|	|	|	1.03
61.333	0.00	0.80	1.616	I O	|	|	|	|	1.03
61.417	0.00	0.80	1.610	I O	|	|	|	|	1.02
61.500	0.00	0.80	1.605	I O	|	|	|	|	1.02
61.583	0.00	0.80	1.599	I O	|	|	|	|	1.02
61.667	0.00	0.80	1.594	I O	|	|	|	|	1.01
61.750	0.00	0.80	1.588	I O	|	|	|	|	1.01
61.833	0.00	0.80	1.583	I O	|	|	|	|	1.01
61.917	0.00	0.80	1.578	I O	|	|	|	|	1.00
62.000	0.00	0.80	1.572	I O	|	|	|	|	1.00
62.083	0.00	0.80	1.567	I O	|	|	|	|	1.00
62.167	0.00	0.80	1.561	I O	|	|	|	|	0.99
62.250	0.00	0.80	1.556	I O	|	|	|	|	0.99
62.333	0.00	0.80	1.550	I O	|	|	|	|	0.99
62.417	0.00	0.80	1.545	I O	|	|	|	|	0.98
62.500	0.00	0.80	1.539	I O	|	|	|	|	0.98
62.583	0.00	0.80	1.534	I O	|	|	|	|	0.98
62.667	0.00	0.80	1.528	I O	|	|	|	|	0.97
62.750	0.00	0.80	1.523	I O	|	|	|	|	0.97
62.833	0.00	0.80	1.517	I O	|	|	|	|	0.97
62.917	0.00	0.80	1.512	I O	|	|	|	|	0.96
63.000	0.00	0.80	1.506	I O	|	|	|	|	0.96
63.083	0.00	0.80	1.501	I O	|	|	|	|	0.96
63.167	0.00	0.80	1.495	I O	|	|	|	|	0.95
63.250	0.00	0.80	1.490	I O	|	|	|	|	0.95
63.333	0.00	0.80	1.484	I O	|	|	|	|	0.95
63.417	0.00	0.80	1.479	I O	|	|	|	|	0.94
63.500	0.00	0.80	1.473	I O	|	|	|	|	0.94
63.583	0.00	0.80	1.468	I O	|	|	|	|	0.94
63.667	0.00	0.80	1.462	I O	|	|	|	|	0.93
63.750	0.00	0.80	1.457	I O	|	|	|	|	0.93
63.833	0.00	0.80	1.451	I O	|	|	|	|	0.93
63.917	0.00	0.80	1.446	I O	|	|	|	|	0.92
64.000	0.00	0.80	1.440	I O	|	|	|	|	0.92
64.083	0.00	0.80	1.435	I O	|	|	|	|	0.92
64.167	0.00	0.80	1.429	I O	|	|	|	|	0.91
64.250	0.00	0.80	1.424	I O	|	|	|	|	0.91
64.333	0.00	0.80	1.418	I O	|	|	|	|	0.91
64.417	0.00	0.80	1.413	I O	|	|	|	|	0.90
64.500	0.00	0.80	1.407	I O	|	|	|	|	0.90
64.583	0.00	0.80	1.402	I O	|	|	|	|	0.90
64.667	0.00	0.80	1.396	I O	|	|	|	|	0.89
64.750	0.00	0.80	1.391	I O	|	|	|	|	0.89
64.833	0.00	0.80	1.385	I O	|	|	|	|	0.89
64.917	0.00	0.80	1.380	I O	|	|	|	|	0.88
65.000	0.00	0.80	1.374	I O	|	|	|	|	0.88
65.083	0.00	0.80	1.369	I O	|	|	|	|	0.88

65.167	0.00	0.80	1.363	I O	|	|	|	| 0.87
65.250	0.00	0.80	1.358	I O	|	|	|	| 0.87
65.333	0.00	0.80	1.352	I O	|	|	|	| 0.87
65.417	0.00	0.80	1.347	I O	|	|	|	| 0.86
65.500	0.00	0.80	1.341	I O	|	|	|	| 0.86
65.583	0.00	0.80	1.336	I O	|	|	|	| 0.86
65.667	0.00	0.80	1.330	I O	|	|	|	| 0.85
65.750	0.00	0.80	1.325	I O	|	|	|	| 0.85
65.833	0.00	0.80	1.319	I O	|	|	|	| 0.85
65.917	0.00	0.80	1.314	I O	|	|	|	| 0.84
66.000	0.00	0.80	1.308	I O	|	|	|	| 0.84
66.083	0.00	0.80	1.303	I O	|	|	|	| 0.84
66.167	0.00	0.80	1.297	I O	|	|	|	| 0.83
66.250	0.00	0.80	1.292	I O	|	|	|	| 0.83
66.333	0.00	0.80	1.286	I O	|	|	|	| 0.82
66.417	0.00	0.80	1.281	I O	|	|	|	| 0.82
66.500	0.00	0.80	1.275	I O	|	|	|	| 0.82
66.583	0.00	0.80	1.270	I O	|	|	|	| 0.81
66.667	0.00	0.80	1.264	I O	|	|	|	| 0.81
66.750	0.00	0.80	1.259	I O	|	|	|	| 0.81
66.833	0.00	0.80	1.253	I O	|	|	|	| 0.80
66.917	0.00	0.80	1.248	I O	|	|	|	| 0.80
67.000	0.00	0.80	1.242	I O	|	|	|	| 0.80
67.083	0.00	0.80	1.237	I O	|	|	|	| 0.79
67.167	0.00	0.80	1.231	I O	|	|	|	| 0.79
67.250	0.00	0.80	1.226	I O	|	|	|	| 0.79
67.333	0.00	0.80	1.220	I O	|	|	|	| 0.78
67.417	0.00	0.80	1.215	I O	|	|	|	| 0.78
67.500	0.00	0.80	1.209	I O	|	|	|	| 0.78
67.583	0.00	0.80	1.204	I O	|	|	|	| 0.77
67.667	0.00	0.80	1.198	I O	|	|	|	| 0.77
67.750	0.00	0.80	1.193	I O	|	|	|	| 0.77
67.833	0.00	0.80	1.187	I O	|	|	|	| 0.76
67.917	0.00	0.80	1.182	I O	|	|	|	| 0.76
68.000	0.00	0.80	1.176	I O	|	|	|	| 0.76
68.083	0.00	0.80	1.171	I O	|	|	|	| 0.75
68.167	0.00	0.80	1.165	I O	|	|	|	| 0.75
68.250	0.00	0.80	1.160	I O	|	|	|	| 0.75
68.333	0.00	0.80	1.154	I O	|	|	|	| 0.74
68.417	0.00	0.80	1.149	I O	|	|	|	| 0.74
68.500	0.00	0.80	1.143	I O	|	|	|	| 0.74
68.583	0.00	0.80	1.138	I O	|	|	|	| 0.73
68.667	0.00	0.80	1.132	I O	|	|	|	| 0.73
68.750	0.00	0.80	1.127	I O	|	|	|	| 0.73
68.833	0.00	0.80	1.121	I O	|	|	|	| 0.72
68.917	0.00	0.80	1.116	I O	|	|	|	| 0.72
69.000	0.00	0.80	1.111	I O	|	|	|	| 0.72
69.083	0.00	0.80	1.105	I O	|	|	|	| 0.71
69.167	0.00	0.80	1.100	I O	|	|	|	| 0.71
69.250	0.00	0.80	1.094	I O	|	|	|	| 0.71
69.333	0.00	0.80	1.089	I O	|	|	|	| 0.70
69.417	0.00	0.80	1.083	I O	|	|	|	| 0.70
69.500	0.00	0.80	1.078	I O	|	|	|	| 0.70
69.583	0.00	0.80	1.072	I O	|	|	|	| 0.69

69.667	0.00	0.80	1.067	I O				0.69
69.750	0.00	0.80	1.061	I O				0.69
69.833	0.00	0.80	1.056	I O				0.68
69.917	0.00	0.80	1.050	I O				0.68
70.000	0.00	0.80	1.045	I O				0.68
70.083	0.00	0.80	1.039	I O				0.67
70.167	0.00	0.80	1.034	I O				0.67
70.250	0.00	0.80	1.028	I O				0.67
70.333	0.00	0.80	1.023	I O				0.66
70.417	0.00	0.80	1.017	I O				0.66
70.500	0.00	0.80	1.012	I O				0.66
70.583	0.00	0.80	1.006	I O				0.65
70.667	0.00	0.80	1.001	I O				0.65
70.750	0.00	0.80	0.995	I O				0.65
70.833	0.00	0.80	0.990	I O				0.64
70.917	0.00	0.80	0.984	I O				0.64
71.000	0.00	0.80	0.979	I O				0.63
71.083	0.00	0.80	0.973	I O				0.63
71.167	0.00	0.80	0.968	I O				0.63
71.250	0.00	0.80	0.962	I O				0.62
71.333	0.00	0.80	0.957	I O				0.62
71.417	0.00	0.80	0.951	I O				0.62
71.500	0.00	0.80	0.946	I O				0.61
71.583	0.00	0.80	0.940	I O				0.61
71.667	0.00	0.80	0.935	I O				0.61
71.750	0.00	0.80	0.929	I O				0.60
71.833	0.00	0.80	0.924	I O				0.60
71.917	0.00	0.80	0.918	I O				0.60
72.000	0.00	0.80	0.913	I O				0.59
72.083	0.00	0.80	0.907	I O				0.59
72.167	0.00	0.80	0.902	I O				0.59
72.250	0.00	0.80	0.896	I O				0.58
72.333	0.00	0.80	0.891	I O				0.58
72.417	0.00	0.80	0.885	I O				0.58
72.500	0.00	0.80	0.880	I O				0.57
72.583	0.00	0.80	0.874	I O				0.57
72.667	0.00	0.80	0.869	I O				0.57
72.750	0.00	0.80	0.863	I O				0.56
72.833	0.00	0.80	0.858	I O				0.56
72.917	0.00	0.80	0.852	I O				0.56
73.000	0.00	0.80	0.847	I O				0.55
73.083	0.00	0.80	0.841	I O				0.55
73.167	0.00	0.80	0.836	I O				0.55
73.250	0.00	0.80	0.830	I O				0.54
73.333	0.00	0.80	0.825	I O				0.54
73.417	0.00	0.80	0.819	I O				0.54
73.500	0.00	0.80	0.814	I O				0.53
73.583	0.00	0.80	0.808	I O				0.53
73.667	0.00	0.80	0.803	I O				0.53
73.750	0.00	0.80	0.797	I O				0.52
73.833	0.00	0.80	0.792	I O				0.52
73.917	0.00	0.80	0.786	I O				0.52
74.000	0.00	0.80	0.781	I O				0.51
74.083	0.00	0.80	0.775	I O				0.51

74.167	0.00	0.80	0.770	I O				0.51
74.250	0.00	0.80	0.764	I O				0.50
74.333	0.00	0.80	0.759	I O				0.50
74.417	0.00	0.79	0.753	IO				0.50
74.500	0.00	0.79	0.748	IO				0.49
74.583	0.00	0.78	0.743	IO				0.49
74.667	0.00	0.77	0.737	IO				0.49
74.750	0.00	0.77	0.732	IO				0.48
74.833	0.00	0.76	0.727	IO				0.48
74.917	0.00	0.76	0.721	IO				0.47
75.000	0.00	0.75	0.716	IO				0.47
75.083	0.00	0.75	0.711	IO				0.47
75.167	0.00	0.74	0.706	IO				0.46
75.250	0.00	0.74	0.701	IO				0.46
75.333	0.00	0.73	0.696	IO				0.46
75.417	0.00	0.73	0.691	IO				0.45
75.500	0.00	0.72	0.686	IO				0.45
75.583	0.00	0.71	0.681	IO				0.45
75.667	0.00	0.71	0.676	IO				0.44
75.750	0.00	0.70	0.671	IO				0.44
75.833	0.00	0.70	0.666	IO				0.44
75.917	0.00	0.69	0.661	IO				0.44
76.000	0.00	0.69	0.657	IO				0.43
76.083	0.00	0.68	0.652	IO				0.43
76.167	0.00	0.68	0.647	IO				0.43
76.250	0.00	0.67	0.643	IO				0.42
76.333	0.00	0.67	0.638	IO				0.42
76.417	0.00	0.66	0.633	IO				0.42
76.500	0.00	0.66	0.629	IO				0.41
76.583	0.00	0.66	0.624	IO				0.41
76.667	0.00	0.65	0.620	IO				0.41
76.750	0.00	0.65	0.615	IO				0.40
76.833	0.00	0.64	0.611	IO				0.40
76.917	0.00	0.64	0.607	IO				0.40
77.000	0.00	0.63	0.602	IO				0.40
77.083	0.00	0.63	0.598	IO				0.39
77.167	0.00	0.62	0.594	IO				0.39
77.250	0.00	0.62	0.589	IO				0.39
77.333	0.00	0.61	0.585	IO				0.38
77.417	0.00	0.61	0.581	IO				0.38
77.500	0.00	0.61	0.577	IO				0.38
77.583	0.00	0.60	0.572	IO				0.38
77.667	0.00	0.60	0.568	IO				0.37
77.750	0.00	0.59	0.564	IO				0.37
77.833	0.00	0.59	0.560	IO				0.37
77.917	0.00	0.58	0.556	IO				0.37
78.000	0.00	0.58	0.552	IO				0.36
78.083	0.00	0.58	0.548	IO				0.36
78.167	0.00	0.57	0.544	IO				0.36
78.250	0.00	0.57	0.540	IO				0.36
78.333	0.00	0.56	0.536	IO				0.35
78.417	0.00	0.56	0.533	IO				0.35
78.500	0.00	0.55	0.529	IO				0.35
78.583	0.00	0.55	0.525	IO				0.35

78.667	0.00	0.55	0.521	IO				0.34
78.750	0.00	0.54	0.517	IO				0.34
78.833	0.00	0.54	0.514	IO				0.34
78.917	0.00	0.54	0.510	IO				0.34
79.000	0.00	0.53	0.506	IO				0.33
79.083	0.00	0.53	0.503	IO				0.33
79.167	0.00	0.52	0.499	IO				0.33
79.250	0.00	0.52	0.495	IO				0.33
79.333	0.00	0.52	0.492	IO				0.32
79.417	0.00	0.51	0.488	IO				0.32
79.500	0.00	0.51	0.485	IO				0.32
79.583	0.00	0.51	0.481	IO				0.32
79.667	0.00	0.50	0.478	IO				0.31
79.750	0.00	0.50	0.474	IO				0.31
79.833	0.00	0.49	0.471	IO				0.31
79.917	0.00	0.49	0.468	IO				0.31
80.000	0.00	0.49	0.464	IO				0.31
80.083	0.00	0.48	0.461	IO				0.30
80.167	0.00	0.48	0.458	IO				0.30
80.250	0.00	0.48	0.454	IO				0.30
80.333	0.00	0.47	0.451	IO				0.30
80.417	0.00	0.47	0.448	IO				0.29
80.500	0.00	0.47	0.444	IO				0.29
80.583	0.00	0.46	0.441	IO				0.29
80.667	0.00	0.46	0.438	IO				0.29
80.750	0.00	0.46	0.435	IO				0.29
80.833	0.00	0.45	0.432	IO				0.28
80.917	0.00	0.45	0.429	IO				0.28
81.000	0.00	0.45	0.426	IO				0.28
81.083	0.00	0.44	0.423	IO				0.28
81.167	0.00	0.44	0.420	IO				0.28
81.250	0.00	0.44	0.416	IO				0.27
81.333	0.00	0.43	0.413	IO				0.27
81.417	0.00	0.43	0.411	IO				0.27
81.500	0.00	0.43	0.408	IO				0.27
81.583	0.00	0.42	0.405	IO				0.27
81.667	0.00	0.42	0.402	IO				0.26
81.750	0.00	0.42	0.399	IO				0.26
81.833	0.00	0.42	0.396	IO				0.26
81.917	0.00	0.41	0.393	IO				0.26
82.000	0.00	0.41	0.390	IO				0.26
82.083	0.00	0.41	0.387	IO				0.25
82.167	0.00	0.40	0.385	IO				0.25
82.250	0.00	0.40	0.382	IO				0.25
82.333	0.00	0.40	0.379	IO				0.25
82.417	0.00	0.40	0.376	O				0.25
82.500	0.00	0.39	0.374	O				0.25
82.583	0.00	0.39	0.371	O				0.24
82.667	0.00	0.39	0.368	O				0.24
82.750	0.00	0.38	0.366	O				0.24
82.833	0.00	0.38	0.363	O				0.24
82.917	0.00	0.38	0.360	O				0.24
83.000	0.00	0.38	0.358	O				0.24
83.083	0.00	0.37	0.355	O				0.23

83.167	0.00	0.37	0.353	O	|	|	|	0.23
83.250	0.00	0.37	0.350	O	|	|	|	0.23
83.333	0.00	0.36	0.348	O	|	|	|	0.23
83.417	0.00	0.36	0.345	O	|	|	|	0.23
83.500	0.00	0.36	0.343	O	|	|	|	0.23
83.583	0.00	0.36	0.340	O	|	|	|	0.22
83.667	0.00	0.35	0.338	O	|	|	|	0.22
83.750	0.00	0.35	0.335	O	|	|	|	0.22
83.833	0.00	0.35	0.333	O	|	|	|	0.22
83.917	0.00	0.35	0.330	O	|	|	|	0.22
84.000	0.00	0.34	0.328	O	|	|	|	0.22
84.083	0.00	0.34	0.326	O	|	|	|	0.21
84.167	0.00	0.34	0.323	O	|	|	|	0.21
84.250	0.00	0.34	0.321	O	|	|	|	0.21
84.333	0.00	0.33	0.319	O	|	|	|	0.21
84.417	0.00	0.33	0.316	O	|	|	|	0.21
84.500	0.00	0.33	0.314	O	|	|	|	0.21
84.583	0.00	0.33	0.312	O	|	|	|	0.21
84.667	0.00	0.33	0.310	O	|	|	|	0.20
84.750	0.00	0.32	0.307	O	|	|	|	0.20
84.833	0.00	0.32	0.305	O	|	|	|	0.20
84.917	0.00	0.32	0.303	O	|	|	|	0.20
85.000	0.00	0.32	0.301	O	|	|	|	0.20
85.083	0.00	0.31	0.299	O	|	|	|	0.20
85.167	0.00	0.31	0.297	O	|	|	|	0.20
85.250	0.00	0.31	0.294	O	|	|	|	0.19
85.333	0.00	0.31	0.292	O	|	|	|	0.19
85.417	0.00	0.30	0.290	O	|	|	|	0.19
85.500	0.00	0.30	0.288	O	|	|	|	0.19
85.583	0.00	0.30	0.286	O	|	|	|	0.19
85.667	0.00	0.30	0.284	O	|	|	|	0.19
85.750	0.00	0.30	0.282	O	|	|	|	0.19
85.833	0.00	0.29	0.280	O	|	|	|	0.18
85.917	0.00	0.29	0.278	O	|	|	|	0.18
86.000	0.00	0.29	0.276	O	|	|	|	0.18
86.083	0.00	0.29	0.274	O	|	|	|	0.18
86.167	0.00	0.29	0.272	O	|	|	|	0.18
86.250	0.00	0.28	0.270	O	|	|	|	0.18
86.333	0.00	0.28	0.268	O	|	|	|	0.18
86.417	0.00	0.28	0.266	O	|	|	|	0.18
86.500	0.00	0.28	0.264	O	|	|	|	0.17
86.583	0.00	0.28	0.262	O	|	|	|	0.17
86.667	0.00	0.27	0.260	O	|	|	|	0.17
86.750	0.00	0.27	0.258	O	|	|	|	0.17
86.833	0.00	0.27	0.257	O	|	|	|	0.17
86.917	0.00	0.27	0.255	O	|	|	|	0.17
87.000	0.00	0.27	0.253	O	|	|	|	0.17
87.083	0.00	0.26	0.251	O	|	|	|	0.17
87.167	0.00	0.26	0.249	O	|	|	|	0.16
87.250	0.00	0.26	0.247	O	|	|	|	0.16
87.333	0.00	0.26	0.246	O	|	|	|	0.16
87.417	0.00	0.26	0.244	O	|	|	|	0.16
87.500	0.00	0.25	0.242	O	|	|	|	0.16
87.583	0.00	0.25	0.240	O	|	|	|	0.16

87.667	0.00	0.25	0.239	O	|	|	|	0.16
87.750	0.00	0.25	0.237	O	|	|	|	0.16
87.833	0.00	0.25	0.235	O	|	|	|	0.15
87.917	0.00	0.25	0.234	O	|	|	|	0.15
88.000	0.00	0.24	0.232	O	|	|	|	0.15
88.083	0.00	0.24	0.230	O	|	|	|	0.15
88.167	0.00	0.24	0.229	O	|	|	|	0.15
88.250	0.00	0.24	0.227	O	|	|	|	0.15
88.333	0.00	0.24	0.225	O	|	|	|	0.15
88.417	0.00	0.23	0.224	O	|	|	|	0.15
88.500	0.00	0.23	0.222	O	|	|	|	0.15
88.583	0.00	0.23	0.220	O	|	|	|	0.15
88.667	0.00	0.23	0.219	O	|	|	|	0.14
88.750	0.00	0.23	0.217	O	|	|	|	0.14
88.833	0.00	0.23	0.216	O	|	|	|	0.14
88.917	0.00	0.22	0.214	O	|	|	|	0.14
89.000	0.00	0.22	0.213	O	|	|	|	0.14
89.083	0.00	0.22	0.211	O	|	|	|	0.14
89.167	0.00	0.22	0.210	O	|	|	|	0.14
89.250	0.00	0.22	0.208	O	|	|	|	0.14
89.333	0.00	0.22	0.207	O	|	|	|	0.14
89.417	0.00	0.22	0.205	O	|	|	|	0.13
89.500	0.00	0.21	0.204	O	|	|	|	0.13
89.583	0.00	0.21	0.202	O	|	|	|	0.13
89.667	0.00	0.21	0.201	O	|	|	|	0.13
89.750	0.00	0.21	0.199	O	|	|	|	0.13
89.833	0.00	0.21	0.198	O	|	|	|	0.13
89.917	0.00	0.21	0.196	O	|	|	|	0.13
90.000	0.00	0.20	0.195	O	|	|	|	0.13
90.083	0.00	0.20	0.194	O	|	|	|	0.13
90.167	0.00	0.20	0.192	O	|	|	|	0.13
90.250	0.00	0.20	0.191	O	|	|	|	0.13
90.333	0.00	0.20	0.189	O	|	|	|	0.12
90.417	0.00	0.20	0.188	O	|	|	|	0.12
90.500	0.00	0.20	0.187	O	|	|	|	0.12
90.583	0.00	0.19	0.185	O	|	|	|	0.12
90.667	0.00	0.19	0.184	O	|	|	|	0.12
90.750	0.00	0.19	0.183	O	|	|	|	0.12
90.833	0.00	0.19	0.181	O	|	|	|	0.12
90.917	0.00	0.19	0.180	O	|	|	|	0.12
91.000	0.00	0.19	0.179	O	|	|	|	0.12
91.083	0.00	0.19	0.177	O	|	|	|	0.12
91.167	0.00	0.18	0.176	O	|	|	|	0.12
91.250	0.00	0.18	0.175	O	|	|	|	0.12
91.333	0.00	0.18	0.174	O	|	|	|	0.11
91.417	0.00	0.18	0.172	O	|	|	|	0.11
91.500	0.00	0.18	0.171	O	|	|	|	0.11
91.583	0.00	0.18	0.170	O	|	|	|	0.11
91.667	0.00	0.18	0.169	O	|	|	|	0.11
91.750	0.00	0.18	0.167	O	|	|	|	0.11
91.833	0.00	0.17	0.166	O	|	|	|	0.11
91.917	0.00	0.17	0.165	O	|	|	|	0.11
92.000	0.00	0.17	0.164	O	|	|	|	0.11
92.083	0.00	0.17	0.163	O	|	|	|	0.11

92.167	0.00	0.17	0.162	O	|	|	|	| 0.11
92.250	0.00	0.17	0.160	O	|	|	|	| 0.11
92.333	0.00	0.17	0.159	O	|	|	|	| 0.10
92.417	0.00	0.17	0.158	O	|	|	|	| 0.10
92.500	0.00	0.16	0.157	O	|	|	|	| 0.10
92.583	0.00	0.16	0.156	O	|	|	|	| 0.10
92.667	0.00	0.16	0.155	O	|	|	|	| 0.10
92.750	0.00	0.16	0.154	O	|	|	|	| 0.10
92.833	0.00	0.16	0.152	O	|	|	|	| 0.10
92.917	0.00	0.16	0.151	O	|	|	|	| 0.10
93.000	0.00	0.16	0.150	O	|	|	|	| 0.10
93.083	0.00	0.16	0.149	O	|	|	|	| 0.10
93.167	0.00	0.16	0.148	O	|	|	|	| 0.10
93.250	0.00	0.15	0.147	O	|	|	|	| 0.10
93.333	0.00	0.15	0.146	O	|	|	|	| 0.10
93.417	0.00	0.15	0.145	O	|	|	|	| 0.10
93.500	0.00	0.15	0.144	O	|	|	|	| 0.09
93.583	0.00	0.15	0.143	O	|	|	|	| 0.09
93.667	0.00	0.15	0.142	O	|	|	|	| 0.09
93.750	0.00	0.15	0.141	O	|	|	|	| 0.09
93.833	0.00	0.15	0.140	O	|	|	|	| 0.09
93.917	0.00	0.15	0.139	O	|	|	|	| 0.09
94.000	0.00	0.14	0.138	O	|	|	|	| 0.09
94.083	0.00	0.14	0.137	O	|	|	|	| 0.09
94.167	0.00	0.14	0.136	O	|	|	|	| 0.09
94.250	0.00	0.14	0.135	O	|	|	|	| 0.09
94.333	0.00	0.14	0.134	O	|	|	|	| 0.09
94.417	0.00	0.14	0.133	O	|	|	|	| 0.09
94.500	0.00	0.14	0.132	O	|	|	|	| 0.09
94.583	0.00	0.14	0.131	O	|	|	|	| 0.09
94.667	0.00	0.14	0.130	O	|	|	|	| 0.09
94.750	0.00	0.14	0.129	O	|	|	|	| 0.08
94.833	0.00	0.13	0.128	O	|	|	|	| 0.08
94.917	0.00	0.13	0.127	O	|	|	|	| 0.08
95.000	0.00	0.13	0.126	O	|	|	|	| 0.08
95.083	0.00	0.13	0.125	O	|	|	|	| 0.08
95.167	0.00	0.13	0.125	O	|	|	|	| 0.08
95.250	0.00	0.13	0.124	O	|	|	|	| 0.08
95.333	0.00	0.13	0.123	O	|	|	|	| 0.08
95.417	0.00	0.13	0.122	O	|	|	|	| 0.08
95.500	0.00	0.13	0.121	O	|	|	|	| 0.08
95.583	0.00	0.13	0.120	O	|	|	|	| 0.08
95.667	0.00	0.13	0.119	O	|	|	|	| 0.08
95.750	0.00	0.12	0.118	O	|	|	|	| 0.08
95.833	0.00	0.12	0.118	O	|	|	|	| 0.08
95.917	0.00	0.12	0.117	O	|	|	|	| 0.08
96.000	0.00	0.12	0.116	O	|	|	|	| 0.08
96.083	0.00	0.12	0.115	O	|	|	|	| 0.08
96.167	0.00	0.12	0.114	O	|	|	|	| 0.08
96.250	0.00	0.12	0.113	O	|	|	|	| 0.07
96.333	0.00	0.12	0.113	O	|	|	|	| 0.07
96.417	0.00	0.12	0.112	O	|	|	|	| 0.07
96.500	0.00	0.12	0.111	O	|	|	|	| 0.07
96.583	0.00	0.12	0.110	O	|	|	|	| 0.07

96.667	0.00	0.11	0.109	O	|	|	|	|	0.07
96.750	0.00	0.11	0.109	O	|	|	|	|	0.07
96.833	0.00	0.11	0.108	O	|	|	|	|	0.07
96.917	0.00	0.11	0.107	O	|	|	|	|	0.07
97.000	0.00	0.11	0.106	O	|	|	|	|	0.07
97.083	0.00	0.11	0.105	O	|	|	|	|	0.07
97.167	0.00	0.11	0.105	O	|	|	|	|	0.07
97.250	0.00	0.11	0.104	O	|	|	|	|	0.07
97.333	0.00	0.11	0.103	O	|	|	|	|	0.07
97.417	0.00	0.11	0.102	O	|	|	|	|	0.07
97.500	0.00	0.11	0.102	O	|	|	|	|	0.07
97.583	0.00	0.11	0.101	O	|	|	|	|	0.07
97.667	0.00	0.11	0.100	O	|	|	|	|	0.07
97.750	0.00	0.10	0.100	O	|	|	|	|	0.07
97.833	0.00	0.10	0.099	O	|	|	|	|	0.07
97.917	0.00	0.10	0.098	O	|	|	|	|	0.06
98.000	0.00	0.10	0.097	O	|	|	|	|	0.06
98.083	0.00	0.10	0.097	O	|	|	|	|	0.06
98.167	0.00	0.10	0.096	O	|	|	|	|	0.06
98.250	0.00	0.10	0.095	O	|	|	|	|	0.06
98.333	0.00	0.10	0.095	O	|	|	|	|	0.06
98.417	0.00	0.10	0.094	O	|	|	|	|	0.06
98.500	0.00	0.10	0.093	O	|	|	|	|	0.06
98.583	0.00	0.10	0.093	O	|	|	|	|	0.06
98.667	0.00	0.10	0.092	O	|	|	|	|	0.06
98.750	0.00	0.10	0.091	O	|	|	|	|	0.06
98.833	0.00	0.10	0.091	O	|	|	|	|	0.06
98.917	0.00	0.09	0.090	O	|	|	|	|	0.06
99.000	0.00	0.09	0.089	O	|	|	|	|	0.06
99.083	0.00	0.09	0.089	O	|	|	|	|	0.06
99.167	0.00	0.09	0.088	O	|	|	|	|	0.06
99.250	0.00	0.09	0.087	O	|	|	|	|	0.06
99.333	0.00	0.09	0.087	O	|	|	|	|	0.06
99.417	0.00	0.09	0.086	O	|	|	|	|	0.06
99.500	0.00	0.09	0.086	O	|	|	|	|	0.06
99.583	0.00	0.09	0.085	O	|	|	|	|	0.06
99.667	0.00	0.09	0.084	O	|	|	|	|	0.06
99.750	0.00	0.09	0.084	O	|	|	|	|	0.06
99.833	0.00	0.09	0.083	O	|	|	|	|	0.05
99.917	0.00	0.09	0.082	O	|	|	|	|	0.05
100.000	0.00	0.09	0.082	O	|	|	|	|	0.05
100.083	0.00	0.09	0.081	O	|	|	|	|	0.05
100.167	0.00	0.08	0.081	O	|	|	|	|	0.05
100.250	0.00	0.08	0.080	O	|	|	|	|	0.05
100.333	0.00	0.08	0.080	O	|	|	|	|	0.05
100.417	0.00	0.08	0.079	O	|	|	|	|	0.05
100.500	0.00	0.08	0.078	O	|	|	|	|	0.05
100.583	0.00	0.08	0.078	O	|	|	|	|	0.05
100.667	0.00	0.08	0.077	O	|	|	|	|	0.05
100.750	0.00	0.08	0.077	O	|	|	|	|	0.05
100.833	0.00	0.08	0.076	O	|	|	|	|	0.05
100.917	0.00	0.08	0.076	O	|	|	|	|	0.05
101.000	0.00	0.08	0.075	O	|	|	|	|	0.05
101.083	0.00	0.08	0.075	O	|	|	|	|	0.05

101.167	0.00	0.08	0.074	O	|	|	|	| 0.05
101.250	0.00	0.08	0.073	O	|	|	|	| 0.05
101.333	0.00	0.08	0.073	O	|	|	|	| 0.05
101.417	0.00	0.08	0.072	O	|	|	|	| 0.05
101.500	0.00	0.08	0.072	O	|	|	|	| 0.05
101.583	0.00	0.07	0.071	O	|	|	|	| 0.05
101.667	0.00	0.07	0.071	O	|	|	|	| 0.05
101.750	0.00	0.07	0.070	O	|	|	|	| 0.05
101.833	0.00	0.07	0.070	O	|	|	|	| 0.05
101.917	0.00	0.07	0.069	O	|	|	|	| 0.05
102.000	0.00	0.07	0.069	O	|	|	|	| 0.05
102.083	0.00	0.07	0.068	O	|	|	|	| 0.04
102.167	0.00	0.07	0.068	O	|	|	|	| 0.04
102.250	0.00	0.07	0.067	O	|	|	|	| 0.04
102.333	0.00	0.07	0.067	O	|	|	|	| 0.04
102.417	0.00	0.07	0.066	O	|	|	|	| 0.04
102.500	0.00	0.07	0.066	O	|	|	|	| 0.04
102.583	0.00	0.07	0.065	O	|	|	|	| 0.04
102.667	0.00	0.07	0.065	O	|	|	|	| 0.04
102.750	0.00	0.07	0.065	O	|	|	|	| 0.04
102.833	0.00	0.07	0.064	O	|	|	|	| 0.04
102.917	0.00	0.07	0.064	O	|	|	|	| 0.04
103.000	0.00	0.07	0.063	O	|	|	|	| 0.04
103.083	0.00	0.07	0.063	O	|	|	|	| 0.04
103.167	0.00	0.07	0.062	O	|	|	|	| 0.04
103.250	0.00	0.06	0.062	O	|	|	|	| 0.04
103.333	0.00	0.06	0.061	O	|	|	|	| 0.04
103.417	0.00	0.06	0.061	O	|	|	|	| 0.04
103.500	0.00	0.06	0.060	O	|	|	|	| 0.04
103.583	0.00	0.06	0.060	O	|	|	|	| 0.04
103.667	0.00	0.06	0.060	O	|	|	|	| 0.04
103.750	0.00	0.06	0.059	O	|	|	|	| 0.04
103.833	0.00	0.06	0.059	O	|	|	|	| 0.04
103.917	0.00	0.06	0.058	O	|	|	|	| 0.04
104.000	0.00	0.06	0.058	O	|	|	|	| 0.04
104.083	0.00	0.06	0.057	O	|	|	|	| 0.04
104.167	0.00	0.06	0.057	O	|	|	|	| 0.04
104.250	0.00	0.06	0.057	O	|	|	|	| 0.04
104.333	0.00	0.06	0.056	O	|	|	|	| 0.04
104.417	0.00	0.06	0.056	O	|	|	|	| 0.04
104.500	0.00	0.06	0.055	O	|	|	|	| 0.04
104.583	0.00	0.06	0.055	O	|	|	|	| 0.04
104.667	0.00	0.06	0.055	O	|	|	|	| 0.04
104.750	0.00	0.06	0.054	O	|	|	|	| 0.04
104.833	0.00	0.06	0.054	O	|	|	|	| 0.04
104.917	0.00	0.06	0.053	O	|	|	|	| 0.04
105.000	0.00	0.06	0.053	O	|	|	|	| 0.03
105.083	0.00	0.06	0.053	O	|	|	|	| 0.03
105.167	0.00	0.05	0.052	O	|	|	|	| 0.03
105.250	0.00	0.05	0.052	O	|	|	|	| 0.03
105.333	0.00	0.05	0.052	O	|	|	|	| 0.03
105.417	0.00	0.05	0.051	O	|	|	|	| 0.03
105.500	0.00	0.05	0.051	O	|	|	|	| 0.03
105.583	0.00	0.05	0.050	O	|	|	|	| 0.03

105.667	0.00	0.05	0.050	O	|	|	|	|	0.03
105.750	0.00	0.05	0.050	O	|	|	|	|	0.03
105.833	0.00	0.05	0.049	O	|	|	|	|	0.03
105.917	0.00	0.05	0.049	O	|	|	|	|	0.03
106.000	0.00	0.05	0.049	O	|	|	|	|	0.03
106.083	0.00	0.05	0.048	O	|	|	|	|	0.03
106.167	0.00	0.05	0.048	O	|	|	|	|	0.03
106.250	0.00	0.05	0.048	O	|	|	|	|	0.03
106.333	0.00	0.05	0.047	O	|	|	|	|	0.03
106.417	0.00	0.05	0.047	O	|	|	|	|	0.03
106.500	0.00	0.05	0.047	O	|	|	|	|	0.03
106.583	0.00	0.05	0.046	O	|	|	|	|	0.03
106.667	0.00	0.05	0.046	O	|	|	|	|	0.03
106.750	0.00	0.05	0.046	O	|	|	|	|	0.03
106.833	0.00	0.05	0.045	O	|	|	|	|	0.03
106.917	0.00	0.05	0.045	O	|	|	|	|	0.03
107.000	0.00	0.05	0.045	O	|	|	|	|	0.03
107.083	0.00	0.05	0.044	O	|	|	|	|	0.03
107.167	0.00	0.05	0.044	O	|	|	|	|	0.03
107.250	0.00	0.05	0.044	O	|	|	|	|	0.03
107.333	0.00	0.05	0.043	O	|	|	|	|	0.03
107.417	0.00	0.05	0.043	O	|	|	|	|	0.03
107.500	0.00	0.04	0.043	O	|	|	|	|	0.03
107.583	0.00	0.04	0.042	O	|	|	|	|	0.03
107.667	0.00	0.04	0.042	O	|	|	|	|	0.03
107.750	0.00	0.04	0.042	O	|	|	|	|	0.03
107.833	0.00	0.04	0.042	O	|	|	|	|	0.03
107.917	0.00	0.04	0.041	O	|	|	|	|	0.03
108.000	0.00	0.04	0.041	O	|	|	|	|	0.03
108.083	0.00	0.04	0.041	O	|	|	|	|	0.03
108.167	0.00	0.04	0.040	O	|	|	|	|	0.03
108.250	0.00	0.04	0.040	O	|	|	|	|	0.03
108.333	0.00	0.04	0.040	O	|	|	|	|	0.03
108.417	0.00	0.04	0.039	O	|	|	|	|	0.03
108.500	0.00	0.04	0.039	O	|	|	|	|	0.03
108.583	0.00	0.04	0.039	O	|	|	|	|	0.03
108.667	0.00	0.04	0.039	O	|	|	|	|	0.03
108.750	0.00	0.04	0.038	O	|	|	|	|	0.03
108.833	0.00	0.04	0.038	O	|	|	|	|	0.03
108.917	0.00	0.04	0.038	O	|	|	|	|	0.02
109.000	0.00	0.04	0.038	O	|	|	|	|	0.02
109.083	0.00	0.04	0.037	O	|	|	|	|	0.02
109.167	0.00	0.04	0.037	O	|	|	|	|	0.02
109.250	0.00	0.04	0.037	O	|	|	|	|	0.02
109.333	0.00	0.04	0.036	O	|	|	|	|	0.02
109.417	0.00	0.04	0.036	O	|	|	|	|	0.02
109.500	0.00	0.04	0.036	O	|	|	|	|	0.02
109.583	0.00	0.04	0.036	O	|	|	|	|	0.02
109.667	0.00	0.04	0.035	O	|	|	|	|	0.02
109.750	0.00	0.04	0.035	O	|	|	|	|	0.02
109.833	0.00	0.04	0.035	O	|	|	|	|	0.02
109.917	0.00	0.04	0.035	O	|	|	|	|	0.02
110.000	0.00	0.04	0.034	O	|	|	|	|	0.02
110.083	0.00	0.04	0.034	O	|	|	|	|	0.02

110.167	0.00	0.04	0.034	O	|	|	|	|	0.02
110.250	0.00	0.04	0.034	O	|	|	|	|	0.02
110.333	0.00	0.04	0.033	O	|	|	|	|	0.02
110.417	0.00	0.03	0.033	O	|	|	|	|	0.02
110.500	0.00	0.03	0.033	O	|	|	|	|	0.02
110.583	0.00	0.03	0.033	O	|	|	|	|	0.02
110.667	0.00	0.03	0.032	O	|	|	|	|	0.02
110.750	0.00	0.03	0.032	O	|	|	|	|	0.02
110.833	0.00	0.03	0.032	O	|	|	|	|	0.02
110.917	0.00	0.03	0.032	O	|	|	|	|	0.02
111.000	0.00	0.03	0.032	O	|	|	|	|	0.02
111.083	0.00	0.03	0.031	O	|	|	|	|	0.02
111.167	0.00	0.03	0.031	O	|	|	|	|	0.02
111.250	0.00	0.03	0.031	O	|	|	|	|	0.02
111.333	0.00	0.03	0.031	O	|	|	|	|	0.02
111.417	0.00	0.03	0.030	O	|	|	|	|	0.02
111.500	0.00	0.03	0.030	O	|	|	|	|	0.02
111.583	0.00	0.03	0.030	O	|	|	|	|	0.02
111.667	0.00	0.03	0.030	O	|	|	|	|	0.02
111.750	0.00	0.03	0.030	O	|	|	|	|	0.02
111.833	0.00	0.03	0.029	O	|	|	|	|	0.02
111.917	0.00	0.03	0.029	O	|	|	|	|	0.02
112.000	0.00	0.03	0.029	O	|	|	|	|	0.02
112.083	0.00	0.03	0.029	O	|	|	|	|	0.02
112.167	0.00	0.03	0.028	O	|	|	|	|	0.02
112.250	0.00	0.03	0.028	O	|	|	|	|	0.02
112.333	0.00	0.03	0.028	O	|	|	|	|	0.02
112.417	0.00	0.03	0.028	O	|	|	|	|	0.02
112.500	0.00	0.03	0.028	O	|	|	|	|	0.02
112.583	0.00	0.03	0.027	O	|	|	|	|	0.02
112.667	0.00	0.03	0.027	O	|	|	|	|	0.02
112.750	0.00	0.03	0.027	O	|	|	|	|	0.02
112.833	0.00	0.03	0.027	O	|	|	|	|	0.02
112.917	0.00	0.03	0.027	O	|	|	|	|	0.02
113.000	0.00	0.03	0.027	O	|	|	|	|	0.02
113.083	0.00	0.03	0.026	O	|	|	|	|	0.02
113.167	0.00	0.03	0.026	O	|	|	|	|	0.02
113.250	0.00	0.03	0.026	O	|	|	|	|	0.02
113.333	0.00	0.03	0.026	O	|	|	|	|	0.02
113.417	0.00	0.03	0.026	O	|	|	|	|	0.02
113.500	0.00	0.03	0.025	O	|	|	|	|	0.02
113.583	0.00	0.03	0.025	O	|	|	|	|	0.02
113.667	0.00	0.03	0.025	O	|	|	|	|	0.02
113.750	0.00	0.03	0.025	O	|	|	|	|	0.02
113.833	0.00	0.03	0.025	O	|	|	|	|	0.02
113.917	0.00	0.03	0.024	O	|	|	|	|	0.02
114.000	0.00	0.03	0.024	O	|	|	|	|	0.02
114.083	0.00	0.03	0.024	O	|	|	|	|	0.02
114.167	0.00	0.03	0.024	O	|	|	|	|	0.02
114.250	0.00	0.02	0.024	O	|	|	|	|	0.02
114.333	0.00	0.02	0.024	O	|	|	|	|	0.02
114.417	0.00	0.02	0.023	O	|	|	|	|	0.02
114.500	0.00	0.02	0.023	O	|	|	|	|	0.02
114.583	0.00	0.02	0.023	O	|	|	|	|	0.02

114.667	0.00	0.02	0.023	O	|	|	|	|	0.02
114.750	0.00	0.02	0.023	O	|	|	|	|	0.01
114.833	0.00	0.02	0.023	O	|	|	|	|	0.01
114.917	0.00	0.02	0.022	O	|	|	|	|	0.01
115.000	0.00	0.02	0.022	O	|	|	|	|	0.01
115.083	0.00	0.02	0.022	O	|	|	|	|	0.01
115.167	0.00	0.02	0.022	O	|	|	|	|	0.01
115.250	0.00	0.02	0.022	O	|	|	|	|	0.01
115.333	0.00	0.02	0.022	O	|	|	|	|	0.01
115.417	0.00	0.02	0.021	O	|	|	|	|	0.01
115.500	0.00	0.02	0.021	O	|	|	|	|	0.01
115.583	0.00	0.02	0.021	O	|	|	|	|	0.01
115.667	0.00	0.02	0.021	O	|	|	|	|	0.01
115.750	0.00	0.02	0.021	O	|	|	|	|	0.01
115.833	0.00	0.02	0.021	O	|	|	|	|	0.01
115.917	0.00	0.02	0.021	O	|	|	|	|	0.01
116.000	0.00	0.02	0.020	O	|	|	|	|	0.01
116.083	0.00	0.02	0.020	O	|	|	|	|	0.01
116.167	0.00	0.02	0.020	O	|	|	|	|	0.01
116.250	0.00	0.02	0.020	O	|	|	|	|	0.01
116.333	0.00	0.02	0.020	O	|	|	|	|	0.01
116.417	0.00	0.02	0.020	O	|	|	|	|	0.01
116.500	0.00	0.02	0.020	O	|	|	|	|	0.01
116.583	0.00	0.02	0.019	O	|	|	|	|	0.01
116.667	0.00	0.02	0.019	O	|	|	|	|	0.01
116.750	0.00	0.02	0.019	O	|	|	|	|	0.01
116.833	0.00	0.02	0.019	O	|	|	|	|	0.01
116.917	0.00	0.02	0.019	O	|	|	|	|	0.01
117.000	0.00	0.02	0.019	O	|	|	|	|	0.01
117.083	0.00	0.02	0.019	O	|	|	|	|	0.01
117.167	0.00	0.02	0.018	O	|	|	|	|	0.01
117.250	0.00	0.02	0.018	O	|	|	|	|	0.01
117.333	0.00	0.02	0.018	O	|	|	|	|	0.01
117.417	0.00	0.02	0.018	O	|	|	|	|	0.01
117.500	0.00	0.02	0.018	O	|	|	|	|	0.01
117.583	0.00	0.02	0.018	O	|	|	|	|	0.01
117.667	0.00	0.02	0.018	O	|	|	|	|	0.01
117.750	0.00	0.02	0.018	O	|	|	|	|	0.01
117.833	0.00	0.02	0.017	O	|	|	|	|	0.01
117.917	0.00	0.02	0.017	O	|	|	|	|	0.01
118.000	0.00	0.02	0.017	O	|	|	|	|	0.01
118.083	0.00	0.02	0.017	O	|	|	|	|	0.01
118.167	0.00	0.02	0.017	O	|	|	|	|	0.01
118.250	0.00	0.02	0.017	O	|	|	|	|	0.01
118.333	0.00	0.02	0.017	O	|	|	|	|	0.01
118.417	0.00	0.02	0.017	O	|	|	|	|	0.01
118.500	0.00	0.02	0.016	O	|	|	|	|	0.01
118.583	0.00	0.02	0.016	O	|	|	|	|	0.01
118.667	0.00	0.02	0.016	O	|	|	|	|	0.01
118.750	0.00	0.02	0.016	O	|	|	|	|	0.01
118.833	0.00	0.02	0.016	O	|	|	|	|	0.01
118.917	0.00	0.02	0.016	O	|	|	|	|	0.01
119.000	0.00	0.02	0.016	O	|	|	|	|	0.01
119.083	0.00	0.02	0.016	O	|	|	|	|	0.01

119.167	0.00	0.02	0.016	O	|	|	|	|	0.01
119.250	0.00	0.02	0.015	O	|	|	|	|	0.01
119.333	0.00	0.02	0.015	O	|	|	|	|	0.01
119.417	0.00	0.02	0.015	O	|	|	|	|	0.01
119.500	0.00	0.02	0.015	O	|	|	|	|	0.01
119.583	0.00	0.02	0.015	O	|	|	|	|	0.01
119.667	0.00	0.02	0.015	O	|	|	|	|	0.01
119.750	0.00	0.02	0.015	O	|	|	|	|	0.01
119.833	0.00	0.02	0.015	O	|	|	|	|	0.01
119.917	0.00	0.02	0.015	O	|	|	|	|	0.01
120.000	0.00	0.02	0.014	O	|	|	|	|	0.01
120.083	0.00	0.02	0.014	O	|	|	|	|	0.01
120.167	0.00	0.01	0.014	O	|	|	|	|	0.01
120.250	0.00	0.01	0.014	O	|	|	|	|	0.01
120.333	0.00	0.01	0.014	O	|	|	|	|	0.01
120.417	0.00	0.01	0.014	O	|	|	|	|	0.01
120.500	0.00	0.01	0.014	O	|	|	|	|	0.01
120.583	0.00	0.01	0.014	O	|	|	|	|	0.01
120.667	0.00	0.01	0.014	O	|	|	|	|	0.01
120.750	0.00	0.01	0.014	O	|	|	|	|	0.01
120.833	0.00	0.01	0.013	O	|	|	|	|	0.01
120.917	0.00	0.01	0.013	O	|	|	|	|	0.01
121.000	0.00	0.01	0.013	O	|	|	|	|	0.01
121.083	0.00	0.01	0.013	O	|	|	|	|	0.01
121.167	0.00	0.01	0.013	O	|	|	|	|	0.01
121.250	0.00	0.01	0.013	O	|	|	|	|	0.01
121.333	0.00	0.01	0.013	O	|	|	|	|	0.01
121.417	0.00	0.01	0.013	O	|	|	|	|	0.01
121.500	0.00	0.01	0.013	O	|	|	|	|	0.01
121.583	0.00	0.01	0.013	O	|	|	|	|	0.01
121.667	0.00	0.01	0.012	O	|	|	|	|	0.01
121.750	0.00	0.01	0.012	O	|	|	|	|	0.01
121.833	0.00	0.01	0.012	O	|	|	|	|	0.01
121.917	0.00	0.01	0.012	O	|	|	|	|	0.01
122.000	0.00	0.01	0.012	O	|	|	|	|	0.01
122.083	0.00	0.01	0.012	O	|	|	|	|	0.01
122.167	0.00	0.01	0.012	O	|	|	|	|	0.01
122.250	0.00	0.01	0.012	O	|	|	|	|	0.01
122.333	0.00	0.01	0.012	O	|	|	|	|	0.01
122.417	0.00	0.01	0.012	O	|	|	|	|	0.01
122.500	0.00	0.01	0.012	O	|	|	|	|	0.01
122.583	0.00	0.01	0.012	O	|	|	|	|	0.01
122.667	0.00	0.01	0.011	O	|	|	|	|	0.01
122.750	0.00	0.01	0.011	O	|	|	|	|	0.01
122.833	0.00	0.01	0.011	O	|	|	|	|	0.01
122.917	0.00	0.01	0.011	O	|	|	|	|	0.01
123.000	0.00	0.01	0.011	O	|	|	|	|	0.01
123.083	0.00	0.01	0.011	O	|	|	|	|	0.01
123.167	0.00	0.01	0.011	O	|	|	|	|	0.01
123.250	0.00	0.01	0.011	O	|	|	|	|	0.01
123.333	0.00	0.01	0.011	O	|	|	|	|	0.01
123.417	0.00	0.01	0.011	O	|	|	|	|	0.01
123.500	0.00	0.01	0.011	O	|	|	|	|	0.01
123.583	0.00	0.01	0.011	O	|	|	|	|	0.01

123.667	0.00	0.01	0.011	O	|	|	|	|	0.01
123.750	0.00	0.01	0.010	O	|	|	|	|	0.01
123.833	0.00	0.01	0.010	O	|	|	|	|	0.01
123.917	0.00	0.01	0.010	O	|	|	|	|	0.01
124.000	0.00	0.01	0.010	O	|	|	|	|	0.01
124.083	0.00	0.01	0.010	O	|	|	|	|	0.01
124.167	0.00	0.01	0.010	O	|	|	|	|	0.01
124.250	0.00	0.01	0.010	O	|	|	|	|	0.01
124.333	0.00	0.01	0.010	O	|	|	|	|	0.01
124.417	0.00	0.01	0.010	O	|	|	|	|	0.01
124.500	0.00	0.01	0.010	O	|	|	|	|	0.01
124.583	0.00	0.01	0.010	O	|	|	|	|	0.01
124.667	0.00	0.01	0.010	O	|	|	|	|	0.01
124.750	0.00	0.01	0.010	O	|	|	|	|	0.01
124.833	0.00	0.01	0.009	O	|	|	|	|	0.01
124.917	0.00	0.01	0.009	O	|	|	|	|	0.01
125.000	0.00	0.01	0.009	O	|	|	|	|	0.01
125.083	0.00	0.01	0.009	O	|	|	|	|	0.01
125.167	0.00	0.01	0.009	O	|	|	|	|	0.01
125.250	0.00	0.01	0.009	O	|	|	|	|	0.01
125.333	0.00	0.01	0.009	O	|	|	|	|	0.01
125.417	0.00	0.01	0.009	O	|	|	|	|	0.01
125.500	0.00	0.01	0.009	O	|	|	|	|	0.01
125.583	0.00	0.01	0.009	O	|	|	|	|	0.01
125.667	0.00	0.01	0.009	O	|	|	|	|	0.01
125.750	0.00	0.01	0.009	O	|	|	|	|	0.01
125.833	0.00	0.01	0.009	O	|	|	|	|	0.01
125.917	0.00	0.01	0.009	O	|	|	|	|	0.01
126.000	0.00	0.01	0.009	O	|	|	|	|	0.01
126.083	0.00	0.01	0.009	O	|	|	|	|	0.01
126.167	0.00	0.01	0.008	O	|	|	|	|	0.01
126.250	0.00	0.01	0.008	O	|	|	|	|	0.01
126.333	0.00	0.01	0.008	O	|	|	|	|	0.01
126.417	0.00	0.01	0.008	O	|	|	|	|	0.01
126.500	0.00	0.01	0.008	O	|	|	|	|	0.01
126.583	0.00	0.01	0.008	O	|	|	|	|	0.01
126.667	0.00	0.01	0.008	O	|	|	|	|	0.01
126.750	0.00	0.01	0.008	O	|	|	|	|	0.01
126.833	0.00	0.01	0.008	O	|	|	|	|	0.01
126.917	0.00	0.01	0.008	O	|	|	|	|	0.01
127.000	0.00	0.01	0.008	O	|	|	|	|	0.01
127.083	0.00	0.01	0.008	O	|	|	|	|	0.01
127.167	0.00	0.01	0.008	O	|	|	|	|	0.01
127.250	0.00	0.01	0.008	O	|	|	|	|	0.01
127.333	0.00	0.01	0.008	O	|	|	|	|	0.01
127.417	0.00	0.01	0.008	O	|	|	|	|	0.00
127.500	0.00	0.01	0.008	O	|	|	|	|	0.00
127.583	0.00	0.01	0.007	O	|	|	|	|	0.00
127.667	0.00	0.01	0.007	O	|	|	|	|	0.00
127.750	0.00	0.01	0.007	O	|	|	|	|	0.00
127.833	0.00	0.01	0.007	O	|	|	|	|	0.00
127.917	0.00	0.01	0.007	O	|	|	|	|	0.00
128.000	0.00	0.01	0.007	O	|	|	|	|	0.00
128.083	0.00	0.01	0.007	O	|	|	|	|	0.00

128.167	0.00	0.01	0.007	O	|	|	|	0.00
128.250	0.00	0.01	0.007	O	|	|	|	0.00
128.333	0.00	0.01	0.007	O	|	|	|	0.00
128.417	0.00	0.01	0.007	O	|	|	|	0.00
128.500	0.00	0.01	0.007	O	|	|	|	0.00
128.583	0.00	0.01	0.007	O	|	|	|	0.00
128.667	0.00	0.01	0.007	O	|	|	|	0.00
128.750	0.00	0.01	0.007	O	|	|	|	0.00
128.833	0.00	0.01	0.007	O	|	|	|	0.00
128.917	0.00	0.01	0.007	O	|	|	|	0.00
129.000	0.00	0.01	0.007	O	|	|	|	0.00
129.083	0.00	0.01	0.007	O	|	|	|	0.00
129.167	0.00	0.01	0.007	O	|	|	|	0.00
129.250	0.00	0.01	0.006	O	|	|	|	0.00
129.333	0.00	0.01	0.006	O	|	|	|	0.00
129.417	0.00	0.01	0.006	O	|	|	|	0.00
129.500	0.00	0.01	0.006	O	|	|	|	0.00
129.583	0.00	0.01	0.006	O	|	|	|	0.00
129.667	0.00	0.01	0.006	O	|	|	|	0.00
129.750	0.00	0.01	0.006	O	|	|	|	0.00
129.833	0.00	0.01	0.006	O	|	|	|	0.00
129.917	0.00	0.01	0.006	O	|	|	|	0.00
130.000	0.00	0.01	0.006	O	|	|	|	0.00
130.083	0.00	0.01	0.006	O	|	|	|	0.00
130.167	0.00	0.01	0.006	O	|	|	|	0.00
130.250	0.00	0.01	0.006	O	|	|	|	0.00
130.333	0.00	0.01	0.006	O	|	|	|	0.00
130.417	0.00	0.01	0.006	O	|	|	|	0.00
130.500	0.00	0.01	0.006	O	|	|	|	0.00
130.583	0.00	0.01	0.006	O	|	|	|	0.00
130.667	0.00	0.01	0.006	O	|	|	|	0.00
130.750	0.00	0.01	0.006	O	|	|	|	0.00
130.833	0.00	0.01	0.006	O	|	|	|	0.00
130.917	0.00	0.01	0.006	O	|	|	|	0.00
131.000	0.00	0.01	0.006	O	|	|	|	0.00
131.083	0.00	0.01	0.006	O	|	|	|	0.00
131.167	0.00	0.01	0.005	O	|	|	|	0.00
131.250	0.00	0.01	0.005	O	|	|	|	0.00
131.333	0.00	0.01	0.005	O	|	|	|	0.00
131.417	0.00	0.01	0.005	O	|	|	|	0.00
131.500	0.00	0.01	0.005	O	|	|	|	0.00
131.583	0.00	0.01	0.005	O	|	|	|	0.00
131.667	0.00	0.01	0.005	O	|	|	|	0.00
131.750	0.00	0.01	0.005	O	|	|	|	0.00
131.833	0.00	0.01	0.005	O	|	|	|	0.00
131.917	0.00	0.01	0.005	O	|	|	|	0.00
132.000	0.00	0.01	0.005	O	|	|	|	0.00
132.083	0.00	0.01	0.005	O	|	|	|	0.00
132.167	0.00	0.01	0.005	O	|	|	|	0.00
132.250	0.00	0.01	0.005	O	|	|	|	0.00
132.333	0.00	0.01	0.005	O	|	|	|	0.00
132.417	0.00	0.01	0.005	O	|	|	|	0.00
132.500	0.00	0.01	0.005	O	|	|	|	0.00
132.583	0.00	0.01	0.005	O	|	|	|	0.00

132.667	0.00	0.01	0.005	O	|	|	|	|	0.00
132.750	0.00	0.01	0.005	O	|	|	|	|	0.00
132.833	0.00	0.00	0.005	O	|	|	|	|	0.00
132.917	0.00	0.00	0.005	O	|	|	|	|	0.00
133.000	0.00	0.00	0.005	O	|	|	|	|	0.00
133.083	0.00	0.00	0.005	O	|	|	|	|	0.00
133.167	0.00	0.00	0.005	O	|	|	|	|	0.00
133.250	0.00	0.00	0.005	O	|	|	|	|	0.00
133.333	0.00	0.00	0.005	O	|	|	|	|	0.00
133.417	0.00	0.00	0.005	O	|	|	|	|	0.00
133.500	0.00	0.00	0.004	O	|	|	|	|	0.00
133.583	0.00	0.00	0.004	O	|	|	|	|	0.00
133.667	0.00	0.00	0.004	O	|	|	|	|	0.00
133.750	0.00	0.00	0.004	O	|	|	|	|	0.00
133.833	0.00	0.00	0.004	O	|	|	|	|	0.00
133.917	0.00	0.00	0.004	O	|	|	|	|	0.00
134.000	0.00	0.00	0.004	O	|	|	|	|	0.00
134.083	0.00	0.00	0.004	O	|	|	|	|	0.00
134.167	0.00	0.00	0.004	O	|	|	|	|	0.00
134.250	0.00	0.00	0.004	O	|	|	|	|	0.00
134.333	0.00	0.00	0.004	O	|	|	|	|	0.00
134.417	0.00	0.00	0.004	O	|	|	|	|	0.00
134.500	0.00	0.00	0.004	O	|	|	|	|	0.00
134.583	0.00	0.00	0.004	O	|	|	|	|	0.00
134.667	0.00	0.00	0.004	O	|	|	|	|	0.00
134.750	0.00	0.00	0.004	O	|	|	|	|	0.00
134.833	0.00	0.00	0.004	O	|	|	|	|	0.00
134.917	0.00	0.00	0.004	O	|	|	|	|	0.00
135.000	0.00	0.00	0.004	O	|	|	|	|	0.00
135.083	0.00	0.00	0.004	O	|	|	|	|	0.00
135.167	0.00	0.00	0.004	O	|	|	|	|	0.00
135.250	0.00	0.00	0.004	O	|	|	|	|	0.00
135.333	0.00	0.00	0.004	O	|	|	|	|	0.00
135.417	0.00	0.00	0.004	O	|	|	|	|	0.00
135.500	0.00	0.00	0.004	O	|	|	|	|	0.00
135.583	0.00	0.00	0.004	O	|	|	|	|	0.00
135.667	0.00	0.00	0.004	O	|	|	|	|	0.00
135.750	0.00	0.00	0.004	O	|	|	|	|	0.00
135.833	0.00	0.00	0.004	O	|	|	|	|	0.00
135.917	0.00	0.00	0.004	O	|	|	|	|	0.00
136.000	0.00	0.00	0.004	O	|	|	|	|	0.00
136.083	0.00	0.00	0.004	O	|	|	|	|	0.00
136.167	0.00	0.00	0.004	O	|	|	|	|	0.00
136.250	0.00	0.00	0.004	O	|	|	|	|	0.00
136.333	0.00	0.00	0.004	O	|	|	|	|	0.00
136.417	0.00	0.00	0.003	O	|	|	|	|	0.00
136.500	0.00	0.00	0.003	O	|	|	|	|	0.00
136.583	0.00	0.00	0.003	O	|	|	|	|	0.00
136.667	0.00	0.00	0.003	O	|	|	|	|	0.00
136.750	0.00	0.00	0.003	O	|	|	|	|	0.00
136.833	0.00	0.00	0.003	O	|	|	|	|	0.00
136.917	0.00	0.00	0.003	O	|	|	|	|	0.00
137.000	0.00	0.00	0.003	O	|	|	|	|	0.00
137.083	0.00	0.00	0.003	O	|	|	|	|	0.00

137.167	0.00	0.00	0.003	O	|	|	|	|	0.00
137.250	0.00	0.00	0.003	O	|	|	|	|	0.00
137.333	0.00	0.00	0.003	O	|	|	|	|	0.00
137.417	0.00	0.00	0.003	O	|	|	|	|	0.00
137.500	0.00	0.00	0.003	O	|	|	|	|	0.00
137.583	0.00	0.00	0.003	O	|	|	|	|	0.00
137.667	0.00	0.00	0.003	O	|	|	|	|	0.00
137.750	0.00	0.00	0.003	O	|	|	|	|	0.00
137.833	0.00	0.00	0.003	O	|	|	|	|	0.00
137.917	0.00	0.00	0.003	O	|	|	|	|	0.00
138.000	0.00	0.00	0.003	O	|	|	|	|	0.00
138.083	0.00	0.00	0.003	O	|	|	|	|	0.00
138.167	0.00	0.00	0.003	O	|	|	|	|	0.00
138.250	0.00	0.00	0.003	O	|	|	|	|	0.00
138.333	0.00	0.00	0.003	O	|	|	|	|	0.00
138.417	0.00	0.00	0.003	O	|	|	|	|	0.00
138.500	0.00	0.00	0.003	O	|	|	|	|	0.00
138.583	0.00	0.00	0.003	O	|	|	|	|	0.00
138.667	0.00	0.00	0.003	O	|	|	|	|	0.00
138.750	0.00	0.00	0.003	O	|	|	|	|	0.00
138.833	0.00	0.00	0.003	O	|	|	|	|	0.00
138.917	0.00	0.00	0.003	O	|	|	|	|	0.00
139.000	0.00	0.00	0.003	O	|	|	|	|	0.00
139.083	0.00	0.00	0.003	O	|	|	|	|	0.00
139.167	0.00	0.00	0.003	O	|	|	|	|	0.00
139.250	0.00	0.00	0.003	O	|	|	|	|	0.00
139.333	0.00	0.00	0.003	O	|	|	|	|	0.00
139.417	0.00	0.00	0.003	O	|	|	|	|	0.00
139.500	0.00	0.00	0.003	O	|	|	|	|	0.00
139.583	0.00	0.00	0.003	O	|	|	|	|	0.00
139.667	0.00	0.00	0.003	O	|	|	|	|	0.00
139.750	0.00	0.00	0.003	O	|	|	|	|	0.00
139.833	0.00	0.00	0.003	O	|	|	|	|	0.00
139.917	0.00	0.00	0.003	O	|	|	|	|	0.00
140.000	0.00	0.00	0.003	O	|	|	|	|	0.00
140.083	0.00	0.00	0.003	O	|	|	|	|	0.00
140.167	0.00	0.00	0.003	O	|	|	|	|	0.00
140.250	0.00	0.00	0.002	O	|	|	|	|	0.00
140.333	0.00	0.00	0.002	O	|	|	|	|	0.00
140.417	0.00	0.00	0.002	O	|	|	|	|	0.00
140.500	0.00	0.00	0.002	O	|	|	|	|	0.00
140.583	0.00	0.00	0.002	O	|	|	|	|	0.00
140.667	0.00	0.00	0.002	O	|	|	|	|	0.00
140.750	0.00	0.00	0.002	O	|	|	|	|	0.00
140.833	0.00	0.00	0.002	O	|	|	|	|	0.00
140.917	0.00	0.00	0.002	O	|	|	|	|	0.00
141.000	0.00	0.00	0.002	O	|	|	|	|	0.00
141.083	0.00	0.00	0.002	O	|	|	|	|	0.00
141.167	0.00	0.00	0.002	O	|	|	|	|	0.00
141.250	0.00	0.00	0.002	O	|	|	|	|	0.00
141.333	0.00	0.00	0.002	O	|	|	|	|	0.00
141.417	0.00	0.00	0.002	O	|	|	|	|	0.00
141.500	0.00	0.00	0.002	O	|	|	|	|	0.00
141.583	0.00	0.00	0.002	O	|	|	|	|	0.00

141.667	0.00	0.00	0.002	O	|	|	|	0.00
141.750	0.00	0.00	0.002	O	|	|	|	0.00
141.833	0.00	0.00	0.002	O	|	|	|	0.00
141.917	0.00	0.00	0.002	O	|	|	|	0.00
142.000	0.00	0.00	0.002	O	|	|	|	0.00
142.083	0.00	0.00	0.002	O	|	|	|	0.00
142.167	0.00	0.00	0.002	O	|	|	|	0.00
142.250	0.00	0.00	0.002	O	|	|	|	0.00
142.333	0.00	0.00	0.002	O	|	|	|	0.00
142.417	0.00	0.00	0.002	O	|	|	|	0.00
142.500	0.00	0.00	0.002	O	|	|	|	0.00
142.583	0.00	0.00	0.002	O	|	|	|	0.00
142.667	0.00	0.00	0.002	O	|	|	|	0.00
142.750	0.00	0.00	0.002	O	|	|	|	0.00
142.833	0.00	0.00	0.002	O	|	|	|	0.00
142.917	0.00	0.00	0.002	O	|	|	|	0.00
143.000	0.00	0.00	0.002	O	|	|	|	0.00
143.083	0.00	0.00	0.002	O	|	|	|	0.00
143.167	0.00	0.00	0.002	O	|	|	|	0.00
143.250	0.00	0.00	0.002	O	|	|	|	0.00
143.333	0.00	0.00	0.002	O	|	|	|	0.00
143.417	0.00	0.00	0.002	O	|	|	|	0.00
143.500	0.00	0.00	0.002	O	|	|	|	0.00
143.583	0.00	0.00	0.002	O	|	|	|	0.00
143.667	0.00	0.00	0.002	O	|	|	|	0.00
143.750	0.00	0.00	0.002	O	|	|	|	0.00
143.833	0.00	0.00	0.002	O	|	|	|	0.00
143.917	0.00	0.00	0.002	O	|	|	|	0.00
144.000	0.00	0.00	0.002	O	|	|	|	0.00
144.083	0.00	0.00	0.002	O	|	|	|	0.00
144.167	0.00	0.00	0.002	O	|	|	|	0.00
144.250	0.00	0.00	0.002	O	|	|	|	0.00
144.333	0.00	0.00	0.002	O	|	|	|	0.00
144.417	0.00	0.00	0.002	O	|	|	|	0.00
144.500	0.00	0.00	0.002	O	|	|	|	0.00
144.583	0.00	0.00	0.002	O	|	|	|	0.00
144.667	0.00	0.00	0.002	O	|	|	|	0.00
144.750	0.00	0.00	0.002	O	|	|	|	0.00
144.833	0.00	0.00	0.002	O	|	|	|	0.00
144.917	0.00	0.00	0.002	O	|	|	|	0.00
145.000	0.00	0.00	0.002	O	|	|	|	0.00
145.083	0.00	0.00	0.002	O	|	|	|	0.00
145.167	0.00	0.00	0.002	O	|	|	|	0.00
145.250	0.00	0.00	0.002	O	|	|	|	0.00
145.333	0.00	0.00	0.002	O	|	|	|	0.00
145.417	0.00	0.00	0.002	O	|	|	|	0.00
145.500	0.00	0.00	0.002	O	|	|	|	0.00
145.583	0.00	0.00	0.002	O	|	|	|	0.00
145.667	0.00	0.00	0.002	O	|	|	|	0.00
145.750	0.00	0.00	0.002	O	|	|	|	0.00
145.833	0.00	0.00	0.002	O	|	|	|	0.00
145.917	0.00	0.00	0.002	O	|	|	|	0.00
146.000	0.00	0.00	0.002	O	|	|	|	0.00

```
        Remaining water in basin =    0.00 (Ac.Ft)


        ***************************HYDROGRAPH
DATA***************************
                        Number of intervals =  1752
                        Time interval =    5.0 (Min.)
                        Maximum/Peak flow rate =        0.798 (CFS)
                        Total volume =       5.311 (Ac.Ft)
                Status of hydrographs being held in storage
                           Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
                Peak (CFS)      0.000     0.000     0.000     0.000     0.000
                Vol (Ac.Ft)      0.000     0.000     0.000     0.000     0.000

****************************************************************************

        ----------------------------------------------------------------------
```

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 05/02/23

BEAUMONT POINTE
DMA 06
BMP BASIN 3
HYDROMODIFICATION

Program License Serial Number 6094

********** HYDROGRAPH INFORMATION **********

From study/file name: Area06242.rte
**********HYDROGRAPH DATA**********
Number of intervals = 291
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 8.180 (CFS)
Total volume = 4.213 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

++++++++++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

Program computation of outflow v. depth

CALCULATED OUTFLOW DATA AT DEPTH = 0.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.33(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.33(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter

Depth above pipe = 0.50(Ft.) Capacity = 0.40(CFS)

Total outflow at this depth = 0.40(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.33(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.33(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 1.00(Ft.) Capacity = 0.40(CFS)

Total outflow at this depth = 0.40(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.33(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.33(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 1.50(Ft.) Capacity = 0.40(CFS)

Total outflow at this depth = 0.40(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 2.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.33(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.33(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 2.00(Ft.) Capacity = 0.40(CFS)

Total outflow at this depth = 0.40(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 2.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.33(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.33(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 2.50(Ft.) Capacity = 0.40(CFS)

Total outflow at this depth = 0.40(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 3.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.33(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.33(Ft.) is greater than diameter of pipe,

```
flow capacity is being calculated using depth = diameter
Depth above pipe =   3.00(Ft.)    Capacity =   0.40(CFS)

Total outflow at this depth =      0.40(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.33(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.33(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   3.50(Ft.)    Capacity =   0.40(CFS)

Total outflow at this depth =      0.40(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.00(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.33(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.33(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   4.00(Ft.)    Capacity =   0.40(CFS)

Total outflow at this depth =      0.40(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.33(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.33(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   4.50(Ft.)    Capacity =   0.40(CFS)

Total outflow at this depth =      0.40(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    5.00(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.33(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.33(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   5.00(Ft.)    Capacity =   0.40(CFS)

Total outflow at this depth =      0.40(CFS)

------------------------------------------------------------------
Total number of inflow hydrograph intervals = 291
Hydrograph time unit =  5.000 (Min.)
Initial depth in storage basin =   0.00(Ft.)
------------------------------------------------------------------
```

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.720	0.402	0.719	0.721
1.000	1.500	0.402	1.499	1.501
1.500	2.320	0.402	2.319	2.321
2.000	3.200	0.402	3.199	3.201
2.500	4.130	0.402	4.129	4.131
3.000	5.110	0.402	5.109	5.111
3.500	6.140	0.402	6.139	6.141
4.000	7.230	0.402	7.229	7.231
4.500	8.370	0.402	8.369	8.371
5.000	9.560	0.402	9.559	9.561

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.0 4.09 6.13 8.18	Depth (Ft.)
0.083	0.15	0.00	0.001	O	0.00
0.167	0.36	0.00	0.002	OI	0.00
0.250	0.39	0.00	0.005	OI	0.00
0.333	0.47	0.00	0.008	OI	0.01
0.417	0.57	0.01	0.011	O I	0.01
0.500	0.59	0.01	0.015	O I	0.01
0.583	0.59	0.01	0.019	O I	0.01
0.667	0.59	0.01	0.023	O I	0.02
0.750	0.59	0.02	0.027	O I	0.02
0.833	0.67	0.02	0.032	O I	0.02
0.917	0.77	0.02	0.036	O I	0.03
1.000	0.79	0.02	0.042	O I	0.03
1.083	0.71	0.03	0.047	O I	0.03
1.167	0.61	0.03	0.051	O I	0.04
1.250	0.60	0.03	0.055	O I	0.04
1.333	0.59	0.03	0.059	O I	0.04
1.417	0.59	0.03	0.063	O I	0.04
1.500	0.59	0.04	0.066	O I	0.05
1.583	0.59	0.04	0.070	O I	0.05
1.667	0.59	0.04	0.074	O I	0.05
1.750	0.59	0.04	0.078	O I	0.05
1.833	0.67	0.05	0.082	O I	0.06
1.917	0.77	0.05	0.086	O I	0.06
2.000	0.79	0.05	0.092	O I	0.06
2.083	0.79	0.05	0.097	O I	0.07

2.167	0.79	0.06	0.102	O	I	|	|	|	|	0.07
2.250	0.79	0.06	0.107	O	I	|	|	|	|	0.07
2.333	0.79	0.06	0.112	O	I	|	|	|	|	0.08
2.417	0.79	0.07	0.117	O	I	|	|	|	|	0.08
2.500	0.79	0.07	0.122	O	I	|	|	|	|	0.08
2.583	0.87	0.07	0.127	O	I	|	|	|	|	0.09
2.667	0.97	0.07	0.133	O	I	|	|	|	|	0.09
2.750	0.98	0.08	0.139	O	I	|	|	|	|	0.10
2.833	0.99	0.08	0.145	O	I	|	|	|	|	0.10
2.917	0.99	0.08	0.151	O	I	|	|	|	|	0.11
3.000	0.99	0.09	0.158	O	I	|	|	|	|	0.11
3.083	0.99	0.09	0.164	O	I	|	|	|	|	0.11
3.167	0.99	0.09	0.170	O	I	|	|	|	|	0.12
3.250	0.99	0.10	0.176	O	I	|	|	|	|	0.12
3.333	0.99	0.10	0.182	O	I	|	|	|	|	0.13
3.417	0.99	0.11	0.188	O	I	|	|	|	|	0.13
3.500	0.99	0.11	0.194	O	I	|	|	|	|	0.13
3.583	0.99	0.11	0.200	O	I	|	|	|	|	0.14
3.667	0.99	0.12	0.206	O	I	|	|	|	|	0.14
3.750	0.99	0.12	0.212	O	I	|	|	|	|	0.15
3.833	1.06	0.12	0.219	O	I	|	|	|	|	0.15
3.917	1.17	0.13	0.225	O	I	|	|	|	|	0.16
4.000	1.18	0.13	0.233	O	I	|	|	|	|	0.16
4.083	1.18	0.13	0.240	O	I	|	|	|	|	0.17
4.167	1.18	0.14	0.247	O	I	|	|	|	|	0.17
4.250	1.18	0.14	0.254	O	I	|	|	|	|	0.18
4.333	1.26	0.15	0.262	O	I	|	|	|	|	0.18
4.417	1.36	0.15	0.270	O	I	|	|	|	|	0.19
4.500	1.38	0.16	0.278	O	I	|	|	|	|	0.19
4.583	1.38	0.16	0.287	O	I	|	|	|	|	0.20
4.667	1.38	0.16	0.295	O	I	|	|	|	|	0.20
4.750	1.38	0.17	0.303	O	I	|	|	|	|	0.21
4.833	1.46	0.17	0.312	O	I	|	|	|	|	0.22
4.917	1.56	0.18	0.321	O	I	|	|	|	|	0.22
5.000	1.58	0.18	0.331	O	I	|	|	|	|	0.23
5.083	1.43	0.19	0.340	O	I	|	|	|	|	0.24
5.167	1.22	0.19	0.348	O	I	|	|	|	|	0.24
5.250	1.19	0.20	0.355	O	I	|	|	|	|	0.25
5.333	1.26	0.20	0.362	O	I	|	|	|	|	0.25
5.417	1.36	0.21	0.369	O	I	|	|	|	|	0.26
5.500	1.38	0.21	0.377	O	I	|	|	|	|	0.26
5.583	1.46	0.22	0.386	O	I	|	|	|	|	0.27
5.667	1.56	0.22	0.394	O	I	|	|	|	|	0.27
5.750	1.58	0.23	0.404	O	I	|	|	|	|	0.28
5.833	1.58	0.23	0.413	O	I	|	|	|	|	0.29
5.917	1.58	0.24	0.422	O	I	|	|	|	|	0.29
6.000	1.58	0.24	0.432	O	I	|	|	|	|	0.30
6.083	1.66	0.25	0.441	O	I	|	|	|	|	0.31
6.167	1.76	0.25	0.451	O	I	|	|	|	|	0.31
6.250	1.77	0.26	0.461	|O	I	|	|	|	|	0.32
6.333	1.78	0.26	0.472	|O	I	|	|	|	|	0.33
6.417	1.78	0.27	0.482	|O	I	|	|	|	|	0.33
6.500	1.78	0.28	0.493	|O	I	|	|	|	|	0.34
6.583	1.85	0.28	0.503	|O	I	|	|	|	|	0.35

6.667	1.96	0.29	0.514	O	I			0.36
6.750	1.97	0.29	0.526	O	I			0.37
6.833	1.97	0.30	0.537	O	I			0.37
6.917	1.97	0.31	0.549	O	I			0.38
7.000	1.97	0.31	0.560	O	I			0.39
7.083	1.97	0.32	0.572	O	I			0.40
7.167	1.97	0.33	0.583	O	I			0.41
7.250	1.97	0.33	0.595	O	I			0.41
7.333	2.05	0.34	0.606	O	I			0.42
7.417	2.15	0.35	0.618	O	I			0.43
7.500	2.17	0.35	0.631	O	I			0.44
7.583	2.25	0.36	0.644	O	I			0.45
7.667	2.35	0.37	0.657	O	I			0.46
7.750	2.37	0.37	0.671	O	I			0.47
7.833	2.45	0.38	0.685	O	I			0.48
7.917	2.55	0.39	0.699	O	I			0.49
8.000	2.56	0.40	0.714	O	I			0.50
8.083	2.72	0.40	0.729	O	I			0.51
8.167	2.92	0.40	0.746	O	I			0.52
8.250	2.96	0.40	0.764	O	I			0.53
8.333	2.96	0.40	0.781	O	I			0.54
8.417	2.96	0.40	0.799	O	I			0.55
8.500	2.96	0.40	0.816	O	I			0.56
8.583	3.04	0.40	0.834	O	I			0.57
8.667	3.14	0.40	0.853	O	I			0.59
8.750	3.16	0.40	0.872	O	I			0.60
8.833	3.24	0.40	0.891	O	I			0.61
8.917	3.34	0.40	0.911	O	I			0.62
9.000	3.35	0.40	0.931	O	I			0.64
9.083	3.51	0.40	0.952	O	I			0.65
9.167	3.71	0.40	0.974	O	I			0.66
9.250	3.75	0.40	0.997	O	I			0.68
9.333	3.83	0.40	1.020	O	I			0.69
9.417	3.93	0.40	1.044	O	I			0.71
9.500	3.95	0.40	1.069	O	I			0.72
9.583	4.03	0.40	1.093	O	I			0.74
9.667	4.13	0.40	1.119	O	I			0.76
9.750	4.14	0.40	1.144	O	I			0.77
9.833	4.22	0.40	1.170	O	I			0.79
9.917	4.33	0.40	1.197	O	I			0.81
10.000	4.34	0.40	1.224	O	I			0.82
10.083	3.81	0.40	1.249	O	I			0.84
10.167	3.10	0.40	1.270	O	I			0.85
10.250	2.98	0.40	1.289	O	I			0.86
10.333	2.96	0.40	1.306	O	I			0.88
10.417	2.96	0.40	1.324	O	I			0.89
10.500	2.96	0.40	1.342	O	I			0.90
10.583	3.35	0.40	1.361	O	I			0.91
10.667	3.85	0.40	1.383	O	I			0.92
10.750	3.93	0.40	1.407	O	I			0.94
10.833	3.95	0.40	1.431	O	I			0.96
10.917	3.95	0.40	1.455	O	I			0.97
11.000	3.95	0.40	1.480	O	I			0.99
11.083	3.87	0.40	1.504	O	I			1.00

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11.167    3.77    0.40      1.528  |O      |     I |       |       |     1.02
11.250    3.76    0.40      1.551  |O      |     I |       |       |     1.03
11.333    3.75    0.40      1.574  |O      |     I |       |       |     1.05
11.417    3.75    0.40      1.597  |O      |     I |       |       |     1.06
11.500    3.75    0.40      1.620  |O      |     I |       |       |     1.07
11.583    3.60    0.40      1.643  |O      |     I |       |       |     1.09
11.667    3.40    0.40      1.664  |O      |    I  |       |       |     1.10
11.750    3.36    0.40      1.684  |O      |    I  |       |       |     1.11
11.833    3.43    0.40      1.705  |O      |    I  |       |       |     1.12
11.917    3.54    0.40      1.726  |O      |    I  |       |       |     1.14
12.000    3.55    0.40      1.748  |O      |    I  |       |       |     1.15
12.083    4.09    0.40      1.771  |O      |       I       |       |     1.17
12.167    4.80    0.40      1.799  |O      |       | I     |       |     1.18
12.250    4.92    0.40      1.830  |O      |       |  I    |       |     1.20
12.333    5.02    0.40      1.861  |O      |       |  I    |       |     1.22
12.417    5.13    0.40      1.894  |O      |       |   I   |       |     1.24
12.500    5.16    0.40      1.926  |O      |       |   I   |       |     1.26
12.583    5.45    0.40      1.960  |O      |       |    I  |       |     1.28
12.667    5.83    0.40      1.996  |O      |       |     I |       |     1.30
12.750    5.91    0.40      2.034  |O      |       |      I|       |     1.33
12.833    6.07    0.40      2.072  |O      |       |      I|       |     1.35
12.917    6.27    0.40      2.112  |O      |       |       I       |     1.37
13.000    6.32    0.40      2.153  |O      |       |       I       |     1.40
13.083    7.02    0.40      2.196  |O      |       |       |  I    |     1.42
13.167    7.94    0.40      2.244  |O      |       |       |      I|     1.45
13.250    8.10    0.40      2.297  |O      |       |       |      I|     1.49
13.333    8.14    0.40      2.350  |O      |       |       |      I|     1.52
13.417    8.16    0.40      2.403  |O      |       |       |      I|     1.55
13.500    8.18    0.40      2.457  |O      |       |       |       I     1.58
13.583    6.78    0.40      2.506  |O      |       |       | I     |     1.61
13.667    4.89    0.40      2.543  |O      |       |  I    |       |     1.63
13.750    4.60    0.40      2.573  |O      |       |I      |       |     1.64
13.833    4.54    0.40      2.602  |O      |       |I      |       |     1.66
13.917    4.54    0.40      2.630  |O      |       |I      |       |     1.68
14.000    4.54    0.40      2.659  |O      |       |I      |       |     1.69
14.083    5.06    0.40      2.689  |O      |       |  I    |       |     1.71
14.167    5.76    0.40      2.723  |O      |       |     I |       |     1.73
14.250    5.89    0.40      2.761  |O      |       |      I|       |     1.75
14.333    5.79    0.40      2.798  |O      |       |     I |       |     1.77
14.417    5.63    0.40      2.835  |O      |       |     I |       |     1.79
14.500    5.62    0.40      2.871  |O      |       |    I  |       |     1.81
14.583    5.63    0.40      2.907  |O      |       |     I |       |     1.83
14.667    5.65    0.40      2.943  |O      |       |     I |       |     1.85
14.750    5.66    0.40      2.979  |O      |       |     I |       |     1.87
14.833    5.55    0.40      3.015  |O      |       |    I  |       |     1.89
14.917    5.38    0.40      3.050  |O      |       |    I  |       |     1.91
15.000    5.37    0.40      3.084  |O      |       |    I  |       |     1.93
15.083    5.25    0.40      3.118  |O      |       |   I   |       |     1.95
15.167    5.09    0.40      3.151  |O      |       |  I    |       |     1.97
15.250    5.08    0.40      3.183  |O      |       |  I    |       |     1.99
15.333    4.95    0.40      3.215  |O      |       |  I    |       |     2.01
15.417    4.79    0.40      3.245  |O      |       | I     |       |     2.02
15.500    4.78    0.40      3.275  |O      |       | I     |       |     2.04
15.583    4.38    0.40      3.304  |O      |       |I      |       |     2.06
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15.667	3.85	0.40	3.330	O	I			2.07
15.750	3.77	0.40	3.353	O	I			2.08
15.833	3.75	0.40	3.376	O	I			2.09
15.917	3.75	0.40	3.400	O	I			2.11
16.000	3.75	0.40	3.423	O	I			2.12
16.083	2.60	0.40	3.442	O	I			2.13
16.167	1.08	0.40	3.452	O I				2.14
16.250	0.84	0.40	3.455	O I				2.14
16.333	0.79	0.40	3.458	O I				2.14
16.417	0.79	0.40	3.461	O I				2.14
16.500	0.79	0.40	3.464	O I				2.14
16.583	0.71	0.40	3.466	OI				2.14
16.667	0.61	0.40	3.468	OI				2.14
16.750	0.60	0.40	3.469	OI				2.14
16.833	0.59	0.40	3.471	OI				2.15
16.917	0.59	0.40	3.472	OI				2.15
17.000	0.59	0.40	3.473	OI				2.15
17.083	0.75	0.40	3.475	OI				2.15
17.167	0.95	0.40	3.478	O I				2.15
17.250	0.98	0.40	3.482	O I				2.15
17.333	0.99	0.40	3.486	O I				2.15
17.417	0.99	0.40	3.490	O I				2.16
17.500	0.99	0.40	3.494	O I				2.16
17.583	0.99	0.40	3.498	O I				2.16
17.667	0.99	0.40	3.502	O I				2.16
17.750	0.99	0.40	3.506	O I				2.16
17.833	0.91	0.40	3.510	O I				2.17
17.917	0.81	0.40	3.513	O I				2.17
18.000	0.79	0.40	3.516	O I				2.17
18.083	0.79	0.40	3.518	O I				2.17
18.167	0.79	0.40	3.521	O I				2.17
18.250	0.79	0.40	3.524	O I				2.17
18.333	0.79	0.40	3.526	O I				2.18
18.417	0.79	0.40	3.529	O I				2.18
18.500	0.79	0.40	3.532	O I				2.18
18.583	0.71	0.40	3.534	OI				2.18
18.667	0.61	0.40	3.536	OI				2.18
18.750	0.60	0.40	3.537	OI				2.18
18.833	0.52	0.40	3.538	OI				2.18
18.917	0.41	0.40	3.539	O				2.18
19.000	0.40	0.40	3.539	O				2.18
19.083	0.47	0.40	3.539	O				2.18
19.167	0.57	0.40	3.540	OI				2.18
19.250	0.59	0.40	3.541	OI				2.18
19.333	0.67	0.40	3.543	OI				2.18
19.417	0.77	0.40	3.545	O I				2.19
19.500	0.79	0.40	3.548	O I				2.19
19.583	0.71	0.40	3.550	OI				2.19
19.667	0.61	0.40	3.552	OI				2.19
19.750	0.60	0.40	3.553	OI				2.19
19.833	0.52	0.40	3.554	OI				2.19
19.917	0.41	0.40	3.555	O				2.19
20.000	0.40	0.40	3.555	O				2.19
20.083	0.47	0.40	3.555	O				2.19

20.167	0.57	0.40	3.556	|OI	|	|	|	2.19
20.250	0.59	0.40	3.557	|OI	|	|	|	2.19
20.333	0.59	0.40	3.558	|OI	|	|	|	2.19
20.417	0.59	0.40	3.560	|OI	|	|	|	2.19
20.500	0.59	0.40	3.561	|OI	|	|	|	2.19
20.583	0.59	0.40	3.562	|OI	|	|	|	2.19
20.667	0.59	0.40	3.563	|OI	|	|	|	2.20
20.750	0.59	0.40	3.565	|OI	|	|	|	2.20
20.833	0.52	0.40	3.566	|OI	|	|	|	2.20
20.917	0.41	0.40	3.566	|O	|	|	|	2.20
21.000	0.40	0.40	3.566	|O	|	|	|	2.20
21.083	0.47	0.40	3.567	|O	|	|	|	2.20
21.167	0.57	0.40	3.567	|OI	|	|	|	2.20
21.250	0.59	0.40	3.569	|OI	|	|	|	2.20
21.333	0.52	0.40	3.570	|OI	|	|	|	2.20
21.417	0.41	0.40	3.570	|O	|	|	|	2.20
21.500	0.40	0.40	3.570	|O	|	|	|	2.20
21.583	0.47	0.40	3.570	|O	|	|	|	2.20
21.667	0.57	0.40	3.571	|OI	|	|	|	2.20
21.750	0.59	0.40	3.572	|OI	|	|	|	2.20
21.833	0.52	0.40	3.573	|OI	|	|	|	2.20
21.917	0.41	0.40	3.574	|O	|	|	|	2.20
22.000	0.40	0.40	3.574	|O	|	|	|	2.20
22.083	0.47	0.40	3.574	|O	|	|	|	2.20
22.167	0.57	0.40	3.575	|OI	|	|	|	2.20
22.250	0.59	0.40	3.576	|OI	|	|	|	2.20
22.333	0.52	0.40	3.577	|OI	|	|	|	2.20
22.417	0.41	0.40	3.578	|O	|	|	|	2.20
22.500	0.40	0.40	3.578	|O	|	|	|	2.20
22.583	0.39	0.40	3.578	|O	|	|	|	2.20
22.667	0.39	0.40	3.578	|O	|	|	|	2.20
22.750	0.39	0.40	3.578	|O	|	|	|	2.20
22.833	0.39	0.40	3.577	|O	|	|	|	2.20
22.917	0.39	0.40	3.577	|O	|	|	|	2.20
23.000	0.39	0.40	3.577	|O	|	|	|	2.20
23.083	0.39	0.40	3.577	|O	|	|	|	2.20
23.167	0.39	0.40	3.577	|O	|	|	|	2.20
23.250	0.39	0.40	3.577	|O	|	|	|	2.20
23.333	0.39	0.40	3.577	|O	|	|	|	2.20
23.417	0.39	0.40	3.577	|O	|	|	|	2.20
23.500	0.39	0.40	3.577	|O	|	|	|	2.20
23.583	0.39	0.40	3.577	|O	|	|	|	2.20
23.667	0.39	0.40	3.577	|O	|	|	|	2.20
23.750	0.39	0.40	3.577	|O	|	|	|	2.20
23.833	0.39	0.40	3.577	|O	|	|	|	2.20
23.917	0.39	0.40	3.577	|O	|	|	|	2.20
24.000	0.39	0.40	3.577	|O	|	|	|	2.20
24.083	0.24	0.40	3.576	IO	|	|	|	2.20
24.167	0.04	0.40	3.574	IO	|	|	|	2.20
24.250	0.01	0.40	3.572	IO	|	|	|	2.20
24.333	0.00	0.40	3.569	IO	|	|	|	2.20
24.417	0.00	0.40	3.566	IO	|	|	|	2.20
24.500	0.00	0.40	3.563	IO	|	|	|	2.20
24.583	0.00	0.40	3.561	IO	|	|	|	2.19

24.667	0.00	0.40	3.558	IO				2.19
24.750	0.00	0.40	3.555	IO				2.19
24.833	0.00	0.40	3.552	IO				2.19
24.917	0.00	0.40	3.550	IO				2.19
25.000	0.00	0.40	3.547	IO				2.19
25.083	0.00	0.40	3.544	IO				2.19
25.167	0.00	0.40	3.541	IO				2.18
25.250	0.00	0.40	3.539	IO				2.18
25.333	0.00	0.40	3.536	IO				2.18
25.417	0.00	0.40	3.533	IO				2.18
25.500	0.00	0.40	3.530	IO				2.18
25.583	0.00	0.40	3.527	IO				2.18
25.667	0.00	0.40	3.525	IO				2.17
25.750	0.00	0.40	3.522	IO				2.17
25.833	0.00	0.40	3.519	IO				2.17
25.917	0.00	0.40	3.516	IO				2.17
26.000	0.00	0.40	3.514	IO				2.17
26.083	0.00	0.40	3.511	IO				2.17
26.167	0.00	0.40	3.508	IO				2.17
26.250	0.00	0.40	3.505	IO				2.16
26.333	0.00	0.40	3.503	IO				2.16
26.417	0.00	0.40	3.500	IO				2.16
26.500	0.00	0.40	3.497	IO				2.16
26.583	0.00	0.40	3.494	IO				2.16
26.667	0.00	0.40	3.491	IO				2.16
26.750	0.00	0.40	3.489	IO				2.16
26.833	0.00	0.40	3.486	IO				2.15
26.917	0.00	0.40	3.483	IO				2.15
27.000	0.00	0.40	3.480	IO				2.15
27.083	0.00	0.40	3.478	IO				2.15
27.167	0.00	0.40	3.475	IO				2.15
27.250	0.00	0.40	3.472	IO				2.15
27.333	0.00	0.40	3.469	IO				2.14
27.417	0.00	0.40	3.467	IO				2.14
27.500	0.00	0.40	3.464	IO				2.14
27.583	0.00	0.40	3.461	IO				2.14
27.667	0.00	0.40	3.458	IO				2.14
27.750	0.00	0.40	3.455	IO				2.14
27.833	0.00	0.40	3.453	IO				2.14
27.917	0.00	0.40	3.450	IO				2.13
28.000	0.00	0.40	3.447	IO				2.13
28.083	0.00	0.40	3.444	IO				2.13
28.167	0.00	0.40	3.442	IO				2.13
28.250	0.00	0.40	3.439	IO				2.13
28.333	0.00	0.40	3.436	IO				2.13
28.417	0.00	0.40	3.433	IO				2.13
28.500	0.00	0.40	3.431	IO				2.12
28.583	0.00	0.40	3.428	IO				2.12
28.667	0.00	0.40	3.425	IO				2.12
28.750	0.00	0.40	3.422	IO				2.12
28.833	0.00	0.40	3.419	IO				2.12
28.917	0.00	0.40	3.417	IO				2.12
29.000	0.00	0.40	3.414	IO				2.12
29.083	0.00	0.40	3.411	IO				2.11

29.167	0.00	0.40	3.408	IO				2.11
29.250	0.00	0.40	3.406	IO				2.11
29.333	0.00	0.40	3.403	IO				2.11
29.417	0.00	0.40	3.400	IO				2.11
29.500	0.00	0.40	3.397	IO				2.11
29.583	0.00	0.40	3.395	IO				2.10
29.667	0.00	0.40	3.392	IO				2.10
29.750	0.00	0.40	3.389	IO				2.10
29.833	0.00	0.40	3.386	IO				2.10
29.917	0.00	0.40	3.384	IO				2.10
30.000	0.00	0.40	3.381	IO				2.10
30.083	0.00	0.40	3.378	IO				2.10
30.167	0.00	0.40	3.375	IO				2.09
30.250	0.00	0.40	3.372	IO				2.09
30.333	0.00	0.40	3.370	IO				2.09
30.417	0.00	0.40	3.367	IO				2.09
30.500	0.00	0.40	3.364	IO				2.09
30.583	0.00	0.40	3.361	IO				2.09
30.667	0.00	0.40	3.359	IO				2.09
30.750	0.00	0.40	3.356	IO				2.08
30.833	0.00	0.40	3.353	IO				2.08
30.917	0.00	0.40	3.350	IO				2.08
31.000	0.00	0.40	3.348	IO				2.08
31.083	0.00	0.40	3.345	IO				2.08
31.167	0.00	0.40	3.342	IO				2.08
31.250	0.00	0.40	3.339	IO				2.07
31.333	0.00	0.40	3.336	IO				2.07
31.417	0.00	0.40	3.334	IO				2.07
31.500	0.00	0.40	3.331	IO				2.07
31.583	0.00	0.40	3.328	IO				2.07
31.667	0.00	0.40	3.325	IO				2.07
31.750	0.00	0.40	3.323	IO				2.07
31.833	0.00	0.40	3.320	IO				2.06
31.917	0.00	0.40	3.317	IO				2.06
32.000	0.00	0.40	3.314	IO				2.06
32.083	0.00	0.40	3.312	IO				2.06
32.167	0.00	0.40	3.309	IO				2.06
32.250	0.00	0.40	3.306	IO				2.06
32.333	0.00	0.40	3.303	IO				2.06
32.417	0.00	0.40	3.300	IO				2.05
32.500	0.00	0.40	3.298	IO				2.05
32.583	0.00	0.40	3.295	IO				2.05
32.667	0.00	0.40	3.292	IO				2.05
32.750	0.00	0.40	3.289	IO				2.05
32.833	0.00	0.40	3.287	IO				2.05
32.917	0.00	0.40	3.284	IO				2.05
33.000	0.00	0.40	3.281	IO				2.04
33.083	0.00	0.40	3.278	IO				2.04
33.167	0.00	0.40	3.276	IO				2.04
33.250	0.00	0.40	3.273	IO				2.04
33.333	0.00	0.40	3.270	IO				2.04
33.417	0.00	0.40	3.267	IO				2.04
33.500	0.00	0.40	3.264	IO				2.03
33.583	0.00	0.40	3.262	IO				2.03

33.667	0.00	0.40	3.259	IO				2.03
33.750	0.00	0.40	3.256	IO				2.03
33.833	0.00	0.40	3.253	IO				2.03
33.917	0.00	0.40	3.251	IO				2.03
34.000	0.00	0.40	3.248	IO				2.03
34.083	0.00	0.40	3.245	IO				2.02
34.167	0.00	0.40	3.242	IO				2.02
34.250	0.00	0.40	3.240	IO				2.02
34.333	0.00	0.40	3.237	IO				2.02
34.417	0.00	0.40	3.234	IO				2.02
34.500	0.00	0.40	3.231	IO				2.02
34.583	0.00	0.40	3.228	IO				2.02
34.667	0.00	0.40	3.226	IO				2.01
34.750	0.00	0.40	3.223	IO				2.01
34.833	0.00	0.40	3.220	IO				2.01
34.917	0.00	0.40	3.217	IO				2.01
35.000	0.00	0.40	3.215	IO				2.01
35.083	0.00	0.40	3.212	IO				2.01
35.167	0.00	0.40	3.209	IO				2.00
35.250	0.00	0.40	3.206	IO				2.00
35.333	0.00	0.40	3.204	IO				2.00
35.417	0.00	0.40	3.201	IO				2.00
35.500	0.00	0.40	3.198	IO				2.00
35.583	0.00	0.40	3.195	IO				2.00
35.667	0.00	0.40	3.192	IO				2.00
35.750	0.00	0.40	3.190	IO				1.99
35.833	0.00	0.40	3.187	IO				1.99
35.917	0.00	0.40	3.184	IO				1.99
36.000	0.00	0.40	3.181	IO				1.99
36.083	0.00	0.40	3.179	IO				1.99
36.167	0.00	0.40	3.176	IO				1.99
36.250	0.00	0.40	3.173	IO				1.98
36.333	0.00	0.40	3.170	IO				1.98
36.417	0.00	0.40	3.168	IO				1.98
36.500	0.00	0.40	3.165	IO				1.98
36.583	0.00	0.40	3.162	IO				1.98
36.667	0.00	0.40	3.159	IO				1.98
36.750	0.00	0.40	3.156	IO				1.98
36.833	0.00	0.40	3.154	IO				1.97
36.917	0.00	0.40	3.151	IO				1.97
37.000	0.00	0.40	3.148	IO				1.97
37.083	0.00	0.40	3.145	IO				1.97
37.167	0.00	0.40	3.143	IO				1.97
37.250	0.00	0.40	3.140	IO				1.97
37.333	0.00	0.40	3.137	IO				1.96
37.417	0.00	0.40	3.134	IO				1.96
37.500	0.00	0.40	3.132	IO				1.96
37.583	0.00	0.40	3.129	IO				1.96
37.667	0.00	0.40	3.126	IO				1.96
37.750	0.00	0.40	3.123	IO				1.96
37.833	0.00	0.40	3.120	IO				1.95
37.917	0.00	0.40	3.118	IO				1.95
38.000	0.00	0.40	3.115	IO				1.95
38.083	0.00	0.40	3.112	IO				1.95

38.167	0.00	0.40	3.109	IO				1.95
38.250	0.00	0.40	3.107	IO				1.95
38.333	0.00	0.40	3.104	IO				1.95
38.417	0.00	0.40	3.101	IO				1.94
38.500	0.00	0.40	3.098	IO				1.94
38.583	0.00	0.40	3.096	IO				1.94
38.667	0.00	0.40	3.093	IO				1.94
38.750	0.00	0.40	3.090	IO				1.94
38.833	0.00	0.40	3.087	IO				1.94
38.917	0.00	0.40	3.084	IO				1.93
39.000	0.00	0.40	3.082	IO				1.93
39.083	0.00	0.40	3.079	IO				1.93
39.167	0.00	0.40	3.076	IO				1.93
39.250	0.00	0.40	3.073	IO				1.93
39.333	0.00	0.40	3.071	IO				1.93
39.417	0.00	0.40	3.068	IO				1.92
39.500	0.00	0.40	3.065	IO				1.92
39.583	0.00	0.40	3.062	IO				1.92
39.667	0.00	0.40	3.060	IO				1.92
39.750	0.00	0.40	3.057	IO				1.92
39.833	0.00	0.40	3.054	IO				1.92
39.917	0.00	0.40	3.051	IO				1.92
40.000	0.00	0.40	3.048	IO				1.91
40.083	0.00	0.40	3.046	IO				1.91
40.167	0.00	0.40	3.043	IO				1.91
40.250	0.00	0.40	3.040	IO				1.91
40.333	0.00	0.40	3.037	IO				1.91
40.417	0.00	0.40	3.035	IO				1.91
40.500	0.00	0.40	3.032	IO				1.90
40.583	0.00	0.40	3.029	IO				1.90
40.667	0.00	0.40	3.026	IO				1.90
40.750	0.00	0.40	3.024	IO				1.90
40.833	0.00	0.40	3.021	IO				1.90
40.917	0.00	0.40	3.018	IO				1.90
41.000	0.00	0.40	3.015	IO				1.90
41.083	0.00	0.40	3.012	IO				1.89
41.167	0.00	0.40	3.010	IO				1.89
41.250	0.00	0.40	3.007	IO				1.89
41.333	0.00	0.40	3.004	IO				1.89
41.417	0.00	0.40	3.001	IO				1.89
41.500	0.00	0.40	2.999	IO				1.89
41.583	0.00	0.40	2.996	IO				1.88
41.667	0.00	0.40	2.993	IO				1.88
41.750	0.00	0.40	2.990	IO				1.88
41.833	0.00	0.40	2.988	IO				1.88
41.917	0.00	0.40	2.985	IO				1.88
42.000	0.00	0.40	2.982	IO				1.88
42.083	0.00	0.40	2.979	IO				1.87
42.167	0.00	0.40	2.976	IO				1.87
42.250	0.00	0.40	2.974	IO				1.87
42.333	0.00	0.40	2.971	IO				1.87
42.417	0.00	0.40	2.968	IO				1.87
42.500	0.00	0.40	2.965	IO				1.87
42.583	0.00	0.40	2.963	IO				1.87

42.667	0.00	0.40	2.960	IO				1.86
42.750	0.00	0.40	2.957	IO				1.86
42.833	0.00	0.40	2.954	IO				1.86
42.917	0.00	0.40	2.952	IO				1.86
43.000	0.00	0.40	2.949	IO				1.86
43.083	0.00	0.40	2.946	IO				1.86
43.167	0.00	0.40	2.943	IO				1.85
43.250	0.00	0.40	2.940	IO				1.85
43.333	0.00	0.40	2.938	IO				1.85
43.417	0.00	0.40	2.935	IO				1.85
43.500	0.00	0.40	2.932	IO				1.85
43.583	0.00	0.40	2.929	IO				1.85
43.667	0.00	0.40	2.927	IO				1.84
43.750	0.00	0.40	2.924	IO				1.84
43.833	0.00	0.40	2.921	IO				1.84
43.917	0.00	0.40	2.918	IO				1.84
44.000	0.00	0.40	2.916	IO				1.84
44.083	0.00	0.40	2.913	IO				1.84
44.167	0.00	0.40	2.910	IO				1.84
44.250	0.00	0.40	2.907	IO				1.83
44.333	0.00	0.40	2.904	IO				1.83
44.417	0.00	0.40	2.902	IO				1.83
44.500	0.00	0.40	2.899	IO				1.83
44.583	0.00	0.40	2.896	IO				1.83
44.667	0.00	0.40	2.893	IO				1.83
44.750	0.00	0.40	2.891	IO				1.82
44.833	0.00	0.40	2.888	IO				1.82
44.917	0.00	0.40	2.885	IO				1.82
45.000	0.00	0.40	2.882	IO				1.82
45.083	0.00	0.40	2.880	IO				1.82
45.167	0.00	0.40	2.877	IO				1.82
45.250	0.00	0.40	2.874	IO				1.81
45.333	0.00	0.40	2.871	IO				1.81
45.417	0.00	0.40	2.868	IO				1.81
45.500	0.00	0.40	2.866	IO				1.81
45.583	0.00	0.40	2.863	IO				1.81
45.667	0.00	0.40	2.860	IO				1.81
45.750	0.00	0.40	2.857	IO				1.81
45.833	0.00	0.40	2.855	IO				1.80
45.917	0.00	0.40	2.852	IO				1.80
46.000	0.00	0.40	2.849	IO				1.80
46.083	0.00	0.40	2.846	IO				1.80
46.167	0.00	0.40	2.844	IO				1.80
46.250	0.00	0.40	2.841	IO				1.80
46.333	0.00	0.40	2.838	IO				1.79
46.417	0.00	0.40	2.835	IO				1.79
46.500	0.00	0.40	2.832	IO				1.79
46.583	0.00	0.40	2.830	IO				1.79
46.667	0.00	0.40	2.827	IO				1.79
46.750	0.00	0.40	2.824	IO				1.79
46.833	0.00	0.40	2.821	IO				1.78
46.917	0.00	0.40	2.819	IO				1.78
47.000	0.00	0.40	2.816	IO				1.78
47.083	0.00	0.40	2.813	IO				1.78

47.167	0.00	0.40	2.810	IO				1.78
47.250	0.00	0.40	2.808	IO				1.78
47.333	0.00	0.40	2.805	IO				1.78
47.417	0.00	0.40	2.802	IO				1.77
47.500	0.00	0.40	2.799	IO				1.77
47.583	0.00	0.40	2.796	IO				1.77
47.667	0.00	0.40	2.794	IO				1.77
47.750	0.00	0.40	2.791	IO				1.77
47.833	0.00	0.40	2.788	IO				1.77
47.917	0.00	0.40	2.785	IO				1.76
48.000	0.00	0.40	2.783	IO				1.76
48.083	0.00	0.40	2.780	IO				1.76
48.167	0.00	0.40	2.777	IO				1.76
48.250	0.00	0.40	2.774	IO				1.76
48.333	0.00	0.40	2.772	IO				1.76
48.417	0.00	0.40	2.769	IO				1.75
48.500	0.00	0.40	2.766	IO				1.75
48.583	0.00	0.40	2.763	IO				1.75
48.667	0.00	0.40	2.760	IO				1.75
48.750	0.00	0.40	2.758	IO				1.75
48.833	0.00	0.40	2.755	IO				1.75
48.917	0.00	0.40	2.752	IO				1.75
49.000	0.00	0.40	2.749	IO				1.74
49.083	0.00	0.40	2.747	IO				1.74
49.167	0.00	0.40	2.744	IO				1.74
49.250	0.00	0.40	2.741	IO				1.74
49.333	0.00	0.40	2.738	IO				1.74
49.417	0.00	0.40	2.736	IO				1.74
49.500	0.00	0.40	2.733	IO				1.73
49.583	0.00	0.40	2.730	IO				1.73
49.667	0.00	0.40	2.727	IO				1.73
49.750	0.00	0.40	2.724	IO				1.73
49.833	0.00	0.40	2.722	IO				1.73
49.917	0.00	0.40	2.719	IO				1.73
50.000	0.00	0.40	2.716	IO				1.73
50.083	0.00	0.40	2.713	IO				1.72
50.167	0.00	0.40	2.711	IO				1.72
50.250	0.00	0.40	2.708	IO				1.72
50.333	0.00	0.40	2.705	IO				1.72
50.417	0.00	0.40	2.702	IO				1.72
50.500	0.00	0.40	2.700	IO				1.72
50.583	0.00	0.40	2.697	IO				1.71
50.667	0.00	0.40	2.694	IO				1.71
50.750	0.00	0.40	2.691	IO				1.71
50.833	0.00	0.40	2.688	IO				1.71
50.917	0.00	0.40	2.686	IO				1.71
51.000	0.00	0.40	2.683	IO				1.71
51.083	0.00	0.40	2.680	IO				1.70
51.167	0.00	0.40	2.677	IO				1.70
51.250	0.00	0.40	2.675	IO				1.70
51.333	0.00	0.40	2.672	IO				1.70
51.417	0.00	0.40	2.669	IO				1.70
51.500	0.00	0.40	2.666	IO				1.70
51.583	0.00	0.40	2.664	IO				1.70

51.667	0.00	0.40	2.661	IO				1.69
51.750	0.00	0.40	2.658	IO				1.69
51.833	0.00	0.40	2.655	IO				1.69
51.917	0.00	0.40	2.652	IO				1.69
52.000	0.00	0.40	2.650	IO				1.69
52.083	0.00	0.40	2.647	IO				1.69
52.167	0.00	0.40	2.644	IO				1.68
52.250	0.00	0.40	2.641	IO				1.68
52.333	0.00	0.40	2.639	IO				1.68
52.417	0.00	0.40	2.636	IO				1.68
52.500	0.00	0.40	2.633	IO				1.68
52.583	0.00	0.40	2.630	IO				1.68
52.667	0.00	0.40	2.628	IO				1.67
52.750	0.00	0.40	2.625	IO				1.67
52.833	0.00	0.40	2.622	IO				1.67
52.917	0.00	0.40	2.619	IO				1.67
53.000	0.00	0.40	2.616	IO				1.67
53.083	0.00	0.40	2.614	IO				1.67
53.167	0.00	0.40	2.611	IO				1.67
53.250	0.00	0.40	2.608	IO				1.66
53.333	0.00	0.40	2.605	IO				1.66
53.417	0.00	0.40	2.603	IO				1.66
53.500	0.00	0.40	2.600	IO				1.66
53.583	0.00	0.40	2.597	IO				1.66
53.667	0.00	0.40	2.594	IO				1.66
53.750	0.00	0.40	2.592	IO				1.65
53.833	0.00	0.40	2.589	IO				1.65
53.917	0.00	0.40	2.586	IO				1.65
54.000	0.00	0.40	2.583	IO				1.65
54.083	0.00	0.40	2.580	IO				1.65
54.167	0.00	0.40	2.578	IO				1.65
54.250	0.00	0.40	2.575	IO				1.64
54.333	0.00	0.40	2.572	IO				1.64
54.417	0.00	0.40	2.569	IO				1.64
54.500	0.00	0.40	2.567	IO				1.64
54.583	0.00	0.40	2.564	IO				1.64
54.667	0.00	0.40	2.561	IO				1.64
54.750	0.00	0.40	2.558	IO				1.64
54.833	0.00	0.40	2.556	IO				1.63
54.917	0.00	0.40	2.553	IO				1.63
55.000	0.00	0.40	2.550	IO				1.63
55.083	0.00	0.40	2.547	IO				1.63
55.167	0.00	0.40	2.544	IO				1.63
55.250	0.00	0.40	2.542	IO				1.63
55.333	0.00	0.40	2.539	IO				1.62
55.417	0.00	0.40	2.536	IO				1.62
55.500	0.00	0.40	2.533	IO				1.62
55.583	0.00	0.40	2.531	IO				1.62
55.667	0.00	0.40	2.528	IO				1.62
55.750	0.00	0.40	2.525	IO				1.62
55.833	0.00	0.40	2.522	IO				1.61
55.917	0.00	0.40	2.520	IO				1.61
56.000	0.00	0.40	2.517	IO				1.61
56.083	0.00	0.40	2.514	IO				1.61

56.167	0.00	0.40	2.511	IO				1.61
56.250	0.00	0.40	2.508	IO				1.61
56.333	0.00	0.40	2.506	IO				1.61
56.417	0.00	0.40	2.503	IO				1.60
56.500	0.00	0.40	2.500	IO				1.60
56.583	0.00	0.40	2.497	IO				1.60
56.667	0.00	0.40	2.495	IO				1.60
56.750	0.00	0.40	2.492	IO				1.60
56.833	0.00	0.40	2.489	IO				1.60
56.917	0.00	0.40	2.486	IO				1.59
57.000	0.00	0.40	2.484	IO				1.59
57.083	0.00	0.40	2.481	IO				1.59
57.167	0.00	0.40	2.478	IO				1.59
57.250	0.00	0.40	2.475	IO				1.59
57.333	0.00	0.40	2.472	IO				1.59
57.417	0.00	0.40	2.470	IO				1.59
57.500	0.00	0.40	2.467	IO				1.58
57.583	0.00	0.40	2.464	IO				1.58
57.667	0.00	0.40	2.461	IO				1.58
57.750	0.00	0.40	2.459	IO				1.58
57.833	0.00	0.40	2.456	IO				1.58
57.917	0.00	0.40	2.453	IO				1.58
58.000	0.00	0.40	2.450	IO				1.57
58.083	0.00	0.40	2.448	IO				1.57
58.167	0.00	0.40	2.445	IO				1.57
58.250	0.00	0.40	2.442	IO				1.57
58.333	0.00	0.40	2.439	IO				1.57
58.417	0.00	0.40	2.437	IO				1.57
58.500	0.00	0.40	2.434	IO				1.56
58.583	0.00	0.40	2.431	IO				1.56
58.667	0.00	0.40	2.428	IO				1.56
58.750	0.00	0.40	2.425	IO				1.56
58.833	0.00	0.40	2.423	IO				1.56
58.917	0.00	0.40	2.420	IO				1.56
59.000	0.00	0.40	2.417	IO				1.56
59.083	0.00	0.40	2.414	IO				1.55
59.167	0.00	0.40	2.412	IO				1.55
59.250	0.00	0.40	2.409	IO				1.55
59.333	0.00	0.40	2.406	IO				1.55
59.417	0.00	0.40	2.403	IO				1.55
59.500	0.00	0.40	2.401	IO				1.55
59.583	0.00	0.40	2.398	IO				1.54
59.667	0.00	0.40	2.395	IO				1.54
59.750	0.00	0.40	2.392	IO				1.54
59.833	0.00	0.40	2.389	IO				1.54
59.917	0.00	0.40	2.387	IO				1.54
60.000	0.00	0.40	2.384	IO				1.54
60.083	0.00	0.40	2.381	IO				1.53
60.167	0.00	0.40	2.378	IO				1.53
60.250	0.00	0.40	2.376	IO				1.53
60.333	0.00	0.40	2.373	IO				1.53
60.417	0.00	0.40	2.370	IO				1.53
60.500	0.00	0.40	2.367	IO				1.53
60.583	0.00	0.40	2.365	IO				1.53

60.667	0.00	0.40	2.362	IO				1.52
60.750	0.00	0.40	2.359	IO				1.52
60.833	0.00	0.40	2.356	IO				1.52
60.917	0.00	0.40	2.353	IO				1.52
61.000	0.00	0.40	2.351	IO				1.52
61.083	0.00	0.40	2.348	IO				1.52
61.167	0.00	0.40	2.345	IO				1.51
61.250	0.00	0.40	2.342	IO				1.51
61.333	0.00	0.40	2.340	IO				1.51
61.417	0.00	0.40	2.337	IO				1.51
61.500	0.00	0.40	2.334	IO				1.51
61.583	0.00	0.40	2.331	IO				1.51
61.667	0.00	0.40	2.329	IO				1.50
61.750	0.00	0.40	2.326	IO				1.50
61.833	0.00	0.40	2.323	IO				1.50
61.917	0.00	0.40	2.320	IO				1.50
62.000	0.00	0.40	2.317	IO				1.50
62.083	0.00	0.40	2.315	IO				1.50
62.167	0.00	0.40	2.312	IO				1.50
62.250	0.00	0.40	2.309	IO				1.49
62.333	0.00	0.40	2.306	IO				1.49
62.417	0.00	0.40	2.304	IO				1.49
62.500	0.00	0.40	2.301	IO				1.49
62.583	0.00	0.40	2.298	IO				1.49
62.667	0.00	0.40	2.295	IO				1.48
62.750	0.00	0.40	2.293	IO				1.48
62.833	0.00	0.40	2.290	IO				1.48
62.917	0.00	0.40	2.287	IO				1.48
63.000	0.00	0.40	2.284	IO				1.48
63.083	0.00	0.40	2.281	IO				1.48
63.167	0.00	0.40	2.279	IO				1.47
63.250	0.00	0.40	2.276	IO				1.47
63.333	0.00	0.40	2.273	IO				1.47
63.417	0.00	0.40	2.270	IO				1.47
63.500	0.00	0.40	2.268	IO				1.47
63.583	0.00	0.40	2.265	IO				1.47
63.667	0.00	0.40	2.262	IO				1.46
63.750	0.00	0.40	2.259	IO				1.46
63.833	0.00	0.40	2.257	IO				1.46
63.917	0.00	0.40	2.254	IO				1.46
64.000	0.00	0.40	2.251	IO				1.46
64.083	0.00	0.40	2.248	IO				1.46
64.167	0.00	0.40	2.245	IO				1.45
64.250	0.00	0.40	2.243	IO				1.45
64.333	0.00	0.40	2.240	IO				1.45
64.417	0.00	0.40	2.237	IO				1.45
64.500	0.00	0.40	2.234	IO				1.45
64.583	0.00	0.40	2.232	IO				1.45
64.667	0.00	0.40	2.229	IO				1.44
64.750	0.00	0.40	2.226	IO				1.44
64.833	0.00	0.40	2.223	IO				1.44
64.917	0.00	0.40	2.221	IO				1.44
65.000	0.00	0.40	2.218	IO				1.44
65.083	0.00	0.40	2.215	IO				1.44

65.167	0.00	0.40	2.212	IO				1.43
65.250	0.00	0.40	2.209	IO				1.43
65.333	0.00	0.40	2.207	IO				1.43
65.417	0.00	0.40	2.204	IO				1.43
65.500	0.00	0.40	2.201	IO				1.43
65.583	0.00	0.40	2.198	IO				1.43
65.667	0.00	0.40	2.196	IO				1.42
65.750	0.00	0.40	2.193	IO				1.42
65.833	0.00	0.40	2.190	IO				1.42
65.917	0.00	0.40	2.187	IO				1.42
66.000	0.00	0.40	2.185	IO				1.42
66.083	0.00	0.40	2.182	IO				1.42
66.167	0.00	0.40	2.179	IO				1.41
66.250	0.00	0.40	2.176	IO				1.41
66.333	0.00	0.40	2.173	IO				1.41
66.417	0.00	0.40	2.171	IO				1.41
66.500	0.00	0.40	2.168	IO				1.41
66.583	0.00	0.40	2.165	IO				1.41
66.667	0.00	0.40	2.162	IO				1.40
66.750	0.00	0.40	2.160	IO				1.40
66.833	0.00	0.40	2.157	IO				1.40
66.917	0.00	0.40	2.154	IO				1.40
67.000	0.00	0.40	2.151	IO				1.40
67.083	0.00	0.40	2.149	IO				1.40
67.167	0.00	0.40	2.146	IO				1.39
67.250	0.00	0.40	2.143	IO				1.39
67.333	0.00	0.40	2.140	IO				1.39
67.417	0.00	0.40	2.137	IO				1.39
67.500	0.00	0.40	2.135	IO				1.39
67.583	0.00	0.40	2.132	IO				1.39
67.667	0.00	0.40	2.129	IO				1.38
67.750	0.00	0.40	2.126	IO				1.38
67.833	0.00	0.40	2.124	IO				1.38
67.917	0.00	0.40	2.121	IO				1.38
68.000	0.00	0.40	2.118	IO				1.38
68.083	0.00	0.40	2.115	IO				1.38
68.167	0.00	0.40	2.113	IO				1.37
68.250	0.00	0.40	2.110	IO				1.37
68.333	0.00	0.40	2.107	IO				1.37
68.417	0.00	0.40	2.104	IO				1.37
68.500	0.00	0.40	2.101	IO				1.37
68.583	0.00	0.40	2.099	IO				1.37
68.667	0.00	0.40	2.096	IO				1.36
68.750	0.00	0.40	2.093	IO				1.36
68.833	0.00	0.40	2.090	IO				1.36
68.917	0.00	0.40	2.088	IO				1.36
69.000	0.00	0.40	2.085	IO				1.36
69.083	0.00	0.40	2.082	IO				1.35
69.167	0.00	0.40	2.079	IO				1.35
69.250	0.00	0.40	2.077	IO				1.35
69.333	0.00	0.40	2.074	IO				1.35
69.417	0.00	0.40	2.071	IO				1.35
69.500	0.00	0.40	2.068	IO				1.35
69.583	0.00	0.40	2.065	IO				1.34

69.667	0.00	0.40	2.063	IO				1.34
69.750	0.00	0.40	2.060	IO				1.34
69.833	0.00	0.40	2.057	IO				1.34
69.917	0.00	0.40	2.054	IO				1.34
70.000	0.00	0.40	2.052	IO				1.34
70.083	0.00	0.40	2.049	IO				1.33
70.167	0.00	0.40	2.046	IO				1.33
70.250	0.00	0.40	2.043	IO				1.33
70.333	0.00	0.40	2.041	IO				1.33
70.417	0.00	0.40	2.038	IO				1.33
70.500	0.00	0.40	2.035	IO				1.33
70.583	0.00	0.40	2.032	IO				1.32
70.667	0.00	0.40	2.029	IO				1.32
70.750	0.00	0.40	2.027	IO				1.32
70.833	0.00	0.40	2.024	IO				1.32
70.917	0.00	0.40	2.021	IO				1.32
71.000	0.00	0.40	2.018	IO				1.32
71.083	0.00	0.40	2.016	IO				1.31
71.167	0.00	0.40	2.013	IO				1.31
71.250	0.00	0.40	2.010	IO				1.31
71.333	0.00	0.40	2.007	IO				1.31
71.417	0.00	0.40	2.005	IO				1.31
71.500	0.00	0.40	2.002	IO				1.31
71.583	0.00	0.40	1.999	IO				1.30
71.667	0.00	0.40	1.996	IO				1.30
71.750	0.00	0.40	1.993	IO				1.30
71.833	0.00	0.40	1.991	IO				1.30
71.917	0.00	0.40	1.988	IO				1.30
72.000	0.00	0.40	1.985	IO				1.30
72.083	0.00	0.40	1.982	IO				1.29
72.167	0.00	0.40	1.980	IO				1.29
72.250	0.00	0.40	1.977	IO				1.29
72.333	0.00	0.40	1.974	IO				1.29
72.417	0.00	0.40	1.971	IO				1.29
72.500	0.00	0.40	1.969	IO				1.29
72.583	0.00	0.40	1.966	IO				1.28
72.667	0.00	0.40	1.963	IO				1.28
72.750	0.00	0.40	1.960	IO				1.28
72.833	0.00	0.40	1.957	IO				1.28
72.917	0.00	0.40	1.955	IO				1.28
73.000	0.00	0.40	1.952	IO				1.28
73.083	0.00	0.40	1.949	IO				1.27
73.167	0.00	0.40	1.946	IO				1.27
73.250	0.00	0.40	1.944	IO				1.27
73.333	0.00	0.40	1.941	IO				1.27
73.417	0.00	0.40	1.938	IO				1.27
73.500	0.00	0.40	1.935	IO				1.27
73.583	0.00	0.40	1.933	IO				1.26
73.667	0.00	0.40	1.930	IO				1.26
73.750	0.00	0.40	1.927	IO				1.26
73.833	0.00	0.40	1.924	IO				1.26
73.917	0.00	0.40	1.921	IO				1.26
74.000	0.00	0.40	1.919	IO				1.26
74.083	0.00	0.40	1.916	IO				1.25

74.167	0.00	0.40	1.913	IO				1.25
74.250	0.00	0.40	1.910	IO				1.25
74.333	0.00	0.40	1.908	IO				1.25
74.417	0.00	0.40	1.905	IO				1.25
74.500	0.00	0.40	1.902	IO				1.25
74.583	0.00	0.40	1.899	IO				1.24
74.667	0.00	0.40	1.897	IO				1.24
74.750	0.00	0.40	1.894	IO				1.24
74.833	0.00	0.40	1.891	IO				1.24
74.917	0.00	0.40	1.888	IO				1.24
75.000	0.00	0.40	1.885	IO				1.24
75.083	0.00	0.40	1.883	IO				1.23
75.167	0.00	0.40	1.880	IO				1.23
75.250	0.00	0.40	1.877	IO				1.23
75.333	0.00	0.40	1.874	IO				1.23
75.417	0.00	0.40	1.872	IO				1.23
75.500	0.00	0.40	1.869	IO				1.22
75.583	0.00	0.40	1.866	IO				1.22
75.667	0.00	0.40	1.863	IO				1.22
75.750	0.00	0.40	1.861	IO				1.22
75.833	0.00	0.40	1.858	IO				1.22
75.917	0.00	0.40	1.855	IO				1.22
76.000	0.00	0.40	1.852	IO				1.21
76.083	0.00	0.40	1.849	IO				1.21
76.167	0.00	0.40	1.847	IO				1.21
76.250	0.00	0.40	1.844	IO				1.21
76.333	0.00	0.40	1.841	IO				1.21
76.417	0.00	0.40	1.838	IO				1.21
76.500	0.00	0.40	1.836	IO				1.20
76.583	0.00	0.40	1.833	IO				1.20
76.667	0.00	0.40	1.830	IO				1.20
76.750	0.00	0.40	1.827	IO				1.20
76.833	0.00	0.40	1.825	IO				1.20
76.917	0.00	0.40	1.822	IO				1.20
77.000	0.00	0.40	1.819	IO				1.19
77.083	0.00	0.40	1.816	IO				1.19
77.167	0.00	0.40	1.813	IO				1.19
77.250	0.00	0.40	1.811	IO				1.19
77.333	0.00	0.40	1.808	IO				1.19
77.417	0.00	0.40	1.805	IO				1.19
77.500	0.00	0.40	1.802	IO				1.18
77.583	0.00	0.40	1.800	IO				1.18
77.667	0.00	0.40	1.797	IO				1.18
77.750	0.00	0.40	1.794	IO				1.18
77.833	0.00	0.40	1.791	IO				1.18
77.917	0.00	0.40	1.789	IO				1.18
78.000	0.00	0.40	1.786	IO				1.17
78.083	0.00	0.40	1.783	IO				1.17
78.167	0.00	0.40	1.780	IO				1.17
78.250	0.00	0.40	1.777	IO				1.17
78.333	0.00	0.40	1.775	IO				1.17
78.417	0.00	0.40	1.772	IO				1.17
78.500	0.00	0.40	1.769	IO				1.16
78.583	0.00	0.40	1.766	IO				1.16

78.667	0.00	0.40	1.764	IO				1.16
78.750	0.00	0.40	1.761	IO				1.16
78.833	0.00	0.40	1.758	IO				1.16
78.917	0.00	0.40	1.755	IO				1.16
79.000	0.00	0.40	1.753	IO				1.15
79.083	0.00	0.40	1.750	IO				1.15
79.167	0.00	0.40	1.747	IO				1.15
79.250	0.00	0.40	1.744	IO				1.15
79.333	0.00	0.40	1.741	IO				1.15
79.417	0.00	0.40	1.739	IO				1.15
79.500	0.00	0.40	1.736	IO				1.14
79.583	0.00	0.40	1.733	IO				1.14
79.667	0.00	0.40	1.730	IO				1.14
79.750	0.00	0.40	1.728	IO				1.14
79.833	0.00	0.40	1.725	IO				1.14
79.917	0.00	0.40	1.722	IO				1.14
80.000	0.00	0.40	1.719	IO				1.13
80.083	0.00	0.40	1.717	IO				1.13
80.167	0.00	0.40	1.714	IO				1.13
80.250	0.00	0.40	1.711	IO				1.13
80.333	0.00	0.40	1.708	IO				1.13
80.417	0.00	0.40	1.705	IO				1.13
80.500	0.00	0.40	1.703	IO				1.12
80.583	0.00	0.40	1.700	IO				1.12
80.667	0.00	0.40	1.697	IO				1.12
80.750	0.00	0.40	1.694	IO				1.12
80.833	0.00	0.40	1.692	IO				1.12
80.917	0.00	0.40	1.689	IO				1.12
81.000	0.00	0.40	1.686	IO				1.11
81.083	0.00	0.40	1.683	IO				1.11
81.167	0.00	0.40	1.681	IO				1.11
81.250	0.00	0.40	1.678	IO				1.11
81.333	0.00	0.40	1.675	IO				1.11
81.417	0.00	0.40	1.672	IO				1.11
81.500	0.00	0.40	1.669	IO				1.10
81.583	0.00	0.40	1.667	IO				1.10
81.667	0.00	0.40	1.664	IO				1.10
81.750	0.00	0.40	1.661	IO				1.10
81.833	0.00	0.40	1.658	IO				1.10
81.917	0.00	0.40	1.656	IO				1.09
82.000	0.00	0.40	1.653	IO				1.09
82.083	0.00	0.40	1.650	IO				1.09
82.167	0.00	0.40	1.647	IO				1.09
82.250	0.00	0.40	1.645	IO				1.09
82.333	0.00	0.40	1.642	IO				1.09
82.417	0.00	0.40	1.639	IO				1.08
82.500	0.00	0.40	1.636	IO				1.08
82.583	0.00	0.40	1.633	IO				1.08
82.667	0.00	0.40	1.631	IO				1.08
82.750	0.00	0.40	1.628	IO				1.08
82.833	0.00	0.40	1.625	IO				1.08
82.917	0.00	0.40	1.622	IO				1.07
83.000	0.00	0.40	1.620	IO				1.07
83.083	0.00	0.40	1.617	IO				1.07

83.167	0.00	0.40	1.614	IO				1.07
83.250	0.00	0.40	1.611	IO				1.07
83.333	0.00	0.40	1.609	IO				1.07
83.417	0.00	0.40	1.606	IO				1.06
83.500	0.00	0.40	1.603	IO				1.06
83.583	0.00	0.40	1.600	IO				1.06
83.667	0.00	0.40	1.597	IO				1.06
83.750	0.00	0.40	1.595	IO				1.06
83.833	0.00	0.40	1.592	IO				1.06
83.917	0.00	0.40	1.589	IO				1.05
84.000	0.00	0.40	1.586	IO				1.05
84.083	0.00	0.40	1.584	IO				1.05
84.167	0.00	0.40	1.581	IO				1.05
84.250	0.00	0.40	1.578	IO				1.05
84.333	0.00	0.40	1.575	IO				1.05
84.417	0.00	0.40	1.573	IO				1.04
84.500	0.00	0.40	1.570	IO				1.04
84.583	0.00	0.40	1.567	IO				1.04
84.667	0.00	0.40	1.564	IO				1.04
84.750	0.00	0.40	1.561	IO				1.04
84.833	0.00	0.40	1.559	IO				1.04
84.917	0.00	0.40	1.556	IO				1.03
85.000	0.00	0.40	1.553	IO				1.03
85.083	0.00	0.40	1.550	IO				1.03
85.167	0.00	0.40	1.548	IO				1.03
85.250	0.00	0.40	1.545	IO				1.03
85.333	0.00	0.40	1.542	IO				1.03
85.417	0.00	0.40	1.539	IO				1.02
85.500	0.00	0.40	1.537	IO				1.02
85.583	0.00	0.40	1.534	IO				1.02
85.667	0.00	0.40	1.531	IO				1.02
85.750	0.00	0.40	1.528	IO				1.02
85.833	0.00	0.40	1.525	IO				1.02
85.917	0.00	0.40	1.523	IO				1.01
86.000	0.00	0.40	1.520	IO				1.01
86.083	0.00	0.40	1.517	IO				1.01
86.167	0.00	0.40	1.514	IO				1.01
86.250	0.00	0.40	1.512	IO				1.01
86.333	0.00	0.40	1.509	IO				1.01
86.417	0.00	0.40	1.506	IO				1.00
86.500	0.00	0.40	1.503	IO				1.00
86.583	0.00	0.40	1.501	IO				1.00
86.667	0.00	0.40	1.498	IO				1.00
86.750	0.00	0.40	1.495	IO				1.00
86.833	0.00	0.40	1.492	IO				1.00
86.917	0.00	0.40	1.490	IO				0.99
87.000	0.00	0.40	1.487	IO				0.99
87.083	0.00	0.40	1.484	IO				0.99
87.167	0.00	0.40	1.481	IO				0.99
87.250	0.00	0.40	1.478	IO				0.99
87.333	0.00	0.40	1.476	IO				0.98
87.417	0.00	0.40	1.473	IO				0.98
87.500	0.00	0.40	1.470	IO				0.98
87.583	0.00	0.40	1.467	IO				0.98

87.667	0.00	0.40	1.465	IO				0.98
87.750	0.00	0.40	1.462	IO				0.98
87.833	0.00	0.40	1.459	IO				0.97
87.917	0.00	0.40	1.456	IO				0.97
88.000	0.00	0.40	1.454	IO				0.97
88.083	0.00	0.40	1.451	IO				0.97
88.167	0.00	0.40	1.448	IO				0.97
88.250	0.00	0.40	1.445	IO				0.96
88.333	0.00	0.40	1.442	IO				0.96
88.417	0.00	0.40	1.440	IO				0.96
88.500	0.00	0.40	1.437	IO				0.96
88.583	0.00	0.40	1.434	IO				0.96
88.667	0.00	0.40	1.431	IO				0.96
88.750	0.00	0.40	1.429	IO				0.95
88.833	0.00	0.40	1.426	IO				0.95
88.917	0.00	0.40	1.423	IO				0.95
89.000	0.00	0.40	1.420	IO				0.95
89.083	0.00	0.40	1.418	IO				0.95
89.167	0.00	0.40	1.415	IO				0.95
89.250	0.00	0.40	1.412	IO				0.94
89.333	0.00	0.40	1.409	IO				0.94
89.417	0.00	0.40	1.406	IO				0.94
89.500	0.00	0.40	1.404	IO				0.94
89.583	0.00	0.40	1.401	IO				0.94
89.667	0.00	0.40	1.398	IO				0.93
89.750	0.00	0.40	1.395	IO				0.93
89.833	0.00	0.40	1.393	IO				0.93
89.917	0.00	0.40	1.390	IO				0.93
90.000	0.00	0.40	1.387	IO				0.93
90.083	0.00	0.40	1.384	IO				0.93
90.167	0.00	0.40	1.382	IO				0.92
90.250	0.00	0.40	1.379	IO				0.92
90.333	0.00	0.40	1.376	IO				0.92
90.417	0.00	0.40	1.373	IO				0.92
90.500	0.00	0.40	1.370	IO				0.92
90.583	0.00	0.40	1.368	IO				0.92
90.667	0.00	0.40	1.365	IO				0.91
90.750	0.00	0.40	1.362	IO				0.91
90.833	0.00	0.40	1.359	IO				0.91
90.917	0.00	0.40	1.357	IO				0.91
91.000	0.00	0.40	1.354	IO				0.91
91.083	0.00	0.40	1.351	IO				0.90
91.167	0.00	0.40	1.348	IO				0.90
91.250	0.00	0.40	1.346	IO				0.90
91.333	0.00	0.40	1.343	IO				0.90
91.417	0.00	0.40	1.340	IO				0.90
91.500	0.00	0.40	1.337	IO				0.90
91.583	0.00	0.40	1.334	IO				0.89
91.667	0.00	0.40	1.332	IO				0.89
91.750	0.00	0.40	1.329	IO				0.89
91.833	0.00	0.40	1.326	IO				0.89
91.917	0.00	0.40	1.323	IO				0.89
92.000	0.00	0.40	1.321	IO				0.88
92.083	0.00	0.40	1.318	IO				0.88

92.167	0.00	0.40	1.315	IO				0.88
92.250	0.00	0.40	1.312	IO				0.88
92.333	0.00	0.40	1.310	IO				0.88
92.417	0.00	0.40	1.307	IO				0.88
92.500	0.00	0.40	1.304	IO				0.87
92.583	0.00	0.40	1.301	IO				0.87
92.667	0.00	0.40	1.298	IO				0.87
92.750	0.00	0.40	1.296	IO				0.87
92.833	0.00	0.40	1.293	IO				0.87
92.917	0.00	0.40	1.290	IO				0.87
93.000	0.00	0.40	1.287	IO				0.86
93.083	0.00	0.40	1.285	IO				0.86
93.167	0.00	0.40	1.282	IO				0.86
93.250	0.00	0.40	1.279	IO				0.86
93.333	0.00	0.40	1.276	IO				0.86
93.417	0.00	0.40	1.274	IO				0.85
93.500	0.00	0.40	1.271	IO				0.85
93.583	0.00	0.40	1.268	IO				0.85
93.667	0.00	0.40	1.265	IO				0.85
93.750	0.00	0.40	1.262	IO				0.85
93.833	0.00	0.40	1.260	IO				0.85
93.917	0.00	0.40	1.257	IO				0.84
94.000	0.00	0.40	1.254	IO				0.84
94.083	0.00	0.40	1.251	IO				0.84
94.167	0.00	0.40	1.249	IO				0.84
94.250	0.00	0.40	1.246	IO				0.84
94.333	0.00	0.40	1.243	IO				0.84
94.417	0.00	0.40	1.240	IO				0.83
94.500	0.00	0.40	1.238	IO				0.83
94.583	0.00	0.40	1.235	IO				0.83
94.667	0.00	0.40	1.232	IO				0.83
94.750	0.00	0.40	1.229	IO				0.83
94.833	0.00	0.40	1.226	IO				0.82
94.917	0.00	0.40	1.224	IO				0.82
95.000	0.00	0.40	1.221	IO				0.82
95.083	0.00	0.40	1.218	IO				0.82
95.167	0.00	0.40	1.215	IO				0.82
95.250	0.00	0.40	1.213	IO				0.82
95.333	0.00	0.40	1.210	IO				0.81
95.417	0.00	0.40	1.207	IO				0.81
95.500	0.00	0.40	1.204	IO				0.81
95.583	0.00	0.40	1.202	IO				0.81
95.667	0.00	0.40	1.199	IO				0.81
95.750	0.00	0.40	1.196	IO				0.81
95.833	0.00	0.40	1.193	IO				0.80
95.917	0.00	0.40	1.190	IO				0.80
96.000	0.00	0.40	1.188	IO				0.80
96.083	0.00	0.40	1.185	IO				0.80
96.167	0.00	0.40	1.182	IO				0.80
96.250	0.00	0.40	1.179	IO				0.79
96.333	0.00	0.40	1.177	IO				0.79
96.417	0.00	0.40	1.174	IO				0.79
96.500	0.00	0.40	1.171	IO				0.79
96.583	0.00	0.40	1.168	IO				0.79

96.667	0.00	0.40	1.166	IO				0.79
96.750	0.00	0.40	1.163	IO				0.78
96.833	0.00	0.40	1.160	IO				0.78
96.917	0.00	0.40	1.157	IO				0.78
97.000	0.00	0.40	1.154	IO				0.78
97.083	0.00	0.40	1.152	IO				0.78
97.167	0.00	0.40	1.149	IO				0.77
97.250	0.00	0.40	1.146	IO				0.77
97.333	0.00	0.40	1.143	IO				0.77
97.417	0.00	0.40	1.141	IO				0.77
97.500	0.00	0.40	1.138	IO				0.77
97.583	0.00	0.40	1.135	IO				0.77
97.667	0.00	0.40	1.132	IO				0.76
97.750	0.00	0.40	1.130	IO				0.76
97.833	0.00	0.40	1.127	IO				0.76
97.917	0.00	0.40	1.124	IO				0.76
98.000	0.00	0.40	1.121	IO				0.76
98.083	0.00	0.40	1.118	IO				0.76
98.167	0.00	0.40	1.116	IO				0.75
98.250	0.00	0.40	1.113	IO				0.75
98.333	0.00	0.40	1.110	IO				0.75
98.417	0.00	0.40	1.107	IO				0.75
98.500	0.00	0.40	1.105	IO				0.75
98.583	0.00	0.40	1.102	IO				0.74
98.667	0.00	0.40	1.099	IO				0.74
98.750	0.00	0.40	1.096	IO				0.74
98.833	0.00	0.40	1.094	IO				0.74
98.917	0.00	0.40	1.091	IO				0.74
99.000	0.00	0.40	1.088	IO				0.74
99.083	0.00	0.40	1.085	IO				0.73
99.167	0.00	0.40	1.082	IO				0.73
99.250	0.00	0.40	1.080	IO				0.73
99.333	0.00	0.40	1.077	IO				0.73
99.417	0.00	0.40	1.074	IO				0.73
99.500	0.00	0.40	1.071	IO				0.73
99.583	0.00	0.40	1.069	IO				0.72
99.667	0.00	0.40	1.066	IO				0.72
99.750	0.00	0.40	1.063	IO				0.72
99.833	0.00	0.40	1.060	IO				0.72
99.917	0.00	0.40	1.058	IO				0.72
100.000	0.00	0.40	1.055	IO				0.71
100.083	0.00	0.40	1.052	IO				0.71
100.167	0.00	0.40	1.049	IO				0.71
100.250	0.00	0.40	1.046	IO				0.71
100.333	0.00	0.40	1.044	IO				0.71
100.417	0.00	0.40	1.041	IO				0.71
100.500	0.00	0.40	1.038	IO				0.70
100.583	0.00	0.40	1.035	IO				0.70
100.667	0.00	0.40	1.033	IO				0.70
100.750	0.00	0.40	1.030	IO				0.70
100.833	0.00	0.40	1.027	IO				0.70
100.917	0.00	0.40	1.024	IO				0.70
101.000	0.00	0.40	1.022	IO				0.69
101.083	0.00	0.40	1.019	IO				0.69

101.167	0.00	0.40	1.016	IO				0.69
101.250	0.00	0.40	1.013	IO				0.69
101.333	0.00	0.40	1.010	IO				0.69
101.417	0.00	0.40	1.008	IO				0.68
101.500	0.00	0.40	1.005	IO				0.68
101.583	0.00	0.40	1.002	IO				0.68
101.667	0.00	0.40	0.999	IO				0.68
101.750	0.00	0.40	0.997	IO				0.68
101.833	0.00	0.40	0.994	IO				0.68
101.917	0.00	0.40	0.991	IO				0.67
102.000	0.00	0.40	0.988	IO				0.67
102.083	0.00	0.40	0.986	IO				0.67
102.167	0.00	0.40	0.983	IO				0.67
102.250	0.00	0.40	0.980	IO				0.67
102.333	0.00	0.40	0.977	IO				0.66
102.417	0.00	0.40	0.974	IO				0.66
102.500	0.00	0.40	0.972	IO				0.66
102.583	0.00	0.40	0.969	IO				0.66
102.667	0.00	0.40	0.966	IO				0.66
102.750	0.00	0.40	0.963	IO				0.66
102.833	0.00	0.40	0.961	IO				0.65
102.917	0.00	0.40	0.958	IO				0.65
103.000	0.00	0.40	0.955	IO				0.65
103.083	0.00	0.40	0.952	IO				0.65
103.167	0.00	0.40	0.950	IO				0.65
103.250	0.00	0.40	0.947	IO				0.65
103.333	0.00	0.40	0.944	IO				0.64
103.417	0.00	0.40	0.941	IO				0.64
103.500	0.00	0.40	0.938	IO				0.64
103.583	0.00	0.40	0.936	IO				0.64
103.667	0.00	0.40	0.933	IO				0.64
103.750	0.00	0.40	0.930	IO				0.63
103.833	0.00	0.40	0.927	IO				0.63
103.917	0.00	0.40	0.925	IO				0.63
104.000	0.00	0.40	0.922	IO				0.63
104.083	0.00	0.40	0.919	IO				0.63
104.167	0.00	0.40	0.916	IO				0.63
104.250	0.00	0.40	0.914	IO				0.62
104.333	0.00	0.40	0.911	IO				0.62
104.417	0.00	0.40	0.908	IO				0.62
104.500	0.00	0.40	0.905	IO				0.62
104.583	0.00	0.40	0.902	IO				0.62
104.667	0.00	0.40	0.900	IO				0.62
104.750	0.00	0.40	0.897	IO				0.61
104.833	0.00	0.40	0.894	IO				0.61
104.917	0.00	0.40	0.891	IO				0.61
105.000	0.00	0.40	0.889	IO				0.61
105.083	0.00	0.40	0.886	IO				0.61
105.167	0.00	0.40	0.883	IO				0.60
105.250	0.00	0.40	0.880	IO				0.60
105.333	0.00	0.40	0.878	IO				0.60
105.417	0.00	0.40	0.875	IO				0.60
105.500	0.00	0.40	0.872	IO				0.60
105.583	0.00	0.40	0.869	IO				0.60

105.667	0.00	0.40	0.866	IO				0.59
105.750	0.00	0.40	0.864	IO				0.59
105.833	0.00	0.40	0.861	IO				0.59
105.917	0.00	0.40	0.858	IO				0.59
106.000	0.00	0.40	0.855	IO				0.59
106.083	0.00	0.40	0.853	IO				0.59
106.167	0.00	0.40	0.850	IO				0.58
106.250	0.00	0.40	0.847	IO				0.58
106.333	0.00	0.40	0.844	IO				0.58
106.417	0.00	0.40	0.842	IO				0.58
106.500	0.00	0.40	0.839	IO				0.58
106.583	0.00	0.40	0.836	IO				0.57
106.667	0.00	0.40	0.833	IO				0.57
106.750	0.00	0.40	0.830	IO				0.57
106.833	0.00	0.40	0.828	IO				0.57
106.917	0.00	0.40	0.825	IO				0.57
107.000	0.00	0.40	0.822	IO				0.57
107.083	0.00	0.40	0.819	IO				0.56
107.167	0.00	0.40	0.817	IO				0.56
107.250	0.00	0.40	0.814	IO				0.56
107.333	0.00	0.40	0.811	IO				0.56
107.417	0.00	0.40	0.808	IO				0.56
107.500	0.00	0.40	0.806	IO				0.55
107.583	0.00	0.40	0.803	IO				0.55
107.667	0.00	0.40	0.800	IO				0.55
107.750	0.00	0.40	0.797	IO				0.55
107.833	0.00	0.40	0.794	IO				0.55
107.917	0.00	0.40	0.792	IO				0.55
108.000	0.00	0.40	0.789	IO				0.54
108.083	0.00	0.40	0.786	IO				0.54
108.167	0.00	0.40	0.783	IO				0.54
108.250	0.00	0.40	0.781	IO				0.54
108.333	0.00	0.40	0.778	IO				0.54
108.417	0.00	0.40	0.775	IO				0.54
108.500	0.00	0.40	0.772	IO				0.53
108.583	0.00	0.40	0.770	IO				0.53
108.667	0.00	0.40	0.767	IO				0.53
108.750	0.00	0.40	0.764	IO				0.53
108.833	0.00	0.40	0.761	IO				0.53
108.917	0.00	0.40	0.758	IO				0.52
109.000	0.00	0.40	0.756	IO				0.52
109.083	0.00	0.40	0.753	IO				0.52
109.167	0.00	0.40	0.750	IO				0.52
109.250	0.00	0.40	0.747	IO				0.52
109.333	0.00	0.40	0.745	IO				0.52
109.417	0.00	0.40	0.742	IO				0.51
109.500	0.00	0.40	0.739	IO				0.51
109.583	0.00	0.40	0.736	IO				0.51
109.667	0.00	0.40	0.734	IO				0.51
109.750	0.00	0.40	0.731	IO				0.51
109.833	0.00	0.40	0.728	IO				0.51
109.917	0.00	0.40	0.725	IO				0.50
110.000	0.00	0.40	0.722	IO				0.50
110.083	0.00	0.40	0.720	IO				0.50

110.167	0.00	0.40	0.717	IO				0.50
110.250	0.00	0.40	0.714	IO				0.50
110.333	0.00	0.40	0.711	IO				0.49
110.417	0.00	0.40	0.709	IO				0.49
110.500	0.00	0.39	0.706	IO				0.49
110.583	0.00	0.39	0.703	IO				0.49
110.667	0.00	0.39	0.701	IO				0.49
110.750	0.00	0.39	0.698	IO				0.48
110.833	0.00	0.39	0.695	IO				0.48
110.917	0.00	0.39	0.693	IO				0.48
111.000	0.00	0.39	0.690	IO				0.48
111.083	0.00	0.38	0.687	IO				0.48
111.167	0.00	0.38	0.685	IO				0.48
111.250	0.00	0.38	0.682	IO				0.47
111.333	0.00	0.38	0.679	IO				0.47
111.417	0.00	0.38	0.677	IO				0.47
111.500	0.00	0.38	0.674	IO				0.47
111.583	0.00	0.38	0.672	IO				0.47
111.667	0.00	0.37	0.669	IO				0.46
111.750	0.00	0.37	0.666	IO				0.46
111.833	0.00	0.37	0.664	IO				0.46
111.917	0.00	0.37	0.661	IO				0.46
112.000	0.00	0.37	0.659	IO				0.46
112.083	0.00	0.37	0.656	IO				0.46
112.167	0.00	0.37	0.654	IO				0.45
112.250	0.00	0.36	0.651	IO				0.45
112.333	0.00	0.36	0.649	IO				0.45
112.417	0.00	0.36	0.646	IO				0.45
112.500	0.00	0.36	0.644	IO				0.45
112.583	0.00	0.36	0.641	IO				0.45
112.667	0.00	0.36	0.639	IO				0.44
112.750	0.00	0.36	0.636	IO				0.44
112.833	0.00	0.35	0.634	IO				0.44
112.917	0.00	0.35	0.632	IO				0.44
113.000	0.00	0.35	0.629	IO				0.44
113.083	0.00	0.35	0.627	IO				0.44
113.167	0.00	0.35	0.624	IO				0.43
113.250	0.00	0.35	0.622	IO				0.43
113.333	0.00	0.35	0.619	IO				0.43
113.417	0.00	0.34	0.617	IO				0.43
113.500	0.00	0.34	0.615	IO				0.43
113.583	0.00	0.34	0.612	IO				0.43
113.667	0.00	0.34	0.610	IO				0.42
113.750	0.00	0.34	0.608	IO				0.42
113.833	0.00	0.34	0.605	IO				0.42
113.917	0.00	0.34	0.603	IO				0.42
114.000	0.00	0.34	0.601	IO				0.42
114.083	0.00	0.33	0.598	IO				0.42
114.167	0.00	0.33	0.596	IO				0.41
114.250	0.00	0.33	0.594	IO				0.41
114.333	0.00	0.33	0.592	IO				0.41
114.417	0.00	0.33	0.589	IO				0.41
114.500	0.00	0.33	0.587	IO				0.41
114.583	0.00	0.33	0.585	IO				0.41

114.667	0.00	0.33	0.583	IO				0.40
114.750	0.00	0.32	0.580	IO				0.40
114.833	0.00	0.32	0.578	IO				0.40
114.917	0.00	0.32	0.576	IO				0.40
115.000	0.00	0.32	0.574	IO				0.40
115.083	0.00	0.32	0.571	IO				0.40
115.167	0.00	0.32	0.569	IO				0.40
115.250	0.00	0.32	0.567	IO				0.39
115.333	0.00	0.32	0.565	IO				0.39
115.417	0.00	0.31	0.563	IO				0.39
115.500	0.00	0.31	0.561	IO				0.39
115.583	0.00	0.31	0.558	IO				0.39
115.667	0.00	0.31	0.556	IO				0.39
115.750	0.00	0.31	0.554	IO				0.38
115.833	0.00	0.31	0.552	IO				0.38
115.917	0.00	0.31	0.550	IO				0.38
116.000	0.00	0.31	0.548	IO				0.38
116.083	0.00	0.30	0.546	IO				0.38
116.167	0.00	0.30	0.544	IO				0.38
116.250	0.00	0.30	0.541	IO				0.38
116.333	0.00	0.30	0.539	IO				0.37
116.417	0.00	0.30	0.537	IO				0.37
116.500	0.00	0.30	0.535	IO				0.37
116.583	0.00	0.30	0.533	IO				0.37
116.667	0.00	0.30	0.531	IO				0.37
116.750	0.00	0.30	0.529	IO				0.37
116.833	0.00	0.29	0.527	IO				0.37
116.917	0.00	0.29	0.525	IO				0.36
117.000	0.00	0.29	0.523	IO				0.36
117.083	0.00	0.29	0.521	IO				0.36
117.167	0.00	0.29	0.519	IO				0.36
117.250	0.00	0.29	0.517	IO				0.36
117.333	0.00	0.29	0.515	IO				0.36
117.417	0.00	0.29	0.513	IO				0.36
117.500	0.00	0.29	0.511	IO				0.35
117.583	0.00	0.28	0.509	IO				0.35
117.667	0.00	0.28	0.507	IO				0.35
117.750	0.00	0.28	0.505	IO				0.35
117.833	0.00	0.28	0.503	IO				0.35
117.917	0.00	0.28	0.501	IO				0.35
118.000	0.00	0.28	0.499	IO				0.35
118.083	0.00	0.28	0.498	IO				0.35
118.167	0.00	0.28	0.496	IO				0.34
118.250	0.00	0.28	0.494	IO				0.34
118.333	0.00	0.27	0.492	IO				0.34
118.417	0.00	0.27	0.490	IO				0.34
118.500	0.00	0.27	0.488	IO				0.34
118.583	0.00	0.27	0.486	IO				0.34
118.667	0.00	0.27	0.484	IO				0.34
118.750	0.00	0.27	0.482	IO				0.34
118.833	0.00	0.27	0.481	IO				0.33
118.917	0.00	0.27	0.479	IO				0.33
119.000	0.00	0.27	0.477	IO				0.33
119.083	0.00	0.27	0.475	IO				0.33

119.167	0.00	0.26	0.473	IO				0.33
119.250	0.00	0.26	0.471	IO				0.33
119.333	0.00	0.26	0.470	IO				0.33
119.417	0.00	0.26	0.468	IO				0.32
119.500	0.00	0.26	0.466	IO				0.32
119.583	0.00	0.26	0.464	IO				0.32
119.667	0.00	0.26	0.462	IO				0.32
119.750	0.00	0.26	0.461	IO				0.32
119.833	0.00	0.26	0.459	IO				0.32
119.917	0.00	0.26	0.457	O				0.32
120.000	0.00	0.25	0.455	O				0.32
120.083	0.00	0.25	0.454	O				0.32
120.167	0.00	0.25	0.452	O				0.31
120.250	0.00	0.25	0.450	O				0.31
120.333	0.00	0.25	0.448	O				0.31
120.417	0.00	0.25	0.447	O				0.31
120.500	0.00	0.25	0.445	O				0.31
120.583	0.00	0.25	0.443	O				0.31
120.667	0.00	0.25	0.442	O				0.31
120.750	0.00	0.25	0.440	O				0.31
120.833	0.00	0.24	0.438	O				0.30
120.917	0.00	0.24	0.437	O				0.30
121.000	0.00	0.24	0.435	O				0.30
121.083	0.00	0.24	0.433	O				0.30
121.167	0.00	0.24	0.432	O				0.30
121.250	0.00	0.24	0.430	O				0.30
121.333	0.00	0.24	0.428	O				0.30
121.417	0.00	0.24	0.427	O				0.30
121.500	0.00	0.24	0.425	O				0.30
121.583	0.00	0.24	0.423	O				0.29
121.667	0.00	0.24	0.422	O				0.29
121.750	0.00	0.23	0.420	O				0.29
121.833	0.00	0.23	0.418	O				0.29
121.917	0.00	0.23	0.417	O				0.29
122.000	0.00	0.23	0.415	O				0.29
122.083	0.00	0.23	0.414	O				0.29
122.167	0.00	0.23	0.412	O				0.29
122.250	0.00	0.23	0.410	O				0.29
122.333	0.00	0.23	0.409	O				0.28
122.417	0.00	0.23	0.407	O				0.28
122.500	0.00	0.23	0.406	O				0.28
122.583	0.00	0.23	0.404	O				0.28
122.667	0.00	0.22	0.403	O				0.28
122.750	0.00	0.22	0.401	O				0.28
122.833	0.00	0.22	0.400	O				0.28
122.917	0.00	0.22	0.398	O				0.28
123.000	0.00	0.22	0.397	O				0.28
123.083	0.00	0.22	0.395	O				0.27
123.167	0.00	0.22	0.393	O				0.27
123.250	0.00	0.22	0.392	O				0.27
123.333	0.00	0.22	0.390	O				0.27
123.417	0.00	0.22	0.389	O				0.27
123.500	0.00	0.22	0.387	O				0.27
123.583	0.00	0.22	0.386	O				0.27

123.667	0.00	0.21	0.385	O	|	|	|	0.27
123.750	0.00	0.21	0.383	O	|	|	|	0.27
123.833	0.00	0.21	0.382	O	|	|	|	0.26
123.917	0.00	0.21	0.380	O	|	|	|	0.26
124.000	0.00	0.21	0.379	O	|	|	|	0.26
124.083	0.00	0.21	0.377	O	|	|	|	0.26
124.167	0.00	0.21	0.376	O	|	|	|	0.26
124.250	0.00	0.21	0.374	O	|	|	|	0.26
124.333	0.00	0.21	0.373	O	|	|	|	0.26
124.417	0.00	0.21	0.371	O	|	|	|	0.26
124.500	0.00	0.21	0.370	O	|	|	|	0.26
124.583	0.00	0.21	0.369	O	|	|	|	0.26
124.667	0.00	0.21	0.367	O	|	|	|	0.25
124.750	0.00	0.20	0.366	O	|	|	|	0.25
124.833	0.00	0.20	0.364	O	|	|	|	0.25
124.917	0.00	0.20	0.363	O	|	|	|	0.25
125.000	0.00	0.20	0.362	O	|	|	|	0.25
125.083	0.00	0.20	0.360	O	|	|	|	0.25
125.167	0.00	0.20	0.359	O	|	|	|	0.25
125.250	0.00	0.20	0.357	O	|	|	|	0.25
125.333	0.00	0.20	0.356	O	|	|	|	0.25
125.417	0.00	0.20	0.355	O	|	|	|	0.25
125.500	0.00	0.20	0.353	O	|	|	|	0.25
125.583	0.00	0.20	0.352	O	|	|	|	0.24
125.667	0.00	0.20	0.351	O	|	|	|	0.24
125.750	0.00	0.20	0.349	O	|	|	|	0.24
125.833	0.00	0.19	0.348	O	|	|	|	0.24
125.917	0.00	0.19	0.347	O	|	|	|	0.24
126.000	0.00	0.19	0.345	O	|	|	|	0.24
126.083	0.00	0.19	0.344	O	|	|	|	0.24
126.167	0.00	0.19	0.343	O	|	|	|	0.24
126.250	0.00	0.19	0.341	O	|	|	|	0.24
126.333	0.00	0.19	0.340	O	|	|	|	0.24
126.417	0.00	0.19	0.339	O	|	|	|	0.24
126.500	0.00	0.19	0.337	O	|	|	|	0.23
126.583	0.00	0.19	0.336	O	|	|	|	0.23
126.667	0.00	0.19	0.335	O	|	|	|	0.23
126.750	0.00	0.19	0.334	O	|	|	|	0.23
126.833	0.00	0.19	0.332	O	|	|	|	0.23
126.917	0.00	0.18	0.331	O	|	|	|	0.23
127.000	0.00	0.18	0.330	O	|	|	|	0.23
127.083	0.00	0.18	0.328	O	|	|	|	0.23
127.167	0.00	0.18	0.327	O	|	|	|	0.23
127.250	0.00	0.18	0.326	O	|	|	|	0.23
127.333	0.00	0.18	0.325	O	|	|	|	0.23
127.417	0.00	0.18	0.323	O	|	|	|	0.22
127.500	0.00	0.18	0.322	O	|	|	|	0.22
127.583	0.00	0.18	0.321	O	|	|	|	0.22
127.667	0.00	0.18	0.320	O	|	|	|	0.22
127.750	0.00	0.18	0.318	O	|	|	|	0.22
127.833	0.00	0.18	0.317	O	|	|	|	0.22
127.917	0.00	0.18	0.316	O	|	|	|	0.22
128.000	0.00	0.18	0.315	O	|	|	|	0.22
128.083	0.00	0.18	0.314	O	|	|	|	0.22

128.167	0.00	0.17	0.312	O	|	|	|	0.22
128.250	0.00	0.17	0.311	O	|	|	|	0.22
128.333	0.00	0.17	0.310	O	|	|	|	0.22
128.417	0.00	0.17	0.309	O	|	|	|	0.21
128.500	0.00	0.17	0.308	O	|	|	|	0.21
128.583	0.00	0.17	0.306	O	|	|	|	0.21
128.667	0.00	0.17	0.305	O	|	|	|	0.21
128.750	0.00	0.17	0.304	O	|	|	|	0.21
128.833	0.00	0.17	0.303	O	|	|	|	0.21
128.917	0.00	0.17	0.302	O	|	|	|	0.21
129.000	0.00	0.17	0.301	O	|	|	|	0.21
129.083	0.00	0.17	0.299	O	|	|	|	0.21
129.167	0.00	0.17	0.298	O	|	|	|	0.21
129.250	0.00	0.17	0.297	O	|	|	|	0.21
129.333	0.00	0.17	0.296	O	|	|	|	0.21
129.417	0.00	0.16	0.295	O	|	|	|	0.20
129.500	0.00	0.16	0.294	O	|	|	|	0.20
129.583	0.00	0.16	0.293	O	|	|	|	0.20
129.667	0.00	0.16	0.292	O	|	|	|	0.20
129.750	0.00	0.16	0.290	O	|	|	|	0.20
129.833	0.00	0.16	0.289	O	|	|	|	0.20
129.917	0.00	0.16	0.288	O	|	|	|	0.20
130.000	0.00	0.16	0.287	O	|	|	|	0.20
130.083	0.00	0.16	0.286	O	|	|	|	0.20
130.167	0.00	0.16	0.285	O	|	|	|	0.20
130.250	0.00	0.16	0.284	O	|	|	|	0.20
130.333	0.00	0.16	0.283	O	|	|	|	0.20
130.417	0.00	0.16	0.282	O	|	|	|	0.20
130.500	0.00	0.16	0.281	O	|	|	|	0.19
130.583	0.00	0.16	0.279	O	|	|	|	0.19
130.667	0.00	0.16	0.278	O	|	|	|	0.19
130.750	0.00	0.15	0.277	O	|	|	|	0.19
130.833	0.00	0.15	0.276	O	|	|	|	0.19
130.917	0.00	0.15	0.275	O	|	|	|	0.19
131.000	0.00	0.15	0.274	O	|	|	|	0.19
131.083	0.00	0.15	0.273	O	|	|	|	0.19
131.167	0.00	0.15	0.272	O	|	|	|	0.19
131.250	0.00	0.15	0.271	O	|	|	|	0.19
131.333	0.00	0.15	0.270	O	|	|	|	0.19
131.417	0.00	0.15	0.269	O	|	|	|	0.19
131.500	0.00	0.15	0.268	O	|	|	|	0.19
131.583	0.00	0.15	0.267	O	|	|	|	0.19
131.667	0.00	0.15	0.266	O	|	|	|	0.18
131.750	0.00	0.15	0.265	O	|	|	|	0.18
131.833	0.00	0.15	0.264	O	|	|	|	0.18
131.917	0.00	0.15	0.263	O	|	|	|	0.18
132.000	0.00	0.15	0.262	O	|	|	|	0.18
132.083	0.00	0.15	0.261	O	|	|	|	0.18
132.167	0.00	0.15	0.260	O	|	|	|	0.18
132.250	0.00	0.14	0.259	O	|	|	|	0.18
132.333	0.00	0.14	0.258	O	|	|	|	0.18
132.417	0.00	0.14	0.257	O	|	|	|	0.18
132.500	0.00	0.14	0.256	O	|	|	|	0.18
132.583	0.00	0.14	0.255	O	|	|	|	0.18

132.667	0.00	0.14	0.254	O	|	|	|	|	0.18
132.750	0.00	0.14	0.253	O	|	|	|	|	0.18
132.833	0.00	0.14	0.252	O	|	|	|	|	0.17
132.917	0.00	0.14	0.251	O	|	|	|	|	0.17
133.000	0.00	0.14	0.250	O	|	|	|	|	0.17
133.083	0.00	0.14	0.249	O	|	|	|	|	0.17
133.167	0.00	0.14	0.248	O	|	|	|	|	0.17
133.250	0.00	0.14	0.247	O	|	|	|	|	0.17
133.333	0.00	0.14	0.246	O	|	|	|	|	0.17
133.417	0.00	0.14	0.245	O	|	|	|	|	0.17
133.500	0.00	0.14	0.244	O	|	|	|	|	0.17
133.583	0.00	0.14	0.243	O	|	|	|	|	0.17
133.667	0.00	0.14	0.242	O	|	|	|	|	0.17
133.750	0.00	0.13	0.241	O	|	|	|	|	0.17
133.833	0.00	0.13	0.241	O	|	|	|	|	0.17
133.917	0.00	0.13	0.240	O	|	|	|	|	0.17
134.000	0.00	0.13	0.239	O	|	|	|	|	0.17
134.083	0.00	0.13	0.238	O	|	|	|	|	0.17
134.167	0.00	0.13	0.237	O	|	|	|	|	0.16
134.250	0.00	0.13	0.236	O	|	|	|	|	0.16
134.333	0.00	0.13	0.235	O	|	|	|	|	0.16
134.417	0.00	0.13	0.234	O	|	|	|	|	0.16
134.500	0.00	0.13	0.233	O	|	|	|	|	0.16
134.583	0.00	0.13	0.232	O	|	|	|	|	0.16
134.667	0.00	0.13	0.231	O	|	|	|	|	0.16
134.750	0.00	0.13	0.231	O	|	|	|	|	0.16
134.833	0.00	0.13	0.230	O	|	|	|	|	0.16
134.917	0.00	0.13	0.229	O	|	|	|	|	0.16
135.000	0.00	0.13	0.228	O	|	|	|	|	0.16
135.083	0.00	0.13	0.227	O	|	|	|	|	0.16
135.167	0.00	0.13	0.226	O	|	|	|	|	0.16
135.250	0.00	0.13	0.225	O	|	|	|	|	0.16
135.333	0.00	0.13	0.224	O	|	|	|	|	0.16
135.417	0.00	0.12	0.224	O	|	|	|	|	0.16
135.500	0.00	0.12	0.223	O	|	|	|	|	0.15
135.583	0.00	0.12	0.222	O	|	|	|	|	0.15
135.667	0.00	0.12	0.221	O	|	|	|	|	0.15
135.750	0.00	0.12	0.220	O	|	|	|	|	0.15
135.833	0.00	0.12	0.219	O	|	|	|	|	0.15
135.917	0.00	0.12	0.218	O	|	|	|	|	0.15
136.000	0.00	0.12	0.218	O	|	|	|	|	0.15
136.083	0.00	0.12	0.217	O	|	|	|	|	0.15
136.167	0.00	0.12	0.216	O	|	|	|	|	0.15
136.250	0.00	0.12	0.215	O	|	|	|	|	0.15
136.333	0.00	0.12	0.214	O	|	|	|	|	0.15
136.417	0.00	0.12	0.213	O	|	|	|	|	0.15
136.500	0.00	0.12	0.213	O	|	|	|	|	0.15
136.583	0.00	0.12	0.212	O	|	|	|	|	0.15
136.667	0.00	0.12	0.211	O	|	|	|	|	0.15
136.750	0.00	0.12	0.210	O	|	|	|	|	0.15
136.833	0.00	0.12	0.209	O	|	|	|	|	0.15
136.917	0.00	0.12	0.209	O	|	|	|	|	0.14
137.000	0.00	0.12	0.208	O	|	|	|	|	0.14
137.083	0.00	0.12	0.207	O	|	|	|	|	0.14

137.167	0.00	0.12	0.206	O	|	|	|	0.14
137.250	0.00	0.11	0.205	O	|	|	|	0.14
137.333	0.00	0.11	0.205	O	|	|	|	0.14
137.417	0.00	0.11	0.204	O	|	|	|	0.14
137.500	0.00	0.11	0.203	O	|	|	|	0.14
137.583	0.00	0.11	0.202	O	|	|	|	0.14
137.667	0.00	0.11	0.202	O	|	|	|	0.14
137.750	0.00	0.11	0.201	O	|	|	|	0.14
137.833	0.00	0.11	0.200	O	|	|	|	0.14
137.917	0.00	0.11	0.199	O	|	|	|	0.14
138.000	0.00	0.11	0.198	O	|	|	|	0.14
138.083	0.00	0.11	0.198	O	|	|	|	0.14
138.167	0.00	0.11	0.197	O	|	|	|	0.14
138.250	0.00	0.11	0.196	O	|	|	|	0.14
138.333	0.00	0.11	0.195	O	|	|	|	0.14
138.417	0.00	0.11	0.195	O	|	|	|	0.14
138.500	0.00	0.11	0.194	O	|	|	|	0.13
138.583	0.00	0.11	0.193	O	|	|	|	0.13
138.667	0.00	0.11	0.192	O	|	|	|	0.13
138.750	0.00	0.11	0.192	O	|	|	|	0.13
138.833	0.00	0.11	0.191	O	|	|	|	0.13
138.917	0.00	0.11	0.190	O	|	|	|	0.13
139.000	0.00	0.11	0.189	O	|	|	|	0.13
139.083	0.00	0.11	0.189	O	|	|	|	0.13
139.167	0.00	0.11	0.188	O	|	|	|	0.13
139.250	0.00	0.10	0.187	O	|	|	|	0.13
139.333	0.00	0.10	0.187	O	|	|	|	0.13
139.417	0.00	0.10	0.186	O	|	|	|	0.13
139.500	0.00	0.10	0.185	O	|	|	|	0.13
139.583	0.00	0.10	0.184	O	|	|	|	0.13
139.667	0.00	0.10	0.184	O	|	|	|	0.13
139.750	0.00	0.10	0.183	O	|	|	|	0.13
139.833	0.00	0.10	0.182	O	|	|	|	0.13
139.917	0.00	0.10	0.182	O	|	|	|	0.13
140.000	0.00	0.10	0.181	O	|	|	|	0.13
140.083	0.00	0.10	0.180	O	|	|	|	0.13
140.167	0.00	0.10	0.180	O	|	|	|	0.12
140.250	0.00	0.10	0.179	O	|	|	|	0.12
140.333	0.00	0.10	0.178	O	|	|	|	0.12
140.417	0.00	0.10	0.178	O	|	|	|	0.12
140.500	0.00	0.10	0.177	O	|	|	|	0.12
140.583	0.00	0.10	0.176	O	|	|	|	0.12
140.667	0.00	0.10	0.175	O	|	|	|	0.12
140.750	0.00	0.10	0.175	O	|	|	|	0.12
140.833	0.00	0.10	0.174	O	|	|	|	0.12
140.917	0.00	0.10	0.173	O	|	|	|	0.12
141.000	0.00	0.10	0.173	O	|	|	|	0.12
141.083	0.00	0.10	0.172	O	|	|	|	0.12
141.167	0.00	0.10	0.171	O	|	|	|	0.12
141.250	0.00	0.10	0.171	O	|	|	|	0.12
141.333	0.00	0.10	0.170	O	|	|	|	0.12
141.417	0.00	0.09	0.169	O	|	|	|	0.12
141.500	0.00	0.09	0.169	O	|	|	|	0.12
141.583	0.00	0.09	0.168	O	|	|	|	0.12

141.667	0.00	0.09	0.168	O	|	|	|	|	0.12
141.750	0.00	0.09	0.167	O	|	|	|	|	0.12
141.833	0.00	0.09	0.166	O	|	|	|	|	0.12
141.917	0.00	0.09	0.166	O	|	|	|	|	0.12
142.000	0.00	0.09	0.165	O	|	|	|	|	0.11
142.083	0.00	0.09	0.164	O	|	|	|	|	0.11
142.167	0.00	0.09	0.164	O	|	|	|	|	0.11
142.250	0.00	0.09	0.163	O	|	|	|	|	0.11
142.333	0.00	0.09	0.162	O	|	|	|	|	0.11
142.417	0.00	0.09	0.162	O	|	|	|	|	0.11
142.500	0.00	0.09	0.161	O	|	|	|	|	0.11
142.583	0.00	0.09	0.161	O	|	|	|	|	0.11
142.667	0.00	0.09	0.160	O	|	|	|	|	0.11
142.750	0.00	0.09	0.159	O	|	|	|	|	0.11
142.833	0.00	0.09	0.159	O	|	|	|	|	0.11
142.917	0.00	0.09	0.158	O	|	|	|	|	0.11
143.000	0.00	0.09	0.158	O	|	|	|	|	0.11
143.083	0.00	0.09	0.157	O	|	|	|	|	0.11
143.167	0.00	0.09	0.156	O	|	|	|	|	0.11
143.250	0.00	0.09	0.156	O	|	|	|	|	0.11
143.333	0.00	0.09	0.155	O	|	|	|	|	0.11
143.417	0.00	0.09	0.155	O	|	|	|	|	0.11
143.500	0.00	0.09	0.154	O	|	|	|	|	0.11
143.583	0.00	0.09	0.153	O	|	|	|	|	0.11
143.667	0.00	0.09	0.153	O	|	|	|	|	0.11
143.750	0.00	0.08	0.152	O	|	|	|	|	0.11
143.833	0.00	0.08	0.152	O	|	|	|	|	0.11
143.917	0.00	0.08	0.151	O	|	|	|	|	0.10
144.000	0.00	0.08	0.150	O	|	|	|	|	0.10
144.083	0.00	0.08	0.150	O	|	|	|	|	0.10
144.167	0.00	0.08	0.149	O	|	|	|	|	0.10
144.250	0.00	0.08	0.149	O	|	|	|	|	0.10
144.333	0.00	0.08	0.148	O	|	|	|	|	0.10
144.417	0.00	0.08	0.148	O	|	|	|	|	0.10
144.500	0.00	0.08	0.147	O	|	|	|	|	0.10
144.583	0.00	0.08	0.146	O	|	|	|	|	0.10
144.667	0.00	0.08	0.146	O	|	|	|	|	0.10
144.750	0.00	0.08	0.145	O	|	|	|	|	0.10
144.833	0.00	0.08	0.145	O	|	|	|	|	0.10
144.917	0.00	0.08	0.144	O	|	|	|	|	0.10
145.000	0.00	0.08	0.144	O	|	|	|	|	0.10
145.083	0.00	0.08	0.143	O	|	|	|	|	0.10
145.167	0.00	0.08	0.143	O	|	|	|	|	0.10
145.250	0.00	0.08	0.142	O	|	|	|	|	0.10
145.333	0.00	0.08	0.141	O	|	|	|	|	0.10
145.417	0.00	0.08	0.141	O	|	|	|	|	0.10
145.500	0.00	0.08	0.140	O	|	|	|	|	0.10
145.583	0.00	0.08	0.140	O	|	|	|	|	0.10
145.667	0.00	0.08	0.139	O	|	|	|	|	0.10
145.750	0.00	0.08	0.139	O	|	|	|	|	0.10
145.833	0.00	0.08	0.138	O	|	|	|	|	0.10
145.917	0.00	0.08	0.138	O	|	|	|	|	0.10
146.000	0.00	0.08	0.137	O	|	|	|	|	0.10
146.083	0.00	0.08	0.137	O	|	|	|	|	0.09

146.167	0.00	0.08	0.136	O	|	|	|	|	0.09
146.250	0.00	0.08	0.136	O	|	|	|	|	0.09
146.333	0.00	0.08	0.135	O	|	|	|	|	0.09
146.417	0.00	0.08	0.135	O	|	|	|	|	0.09
146.500	0.00	0.07	0.134	O	|	|	|	|	0.09
146.583	0.00	0.07	0.134	O	|	|	|	|	0.09
146.667	0.00	0.07	0.133	O	|	|	|	|	0.09
146.750	0.00	0.07	0.133	O	|	|	|	|	0.09
146.833	0.00	0.07	0.132	O	|	|	|	|	0.09
146.917	0.00	0.07	0.131	O	|	|	|	|	0.09
147.000	0.00	0.07	0.131	O	|	|	|	|	0.09
147.083	0.00	0.07	0.130	O	|	|	|	|	0.09
147.167	0.00	0.07	0.130	O	|	|	|	|	0.09
147.250	0.00	0.07	0.129	O	|	|	|	|	0.09
147.333	0.00	0.07	0.129	O	|	|	|	|	0.09
147.417	0.00	0.07	0.128	O	|	|	|	|	0.09
147.500	0.00	0.07	0.128	O	|	|	|	|	0.09
147.583	0.00	0.07	0.128	O	|	|	|	|	0.09
147.667	0.00	0.07	0.127	O	|	|	|	|	0.09
147.750	0.00	0.07	0.127	O	|	|	|	|	0.09
147.833	0.00	0.07	0.126	O	|	|	|	|	0.09
147.917	0.00	0.07	0.126	O	|	|	|	|	0.09
148.000	0.00	0.07	0.125	O	|	|	|	|	0.09
148.083	0.00	0.07	0.125	O	|	|	|	|	0.09
148.167	0.00	0.07	0.124	O	|	|	|	|	0.09
148.250	0.00	0.07	0.124	O	|	|	|	|	0.09
148.333	0.00	0.07	0.123	O	|	|	|	|	0.09
148.417	0.00	0.07	0.123	O	|	|	|	|	0.09
148.500	0.00	0.07	0.122	O	|	|	|	|	0.08
148.583	0.00	0.07	0.122	O	|	|	|	|	0.08
148.667	0.00	0.07	0.121	O	|	|	|	|	0.08
148.750	0.00	0.07	0.121	O	|	|	|	|	0.08
148.833	0.00	0.07	0.120	O	|	|	|	|	0.08
148.917	0.00	0.07	0.120	O	|	|	|	|	0.08
149.000	0.00	0.07	0.119	O	|	|	|	|	0.08
149.083	0.00	0.07	0.119	O	|	|	|	|	0.08
149.167	0.00	0.07	0.119	O	|	|	|	|	0.08
149.250	0.00	0.07	0.118	O	|	|	|	|	0.08
149.333	0.00	0.07	0.118	O	|	|	|	|	0.08
149.417	0.00	0.07	0.117	O	|	|	|	|	0.08
149.500	0.00	0.07	0.117	O	|	|	|	|	0.08
149.583	0.00	0.06	0.116	O	|	|	|	|	0.08
149.667	0.00	0.06	0.116	O	|	|	|	|	0.08
149.750	0.00	0.06	0.115	O	|	|	|	|	0.08
149.833	0.00	0.06	0.115	O	|	|	|	|	0.08
149.917	0.00	0.06	0.114	O	|	|	|	|	0.08
150.000	0.00	0.06	0.114	O	|	|	|	|	0.08
150.083	0.00	0.06	0.114	O	|	|	|	|	0.08
150.167	0.00	0.06	0.113	O	|	|	|	|	0.08
150.250	0.00	0.06	0.113	O	|	|	|	|	0.08
150.333	0.00	0.06	0.112	O	|	|	|	|	0.08
150.417	0.00	0.06	0.112	O	|	|	|	|	0.08
150.500	0.00	0.06	0.111	O	|	|	|	|	0.08
150.583	0.00	0.06	0.111	O	|	|	|	|	0.08

150.667	0.00	0.06	0.111	O	|	|	|	|	0.08
150.750	0.00	0.06	0.110	O	|	|	|	|	0.08
150.833	0.00	0.06	0.110	O	|	|	|	|	0.08
150.917	0.00	0.06	0.109	O	|	|	|	|	0.08
151.000	0.00	0.06	0.109	O	|	|	|	|	0.08
151.083	0.00	0.06	0.108	O	|	|	|	|	0.08
151.167	0.00	0.06	0.108	O	|	|	|	|	0.08
151.250	0.00	0.06	0.108	O	|	|	|	|	0.07
151.333	0.00	0.06	0.107	O	|	|	|	|	0.07
151.417	0.00	0.06	0.107	O	|	|	|	|	0.07
151.500	0.00	0.06	0.106	O	|	|	|	|	0.07
151.583	0.00	0.06	0.106	O	|	|	|	|	0.07
151.667	0.00	0.06	0.106	O	|	|	|	|	0.07
151.750	0.00	0.06	0.105	O	|	|	|	|	0.07
151.833	0.00	0.06	0.105	O	|	|	|	|	0.07
151.917	0.00	0.06	0.104	O	|	|	|	|	0.07
152.000	0.00	0.06	0.104	O	|	|	|	|	0.07
152.083	0.00	0.06	0.104	O	|	|	|	|	0.07
152.167	0.00	0.06	0.103	O	|	|	|	|	0.07
152.250	0.00	0.06	0.103	O	|	|	|	|	0.07
152.333	0.00	0.06	0.102	O	|	|	|	|	0.07
152.417	0.00	0.06	0.102	O	|	|	|	|	0.07
152.500	0.00	0.06	0.102	O	|	|	|	|	0.07
152.583	0.00	0.06	0.101	O	|	|	|	|	0.07
152.667	0.00	0.06	0.101	O	|	|	|	|	0.07
152.750	0.00	0.06	0.100	O	|	|	|	|	0.07
152.833	0.00	0.06	0.100	O	|	|	|	|	0.07
152.917	0.00	0.06	0.100	O	|	|	|	|	0.07
153.000	0.00	0.06	0.099	O	|	|	|	|	0.07
153.083	0.00	0.06	0.099	O	|	|	|	|	0.07
153.167	0.00	0.06	0.099	O	|	|	|	|	0.07
153.250	0.00	0.05	0.098	O	|	|	|	|	0.07
153.333	0.00	0.05	0.098	O	|	|	|	|	0.07
153.417	0.00	0.05	0.097	O	|	|	|	|	0.07
153.500	0.00	0.05	0.097	O	|	|	|	|	0.07
153.583	0.00	0.05	0.097	O	|	|	|	|	0.07
153.667	0.00	0.05	0.096	O	|	|	|	|	0.07
153.750	0.00	0.05	0.096	O	|	|	|	|	0.07
153.833	0.00	0.05	0.096	O	|	|	|	|	0.07
153.917	0.00	0.05	0.095	O	|	|	|	|	0.07
154.000	0.00	0.05	0.095	O	|	|	|	|	0.07
154.083	0.00	0.05	0.094	O	|	|	|	|	0.07
154.167	0.00	0.05	0.094	O	|	|	|	|	0.07
154.250	0.00	0.05	0.094	O	|	|	|	|	0.07
154.333	0.00	0.05	0.093	O	|	|	|	|	0.06
154.417	0.00	0.05	0.093	O	|	|	|	|	0.06
154.500	0.00	0.05	0.093	O	|	|	|	|	0.06
154.583	0.00	0.05	0.092	O	|	|	|	|	0.06
154.667	0.00	0.05	0.092	O	|	|	|	|	0.06
154.750	0.00	0.05	0.092	O	|	|	|	|	0.06
154.833	0.00	0.05	0.091	O	|	|	|	|	0.06
154.917	0.00	0.05	0.091	O	|	|	|	|	0.06
155.000	0.00	0.05	0.091	O	|	|	|	|	0.06
155.083	0.00	0.05	0.090	O	|	|	|	|	0.06

155.167	0.00	0.05	0.090	O	|	|	|	|	0.06
155.250	0.00	0.05	0.090	O	|	|	|	|	0.06
155.333	0.00	0.05	0.089	O	|	|	|	|	0.06
155.417	0.00	0.05	0.089	O	|	|	|	|	0.06
155.500	0.00	0.05	0.088	O	|	|	|	|	0.06
155.583	0.00	0.05	0.088	O	|	|	|	|	0.06
155.667	0.00	0.05	0.088	O	|	|	|	|	0.06
155.750	0.00	0.05	0.087	O	|	|	|	|	0.06
155.833	0.00	0.05	0.087	O	|	|	|	|	0.06
155.917	0.00	0.05	0.087	O	|	|	|	|	0.06
156.000	0.00	0.05	0.086	O	|	|	|	|	0.06
156.083	0.00	0.05	0.086	O	|	|	|	|	0.06
156.167	0.00	0.05	0.086	O	|	|	|	|	0.06
156.250	0.00	0.05	0.085	O	|	|	|	|	0.06
156.333	0.00	0.05	0.085	O	|	|	|	|	0.06
156.417	0.00	0.05	0.085	O	|	|	|	|	0.06
156.500	0.00	0.05	0.084	O	|	|	|	|	0.06
156.583	0.00	0.05	0.084	O	|	|	|	|	0.06
156.667	0.00	0.05	0.084	O	|	|	|	|	0.06
156.750	0.00	0.05	0.084	O	|	|	|	|	0.06
156.833	0.00	0.05	0.083	O	|	|	|	|	0.06
156.917	0.00	0.05	0.083	O	|	|	|	|	0.06
157.000	0.00	0.05	0.083	O	|	|	|	|	0.06
157.083	0.00	0.05	0.082	O	|	|	|	|	0.06
157.167	0.00	0.05	0.082	O	|	|	|	|	0.06
157.250	0.00	0.05	0.082	O	|	|	|	|	0.06
157.333	0.00	0.05	0.081	O	|	|	|	|	0.06
157.417	0.00	0.05	0.081	O	|	|	|	|	0.06
157.500	0.00	0.05	0.081	O	|	|	|	|	0.06
157.583	0.00	0.04	0.080	O	|	|	|	|	0.06
157.667	0.00	0.04	0.080	O	|	|	|	|	0.06
157.750	0.00	0.04	0.080	O	|	|	|	|	0.06
157.833	0.00	0.04	0.079	O	|	|	|	|	0.06
157.917	0.00	0.04	0.079	O	|	|	|	|	0.05
158.000	0.00	0.04	0.079	O	|	|	|	|	0.05
158.083	0.00	0.04	0.079	O	|	|	|	|	0.05
158.167	0.00	0.04	0.078	O	|	|	|	|	0.05
158.250	0.00	0.04	0.078	O	|	|	|	|	0.05
158.333	0.00	0.04	0.078	O	|	|	|	|	0.05
158.417	0.00	0.04	0.077	O	|	|	|	|	0.05
158.500	0.00	0.04	0.077	O	|	|	|	|	0.05
158.583	0.00	0.04	0.077	O	|	|	|	|	0.05
158.667	0.00	0.04	0.076	O	|	|	|	|	0.05
158.750	0.00	0.04	0.076	O	|	|	|	|	0.05
158.833	0.00	0.04	0.076	O	|	|	|	|	0.05
158.917	0.00	0.04	0.076	O	|	|	|	|	0.05
159.000	0.00	0.04	0.075	O	|	|	|	|	0.05
159.083	0.00	0.04	0.075	O	|	|	|	|	0.05
159.167	0.00	0.04	0.075	O	|	|	|	|	0.05
159.250	0.00	0.04	0.074	O	|	|	|	|	0.05
159.333	0.00	0.04	0.074	O	|	|	|	|	0.05
159.417	0.00	0.04	0.074	O	|	|	|	|	0.05
159.500	0.00	0.04	0.074	O	|	|	|	|	0.05
159.583	0.00	0.04	0.073	O	|	|	|	|	0.05

159.667	0.00	0.04	0.073	O	|	|	|	| 0.05
159.750	0.00	0.04	0.073	O	|	|	|	| 0.05
159.833	0.00	0.04	0.072	O	|	|	|	| 0.05
159.917	0.00	0.04	0.072	O	|	|	|	| 0.05
160.000	0.00	0.04	0.072	O	|	|	|	| 0.05
160.083	0.00	0.04	0.072	O	|	|	|	| 0.05
160.167	0.00	0.04	0.071	O	|	|	|	| 0.05
160.250	0.00	0.04	0.071	O	|	|	|	| 0.05
160.333	0.00	0.04	0.071	O	|	|	|	| 0.05
160.417	0.00	0.04	0.071	O	|	|	|	| 0.05
160.500	0.00	0.04	0.070	O	|	|	|	| 0.05
160.583	0.00	0.04	0.070	O	|	|	|	| 0.05
160.667	0.00	0.04	0.070	O	|	|	|	| 0.05
160.750	0.00	0.04	0.069	O	|	|	|	| 0.05
160.833	0.00	0.04	0.069	O	|	|	|	| 0.05
160.917	0.00	0.04	0.069	O	|	|	|	| 0.05
161.000	0.00	0.04	0.069	O	|	|	|	| 0.05
161.083	0.00	0.04	0.068	O	|	|	|	| 0.05
161.167	0.00	0.04	0.068	O	|	|	|	| 0.05
161.250	0.00	0.04	0.068	O	|	|	|	| 0.05
161.333	0.00	0.04	0.068	O	|	|	|	| 0.05
161.417	0.00	0.04	0.067	O	|	|	|	| 0.05
161.500	0.00	0.04	0.067	O	|	|	|	| 0.05
161.583	0.00	0.04	0.067	O	|	|	|	| 0.05
161.667	0.00	0.04	0.067	O	|	|	|	| 0.05
161.750	0.00	0.04	0.066	O	|	|	|	| 0.05
161.833	0.00	0.04	0.066	O	|	|	|	| 0.05
161.917	0.00	0.04	0.066	O	|	|	|	| 0.05
162.000	0.00	0.04	0.066	O	|	|	|	| 0.05
162.083	0.00	0.04	0.065	O	|	|	|	| 0.05
162.167	0.00	0.04	0.065	O	|	|	|	| 0.05
162.250	0.00	0.04	0.065	O	|	|	|	| 0.05
162.333	0.00	0.04	0.065	O	|	|	|	| 0.04
162.417	0.00	0.04	0.064	O	|	|	|	| 0.04
162.500	0.00	0.04	0.064	O	|	|	|	| 0.04
162.583	0.00	0.04	0.064	O	|	|	|	| 0.04
162.667	0.00	0.04	0.064	O	|	|	|	| 0.04
162.750	0.00	0.04	0.063	O	|	|	|	| 0.04
162.833	0.00	0.04	0.063	O	|	|	|	| 0.04
162.917	0.00	0.04	0.063	O	|	|	|	| 0.04
163.000	0.00	0.03	0.063	O	|	|	|	| 0.04
163.083	0.00	0.03	0.062	O	|	|	|	| 0.04
163.167	0.00	0.03	0.062	O	|	|	|	| 0.04
163.250	0.00	0.03	0.062	O	|	|	|	| 0.04
163.333	0.00	0.03	0.062	O	|	|	|	| 0.04
163.417	0.00	0.03	0.061	O	|	|	|	| 0.04
163.500	0.00	0.03	0.061	O	|	|	|	| 0.04
163.583	0.00	0.03	0.061	O	|	|	|	| 0.04
163.667	0.00	0.03	0.061	O	|	|	|	| 0.04
163.750	0.00	0.03	0.060	O	|	|	|	| 0.04
163.833	0.00	0.03	0.060	O	|	|	|	| 0.04
163.917	0.00	0.03	0.060	O	|	|	|	| 0.04
164.000	0.00	0.03	0.060	O	|	|	|	| 0.04
164.083	0.00	0.03	0.060	O	|	|	|	| 0.04

164.167	0.00	0.03	0.059	O	|	|	|	|	0.04
164.250	0.00	0.03	0.059	O	|	|	|	|	0.04
164.333	0.00	0.03	0.059	O	|	|	|	|	0.04
164.417	0.00	0.03	0.059	O	|	|	|	|	0.04
164.500	0.00	0.03	0.058	O	|	|	|	|	0.04
164.583	0.00	0.03	0.058	O	|	|	|	|	0.04
164.667	0.00	0.03	0.058	O	|	|	|	|	0.04
164.750	0.00	0.03	0.058	O	|	|	|	|	0.04
164.833	0.00	0.03	0.058	O	|	|	|	|	0.04
164.917	0.00	0.03	0.057	O	|	|	|	|	0.04
165.000	0.00	0.03	0.057	O	|	|	|	|	0.04
165.083	0.00	0.03	0.057	O	|	|	|	|	0.04
165.167	0.00	0.03	0.057	O	|	|	|	|	0.04
165.250	0.00	0.03	0.056	O	|	|	|	|	0.04
165.333	0.00	0.03	0.056	O	|	|	|	|	0.04
165.417	0.00	0.03	0.056	O	|	|	|	|	0.04
165.500	0.00	0.03	0.056	O	|	|	|	|	0.04
165.583	0.00	0.03	0.056	O	|	|	|	|	0.04
165.667	0.00	0.03	0.055	O	|	|	|	|	0.04
165.750	0.00	0.03	0.055	O	|	|	|	|	0.04
165.833	0.00	0.03	0.055	O	|	|	|	|	0.04
165.917	0.00	0.03	0.055	O	|	|	|	|	0.04
166.000	0.00	0.03	0.055	O	|	|	|	|	0.04
166.083	0.00	0.03	0.054	O	|	|	|	|	0.04
166.167	0.00	0.03	0.054	O	|	|	|	|	0.04
166.250	0.00	0.03	0.054	O	|	|	|	|	0.04
166.333	0.00	0.03	0.054	O	|	|	|	|	0.04
166.417	0.00	0.03	0.053	O	|	|	|	|	0.04
166.500	0.00	0.03	0.053	O	|	|	|	|	0.04
166.583	0.00	0.03	0.053	O	|	|	|	|	0.04
166.667	0.00	0.03	0.053	O	|	|	|	|	0.04
166.750	0.00	0.03	0.053	O	|	|	|	|	0.04
166.833	0.00	0.03	0.052	O	|	|	|	|	0.04
166.917	0.00	0.03	0.052	O	|	|	|	|	0.04
167.000	0.00	0.03	0.052	O	|	|	|	|	0.04
167.083	0.00	0.03	0.052	O	|	|	|	|	0.04
167.167	0.00	0.03	0.052	O	|	|	|	|	0.04
167.250	0.00	0.03	0.051	O	|	|	|	|	0.04
167.333	0.00	0.03	0.051	O	|	|	|	|	0.04
167.417	0.00	0.03	0.051	O	|	|	|	|	0.04
167.500	0.00	0.03	0.051	O	|	|	|	|	0.04
167.583	0.00	0.03	0.051	O	|	|	|	|	0.04
167.667	0.00	0.03	0.050	O	|	|	|	|	0.04
167.750	0.00	0.03	0.050	O	|	|	|	|	0.03
167.833	0.00	0.03	0.050	O	|	|	|	|	0.03
167.917	0.00	0.03	0.050	O	|	|	|	|	0.03
168.000	0.00	0.03	0.050	O	|	|	|	|	0.03
168.083	0.00	0.03	0.050	O	|	|	|	|	0.03
168.167	0.00	0.03	0.049	O	|	|	|	|	0.03
168.250	0.00	0.03	0.049	O	|	|	|	|	0.03
168.333	0.00	0.03	0.049	O	|	|	|	|	0.03
168.417	0.00	0.03	0.049	O	|	|	|	|	0.03
168.500	0.00	0.03	0.049	O	|	|	|	|	0.03
168.583	0.00	0.03	0.048	O	|	|	|	|	0.03

168.667	0.00	0.03	0.048	O	|	|	|	|	0.03
168.750	0.00	0.03	0.048	O	|	|	|	|	0.03
168.833	0.00	0.03	0.048	O	|	|	|	|	0.03
168.917	0.00	0.03	0.048	O	|	|	|	|	0.03
169.000	0.00	0.03	0.047	O	|	|	|	|	0.03
169.083	0.00	0.03	0.047	O	|	|	|	|	0.03
169.167	0.00	0.03	0.047	O	|	|	|	|	0.03
169.250	0.00	0.03	0.047	O	|	|	|	|	0.03
169.333	0.00	0.03	0.047	O	|	|	|	|	0.03
169.417	0.00	0.03	0.047	O	|	|	|	|	0.03
169.500	0.00	0.03	0.046	O	|	|	|	|	0.03
169.583	0.00	0.03	0.046	O	|	|	|	|	0.03
169.667	0.00	0.03	0.046	O	|	|	|	|	0.03
169.750	0.00	0.03	0.046	O	|	|	|	|	0.03
169.833	0.00	0.03	0.046	O	|	|	|	|	0.03
169.917	0.00	0.03	0.045	O	|	|	|	|	0.03
170.000	0.00	0.03	0.045	O	|	|	|	|	0.03
170.083	0.00	0.03	0.045	O	|	|	|	|	0.03
170.167	0.00	0.03	0.045	O	|	|	|	|	0.03
170.250	0.00	0.03	0.045	O	|	|	|	|	0.03
170.333	0.00	0.02	0.045	O	|	|	|	|	0.03
170.417	0.00	0.02	0.044	O	|	|	|	|	0.03
170.500	0.00	0.02	0.044	O	|	|	|	|	0.03
170.583	0.00	0.02	0.044	O	|	|	|	|	0.03
170.667	0.00	0.02	0.044	O	|	|	|	|	0.03
170.750	0.00	0.02	0.044	O	|	|	|	|	0.03
170.833	0.00	0.02	0.044	O	|	|	|	|	0.03
170.917	0.00	0.02	0.043	O	|	|	|	|	0.03
171.000	0.00	0.02	0.043	O	|	|	|	|	0.03
171.083	0.00	0.02	0.043	O	|	|	|	|	0.03
171.167	0.00	0.02	0.043	O	|	|	|	|	0.03
171.250	0.00	0.02	0.043	O	|	|	|	|	0.03
171.333	0.00	0.02	0.043	O	|	|	|	|	0.03
171.417	0.00	0.02	0.042	O	|	|	|	|	0.03
171.500	0.00	0.02	0.042	O	|	|	|	|	0.03
171.583	0.00	0.02	0.042	O	|	|	|	|	0.03
171.667	0.00	0.02	0.042	O	|	|	|	|	0.03
171.750	0.00	0.02	0.042	O	|	|	|	|	0.03
171.833	0.00	0.02	0.042	O	|	|	|	|	0.03
171.917	0.00	0.02	0.041	O	|	|	|	|	0.03
172.000	0.00	0.02	0.041	O	|	|	|	|	0.03
172.083	0.00	0.02	0.041	O	|	|	|	|	0.03
172.167	0.00	0.02	0.041	O	|	|	|	|	0.03
172.250	0.00	0.02	0.041	O	|	|	|	|	0.03
172.333	0.00	0.02	0.041	O	|	|	|	|	0.03
172.417	0.00	0.02	0.041	O	|	|	|	|	0.03
172.500	0.00	0.02	0.040	O	|	|	|	|	0.03
172.583	0.00	0.02	0.040	O	|	|	|	|	0.03
172.667	0.00	0.02	0.040	O	|	|	|	|	0.03
172.750	0.00	0.02	0.040	O	|	|	|	|	0.03
172.833	0.00	0.02	0.040	O	|	|	|	|	0.03
172.917	0.00	0.02	0.040	O	|	|	|	|	0.03
173.000	0.00	0.02	0.039	O	|	|	|	|	0.03
173.083	0.00	0.02	0.039	O	|	|	|	|	0.03

173.167	0.00	0.02	0.039	O	|	|	|	|	0.03
173.250	0.00	0.02	0.039	O	|	|	|	|	0.03
173.333	0.00	0.02	0.039	O	|	|	|	|	0.03
173.417	0.00	0.02	0.039	O	|	|	|	|	0.03
173.500	0.00	0.02	0.039	O	|	|	|	|	0.03
173.583	0.00	0.02	0.038	O	|	|	|	|	0.03
173.667	0.00	0.02	0.038	O	|	|	|	|	0.03
173.750	0.00	0.02	0.038	O	|	|	|	|	0.03
173.833	0.00	0.02	0.038	O	|	|	|	|	0.03
173.917	0.00	0.02	0.038	O	|	|	|	|	0.03
174.000	0.00	0.02	0.038	O	|	|	|	|	0.03
174.083	0.00	0.02	0.038	O	|	|	|	|	0.03
174.167	0.00	0.02	0.037	O	|	|	|	|	0.03
174.250	0.00	0.02	0.037	O	|	|	|	|	0.03
174.333	0.00	0.02	0.037	O	|	|	|	|	0.03
174.417	0.00	0.02	0.037	O	|	|	|	|	0.03
174.500	0.00	0.02	0.037	O	|	|	|	|	0.03
174.583	0.00	0.02	0.037	O	|	|	|	|	0.03
174.667	0.00	0.02	0.037	O	|	|	|	|	0.03
174.750	0.00	0.02	0.036	O	|	|	|	|	0.03
174.833	0.00	0.02	0.036	O	|	|	|	|	0.03
174.917	0.00	0.02	0.036	O	|	|	|	|	0.03
175.000	0.00	0.02	0.036	O	|	|	|	|	0.02
175.083	0.00	0.02	0.036	O	|	|	|	|	0.02
175.167	0.00	0.02	0.036	O	|	|	|	|	0.02
175.250	0.00	0.02	0.036	O	|	|	|	|	0.02
175.333	0.00	0.02	0.035	O	|	|	|	|	0.02
175.417	0.00	0.02	0.035	O	|	|	|	|	0.02
175.500	0.00	0.02	0.035	O	|	|	|	|	0.02
175.583	0.00	0.02	0.035	O	|	|	|	|	0.02
175.667	0.00	0.02	0.035	O	|	|	|	|	0.02
175.750	0.00	0.02	0.035	O	|	|	|	|	0.02
175.833	0.00	0.02	0.035	O	|	|	|	|	0.02
175.917	0.00	0.02	0.034	O	|	|	|	|	0.02
176.000	0.00	0.02	0.034	O	|	|	|	|	0.02
176.083	0.00	0.02	0.034	O	|	|	|	|	0.02
176.167	0.00	0.02	0.034	O	|	|	|	|	0.02
176.250	0.00	0.02	0.034	O	|	|	|	|	0.02
176.333	0.00	0.02	0.034	O	|	|	|	|	0.02
176.417	0.00	0.02	0.034	O	|	|	|	|	0.02
176.500	0.00	0.02	0.034	O	|	|	|	|	0.02
176.583	0.00	0.02	0.033	O	|	|	|	|	0.02
176.667	0.00	0.02	0.033	O	|	|	|	|	0.02
176.750	0.00	0.02	0.033	O	|	|	|	|	0.02
176.833	0.00	0.02	0.033	O	|	|	|	|	0.02
176.917	0.00	0.02	0.033	O	|	|	|	|	0.02
177.000	0.00	0.02	0.033	O	|	|	|	|	0.02
177.083	0.00	0.02	0.033	O	|	|	|	|	0.02
177.167	0.00	0.02	0.033	O	|	|	|	|	0.02
177.250	0.00	0.02	0.032	O	|	|	|	|	0.02
177.333	0.00	0.02	0.032	O	|	|	|	|	0.02
177.417	0.00	0.02	0.032	O	|	|	|	|	0.02
177.500	0.00	0.02	0.032	O	|	|	|	|	0.02
177.583	0.00	0.02	0.032	O	|	|	|	|	0.02

177.667	0.00	0.02	0.032	O	|	|	|	|	0.02
177.750	0.00	0.02	0.032	O	|	|	|	|	0.02
177.833	0.00	0.02	0.032	O	|	|	|	|	0.02
177.917	0.00	0.02	0.031	O	|	|	|	|	0.02
178.000	0.00	0.02	0.031	O	|	|	|	|	0.02
178.083	0.00	0.02	0.031	O	|	|	|	|	0.02
178.167	0.00	0.02	0.031	O	|	|	|	|	0.02
178.250	0.00	0.02	0.031	O	|	|	|	|	0.02
178.333	0.00	0.02	0.031	O	|	|	|	|	0.02
178.417	0.00	0.02	0.031	O	|	|	|	|	0.02
178.500	0.00	0.02	0.031	O	|	|	|	|	0.02
178.583	0.00	0.02	0.030	O	|	|	|	|	0.02
178.667	0.00	0.02	0.030	O	|	|	|	|	0.02
178.750	0.00	0.02	0.030	O	|	|	|	|	0.02
178.833	0.00	0.02	0.030	O	|	|	|	|	0.02
178.917	0.00	0.02	0.030	O	|	|	|	|	0.02
179.000	0.00	0.02	0.030	O	|	|	|	|	0.02
179.083	0.00	0.02	0.030	O	|	|	|	|	0.02
179.167	0.00	0.02	0.030	O	|	|	|	|	0.02
179.250	0.00	0.02	0.030	O	|	|	|	|	0.02
179.333	0.00	0.02	0.029	O	|	|	|	|	0.02
179.417	0.00	0.02	0.029	O	|	|	|	|	0.02
179.500	0.00	0.02	0.029	O	|	|	|	|	0.02
179.583	0.00	0.02	0.029	O	|	|	|	|	0.02
179.667	0.00	0.02	0.029	O	|	|	|	|	0.02
179.750	0.00	0.02	0.029	O	|	|	|	|	0.02
179.833	0.00	0.02	0.029	O	|	|	|	|	0.02
179.917	0.00	0.02	0.029	O	|	|	|	|	0.02
180.000	0.00	0.02	0.029	O	|	|	|	|	0.02
180.083	0.00	0.02	0.028	O	|	|	|	|	0.02
180.167	0.00	0.02	0.028	O	|	|	|	|	0.02
180.250	0.00	0.02	0.028	O	|	|	|	|	0.02
180.333	0.00	0.02	0.028	O	|	|	|	|	0.02
180.417	0.00	0.02	0.028	O	|	|	|	|	0.02
180.500	0.00	0.02	0.028	O	|	|	|	|	0.02
180.583	0.00	0.02	0.028	O	|	|	|	|	0.02
180.667	0.00	0.02	0.028	O	|	|	|	|	0.02
180.750	0.00	0.02	0.028	O	|	|	|	|	0.02
180.833	0.00	0.02	0.027	O	|	|	|	|	0.02
180.917	0.00	0.02	0.027	O	|	|	|	|	0.02
181.000	0.00	0.02	0.027	O	|	|	|	|	0.02
181.083	0.00	0.02	0.027	O	|	|	|	|	0.02
181.167	0.00	0.02	0.027	O	|	|	|	|	0.02
181.250	0.00	0.02	0.027	O	|	|	|	|	0.02
181.333	0.00	0.01	0.027	O	|	|	|	|	0.02
181.417	0.00	0.01	0.027	O	|	|	|	|	0.02
181.500	0.00	0.01	0.027	O	|	|	|	|	0.02
181.583	0.00	0.01	0.027	O	|	|	|	|	0.02
181.667	0.00	0.01	0.026	O	|	|	|	|	0.02
181.750	0.00	0.01	0.026	O	|	|	|	|	0.02
181.833	0.00	0.01	0.026	O	|	|	|	|	0.02
181.917	0.00	0.01	0.026	O	|	|	|	|	0.02
182.000	0.00	0.01	0.026	O	|	|	|	|	0.02
182.083	0.00	0.01	0.026	O	|	|	|	|	0.02

182.167	0.00	0.01	0.026	O	|	|	|	|	0.02
182.250	0.00	0.01	0.026	O	|	|	|	|	0.02
182.333	0.00	0.01	0.026	O	|	|	|	|	0.02
182.417	0.00	0.01	0.026	O	|	|	|	|	0.02
182.500	0.00	0.01	0.025	O	|	|	|	|	0.02
182.583	0.00	0.01	0.025	O	|	|	|	|	0.02
182.667	0.00	0.01	0.025	O	|	|	|	|	0.02
182.750	0.00	0.01	0.025	O	|	|	|	|	0.02
182.833	0.00	0.01	0.025	O	|	|	|	|	0.02
182.917	0.00	0.01	0.025	O	|	|	|	|	0.02
183.000	0.00	0.01	0.025	O	|	|	|	|	0.02
183.083	0.00	0.01	0.025	O	|	|	|	|	0.02
183.167	0.00	0.01	0.025	O	|	|	|	|	0.02
183.250	0.00	0.01	0.025	O	|	|	|	|	0.02
183.333	0.00	0.01	0.024	O	|	|	|	|	0.02
183.417	0.00	0.01	0.024	O	|	|	|	|	0.02
183.500	0.00	0.01	0.024	O	|	|	|	|	0.02
183.583	0.00	0.01	0.024	O	|	|	|	|	0.02
183.667	0.00	0.01	0.024	O	|	|	|	|	0.02
183.750	0.00	0.01	0.024	O	|	|	|	|	0.02
183.833	0.00	0.01	0.024	O	|	|	|	|	0.02
183.917	0.00	0.01	0.024	O	|	|	|	|	0.02
184.000	0.00	0.01	0.024	O	|	|	|	|	0.02
184.083	0.00	0.01	0.024	O	|	|	|	|	0.02
184.167	0.00	0.01	0.024	O	|	|	|	|	0.02
184.250	0.00	0.01	0.023	O	|	|	|	|	0.02
184.333	0.00	0.01	0.023	O	|	|	|	|	0.02
184.417	0.00	0.01	0.023	O	|	|	|	|	0.02
184.500	0.00	0.01	0.023	O	|	|	|	|	0.02
184.583	0.00	0.01	0.023	O	|	|	|	|	0.02
184.667	0.00	0.01	0.023	O	|	|	|	|	0.02
184.750	0.00	0.01	0.023	O	|	|	|	|	0.02
184.833	0.00	0.01	0.023	O	|	|	|	|	0.02
184.917	0.00	0.01	0.023	O	|	|	|	|	0.02
185.000	0.00	0.01	0.023	O	|	|	|	|	0.02
185.083	0.00	0.01	0.023	O	|	|	|	|	0.02
185.167	0.00	0.01	0.023	O	|	|	|	|	0.02
185.250	0.00	0.01	0.022	O	|	|	|	|	0.02
185.333	0.00	0.01	0.022	O	|	|	|	|	0.02
185.417	0.00	0.01	0.022	O	|	|	|	|	0.02
185.500	0.00	0.01	0.022	O	|	|	|	|	0.02
185.583	0.00	0.01	0.022	O	|	|	|	|	0.02
185.667	0.00	0.01	0.022	O	|	|	|	|	0.02
185.750	0.00	0.01	0.022	O	|	|	|	|	0.02
185.833	0.00	0.01	0.022	O	|	|	|	|	0.02
185.917	0.00	0.01	0.022	O	|	|	|	|	0.02
186.000	0.00	0.01	0.022	O	|	|	|	|	0.02
186.083	0.00	0.01	0.022	O	|	|	|	|	0.01
186.167	0.00	0.01	0.021	O	|	|	|	|	0.01
186.250	0.00	0.01	0.021	O	|	|	|	|	0.01
186.333	0.00	0.01	0.021	O	|	|	|	|	0.01
186.417	0.00	0.01	0.021	O	|	|	|	|	0.01
186.500	0.00	0.01	0.021	O	|	|	|	|	0.01
186.583	0.00	0.01	0.021	O	|	|	|	|	0.01

186.667	0.00	0.01	0.021	O	|	|	|	|	0.01
186.750	0.00	0.01	0.021	O	|	|	|	|	0.01
186.833	0.00	0.01	0.021	O	|	|	|	|	0.01
186.917	0.00	0.01	0.021	O	|	|	|	|	0.01
187.000	0.00	0.01	0.021	O	|	|	|	|	0.01
187.083	0.00	0.01	0.021	O	|	|	|	|	0.01
187.167	0.00	0.01	0.021	O	|	|	|	|	0.01
187.250	0.00	0.01	0.020	O	|	|	|	|	0.01
187.333	0.00	0.01	0.020	O	|	|	|	|	0.01
187.417	0.00	0.01	0.020	O	|	|	|	|	0.01
187.500	0.00	0.01	0.020	O	|	|	|	|	0.01
187.583	0.00	0.01	0.020	O	|	|	|	|	0.01
187.667	0.00	0.01	0.020	O	|	|	|	|	0.01
187.750	0.00	0.01	0.020	O	|	|	|	|	0.01
187.833	0.00	0.01	0.020	O	|	|	|	|	0.01
187.917	0.00	0.01	0.020	O	|	|	|	|	0.01
188.000	0.00	0.01	0.020	O	|	|	|	|	0.01
188.083	0.00	0.01	0.020	O	|	|	|	|	0.01
188.167	0.00	0.01	0.020	O	|	|	|	|	0.01
188.250	0.00	0.01	0.020	O	|	|	|	|	0.01
188.333	0.00	0.01	0.019	O	|	|	|	|	0.01
188.417	0.00	0.01	0.019	O	|	|	|	|	0.01
188.500	0.00	0.01	0.019	O	|	|	|	|	0.01
188.583	0.00	0.01	0.019	O	|	|	|	|	0.01
188.667	0.00	0.01	0.019	O	|	|	|	|	0.01
188.750	0.00	0.01	0.019	O	|	|	|	|	0.01
188.833	0.00	0.01	0.019	O	|	|	|	|	0.01
188.917	0.00	0.01	0.019	O	|	|	|	|	0.01
189.000	0.00	0.01	0.019	O	|	|	|	|	0.01
189.083	0.00	0.01	0.019	O	|	|	|	|	0.01
189.167	0.00	0.01	0.019	O	|	|	|	|	0.01
189.250	0.00	0.01	0.019	O	|	|	|	|	0.01
189.333	0.00	0.01	0.019	O	|	|	|	|	0.01
189.417	0.00	0.01	0.018	O	|	|	|	|	0.01
189.500	0.00	0.01	0.018	O	|	|	|	|	0.01
189.583	0.00	0.01	0.018	O	|	|	|	|	0.01
189.667	0.00	0.01	0.018	O	|	|	|	|	0.01
189.750	0.00	0.01	0.018	O	|	|	|	|	0.01
189.833	0.00	0.01	0.018	O	|	|	|	|	0.01
189.917	0.00	0.01	0.018	O	|	|	|	|	0.01
190.000	0.00	0.01	0.018	O	|	|	|	|	0.01
190.083	0.00	0.01	0.018	O	|	|	|	|	0.01
190.167	0.00	0.01	0.018	O	|	|	|	|	0.01
190.250	0.00	0.01	0.018	O	|	|	|	|	0.01
190.333	0.00	0.01	0.018	O	|	|	|	|	0.01
190.417	0.00	0.01	0.018	O	|	|	|	|	0.01
190.500	0.00	0.01	0.018	O	|	|	|	|	0.01
190.583	0.00	0.01	0.018	O	|	|	|	|	0.01
190.667	0.00	0.01	0.017	O	|	|	|	|	0.01
190.750	0.00	0.01	0.017	O	|	|	|	|	0.01
190.833	0.00	0.01	0.017	O	|	|	|	|	0.01
190.917	0.00	0.01	0.017	O	|	|	|	|	0.01
191.000	0.00	0.01	0.017	O	|	|	|	|	0.01
191.083	0.00	0.01	0.017	O	|	|	|	|	0.01

191.167	0.00	0.01	0.017	O	|	|	|	|	0.01
191.250	0.00	0.01	0.017	O	|	|	|	|	0.01
191.333	0.00	0.01	0.017	O	|	|	|	|	0.01
191.417	0.00	0.01	0.017	O	|	|	|	|	0.01
191.500	0.00	0.01	0.017	O	|	|	|	|	0.01
191.583	0.00	0.01	0.017	O	|	|	|	|	0.01
191.667	0.00	0.01	0.017	O	|	|	|	|	0.01
191.750	0.00	0.01	0.017	O	|	|	|	|	0.01
191.833	0.00	0.01	0.017	O	|	|	|	|	0.01
191.917	0.00	0.01	0.016	O	|	|	|	|	0.01
192.000	0.00	0.01	0.016	O	|	|	|	|	0.01
192.083	0.00	0.01	0.016	O	|	|	|	|	0.01
192.167	0.00	0.01	0.016	O	|	|	|	|	0.01
192.250	0.00	0.01	0.016	O	|	|	|	|	0.01
192.333	0.00	0.01	0.016	O	|	|	|	|	0.01
192.417	0.00	0.01	0.016	O	|	|	|	|	0.01
192.500	0.00	0.01	0.016	O	|	|	|	|	0.01
192.583	0.00	0.01	0.016	O	|	|	|	|	0.01
192.667	0.00	0.01	0.016	O	|	|	|	|	0.01
192.750	0.00	0.01	0.016	O	|	|	|	|	0.01
192.833	0.00	0.01	0.016	O	|	|	|	|	0.01
192.917	0.00	0.01	0.016	O	|	|	|	|	0.01
193.000	0.00	0.01	0.016	O	|	|	|	|	0.01
193.083	0.00	0.01	0.016	O	|	|	|	|	0.01
193.167	0.00	0.01	0.016	O	|	|	|	|	0.01
193.250	0.00	0.01	0.015	O	|	|	|	|	0.01
193.333	0.00	0.01	0.015	O	|	|	|	|	0.01
193.417	0.00	0.01	0.015	O	|	|	|	|	0.01
193.500	0.00	0.01	0.015	O	|	|	|	|	0.01
193.583	0.00	0.01	0.015	O	|	|	|	|	0.01
193.667	0.00	0.01	0.015	O	|	|	|	|	0.01
193.750	0.00	0.01	0.015	O	|	|	|	|	0.01
193.833	0.00	0.01	0.015	O	|	|	|	|	0.01
193.917	0.00	0.01	0.015	O	|	|	|	|	0.01
194.000	0.00	0.01	0.015	O	|	|	|	|	0.01
194.083	0.00	0.01	0.015	O	|	|	|	|	0.01
194.167	0.00	0.01	0.015	O	|	|	|	|	0.01
194.250	0.00	0.01	0.015	O	|	|	|	|	0.01
194.333	0.00	0.01	0.015	O	|	|	|	|	0.01
194.417	0.00	0.01	0.015	O	|	|	|	|	0.01
194.500	0.00	0.01	0.015	O	|	|	|	|	0.01
194.583	0.00	0.01	0.015	O	|	|	|	|	0.01
194.667	0.00	0.01	0.015	O	|	|	|	|	0.01
194.750	0.00	0.01	0.014	O	|	|	|	|	0.01
194.833	0.00	0.01	0.014	O	|	|	|	|	0.01
194.917	0.00	0.01	0.014	O	|	|	|	|	0.01
195.000	0.00	0.01	0.014	O	|	|	|	|	0.01
195.083	0.00	0.01	0.014	O	|	|	|	|	0.01
195.167	0.00	0.01	0.014	O	|	|	|	|	0.01
195.250	0.00	0.01	0.014	O	|	|	|	|	0.01
195.333	0.00	0.01	0.014	O	|	|	|	|	0.01
195.417	0.00	0.01	0.014	O	|	|	|	|	0.01
195.500	0.00	0.01	0.014	O	|	|	|	|	0.01
195.583	0.00	0.01	0.014	O	|	|	|	|	0.01

195.667	0.00	0.01	0.014	O	|	|	|	|	0.01
195.750	0.00	0.01	0.014	O	|	|	|	|	0.01
195.833	0.00	0.01	0.014	O	|	|	|	|	0.01
195.917	0.00	0.01	0.014	O	|	|	|	|	0.01
196.000	0.00	0.01	0.014	O	|	|	|	|	0.01
196.083	0.00	0.01	0.014	O	|	|	|	|	0.01
196.167	0.00	0.01	0.014	O	|	|	|	|	0.01
196.250	0.00	0.01	0.013	O	|	|	|	|	0.01
196.333	0.00	0.01	0.013	O	|	|	|	|	0.01
196.417	0.00	0.01	0.013	O	|	|	|	|	0.01
196.500	0.00	0.01	0.013	O	|	|	|	|	0.01
196.583	0.00	0.01	0.013	O	|	|	|	|	0.01
196.667	0.00	0.01	0.013	O	|	|	|	|	0.01
196.750	0.00	0.01	0.013	O	|	|	|	|	0.01
196.833	0.00	0.01	0.013	O	|	|	|	|	0.01
196.917	0.00	0.01	0.013	O	|	|	|	|	0.01
197.000	0.00	0.01	0.013	O	|	|	|	|	0.01
197.083	0.00	0.01	0.013	O	|	|	|	|	0.01
197.167	0.00	0.01	0.013	O	|	|	|	|	0.01
197.250	0.00	0.01	0.013	O	|	|	|	|	0.01
197.333	0.00	0.01	0.013	O	|	|	|	|	0.01
197.417	0.00	0.01	0.013	O	|	|	|	|	0.01
197.500	0.00	0.01	0.013	O	|	|	|	|	0.01
197.583	0.00	0.01	0.013	O	|	|	|	|	0.01
197.667	0.00	0.01	0.013	O	|	|	|	|	0.01
197.750	0.00	0.01	0.013	O	|	|	|	|	0.01
197.833	0.00	0.01	0.013	O	|	|	|	|	0.01
197.917	0.00	0.01	0.012	O	|	|	|	|	0.01
198.000	0.00	0.01	0.012	O	|	|	|	|	0.01
198.083	0.00	0.01	0.012	O	|	|	|	|	0.01
198.167	0.00	0.01	0.012	O	|	|	|	|	0.01
198.250	0.00	0.01	0.012	O	|	|	|	|	0.01
198.333	0.00	0.01	0.012	O	|	|	|	|	0.01
198.417	0.00	0.01	0.012	O	|	|	|	|	0.01
198.500	0.00	0.01	0.012	O	|	|	|	|	0.01
198.583	0.00	0.01	0.012	O	|	|	|	|	0.01
198.667	0.00	0.01	0.012	O	|	|	|	|	0.01
198.750	0.00	0.01	0.012	O	|	|	|	|	0.01
198.833	0.00	0.01	0.012	O	|	|	|	|	0.01
198.917	0.00	0.01	0.012	O	|	|	|	|	0.01
199.000	0.00	0.01	0.012	O	|	|	|	|	0.01
199.083	0.00	0.01	0.012	O	|	|	|	|	0.01
199.167	0.00	0.01	0.012	O	|	|	|	|	0.01
199.250	0.00	0.01	0.012	O	|	|	|	|	0.01
199.333	0.00	0.01	0.012	O	|	|	|	|	0.01
199.417	0.00	0.01	0.012	O	|	|	|	|	0.01
199.500	0.00	0.01	0.012	O	|	|	|	|	0.01
199.583	0.00	0.01	0.012	O	|	|	|	|	0.01
199.667	0.00	0.01	0.012	O	|	|	|	|	0.01
199.750	0.00	0.01	0.011	O	|	|	|	|	0.01
199.833	0.00	0.01	0.011	O	|	|	|	|	0.01
199.917	0.00	0.01	0.011	O	|	|	|	|	0.01
200.000	0.00	0.01	0.011	O	|	|	|	|	0.01
200.083	0.00	0.01	0.011	O	|	|	|	|	0.01

200.167	0.00	0.01	0.011	O	|	|	|	|	0.01
200.250	0.00	0.01	0.011	O	|	|	|	|	0.01
200.333	0.00	0.01	0.011	O	|	|	|	|	0.01
200.417	0.00	0.01	0.011	O	|	|	|	|	0.01
200.500	0.00	0.01	0.011	O	|	|	|	|	0.01
200.583	0.00	0.01	0.011	O	|	|	|	|	0.01
200.667	0.00	0.01	0.011	O	|	|	|	|	0.01
200.750	0.00	0.01	0.011	O	|	|	|	|	0.01
200.833	0.00	0.01	0.011	O	|	|	|	|	0.01
200.917	0.00	0.01	0.011	O	|	|	|	|	0.01
201.000	0.00	0.01	0.011	O	|	|	|	|	0.01
201.083	0.00	0.01	0.011	O	|	|	|	|	0.01
201.167	0.00	0.01	0.011	O	|	|	|	|	0.01
201.250	0.00	0.01	0.011	O	|	|	|	|	0.01
201.333	0.00	0.01	0.011	O	|	|	|	|	0.01
201.417	0.00	0.01	0.011	O	|	|	|	|	0.01
201.500	0.00	0.01	0.011	O	|	|	|	|	0.01
201.583	0.00	0.01	0.011	O	|	|	|	|	0.01
201.667	0.00	0.01	0.011	O	|	|	|	|	0.01
201.750	0.00	0.01	0.010	O	|	|	|	|	0.01
201.833	0.00	0.01	0.010	O	|	|	|	|	0.01
201.917	0.00	0.01	0.010	O	|	|	|	|	0.01
202.000	0.00	0.01	0.010	O	|	|	|	|	0.01
202.083	0.00	0.01	0.010	O	|	|	|	|	0.01
202.167	0.00	0.01	0.010	O	|	|	|	|	0.01
202.250	0.00	0.01	0.010	O	|	|	|	|	0.01
202.333	0.00	0.01	0.010	O	|	|	|	|	0.01
202.417	0.00	0.01	0.010	O	|	|	|	|	0.01
202.500	0.00	0.01	0.010	O	|	|	|	|	0.01
202.583	0.00	0.01	0.010	O	|	|	|	|	0.01
202.667	0.00	0.01	0.010	O	|	|	|	|	0.01
202.750	0.00	0.01	0.010	O	|	|	|	|	0.01
202.833	0.00	0.01	0.010	O	|	|	|	|	0.01
202.917	0.00	0.01	0.010	O	|	|	|	|	0.01
203.000	0.00	0.01	0.010	O	|	|	|	|	0.01
203.083	0.00	0.01	0.010	O	|	|	|	|	0.01
203.167	0.00	0.01	0.010	O	|	|	|	|	0.01
203.250	0.00	0.01	0.010	O	|	|	|	|	0.01
203.333	0.00	0.01	0.010	O	|	|	|	|	0.01
203.417	0.00	0.01	0.010	O	|	|	|	|	0.01
203.500	0.00	0.01	0.010	O	|	|	|	|	0.01
203.583	0.00	0.01	0.010	O	|	|	|	|	0.01
203.667	0.00	0.01	0.010	O	|	|	|	|	0.01
203.750	0.00	0.01	0.010	O	|	|	|	|	0.01
203.833	0.00	0.01	0.010	O	|	|	|	|	0.01
203.917	0.00	0.01	0.009	O	|	|	|	|	0.01
204.000	0.00	0.01	0.009	O	|	|	|	|	0.01
204.083	0.00	0.01	0.009	O	|	|	|	|	0.01
204.167	0.00	0.01	0.009	O	|	|	|	|	0.01
204.250	0.00	0.01	0.009	O	|	|	|	|	0.01
204.333	0.00	0.01	0.009	O	|	|	|	|	0.01
204.417	0.00	0.01	0.009	O	|	|	|	|	0.01
204.500	0.00	0.01	0.009	O	|	|	|	|	0.01
204.583	0.00	0.01	0.009	O	|	|	|	|	0.01

204.667	0.00	0.01	0.009	O	|	|	|	|	0.01
204.750	0.00	0.01	0.009	O	|	|	|	|	0.01
204.833	0.00	0.01	0.009	O	|	|	|	|	0.01
204.917	0.00	0.01	0.009	O	|	|	|	|	0.01
205.000	0.00	0.01	0.009	O	|	|	|	|	0.01
205.083	0.00	0.01	0.009	O	|	|	|	|	0.01
205.167	0.00	0.00	0.009	O	|	|	|	|	0.01
205.250	0.00	0.00	0.009	O	|	|	|	|	0.01
205.333	0.00	0.00	0.009	O	|	|	|	|	0.01
205.417	0.00	0.00	0.009	O	|	|	|	|	0.01
205.500	0.00	0.00	0.009	O	|	|	|	|	0.01
205.583	0.00	0.00	0.009	O	|	|	|	|	0.01
205.667	0.00	0.00	0.009	O	|	|	|	|	0.01
205.750	0.00	0.00	0.009	O	|	|	|	|	0.01
205.833	0.00	0.00	0.009	O	|	|	|	|	0.01
205.917	0.00	0.00	0.009	O	|	|	|	|	0.01
206.000	0.00	0.00	0.009	O	|	|	|	|	0.01
206.083	0.00	0.00	0.009	O	|	|	|	|	0.01
206.167	0.00	0.00	0.009	O	|	|	|	|	0.01
206.250	0.00	0.00	0.009	O	|	|	|	|	0.01
206.333	0.00	0.00	0.008	O	|	|	|	|	0.01
206.417	0.00	0.00	0.008	O	|	|	|	|	0.01
206.500	0.00	0.00	0.008	O	|	|	|	|	0.01
206.583	0.00	0.00	0.008	O	|	|	|	|	0.01
206.667	0.00	0.00	0.008	O	|	|	|	|	0.01
206.750	0.00	0.00	0.008	O	|	|	|	|	0.01
206.833	0.00	0.00	0.008	O	|	|	|	|	0.01
206.917	0.00	0.00	0.008	O	|	|	|	|	0.01
207.000	0.00	0.00	0.008	O	|	|	|	|	0.01
207.083	0.00	0.00	0.008	O	|	|	|	|	0.01
207.167	0.00	0.00	0.008	O	|	|	|	|	0.01
207.250	0.00	0.00	0.008	O	|	|	|	|	0.01
207.333	0.00	0.00	0.008	O	|	|	|	|	0.01
207.417	0.00	0.00	0.008	O	|	|	|	|	0.01
207.500	0.00	0.00	0.008	O	|	|	|	|	0.01
207.583	0.00	0.00	0.008	O	|	|	|	|	0.01
207.667	0.00	0.00	0.008	O	|	|	|	|	0.01
207.750	0.00	0.00	0.008	O	|	|	|	|	0.01
207.833	0.00	0.00	0.008	O	|	|	|	|	0.01
207.917	0.00	0.00	0.008	O	|	|	|	|	0.01
208.000	0.00	0.00	0.008	O	|	|	|	|	0.01
208.083	0.00	0.00	0.008	O	|	|	|	|	0.01
208.167	0.00	0.00	0.008	O	|	|	|	|	0.01
208.250	0.00	0.00	0.008	O	|	|	|	|	0.01
208.333	0.00	0.00	0.008	O	|	|	|	|	0.01
208.417	0.00	0.00	0.008	O	|	|	|	|	0.01
208.500	0.00	0.00	0.008	O	|	|	|	|	0.01
208.583	0.00	0.00	0.008	O	|	|	|	|	0.01
208.667	0.00	0.00	0.008	O	|	|	|	|	0.01
208.750	0.00	0.00	0.008	O	|	|	|	|	0.01
208.833	0.00	0.00	0.008	O	|	|	|	|	0.01
208.917	0.00	0.00	0.008	O	|	|	|	|	0.01
209.000	0.00	0.00	0.007	O	|	|	|	|	0.01
209.083	0.00	0.00	0.007	O	|	|	|	|	0.01

209.167	0.00	0.00	0.007	O	|	|	|	|	0.01
209.250	0.00	0.00	0.007	O	|	|	|	|	0.01
209.333	0.00	0.00	0.007	O	|	|	|	|	0.01
209.417	0.00	0.00	0.007	O	|	|	|	|	0.01
209.500	0.00	0.00	0.007	O	|	|	|	|	0.01
209.583	0.00	0.00	0.007	O	|	|	|	|	0.01
209.667	0.00	0.00	0.007	O	|	|	|	|	0.01
209.750	0.00	0.00	0.007	O	|	|	|	|	0.01
209.833	0.00	0.00	0.007	O	|	|	|	|	0.01
209.917	0.00	0.00	0.007	O	|	|	|	|	0.00
210.000	0.00	0.00	0.007	O	|	|	|	|	0.00
210.083	0.00	0.00	0.007	O	|	|	|	|	0.00
210.167	0.00	0.00	0.007	O	|	|	|	|	0.00
210.250	0.00	0.00	0.007	O	|	|	|	|	0.00
210.333	0.00	0.00	0.007	O	|	|	|	|	0.00
210.417	0.00	0.00	0.007	O	|	|	|	|	0.00
210.500	0.00	0.00	0.007	O	|	|	|	|	0.00
210.583	0.00	0.00	0.007	O	|	|	|	|	0.00
210.667	0.00	0.00	0.007	O	|	|	|	|	0.00
210.750	0.00	0.00	0.007	O	|	|	|	|	0.00
210.833	0.00	0.00	0.007	O	|	|	|	|	0.00
210.917	0.00	0.00	0.007	O	|	|	|	|	0.00
211.000	0.00	0.00	0.007	O	|	|	|	|	0.00
211.083	0.00	0.00	0.007	O	|	|	|	|	0.00
211.167	0.00	0.00	0.007	O	|	|	|	|	0.00
211.250	0.00	0.00	0.007	O	|	|	|	|	0.00
211.333	0.00	0.00	0.007	O	|	|	|	|	0.00
211.417	0.00	0.00	0.007	O	|	|	|	|	0.00
211.500	0.00	0.00	0.007	O	|	|	|	|	0.00
211.583	0.00	0.00	0.007	O	|	|	|	|	0.00
211.667	0.00	0.00	0.007	O	|	|	|	|	0.00
211.750	0.00	0.00	0.007	O	|	|	|	|	0.00
211.833	0.00	0.00	0.007	O	|	|	|	|	0.00
211.917	0.00	0.00	0.007	O	|	|	|	|	0.00
212.000	0.00	0.00	0.007	O	|	|	|	|	0.00
212.083	0.00	0.00	0.006	O	|	|	|	|	0.00
212.167	0.00	0.00	0.006	O	|	|	|	|	0.00
212.250	0.00	0.00	0.006	O	|	|	|	|	0.00
212.333	0.00	0.00	0.006	O	|	|	|	|	0.00
212.417	0.00	0.00	0.006	O	|	|	|	|	0.00
212.500	0.00	0.00	0.006	O	|	|	|	|	0.00
212.583	0.00	0.00	0.006	O	|	|	|	|	0.00
212.667	0.00	0.00	0.006	O	|	|	|	|	0.00
212.750	0.00	0.00	0.006	O	|	|	|	|	0.00
212.833	0.00	0.00	0.006	O	|	|	|	|	0.00
212.917	0.00	0.00	0.006	O	|	|	|	|	0.00
213.000	0.00	0.00	0.006	O	|	|	|	|	0.00
213.083	0.00	0.00	0.006	O	|	|	|	|	0.00
213.167	0.00	0.00	0.006	O	|	|	|	|	0.00
213.250	0.00	0.00	0.006	O	|	|	|	|	0.00
213.333	0.00	0.00	0.006	O	|	|	|	|	0.00
213.417	0.00	0.00	0.006	O	|	|	|	|	0.00
213.500	0.00	0.00	0.006	O	|	|	|	|	0.00
213.583	0.00	0.00	0.006	O	|	|	|	|	0.00

213.667	0.00	0.00	0.006	O	|	|	|	|	0.00
213.750	0.00	0.00	0.006	O	|	|	|	|	0.00
213.833	0.00	0.00	0.006	O	|	|	|	|	0.00
213.917	0.00	0.00	0.006	O	|	|	|	|	0.00
214.000	0.00	0.00	0.006	O	|	|	|	|	0.00
214.083	0.00	0.00	0.006	O	|	|	|	|	0.00
214.167	0.00	0.00	0.006	O	|	|	|	|	0.00
214.250	0.00	0.00	0.006	O	|	|	|	|	0.00
214.333	0.00	0.00	0.006	O	|	|	|	|	0.00
214.417	0.00	0.00	0.006	O	|	|	|	|	0.00
214.500	0.00	0.00	0.006	O	|	|	|	|	0.00
214.583	0.00	0.00	0.006	O	|	|	|	|	0.00
214.667	0.00	0.00	0.006	O	|	|	|	|	0.00
214.750	0.00	0.00	0.006	O	|	|	|	|	0.00
214.833	0.00	0.00	0.006	O	|	|	|	|	0.00
214.917	0.00	0.00	0.006	O	|	|	|	|	0.00
215.000	0.00	0.00	0.006	O	|	|	|	|	0.00
215.083	0.00	0.00	0.006	O	|	|	|	|	0.00
215.167	0.00	0.00	0.006	O	|	|	|	|	0.00
215.250	0.00	0.00	0.006	O	|	|	|	|	0.00
215.333	0.00	0.00	0.006	O	|	|	|	|	0.00
215.417	0.00	0.00	0.006	O	|	|	|	|	0.00
215.500	0.00	0.00	0.006	O	|	|	|	|	0.00
215.583	0.00	0.00	0.006	O	|	|	|	|	0.00
215.667	0.00	0.00	0.006	O	|	|	|	|	0.00
215.750	0.00	0.00	0.005	O	|	|	|	|	0.00
215.833	0.00	0.00	0.005	O	|	|	|	|	0.00
215.917	0.00	0.00	0.005	O	|	|	|	|	0.00
216.000	0.00	0.00	0.005	O	|	|	|	|	0.00
216.083	0.00	0.00	0.005	O	|	|	|	|	0.00
216.167	0.00	0.00	0.005	O	|	|	|	|	0.00
216.250	0.00	0.00	0.005	O	|	|	|	|	0.00
216.333	0.00	0.00	0.005	O	|	|	|	|	0.00
216.417	0.00	0.00	0.005	O	|	|	|	|	0.00
216.500	0.00	0.00	0.005	O	|	|	|	|	0.00
216.583	0.00	0.00	0.005	O	|	|	|	|	0.00
216.667	0.00	0.00	0.005	O	|	|	|	|	0.00
216.750	0.00	0.00	0.005	O	|	|	|	|	0.00
216.833	0.00	0.00	0.005	O	|	|	|	|	0.00
216.917	0.00	0.00	0.005	O	|	|	|	|	0.00
217.000	0.00	0.00	0.005	O	|	|	|	|	0.00
217.083	0.00	0.00	0.005	O	|	|	|	|	0.00
217.167	0.00	0.00	0.005	O	|	|	|	|	0.00
217.250	0.00	0.00	0.005	O	|	|	|	|	0.00
217.333	0.00	0.00	0.005	O	|	|	|	|	0.00
217.417	0.00	0.00	0.005	O	|	|	|	|	0.00
217.500	0.00	0.00	0.005	O	|	|	|	|	0.00
217.583	0.00	0.00	0.005	O	|	|	|	|	0.00
217.667	0.00	0.00	0.005	O	|	|	|	|	0.00
217.750	0.00	0.00	0.005	O	|	|	|	|	0.00
217.833	0.00	0.00	0.005	O	|	|	|	|	0.00
217.917	0.00	0.00	0.005	O	|	|	|	|	0.00
218.000	0.00	0.00	0.005	O	|	|	|	|	0.00
218.083	0.00	0.00	0.005	O	|	|	|	|	0.00

218.167	0.00	0.00	0.005	O	|	|	|	|	0.00
218.250	0.00	0.00	0.005	O	|	|	|	|	0.00
218.333	0.00	0.00	0.005	O	|	|	|	|	0.00
218.417	0.00	0.00	0.005	O	|	|	|	|	0.00
218.500	0.00	0.00	0.005	O	|	|	|	|	0.00
218.583	0.00	0.00	0.005	O	|	|	|	|	0.00
218.667	0.00	0.00	0.005	O	|	|	|	|	0.00
218.750	0.00	0.00	0.005	O	|	|	|	|	0.00
218.833	0.00	0.00	0.005	O	|	|	|	|	0.00
218.917	0.00	0.00	0.005	O	|	|	|	|	0.00
219.000	0.00	0.00	0.005	O	|	|	|	|	0.00
219.083	0.00	0.00	0.005	O	|	|	|	|	0.00
219.167	0.00	0.00	0.005	O	|	|	|	|	0.00
219.250	0.00	0.00	0.005	O	|	|	|	|	0.00
219.333	0.00	0.00	0.005	O	|	|	|	|	0.00
219.417	0.00	0.00	0.005	O	|	|	|	|	0.00
219.500	0.00	0.00	0.005	O	|	|	|	|	0.00
219.583	0.00	0.00	0.005	O	|	|	|	|	0.00
219.667	0.00	0.00	0.005	O	|	|	|	|	0.00
219.750	0.00	0.00	0.005	O	|	|	|	|	0.00
219.833	0.00	0.00	0.005	O	|	|	|	|	0.00
219.917	0.00	0.00	0.005	O	|	|	|	|	0.00
220.000	0.00	0.00	0.005	O	|	|	|	|	0.00
220.083	0.00	0.00	0.004	O	|	|	|	|	0.00
220.167	0.00	0.00	0.004	O	|	|	|	|	0.00
220.250	0.00	0.00	0.004	O	|	|	|	|	0.00
220.333	0.00	0.00	0.004	O	|	|	|	|	0.00
220.417	0.00	0.00	0.004	O	|	|	|	|	0.00
220.500	0.00	0.00	0.004	O	|	|	|	|	0.00
220.583	0.00	0.00	0.004	O	|	|	|	|	0.00
220.667	0.00	0.00	0.004	O	|	|	|	|	0.00
220.750	0.00	0.00	0.004	O	|	|	|	|	0.00
220.833	0.00	0.00	0.004	O	|	|	|	|	0.00
220.917	0.00	0.00	0.004	O	|	|	|	|	0.00
221.000	0.00	0.00	0.004	O	|	|	|	|	0.00
221.083	0.00	0.00	0.004	O	|	|	|	|	0.00
221.167	0.00	0.00	0.004	O	|	|	|	|	0.00
221.250	0.00	0.00	0.004	O	|	|	|	|	0.00
221.333	0.00	0.00	0.004	O	|	|	|	|	0.00
221.417	0.00	0.00	0.004	O	|	|	|	|	0.00
221.500	0.00	0.00	0.004	O	|	|	|	|	0.00
221.583	0.00	0.00	0.004	O	|	|	|	|	0.00
221.667	0.00	0.00	0.004	O	|	|	|	|	0.00
221.750	0.00	0.00	0.004	O	|	|	|	|	0.00
221.833	0.00	0.00	0.004	O	|	|	|	|	0.00
221.917	0.00	0.00	0.004	O	|	|	|	|	0.00
222.000	0.00	0.00	0.004	O	|	|	|	|	0.00
222.083	0.00	0.00	0.004	O	|	|	|	|	0.00
222.167	0.00	0.00	0.004	O	|	|	|	|	0.00
222.250	0.00	0.00	0.004	O	|	|	|	|	0.00
222.333	0.00	0.00	0.004	O	|	|	|	|	0.00
222.417	0.00	0.00	0.004	O	|	|	|	|	0.00
222.500	0.00	0.00	0.004	O	|	|	|	|	0.00
222.583	0.00	0.00	0.004	O	|	|	|	|	0.00

222.667	0.00	0.00	0.004	O	|	|	|	|	0.00
222.750	0.00	0.00	0.004	O	|	|	|	|	0.00
222.833	0.00	0.00	0.004	O	|	|	|	|	0.00
222.917	0.00	0.00	0.004	O	|	|	|	|	0.00
223.000	0.00	0.00	0.004	O	|	|	|	|	0.00
223.083	0.00	0.00	0.004	O	|	|	|	|	0.00
223.167	0.00	0.00	0.004	O	|	|	|	|	0.00
223.250	0.00	0.00	0.004	O	|	|	|	|	0.00
223.333	0.00	0.00	0.004	O	|	|	|	|	0.00
223.417	0.00	0.00	0.004	O	|	|	|	|	0.00
223.500	0.00	0.00	0.004	O	|	|	|	|	0.00
223.583	0.00	0.00	0.004	O	|	|	|	|	0.00
223.667	0.00	0.00	0.004	O	|	|	|	|	0.00
223.750	0.00	0.00	0.004	O	|	|	|	|	0.00
223.833	0.00	0.00	0.004	O	|	|	|	|	0.00
223.917	0.00	0.00	0.004	O	|	|	|	|	0.00
224.000	0.00	0.00	0.004	O	|	|	|	|	0.00
224.083	0.00	0.00	0.004	O	|	|	|	|	0.00
224.167	0.00	0.00	0.004	O	|	|	|	|	0.00
224.250	0.00	0.00	0.004	O	|	|	|	|	0.00
224.333	0.00	0.00	0.004	O	|	|	|	|	0.00
224.417	0.00	0.00	0.004	O	|	|	|	|	0.00
224.500	0.00	0.00	0.004	O	|	|	|	|	0.00
224.583	0.00	0.00	0.004	O	|	|	|	|	0.00
224.667	0.00	0.00	0.004	O	|	|	|	|	0.00
224.750	0.00	0.00	0.004	O	|	|	|	|	0.00
224.833	0.00	0.00	0.004	O	|	|	|	|	0.00
224.917	0.00	0.00	0.004	O	|	|	|	|	0.00
225.000	0.00	0.00	0.004	O	|	|	|	|	0.00
225.083	0.00	0.00	0.004	O	|	|	|	|	0.00
225.167	0.00	0.00	0.004	O	|	|	|	|	0.00
225.250	0.00	0.00	0.004	O	|	|	|	|	0.00
225.333	0.00	0.00	0.004	O	|	|	|	|	0.00
225.417	0.00	0.00	0.004	O	|	|	|	|	0.00
225.500	0.00	0.00	0.003	O	|	|	|	|	0.00
225.583	0.00	0.00	0.003	O	|	|	|	|	0.00
225.667	0.00	0.00	0.003	O	|	|	|	|	0.00
225.750	0.00	0.00	0.003	O	|	|	|	|	0.00
225.833	0.00	0.00	0.003	O	|	|	|	|	0.00
225.917	0.00	0.00	0.003	O	|	|	|	|	0.00
226.000	0.00	0.00	0.003	O	|	|	|	|	0.00
226.083	0.00	0.00	0.003	O	|	|	|	|	0.00
226.167	0.00	0.00	0.003	O	|	|	|	|	0.00
226.250	0.00	0.00	0.003	O	|	|	|	|	0.00
226.333	0.00	0.00	0.003	O	|	|	|	|	0.00
226.417	0.00	0.00	0.003	O	|	|	|	|	0.00
226.500	0.00	0.00	0.003	O	|	|	|	|	0.00
226.583	0.00	0.00	0.003	O	|	|	|	|	0.00
226.667	0.00	0.00	0.003	O	|	|	|	|	0.00
226.750	0.00	0.00	0.003	O	|	|	|	|	0.00
226.833	0.00	0.00	0.003	O	|	|	|	|	0.00
226.917	0.00	0.00	0.003	O	|	|	|	|	0.00
227.000	0.00	0.00	0.003	O	|	|	|	|	0.00
227.083	0.00	0.00	0.003	O	|	|	|	|	0.00

227.167	0.00	0.00	0.003	O	|	|	|	|	0.00
227.250	0.00	0.00	0.003	O	|	|	|	|	0.00
227.333	0.00	0.00	0.003	O	|	|	|	|	0.00
227.417	0.00	0.00	0.003	O	|	|	|	|	0.00
227.500	0.00	0.00	0.003	O	|	|	|	|	0.00
227.583	0.00	0.00	0.003	O	|	|	|	|	0.00
227.667	0.00	0.00	0.003	O	|	|	|	|	0.00
227.750	0.00	0.00	0.003	O	|	|	|	|	0.00
227.833	0.00	0.00	0.003	O	|	|	|	|	0.00
227.917	0.00	0.00	0.003	O	|	|	|	|	0.00
228.000	0.00	0.00	0.003	O	|	|	|	|	0.00
228.083	0.00	0.00	0.003	O	|	|	|	|	0.00
228.167	0.00	0.00	0.003	O	|	|	|	|	0.00
228.250	0.00	0.00	0.003	O	|	|	|	|	0.00
228.333	0.00	0.00	0.003	O	|	|	|	|	0.00
228.417	0.00	0.00	0.003	O	|	|	|	|	0.00
228.500	0.00	0.00	0.003	O	|	|	|	|	0.00
228.583	0.00	0.00	0.003	O	|	|	|	|	0.00
228.667	0.00	0.00	0.003	O	|	|	|	|	0.00
228.750	0.00	0.00	0.003	O	|	|	|	|	0.00
228.833	0.00	0.00	0.003	O	|	|	|	|	0.00
228.917	0.00	0.00	0.003	O	|	|	|	|	0.00
229.000	0.00	0.00	0.003	O	|	|	|	|	0.00
229.083	0.00	0.00	0.003	O	|	|	|	|	0.00
229.167	0.00	0.00	0.003	O	|	|	|	|	0.00
229.250	0.00	0.00	0.003	O	|	|	|	|	0.00
229.333	0.00	0.00	0.003	O	|	|	|	|	0.00
229.417	0.00	0.00	0.003	O	|	|	|	|	0.00
229.500	0.00	0.00	0.003	O	|	|	|	|	0.00
229.583	0.00	0.00	0.003	O	|	|	|	|	0.00
229.667	0.00	0.00	0.003	O	|	|	|	|	0.00
229.750	0.00	0.00	0.003	O	|	|	|	|	0.00
229.833	0.00	0.00	0.003	O	|	|	|	|	0.00
229.917	0.00	0.00	0.003	O	|	|	|	|	0.00
230.000	0.00	0.00	0.003	O	|	|	|	|	0.00
230.083	0.00	0.00	0.003	O	|	|	|	|	0.00
230.167	0.00	0.00	0.003	O	|	|	|	|	0.00
230.250	0.00	0.00	0.003	O	|	|	|	|	0.00
230.333	0.00	0.00	0.003	O	|	|	|	|	0.00
230.417	0.00	0.00	0.003	O	|	|	|	|	0.00
230.500	0.00	0.00	0.003	O	|	|	|	|	0.00
230.583	0.00	0.00	0.003	O	|	|	|	|	0.00
230.667	0.00	0.00	0.003	O	|	|	|	|	0.00
230.750	0.00	0.00	0.003	O	|	|	|	|	0.00
230.833	0.00	0.00	0.003	O	|	|	|	|	0.00
230.917	0.00	0.00	0.003	O	|	|	|	|	0.00
231.000	0.00	0.00	0.003	O	|	|	|	|	0.00
231.083	0.00	0.00	0.003	O	|	|	|	|	0.00
231.167	0.00	0.00	0.003	O	|	|	|	|	0.00
231.250	0.00	0.00	0.003	O	|	|	|	|	0.00
231.333	0.00	0.00	0.003	O	|	|	|	|	0.00
231.417	0.00	0.00	0.003	O	|	|	|	|	0.00
231.500	0.00	0.00	0.003	O	|	|	|	|	0.00
231.583	0.00	0.00	0.003	O	|	|	|	|	0.00

231.667	0.00	0.00	0.003	O	|	|	|	| 0.00
231.750	0.00	0.00	0.003	O	|	|	|	| 0.00
231.833	0.00	0.00	0.003	O	|	|	|	| 0.00
231.917	0.00	0.00	0.003	O	|	|	|	| 0.00
232.000	0.00	0.00	0.003	O	|	|	|	| 0.00
232.083	0.00	0.00	0.003	O	|	|	|	| 0.00
232.167	0.00	0.00	0.003	O	|	|	|	| 0.00
232.250	0.00	0.00	0.003	O	|	|	|	| 0.00
232.333	0.00	0.00	0.003	O	|	|	|	| 0.00
232.417	0.00	0.00	0.003	O	|	|	|	| 0.00
232.500	0.00	0.00	0.003	O	|	|	|	| 0.00
232.583	0.00	0.00	0.003	O	|	|	|	| 0.00
232.667	0.00	0.00	0.003	O	|	|	|	| 0.00
232.750	0.00	0.00	0.003	O	|	|	|	| 0.00
232.833	0.00	0.00	0.002	O	|	|	|	| 0.00
232.917	0.00	0.00	0.002	O	|	|	|	| 0.00
233.000	0.00	0.00	0.002	O	|	|	|	| 0.00
233.083	0.00	0.00	0.002	O	|	|	|	| 0.00
233.167	0.00	0.00	0.002	O	|	|	|	| 0.00
233.250	0.00	0.00	0.002	O	|	|	|	| 0.00
233.333	0.00	0.00	0.002	O	|	|	|	| 0.00
233.417	0.00	0.00	0.002	O	|	|	|	| 0.00
233.500	0.00	0.00	0.002	O	|	|	|	| 0.00
233.583	0.00	0.00	0.002	O	|	|	|	| 0.00
233.667	0.00	0.00	0.002	O	|	|	|	| 0.00
233.750	0.00	0.00	0.002	O	|	|	|	| 0.00
233.833	0.00	0.00	0.002	O	|	|	|	| 0.00
233.917	0.00	0.00	0.002	O	|	|	|	| 0.00
234.000	0.00	0.00	0.002	O	|	|	|	| 0.00
234.083	0.00	0.00	0.002	O	|	|	|	| 0.00
234.167	0.00	0.00	0.002	O	|	|	|	| 0.00
234.250	0.00	0.00	0.002	O	|	|	|	| 0.00
234.333	0.00	0.00	0.002	O	|	|	|	| 0.00
234.417	0.00	0.00	0.002	O	|	|	|	| 0.00
234.500	0.00	0.00	0.002	O	|	|	|	| 0.00
234.583	0.00	0.00	0.002	O	|	|	|	| 0.00
234.667	0.00	0.00	0.002	O	|	|	|	| 0.00
234.750	0.00	0.00	0.002	O	|	|	|	| 0.00
234.833	0.00	0.00	0.002	O	|	|	|	| 0.00
234.917	0.00	0.00	0.002	O	|	|	|	| 0.00
235.000	0.00	0.00	0.002	O	|	|	|	| 0.00
235.083	0.00	0.00	0.002	O	|	|	|	| 0.00
235.167	0.00	0.00	0.002	O	|	|	|	| 0.00
235.250	0.00	0.00	0.002	O	|	|	|	| 0.00
235.333	0.00	0.00	0.002	O	|	|	|	| 0.00
235.417	0.00	0.00	0.002	O	|	|	|	| 0.00
235.500	0.00	0.00	0.002	O	|	|	|	| 0.00
235.583	0.00	0.00	0.002	O	|	|	|	| 0.00
235.667	0.00	0.00	0.002	O	|	|	|	| 0.00
235.750	0.00	0.00	0.002	O	|	|	|	| 0.00
235.833	0.00	0.00	0.002	O	|	|	|	| 0.00
235.917	0.00	0.00	0.002	O	|	|	|	| 0.00
236.000	0.00	0.00	0.002	O	|	|	|	| 0.00
236.083	0.00	0.00	0.002	O	|	|	|	| 0.00

236.167	0.00	0.00	0.002	O	|	|	|	|	0.00
236.250	0.00	0.00	0.002	O	|	|	|	|	0.00
236.333	0.00	0.00	0.002	O	|	|	|	|	0.00
236.417	0.00	0.00	0.002	O	|	|	|	|	0.00
236.500	0.00	0.00	0.002	O	|	|	|	|	0.00
236.583	0.00	0.00	0.002	O	|	|	|	|	0.00
236.667	0.00	0.00	0.002	O	|	|	|	|	0.00
236.750	0.00	0.00	0.002	O	|	|	|	|	0.00
236.833	0.00	0.00	0.002	O	|	|	|	|	0.00
236.917	0.00	0.00	0.002	O	|	|	|	|	0.00
237.000	0.00	0.00	0.002	O	|	|	|	|	0.00
237.083	0.00	0.00	0.002	O	|	|	|	|	0.00
237.167	0.00	0.00	0.002	O	|	|	|	|	0.00
237.250	0.00	0.00	0.002	O	|	|	|	|	0.00
237.333	0.00	0.00	0.002	O	|	|	|	|	0.00
237.417	0.00	0.00	0.002	O	|	|	|	|	0.00
237.500	0.00	0.00	0.002	O	|	|	|	|	0.00
237.583	0.00	0.00	0.002	O	|	|	|	|	0.00
237.667	0.00	0.00	0.002	O	|	|	|	|	0.00
237.750	0.00	0.00	0.002	O	|	|	|	|	0.00
237.833	0.00	0.00	0.002	O	|	|	|	|	0.00
237.917	0.00	0.00	0.002	O	|	|	|	|	0.00
238.000	0.00	0.00	0.002	O	|	|	|	|	0.00
238.083	0.00	0.00	0.002	O	|	|	|	|	0.00
238.167	0.00	0.00	0.002	O	|	|	|	|	0.00
238.250	0.00	0.00	0.002	O	|	|	|	|	0.00
238.333	0.00	0.00	0.002	O	|	|	|	|	0.00
238.417	0.00	0.00	0.002	O	|	|	|	|	0.00
238.500	0.00	0.00	0.002	O	|	|	|	|	0.00
238.583	0.00	0.00	0.002	O	|	|	|	|	0.00
238.667	0.00	0.00	0.002	O	|	|	|	|	0.00
238.750	0.00	0.00	0.002	O	|	|	|	|	0.00
238.833	0.00	0.00	0.002	O	|	|	|	|	0.00
238.917	0.00	0.00	0.002	O	|	|	|	|	0.00
239.000	0.00	0.00	0.002	O	|	|	|	|	0.00
239.083	0.00	0.00	0.002	O	|	|	|	|	0.00
239.167	0.00	0.00	0.002	O	|	|	|	|	0.00
239.250	0.00	0.00	0.002	O	|	|	|	|	0.00
239.333	0.00	0.00	0.002	O	|	|	|	|	0.00
239.417	0.00	0.00	0.002	O	|	|	|	|	0.00
239.500	0.00	0.00	0.002	O	|	|	|	|	0.00
239.583	0.00	0.00	0.002	O	|	|	|	|	0.00
239.667	0.00	0.00	0.002	O	|	|	|	|	0.00
239.750	0.00	0.00	0.002	O	|	|	|	|	0.00
239.833	0.00	0.00	0.002	O	|	|	|	|	0.00
239.917	0.00	0.00	0.002	O	|	|	|	|	0.00
240.000	0.00	0.00	0.002	O	|	|	|	|	0.00
240.083	0.00	0.00	0.002	O	|	|	|	|	0.00

Remaining water in basin = 0.00 (Ac.Ft)

**********HYDROGRAPH

DATA**************************

Number of intervals = 2881
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.402 (CFS)
Total volume = 4.211 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

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                    FLOOD HYDROGRAPH ROUTING PROGRAM
                Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
                          Study date: 05/02/23

      ---------------------------------------------------------------------


      BEAUMONT POINTE
      DMA 13
      BMP BASIN 2
      HYDROMODIFICATION
      ---------------------------------------------------------------------


      Program License Serial Number 6094

      ---------------------------------------------------------------------
      ********************* HYDROGRAPH INFORMATION **********************

                      From study/file name: Area13242.rte
      ****************************HYDROGRAPH
DATA****************************
                      Number of intervals =   295
                      Time interval =    5.0 (Min.)
                      Maximum/Peak flow rate =       20.801 (CFS)
                      Total volume =      11.106 (Ac.Ft)
               Status of hydrographs being held in storage
                         Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
               Peak (CFS)      0.000     0.000     0.000     0.000     0.000
               Vol (Ac.Ft)      0.000     0.000     0.000     0.000     0.000

**********************************************************************



      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
      Process from Point/Station        1.000 to Point/Station        2.000
      **** RETARDING BASIN ROUTING ****
      ______________________________________________________________________

      Program computation of outflow v. depth




      CALCULATED OUTFLOW DATA AT DEPTH =    0.50(Ft.))

      Free outlet pipe flow:  Pipe Diameter =     0.50(Ft.)
      Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
      Depth above pipe =   0.50(Ft.)    Capacity =   1.11(CFS)
```

Total outflow at this depth = 1.11(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.50(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.50(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 1.00(Ft.) Capacity = 1.11(CFS)

Total outflow at this depth = 1.11(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.50(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.50(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 1.50(Ft.) Capacity = 1.11(CFS)

Total outflow at this depth = 1.11(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 2.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.50(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.50(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 2.00(Ft.) Capacity = 1.11(CFS)

Total outflow at this depth = 1.11(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 2.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.50(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.50(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 2.50(Ft.) Capacity = 1.11(CFS)

Total outflow at this depth = 1.11(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 3.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.50(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.50(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 3.00(Ft.) Capacity = 1.11(CFS)

```
Total outflow at this depth =      1.11(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.50(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.50(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   3.50(Ft.)    Capacity =   1.11(CFS)

Total outflow at this depth =      1.11(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.00(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.50(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.50(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   4.00(Ft.)    Capacity =   1.11(CFS)

Total outflow at this depth =      1.11(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.50(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.50(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   4.50(Ft.)    Capacity =   1.11(CFS)

Total outflow at this depth =      1.11(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    5.00(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.50(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.50(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   5.00(Ft.)    Capacity =   1.11(CFS)

Total outflow at this depth =      1.11(CFS)

------------------------------------------------------------------------
Total number of inflow hydrograph intervals = 295
Hydrograph time unit =  5.000 (Min.)
Initial depth in storage basin =   0.00(Ft.)
------------------------------------------------------------------------
------------------------------------------------------------------------
Initial basin depth =   0.00 (Ft.)
```

Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.950	1.111	0.946	0.954
1.000	1.940	1.111	1.936	1.944
1.500	2.970	1.111	2.966	2.974
2.000	4.030	1.111	4.026	4.034
2.500	5.140	1.111	5.136	5.144
3.000	6.280	1.111	6.276	6.284
3.500	7.460	1.111	7.456	7.464
4.000	8.680	1.111	8.676	8.684
4.500	9.940	1.111	9.936	9.944
5.000	11.240	1.111	11.236	11.244

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 5.2 10.40 15.60 20.80	Depth (Ft.)
0.083	0.12	0.00	0.000	O	0.00
0.167	0.69	0.00	0.003	OI	0.00
0.250	0.91	0.01	0.009	OI	0.00
0.333	1.06	0.02	0.015	OI	0.01
0.417	1.38	0.03	0.023	O I	0.01
0.500	1.50	0.04	0.033	O I	0.02
0.583	1.55	0.05	0.043	O I	0.02
0.667	1.58	0.06	0.054	O I	0.03
0.750	1.58	0.07	0.064	O I	0.03
0.833	1.64	0.09	0.075	O I	0.04
0.917	1.93	0.10	0.086	O I	0.05
1.000	2.04	0.12	0.099	O I	0.05
1.083	2.03	0.13	0.112	O I	0.06
1.167	1.76	0.15	0.124	O I	0.07
1.250	1.66	0.16	0.135	O I	0.07
1.333	1.62	0.17	0.145	O I	0.08
1.417	1.60	0.18	0.155	O I	0.08
1.500	1.59	0.19	0.165	O I	0.09
1.583	1.59	0.20	0.174	O I	0.09
1.667	1.59	0.22	0.184	O I	0.10
1.750	1.59	0.23	0.193	O I	0.10
1.833	1.65	0.24	0.203	O I	0.11
1.917	1.93	0.25	0.214	O I	0.11
2.000	2.04	0.26	0.225	O I	0.12
2.083	2.08	0.28	0.238	O I	0.13
2.167	2.10	0.29	0.250	O I	0.13
2.250	2.11	0.31	0.263	O I	0.14

2.333	2.11	0.32	0.275	O	I	|	|	|	0.14
2.417	2.12	0.34	0.287	O	I	|	|	|	0.15
2.500	2.12	0.35	0.300	O	I	|	|	|	0.16
2.583	2.18	0.36	0.312	O	I	|	|	|	0.16
2.667	2.46	0.38	0.325	O	I	|	|	|	0.17
2.750	2.57	0.40	0.340	O	I	|	|	|	0.18
2.833	2.61	0.42	0.355	O	I	|	|	|	0.19
2.917	2.63	0.43	0.370	O	I	|	|	|	0.19
3.000	2.64	0.45	0.385	O	I	|	|	|	0.20
3.083	2.64	0.47	0.400	O	I	|	|	|	0.21
3.167	2.64	0.49	0.415	O	I	|	|	|	0.22
3.250	2.64	0.50	0.430	O	I	|	|	|	0.23
3.333	2.64	0.52	0.445	O	I	|	|	|	0.23
3.417	2.64	0.54	0.459	O	I	|	|	|	0.24
3.500	2.64	0.55	0.474	O	I	|	|	|	0.25
3.583	2.64	0.57	0.488	O	I	|	|	|	0.26
3.667	2.64	0.59	0.502	O	I	|	|	|	0.26
3.750	2.64	0.60	0.516	O	I	|	|	|	0.27
3.833	2.70	0.62	0.531	O	I	|	|	|	0.28
3.917	2.99	0.64	0.546	O	I	|	|	|	0.29
4.000	3.10	0.66	0.562	O	I	|	|	|	0.30
4.083	3.14	0.68	0.579	O	I	|	|	|	0.30
4.167	3.16	0.70	0.596	O	I	|	|	|	0.31
4.250	3.17	0.72	0.613	O	I	|	|	|	0.32
4.333	3.23	0.74	0.630	O	I	|	|	|	0.33
4.417	3.52	0.76	0.648	O	I	|	|	|	0.34
4.500	3.63	0.78	0.668	O	I	|	|	|	0.35
4.583	3.67	0.80	0.687	O	I	|	|	|	0.36
4.667	3.69	0.83	0.707	O	I	|	|	|	0.37
4.750	3.70	0.85	0.727	O	I	|	|	|	0.38
4.833	3.76	0.87	0.746	O	I	|	|	|	0.39
4.917	4.05	0.90	0.767	O	I	|	|	|	0.40
5.000	4.16	0.92	0.789	O	I	|	|	|	0.42
5.083	4.08	0.95	0.811	O	I	|	|	|	0.43
5.167	3.53	0.97	0.831	O	I	|	|	|	0.44
5.250	3.32	0.99	0.847	O	I	|	|	|	0.45
5.333	3.29	1.01	0.863	O	I	|	|	|	0.45
5.417	3.54	1.03	0.880	O	I	|	|	|	0.46
5.500	3.64	1.05	0.897	O	I	|	|	|	0.47
5.583	3.74	1.07	0.916	O	I	|	|	|	0.48
5.667	4.03	1.09	0.935	O	I	|	|	|	0.49
5.750	4.15	1.11	0.955	O	I	|	|	|	0.50
5.833	4.20	1.11	0.977	O	I	|	|	|	0.51
5.917	4.22	1.11	0.998	O	I	|	|	|	0.52
6.000	4.23	1.11	1.019	O	I	|	|	|	0.53
6.083	4.29	1.11	1.041	O	I	|	|	|	0.55
6.167	4.57	1.11	1.064	O	I	|	|	|	0.56
6.250	4.68	1.11	1.088	O	I	|	|	|	0.57
6.333	4.73	1.11	1.113	O	I	|	|	|	0.58
6.417	4.75	1.11	1.138	O	I	|	|	|	0.59
6.500	4.75	1.11	1.163	O	I	|	|	|	0.61
6.583	4.82	1.11	1.188	O	I	|	|	|	0.62
6.667	5.10	1.11	1.215	O	I	|	|	|	0.63
6.750	5.21	1.11	1.243	O	I	|	|	|	0.65

6.833	5.26	1.11	1.271	O	I			0.66
6.917	5.28	1.11	1.300	O	I			0.68
7.000	5.28	1.11	1.328	O	I			0.69
7.083	5.29	1.11	1.357	O	I			0.71
7.167	5.29	1.11	1.386	O	I			0.72
7.250	5.29	1.11	1.415	O	I			0.73
7.333	5.35	1.11	1.444	O	I			0.75
7.417	5.63	1.11	1.474	O	I			0.76
7.500	5.74	1.11	1.505	O	I			0.78
7.583	5.85	1.11	1.538	O	I			0.80
7.667	6.15	1.11	1.571	O	I			0.81
7.750	6.26	1.11	1.606	O	I			0.83
7.833	6.37	1.11	1.642	O	I			0.85
7.917	6.68	1.11	1.679	O	I			0.87
8.000	6.79	1.11	1.718	O	I			0.89
8.083	6.96	1.11	1.758	O	I			0.91
8.167	7.55	1.11	1.800	O	I			0.93
8.250	7.78	1.11	1.845	O	I			0.95
8.333	7.87	1.11	1.892	O	I			0.98
8.417	7.91	1.11	1.938	O	I			1.00
8.500	7.92	1.11	1.985	O	I			1.02
8.583	7.99	1.11	2.032	O	I			1.04
8.667	8.28	1.11	2.081	O	I			1.07
8.750	8.39	1.11	2.130	O	I			1.09
8.833	8.49	1.11	2.181	O	I			1.12
8.917	8.79	1.11	2.233	O	I			1.14
9.000	8.91	1.11	2.286	O	I			1.17
9.083	9.08	1.11	2.340	O	I			1.19
9.167	9.67	1.11	2.397	O	I			1.22
9.250	9.89	1.11	2.457	O	I			1.25
9.333	10.04	1.11	2.518	O	I			1.28
9.417	10.37	1.11	2.581	O	I			1.31
9.500	10.49	1.11	2.645	O	I			1.34
9.583	10.60	1.11	2.710	O	I			1.37
9.667	10.91	1.11	2.776	O	I			1.41
9.750	11.02	1.11	2.844	O	I			1.44
9.833	11.13	1.11	2.913	O	I			1.47
9.917	11.44	1.11	2.983	O	I			1.51
10.000	11.55	1.11	3.054	O	I			1.54
10.083	11.18	1.11	3.125	O	I			1.57
10.167	9.22	1.11	3.188	O	I			1.60
10.250	8.46	1.11	3.241	O	I			1.63
10.333	8.15	1.11	3.290	O	I			1.65
10.417	8.01	1.11	3.338	O	I			1.67
10.500	7.97	1.11	3.386	O	I			1.70
10.583	8.25	1.11	3.434	O	I			1.72
10.667	9.65	1.11	3.488	O	I			1.74
10.750	10.20	1.11	3.549	O	I			1.77
10.833	10.42	1.11	3.612	O	I			1.80
10.917	10.52	1.11	3.676	O	I			1.83
11.000	10.55	1.11	3.741	O	I			1.86
11.083	10.51	1.11	3.806	O	I			1.89
11.167	10.24	1.11	3.870	O	I			1.92
11.250	10.13	1.11	3.932	O	I			1.95

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11.333   10.08    1.11      3.994  |O      |      I|       |       |     1.98
11.417   10.06    1.11      4.056  |O      |      I|       |       |     2.01
11.500   10.05    1.11      4.118  |O      |      I|       |       |     2.04
11.583    9.93    1.11      4.179  |O      |      I|       |       |     2.07
11.667    9.36    1.11      4.238  |O      |     I |       |       |     2.09
11.750    9.14    1.11      4.294  |O      |     I |       |       |     2.12
11.833    9.11    1.11      4.349  |O      |     I |       |       |     2.14
11.917    9.36    1.11      4.405  |O      |     I |       |       |     2.17
12.000    9.46    1.11      4.462  |O      |     I |       |       |     2.19
12.083    9.91    1.11      4.521  |O      |      I|       |       |     2.22
12.167   11.91    1.11      4.589  |O      |       | I     |       |     2.25
12.250   12.68    1.11      4.666  |O      |       |  I    |       |     2.29
12.333   13.06    1.11      4.747  |O      |       |   I   |       |     2.32
12.417   13.48    1.11      4.830  |O      |       |   I   |       |     2.36
12.500   13.63    1.11      4.916  |O      |       |   I   |       |     2.40
12.583   13.83    1.11      5.003  |O      |       |    I  |       |     2.44
12.667   14.49    1.11      5.093  |O      |       |     I |       |     2.48
12.750   14.77    1.11      5.186  |O      |       |     I |       |     2.52
12.833   15.02    1.11      5.281  |O      |       |      I|       |     2.56
12.917   15.60    1.11      5.379  |O      |       |      I|       |     2.60
13.000   15.85    1.11      5.479  |O      |       |       I       |     2.65
13.083   16.50    1.11      5.583  |O      |       |       |I      |     2.69
13.167   19.02    1.11      5.698  |O      |       |       |    I  |     2.74
13.250   20.03    1.11      5.825  |O      |       |       |     I |     2.80
13.333   20.48    1.11      5.957  |O      |       |       |      I|     2.86
13.417   20.70    1.11      6.091  |O      |       |       |      I|     2.92
13.500   20.80    1.11      6.226  |O      |       |       |       I     2.98
13.583   19.89    1.11      6.358  |O      |       |       |     I |     3.03
13.667   15.23    1.11      6.472  |O      |       |      I|       |     3.08
13.750   13.42    1.11      6.563  |O      |       |   I   |       |     3.12
13.833   12.67    1.11      6.645  |O      |       |  I    |       |     3.15
13.917   12.36    1.11      6.723  |O      |       |  I    |       |     3.19
14.000   12.26    1.11      6.801  |O      |       | I     |       |     3.22
14.083   12.51    1.11      6.878  |O      |       |  I    |       |     3.25
14.167   13.95    1.11      6.962  |O      |       |    I  |       |     3.29
14.250   14.56    1.11      7.052  |O      |       |     I |       |     3.33
14.333   14.73    1.11      7.145  |O      |       |     I |       |     3.37
14.417   14.39    1.11      7.238  |O      |       |     I |       |     3.41
14.500   14.28    1.11      7.329  |O      |       |    I  |       |     3.44
14.583   14.27    1.11      7.420  |O      |       |    I  |       |     3.48
14.667   14.29    1.11      7.510  |O      |       |    I  |       |     3.52
14.750   14.33    1.11      7.601  |O      |       |     I |       |     3.56
14.833   14.27    1.11      7.692  |O      |       |    I  |       |     3.60
14.917   13.83    1.11      7.781  |O      |       |    I  |       |     3.63
15.000   13.69    1.11      7.868  |O      |       |    I  |       |     3.67
15.083   13.55    1.11      7.955  |O      |       |   I   |       |     3.70
15.167   13.08    1.11      8.039  |O      |       |   I   |       |     3.74
15.250   12.93    1.11      8.121  |O      |       |  I    |       |     3.77
15.333   12.81    1.11      8.202  |O      |       |  I    |       |     3.80
15.417   12.42    1.11      8.281  |O      |       |  I    |       |     3.84
15.500   12.27    1.11      8.358  |O      |       | I     |       |     3.87
15.583   11.97    1.11      8.434  |O      |       | I     |       |     3.90
15.667   10.81    1.11      8.505  |O      |       I       |       |     3.93
15.750   10.36    1.11      8.570  |O      |      I|       |       |     3.95
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15.833	10.18	1.11	8.633	O	I			3.98
15.917	10.10	1.11	8.695	O	I			4.01
16.000	10.07	1.11	8.757	O	I			4.03
16.083	9.16	1.11	8.816	O	I			4.05
16.167	4.91	1.11	8.856	O I				4.07
16.250	3.26	1.11	8.877	O I				4.08
16.333	2.58	1.11	8.889	O I				4.08
16.417	2.29	1.11	8.898	O I				4.09
16.500	2.20	1.11	8.906	O I				4.09
16.583	2.09	1.11	8.913	O I				4.09
16.667	1.77	1.11	8.919	OI				4.09
16.750	1.66	1.11	8.923	OI				4.10
16.833	1.62	1.11	8.927	OI				4.10
16.917	1.60	1.11	8.930	OI				4.10
17.000	1.59	1.11	8.934	OI				4.10
17.083	1.71	1.11	8.937	OI				4.10
17.167	2.27	1.11	8.943	O I				4.10
17.250	2.49	1.11	8.952	O I				4.11
17.333	2.58	1.11	8.962	O I				4.11
17.417	2.62	1.11	8.972	O I				4.12
17.500	2.63	1.11	8.983	O I				4.12
17.583	2.64	1.11	8.993	O I				4.12
17.667	2.64	1.11	9.004	O I				4.13
17.750	2.64	1.11	9.014	O I				4.13
17.833	2.58	1.11	9.025	O I				4.14
17.917	2.30	1.11	9.034	O I				4.14
18.000	2.19	1.11	9.042	O I				4.14
18.083	2.15	1.11	9.049	O I				4.15
18.167	2.13	1.11	9.056	O I				4.15
18.250	2.12	1.11	9.063	O I				4.15
18.333	2.12	1.11	9.070	O I				4.15
18.417	2.12	1.11	9.077	O I				4.16
18.500	2.12	1.11	9.084	O I				4.16
18.583	2.06	1.11	9.090	O I				4.16
18.667	1.77	1.11	9.096	OI				4.17
18.750	1.66	1.11	9.100	OI				4.17
18.833	1.56	1.11	9.104	OI				4.17
18.917	1.26	1.11	9.106	O				4.17
19.000	1.14	1.11	9.106	O				4.17
19.083	1.15	1.11	9.107	O				4.17
19.167	1.41	1.11	9.108	OI				4.17
19.250	1.52	1.11	9.110	OI				4.17
19.333	1.62	1.11	9.113	OI				4.17
19.417	1.92	1.11	9.118	OI				4.17
19.500	2.03	1.11	9.124	O I				4.18
19.583	2.02	1.11	9.130	O I				4.18
19.667	1.76	1.11	9.135	OI				4.18
19.750	1.66	1.11	9.140	OI				4.18
19.833	1.56	1.11	9.143	OI				4.18
19.917	1.26	1.11	9.145	O				4.18
20.000	1.14	1.11	9.146	O				4.18
20.083	1.15	1.11	9.146	O				4.18
20.167	1.41	1.11	9.147	OI				4.19
20.250	1.52	1.11	9.149	OI				4.19

20.333	1.56	1.11	9.152	|OI	|	|	|	4.19
20.417	1.58	1.11	9.156	|OI	|	|	|	4.19
20.500	1.58	1.11	9.159	|OI	|	|	|	4.19
20.583	1.58	1.11	9.162	|OI	|	|	|	4.19
20.667	1.59	1.11	9.165	|OI	|	|	|	4.19
20.750	1.59	1.11	9.169	|OI	|	|	|	4.19
20.833	1.53	1.11	9.172	|OI	|	|	|	4.20
20.917	1.24	1.11	9.174	|O	|	|	|	4.20
21.000	1.13	1.11	9.174	|O	|	|	|	4.20
21.083	1.15	1.11	9.174	|O	|	|	|	4.20
21.167	1.41	1.11	9.175	|OI	|	|	|	4.20
21.250	1.52	1.11	9.178	|OI	|	|	|	4.20
21.333	1.50	1.11	9.181	|OI	|	|	|	4.20
21.417	1.23	1.11	9.182	|O	|	|	|	4.20
21.500	1.13	1.11	9.183	|O	|	|	|	4.20
21.583	1.15	1.11	9.183	|O	|	|	|	4.20
21.667	1.41	1.11	9.184	|OI	|	|	|	4.20
21.750	1.52	1.11	9.187	|OI	|	|	|	4.20
21.833	1.50	1.11	9.189	|OI	|	|	|	4.20
21.917	1.23	1.11	9.191	|O	|	|	|	4.20
22.000	1.13	1.11	9.192	|O	|	|	|	4.20
22.083	1.15	1.11	9.192	|O	|	|	|	4.20
22.167	1.41	1.11	9.193	|OI	|	|	|	4.20
22.250	1.52	1.11	9.195	|OI	|	|	|	4.20
22.333	1.50	1.11	9.198	|OI	|	|	|	4.21
22.417	1.23	1.11	9.200	|O	|	|	|	4.21
22.500	1.13	1.11	9.200	|O	|	|	|	4.21
22.583	1.09	1.11	9.200	|O	|	|	|	4.21
22.667	1.07	1.11	9.200	|O	|	|	|	4.21
22.750	1.06	1.11	9.200	|O	|	|	|	4.21
22.833	1.06	1.11	9.199	|O	|	|	|	4.21
22.917	1.06	1.11	9.199	|O	|	|	|	4.21
23.000	1.06	1.11	9.199	|O	|	|	|	4.21
23.083	1.06	1.11	9.198	|O	|	|	|	4.21
23.167	1.06	1.11	9.198	|O	|	|	|	4.21
23.250	1.06	1.11	9.198	|O	|	|	|	4.21
23.333	1.06	1.11	9.197	|O	|	|	|	4.21
23.417	1.06	1.11	9.197	|O	|	|	|	4.21
23.500	1.06	1.11	9.197	|O	|	|	|	4.20
23.583	1.06	1.11	9.196	|O	|	|	|	4.20
23.667	1.06	1.11	9.196	|O	|	|	|	4.20
23.750	1.06	1.11	9.195	|O	|	|	|	4.20
23.833	1.06	1.11	9.195	|O	|	|	|	4.20
23.917	1.06	1.11	9.195	|O	|	|	|	4.20
24.000	1.06	1.11	9.194	|O	|	|	|	4.20
24.083	0.94	1.11	9.194	|O	|	|	|	4.20
24.167	0.37	1.11	9.190	IO	|	|	|	4.20
24.250	0.15	1.11	9.185	IO	|	|	|	4.20
24.333	0.06	1.11	9.178	IO	|	|	|	4.20
24.417	0.02	1.11	9.170	IO	|	|	|	4.19
24.500	0.01	1.11	9.163	IO	|	|	|	4.19
24.583	0.00	1.11	9.155	IO	|	|	|	4.19
24.667	0.00	1.11	9.148	IO	|	|	|	4.19
24.750	0.00	1.11	9.140	IO	|	|	|	4.18

24.833	0.00	1.11	9.132	IO				4.18
24.917	0.00	1.11	9.125	IO				4.18
25.000	0.00	1.11	9.117	IO				4.17
25.083	0.00	1.11	9.109	IO				4.17
25.167	0.00	1.11	9.102	IO				4.17
25.250	0.00	1.11	9.094	IO				4.16
25.333	0.00	1.11	9.086	IO				4.16
25.417	0.00	1.11	9.079	IO				4.16
25.500	0.00	1.11	9.071	IO				4.16
25.583	0.00	1.11	9.063	IO				4.15
25.667	0.00	1.11	9.056	IO				4.15
25.750	0.00	1.11	9.048	IO				4.15
25.833	0.00	1.11	9.040	IO				4.14
25.917	0.00	1.11	9.033	IO				4.14
26.000	0.00	1.11	9.025	IO				4.14
26.083	0.00	1.11	9.017	IO				4.13
26.167	0.00	1.11	9.010	IO				4.13
26.250	0.00	1.11	9.002	IO				4.13
26.333	0.00	1.11	8.995	IO				4.12
26.417	0.00	1.11	8.987	IO				4.12
26.500	0.00	1.11	8.979	IO				4.12
26.583	0.00	1.11	8.972	IO				4.12
26.667	0.00	1.11	8.964	IO				4.11
26.750	0.00	1.11	8.956	IO				4.11
26.833	0.00	1.11	8.949	IO				4.11
26.917	0.00	1.11	8.941	IO				4.10
27.000	0.00	1.11	8.933	IO				4.10
27.083	0.00	1.11	8.926	IO				4.10
27.167	0.00	1.11	8.918	IO				4.09
27.250	0.00	1.11	8.910	IO				4.09
27.333	0.00	1.11	8.903	IO				4.09
27.417	0.00	1.11	8.895	IO				4.09
27.500	0.00	1.11	8.887	IO				4.08
27.583	0.00	1.11	8.880	IO				4.08
27.667	0.00	1.11	8.872	IO				4.08
27.750	0.00	1.11	8.864	IO				4.07
27.833	0.00	1.11	8.857	IO				4.07
27.917	0.00	1.11	8.849	IO				4.07
28.000	0.00	1.11	8.842	IO				4.06
28.083	0.00	1.11	8.834	IO				4.06
28.167	0.00	1.11	8.826	IO				4.06
28.250	0.00	1.11	8.819	IO				4.05
28.333	0.00	1.11	8.811	IO				4.05
28.417	0.00	1.11	8.803	IO				4.05
28.500	0.00	1.11	8.796	IO				4.05
28.583	0.00	1.11	8.788	IO				4.04
28.667	0.00	1.11	8.780	IO				4.04
28.750	0.00	1.11	8.773	IO				4.04
28.833	0.00	1.11	8.765	IO				4.03
28.917	0.00	1.11	8.757	IO				4.03
29.000	0.00	1.11	8.750	IO				4.03
29.083	0.00	1.11	8.742	IO				4.02
29.167	0.00	1.11	8.734	IO				4.02
29.250	0.00	1.11	8.727	IO				4.02

29.333	0.00	1.11	8.719	IO				4.02
29.417	0.00	1.11	8.712	IO				4.01
29.500	0.00	1.11	8.704	IO				4.01
29.583	0.00	1.11	8.696	IO				4.01
29.667	0.00	1.11	8.689	IO				4.00
29.750	0.00	1.11	8.681	IO				4.00
29.833	0.00	1.11	8.673	IO				4.00
29.917	0.00	1.11	8.666	IO				3.99
30.000	0.00	1.11	8.658	IO				3.99
30.083	0.00	1.11	8.650	IO				3.99
30.167	0.00	1.11	8.643	IO				3.98
30.250	0.00	1.11	8.635	IO				3.98
30.333	0.00	1.11	8.627	IO				3.98
30.417	0.00	1.11	8.620	IO				3.98
30.500	0.00	1.11	8.612	IO				3.97
30.583	0.00	1.11	8.604	IO				3.97
30.667	0.00	1.11	8.597	IO				3.97
30.750	0.00	1.11	8.589	IO				3.96
30.833	0.00	1.11	8.581	IO				3.96
30.917	0.00	1.11	8.574	IO				3.96
31.000	0.00	1.11	8.566	IO				3.95
31.083	0.00	1.11	8.559	IO				3.95
31.167	0.00	1.11	8.551	IO				3.95
31.250	0.00	1.11	8.543	IO				3.94
31.333	0.00	1.11	8.536	IO				3.94
31.417	0.00	1.11	8.528	IO				3.94
31.500	0.00	1.11	8.520	IO				3.93
31.583	0.00	1.11	8.513	IO				3.93
31.667	0.00	1.11	8.505	IO				3.93
31.750	0.00	1.11	8.497	IO				3.93
31.833	0.00	1.11	8.490	IO				3.92
31.917	0.00	1.11	8.482	IO				3.92
32.000	0.00	1.11	8.474	IO				3.92
32.083	0.00	1.11	8.467	IO				3.91
32.167	0.00	1.11	8.459	IO				3.91
32.250	0.00	1.11	8.451	IO				3.91
32.333	0.00	1.11	8.444	IO				3.90
32.417	0.00	1.11	8.436	IO				3.90
32.500	0.00	1.11	8.428	IO				3.90
32.583	0.00	1.11	8.421	IO				3.89
32.667	0.00	1.11	8.413	IO				3.89
32.750	0.00	1.11	8.406	IO				3.89
32.833	0.00	1.11	8.398	IO				3.88
32.917	0.00	1.11	8.390	IO				3.88
33.000	0.00	1.11	8.383	IO				3.88
33.083	0.00	1.11	8.375	IO				3.87
33.167	0.00	1.11	8.367	IO				3.87
33.250	0.00	1.11	8.360	IO				3.87
33.333	0.00	1.11	8.352	IO				3.87
33.417	0.00	1.11	8.344	IO				3.86
33.500	0.00	1.11	8.337	IO				3.86
33.583	0.00	1.11	8.329	IO				3.86
33.667	0.00	1.11	8.321	IO				3.85
33.750	0.00	1.11	8.314	IO				3.85

33.833	0.00	1.11	8.306	IO				3.85
33.917	0.00	1.11	8.298	IO				3.84
34.000	0.00	1.11	8.291	IO				3.84
34.083	0.00	1.11	8.283	IO				3.84
34.167	0.00	1.11	8.275	IO				3.83
34.250	0.00	1.11	8.268	IO				3.83
34.333	0.00	1.11	8.260	IO				3.83
34.417	0.00	1.11	8.253	IO				3.82
34.500	0.00	1.11	8.245	IO				3.82
34.583	0.00	1.11	8.237	IO				3.82
34.667	0.00	1.11	8.230	IO				3.82
34.750	0.00	1.11	8.222	IO				3.81
34.833	0.00	1.11	8.214	IO				3.81
34.917	0.00	1.11	8.207	IO				3.81
35.000	0.00	1.11	8.199	IO				3.80
35.083	0.00	1.11	8.191	IO				3.80
35.167	0.00	1.11	8.184	IO				3.80
35.250	0.00	1.11	8.176	IO				3.79
35.333	0.00	1.11	8.168	IO				3.79
35.417	0.00	1.11	8.161	IO				3.79
35.500	0.00	1.11	8.153	IO				3.78
35.583	0.00	1.11	8.145	IO				3.78
35.667	0.00	1.11	8.138	IO				3.78
35.750	0.00	1.11	8.130	IO				3.77
35.833	0.00	1.11	8.122	IO				3.77
35.917	0.00	1.11	8.115	IO				3.77
36.000	0.00	1.11	8.107	IO				3.77
36.083	0.00	1.11	8.100	IO				3.76
36.167	0.00	1.11	8.092	IO				3.76
36.250	0.00	1.11	8.084	IO				3.76
36.333	0.00	1.11	8.077	IO				3.75
36.417	0.00	1.11	8.069	IO				3.75
36.500	0.00	1.11	8.061	IO				3.75
36.583	0.00	1.11	8.054	IO				3.74
36.667	0.00	1.11	8.046	IO				3.74
36.750	0.00	1.11	8.038	IO				3.74
36.833	0.00	1.11	8.031	IO				3.73
36.917	0.00	1.11	8.023	IO				3.73
37.000	0.00	1.11	8.015	IO				3.73
37.083	0.00	1.11	8.008	IO				3.72
37.167	0.00	1.11	8.000	IO				3.72
37.250	0.00	1.11	7.992	IO				3.72
37.333	0.00	1.11	7.985	IO				3.72
37.417	0.00	1.11	7.977	IO				3.71
37.500	0.00	1.11	7.969	IO				3.71
37.583	0.00	1.11	7.962	IO				3.71
37.667	0.00	1.11	7.954	IO				3.70
37.750	0.00	1.11	7.947	IO				3.70
37.833	0.00	1.11	7.939	IO				3.70
37.917	0.00	1.11	7.931	IO				3.69
38.000	0.00	1.11	7.924	IO				3.69
38.083	0.00	1.11	7.916	IO				3.69
38.167	0.00	1.11	7.908	IO				3.68
38.250	0.00	1.11	7.901	IO				3.68

38.333	0.00	1.11	7.893	IO				3.68
38.417	0.00	1.11	7.885	IO				3.67
38.500	0.00	1.11	7.878	IO				3.67
38.583	0.00	1.11	7.870	IO				3.67
38.667	0.00	1.11	7.862	IO				3.66
38.750	0.00	1.11	7.855	IO				3.66
38.833	0.00	1.11	7.847	IO				3.66
38.917	0.00	1.11	7.839	IO				3.66
39.000	0.00	1.11	7.832	IO				3.65
39.083	0.00	1.11	7.824	IO				3.65
39.167	0.00	1.11	7.816	IO				3.65
39.250	0.00	1.11	7.809	IO				3.64
39.333	0.00	1.11	7.801	IO				3.64
39.417	0.00	1.11	7.794	IO				3.64
39.500	0.00	1.11	7.786	IO				3.63
39.583	0.00	1.11	7.778	IO				3.63
39.667	0.00	1.11	7.771	IO				3.63
39.750	0.00	1.11	7.763	IO				3.62
39.833	0.00	1.11	7.755	IO				3.62
39.917	0.00	1.11	7.748	IO				3.62
40.000	0.00	1.11	7.740	IO				3.61
40.083	0.00	1.11	7.732	IO				3.61
40.167	0.00	1.11	7.725	IO				3.61
40.250	0.00	1.11	7.717	IO				3.61
40.333	0.00	1.11	7.709	IO				3.60
40.417	0.00	1.11	7.702	IO				3.60
40.500	0.00	1.11	7.694	IO				3.60
40.583	0.00	1.11	7.686	IO				3.59
40.667	0.00	1.11	7.679	IO				3.59
40.750	0.00	1.11	7.671	IO				3.59
40.833	0.00	1.11	7.664	IO				3.58
40.917	0.00	1.11	7.656	IO				3.58
41.000	0.00	1.11	7.648	IO				3.58
41.083	0.00	1.11	7.641	IO				3.57
41.167	0.00	1.11	7.633	IO				3.57
41.250	0.00	1.11	7.625	IO				3.57
41.333	0.00	1.11	7.618	IO				3.56
41.417	0.00	1.11	7.610	IO				3.56
41.500	0.00	1.11	7.602	IO				3.56
41.583	0.00	1.11	7.595	IO				3.56
41.667	0.00	1.11	7.587	IO				3.55
41.750	0.00	1.11	7.579	IO				3.55
41.833	0.00	1.11	7.572	IO				3.55
41.917	0.00	1.11	7.564	IO				3.54
42.000	0.00	1.11	7.556	IO				3.54
42.083	0.00	1.11	7.549	IO				3.54
42.167	0.00	1.11	7.541	IO				3.53
42.250	0.00	1.11	7.533	IO				3.53
42.333	0.00	1.11	7.526	IO				3.53
42.417	0.00	1.11	7.518	IO				3.52
42.500	0.00	1.11	7.511	IO				3.52
42.583	0.00	1.11	7.503	IO				3.52
42.667	0.00	1.11	7.495	IO				3.51
42.750	0.00	1.11	7.488	IO				3.51

42.833	0.00	1.11	7.480	IO				3.51
42.917	0.00	1.11	7.472	IO				3.51
43.000	0.00	1.11	7.465	IO				3.50
43.083	0.00	1.11	7.457	IO				3.50
43.167	0.00	1.11	7.449	IO				3.50
43.250	0.00	1.11	7.442	IO				3.49
43.333	0.00	1.11	7.434	IO				3.49
43.417	0.00	1.11	7.426	IO				3.49
43.500	0.00	1.11	7.419	IO				3.48
43.583	0.00	1.11	7.411	IO				3.48
43.667	0.00	1.11	7.403	IO				3.48
43.750	0.00	1.11	7.396	IO				3.47
43.833	0.00	1.11	7.388	IO				3.47
43.917	0.00	1.11	7.380	IO				3.47
44.000	0.00	1.11	7.373	IO				3.46
44.083	0.00	1.11	7.365	IO				3.46
44.167	0.00	1.11	7.358	IO				3.46
44.250	0.00	1.11	7.350	IO				3.45
44.333	0.00	1.11	7.342	IO				3.45
44.417	0.00	1.11	7.335	IO				3.45
44.500	0.00	1.11	7.327	IO				3.44
44.583	0.00	1.11	7.319	IO				3.44
44.667	0.00	1.11	7.312	IO				3.44
44.750	0.00	1.11	7.304	IO				3.43
44.833	0.00	1.11	7.296	IO				3.43
44.917	0.00	1.11	7.289	IO				3.43
45.000	0.00	1.11	7.281	IO				3.42
45.083	0.00	1.11	7.273	IO				3.42
45.167	0.00	1.11	7.266	IO				3.42
45.250	0.00	1.11	7.258	IO				3.41
45.333	0.00	1.11	7.250	IO				3.41
45.417	0.00	1.11	7.243	IO				3.41
45.500	0.00	1.11	7.235	IO				3.40
45.583	0.00	1.11	7.227	IO				3.40
45.667	0.00	1.11	7.220	IO				3.40
45.750	0.00	1.11	7.212	IO				3.39
45.833	0.00	1.11	7.205	IO				3.39
45.917	0.00	1.11	7.197	IO				3.39
46.000	0.00	1.11	7.189	IO				3.39
46.083	0.00	1.11	7.182	IO				3.38
46.167	0.00	1.11	7.174	IO				3.38
46.250	0.00	1.11	7.166	IO				3.38
46.333	0.00	1.11	7.159	IO				3.37
46.417	0.00	1.11	7.151	IO				3.37
46.500	0.00	1.11	7.143	IO				3.37
46.583	0.00	1.11	7.136	IO				3.36
46.667	0.00	1.11	7.128	IO				3.36
46.750	0.00	1.11	7.120	IO				3.36
46.833	0.00	1.11	7.113	IO				3.35
46.917	0.00	1.11	7.105	IO				3.35
47.000	0.00	1.11	7.097	IO				3.35
47.083	0.00	1.11	7.090	IO				3.34
47.167	0.00	1.11	7.082	IO				3.34
47.250	0.00	1.11	7.074	IO				3.34

47.333	0.00	1.11	7.067	IO				3.33
47.417	0.00	1.11	7.059	IO				3.33
47.500	0.00	1.11	7.052	IO				3.33
47.583	0.00	1.11	7.044	IO				3.32
47.667	0.00	1.11	7.036	IO				3.32
47.750	0.00	1.11	7.029	IO				3.32
47.833	0.00	1.11	7.021	IO				3.31
47.917	0.00	1.11	7.013	IO				3.31
48.000	0.00	1.11	7.006	IO				3.31
48.083	0.00	1.11	6.998	IO				3.30
48.167	0.00	1.11	6.990	IO				3.30
48.250	0.00	1.11	6.983	IO				3.30
48.333	0.00	1.11	6.975	IO				3.29
48.417	0.00	1.11	6.967	IO				3.29
48.500	0.00	1.11	6.960	IO				3.29
48.583	0.00	1.11	6.952	IO				3.28
48.667	0.00	1.11	6.944	IO				3.28
48.750	0.00	1.11	6.937	IO				3.28
48.833	0.00	1.11	6.929	IO				3.28
48.917	0.00	1.11	6.921	IO				3.27
49.000	0.00	1.11	6.914	IO				3.27
49.083	0.00	1.11	6.906	IO				3.27
49.167	0.00	1.11	6.899	IO				3.26
49.250	0.00	1.11	6.891	IO				3.26
49.333	0.00	1.11	6.883	IO				3.26
49.417	0.00	1.11	6.876	IO				3.25
49.500	0.00	1.11	6.868	IO				3.25
49.583	0.00	1.11	6.860	IO				3.25
49.667	0.00	1.11	6.853	IO				3.24
49.750	0.00	1.11	6.845	IO				3.24
49.833	0.00	1.11	6.837	IO				3.24
49.917	0.00	1.11	6.830	IO				3.23
50.000	0.00	1.11	6.822	IO				3.23
50.083	0.00	1.11	6.814	IO				3.23
50.167	0.00	1.11	6.807	IO				3.22
50.250	0.00	1.11	6.799	IO				3.22
50.333	0.00	1.11	6.791	IO				3.22
50.417	0.00	1.11	6.784	IO				3.21
50.500	0.00	1.11	6.776	IO				3.21
50.583	0.00	1.11	6.769	IO				3.21
50.667	0.00	1.11	6.761	IO				3.20
50.750	0.00	1.11	6.753	IO				3.20
50.833	0.00	1.11	6.746	IO				3.20
50.917	0.00	1.11	6.738	IO				3.19
51.000	0.00	1.11	6.730	IO				3.19
51.083	0.00	1.11	6.723	IO				3.19
51.167	0.00	1.11	6.715	IO				3.18
51.250	0.00	1.11	6.707	IO				3.18
51.333	0.00	1.11	6.700	IO				3.18
51.417	0.00	1.11	6.692	IO				3.17
51.500	0.00	1.11	6.684	IO				3.17
51.583	0.00	1.11	6.677	IO				3.17
51.667	0.00	1.11	6.669	IO				3.16
51.750	0.00	1.11	6.661	IO				3.16

51.833	0.00	1.11	6.654	IO				3.16
51.917	0.00	1.11	6.646	IO				3.16
52.000	0.00	1.11	6.638	IO				3.15
52.083	0.00	1.11	6.631	IO				3.15
52.167	0.00	1.11	6.623	IO				3.15
52.250	0.00	1.11	6.616	IO				3.14
52.333	0.00	1.11	6.608	IO				3.14
52.417	0.00	1.11	6.600	IO				3.14
52.500	0.00	1.11	6.593	IO				3.13
52.583	0.00	1.11	6.585	IO				3.13
52.667	0.00	1.11	6.577	IO				3.13
52.750	0.00	1.11	6.570	IO				3.12
52.833	0.00	1.11	6.562	IO				3.12
52.917	0.00	1.11	6.554	IO				3.12
53.000	0.00	1.11	6.547	IO				3.11
53.083	0.00	1.11	6.539	IO				3.11
53.167	0.00	1.11	6.531	IO				3.11
53.250	0.00	1.11	6.524	IO				3.10
53.333	0.00	1.11	6.516	IO				3.10
53.417	0.00	1.11	6.508	IO				3.10
53.500	0.00	1.11	6.501	IO				3.09
53.583	0.00	1.11	6.493	IO				3.09
53.667	0.00	1.11	6.485	IO				3.09
53.750	0.00	1.11	6.478	IO				3.08
53.833	0.00	1.11	6.470	IO				3.08
53.917	0.00	1.11	6.463	IO				3.08
54.000	0.00	1.11	6.455	IO				3.07
54.083	0.00	1.11	6.447	IO				3.07
54.167	0.00	1.11	6.440	IO				3.07
54.250	0.00	1.11	6.432	IO				3.06
54.333	0.00	1.11	6.424	IO				3.06
54.417	0.00	1.11	6.417	IO				3.06
54.500	0.00	1.11	6.409	IO				3.05
54.583	0.00	1.11	6.401	IO				3.05
54.667	0.00	1.11	6.394	IO				3.05
54.750	0.00	1.11	6.386	IO				3.04
54.833	0.00	1.11	6.378	IO				3.04
54.917	0.00	1.11	6.371	IO				3.04
55.000	0.00	1.11	6.363	IO				3.04
55.083	0.00	1.11	6.355	IO				3.03
55.167	0.00	1.11	6.348	IO				3.03
55.250	0.00	1.11	6.340	IO				3.03
55.333	0.00	1.11	6.332	IO				3.02
55.417	0.00	1.11	6.325	IO				3.02
55.500	0.00	1.11	6.317	IO				3.02
55.583	0.00	1.11	6.310	IO				3.01
55.667	0.00	1.11	6.302	IO				3.01
55.750	0.00	1.11	6.294	IO				3.01
55.833	0.00	1.11	6.287	IO				3.00
55.917	0.00	1.11	6.279	IO				3.00
56.000	0.00	1.11	6.271	IO				3.00
56.083	0.00	1.11	6.264	IO				2.99
56.167	0.00	1.11	6.256	IO				2.99
56.250	0.00	1.11	6.248	IO				2.99

56.333	0.00	1.11	6.241	IO				2.98
56.417	0.00	1.11	6.233	IO				2.98
56.500	0.00	1.11	6.225	IO				2.98
56.583	0.00	1.11	6.218	IO				2.97
56.667	0.00	1.11	6.210	IO				2.97
56.750	0.00	1.11	6.202	IO				2.97
56.833	0.00	1.11	6.195	IO				2.96
56.917	0.00	1.11	6.187	IO				2.96
57.000	0.00	1.11	6.179	IO				2.96
57.083	0.00	1.11	6.172	IO				2.95
57.167	0.00	1.11	6.164	IO				2.95
57.250	0.00	1.11	6.157	IO				2.95
57.333	0.00	1.11	6.149	IO				2.94
57.417	0.00	1.11	6.141	IO				2.94
57.500	0.00	1.11	6.134	IO				2.94
57.583	0.00	1.11	6.126	IO				2.93
57.667	0.00	1.11	6.118	IO				2.93
57.750	0.00	1.11	6.111	IO				2.93
57.833	0.00	1.11	6.103	IO				2.92
57.917	0.00	1.11	6.095	IO				2.92
58.000	0.00	1.11	6.088	IO				2.92
58.083	0.00	1.11	6.080	IO				2.91
58.167	0.00	1.11	6.072	IO				2.91
58.250	0.00	1.11	6.065	IO				2.91
58.333	0.00	1.11	6.057	IO				2.90
58.417	0.00	1.11	6.049	IO				2.90
58.500	0.00	1.11	6.042	IO				2.90
58.583	0.00	1.11	6.034	IO				2.89
58.667	0.00	1.11	6.026	IO				2.89
58.750	0.00	1.11	6.019	IO				2.89
58.833	0.00	1.11	6.011	IO				2.88
58.917	0.00	1.11	6.004	IO				2.88
59.000	0.00	1.11	5.996	IO				2.88
59.083	0.00	1.11	5.988	IO				2.87
59.167	0.00	1.11	5.981	IO				2.87
59.250	0.00	1.11	5.973	IO				2.87
59.333	0.00	1.11	5.965	IO				2.86
59.417	0.00	1.11	5.958	IO				2.86
59.500	0.00	1.11	5.950	IO				2.86
59.583	0.00	1.11	5.942	IO				2.85
59.667	0.00	1.11	5.935	IO				2.85
59.750	0.00	1.11	5.927	IO				2.85
59.833	0.00	1.11	5.919	IO				2.84
59.917	0.00	1.11	5.912	IO				2.84
60.000	0.00	1.11	5.904	IO				2.84
60.083	0.00	1.11	5.896	IO				2.83
60.167	0.00	1.11	5.889	IO				2.83
60.250	0.00	1.11	5.881	IO				2.83
60.333	0.00	1.11	5.874	IO				2.82
60.417	0.00	1.11	5.866	IO				2.82
60.500	0.00	1.11	5.858	IO				2.82
60.583	0.00	1.11	5.851	IO				2.81
60.667	0.00	1.11	5.843	IO				2.81
60.750	0.00	1.11	5.835	IO				2.80

60.833	0.00	1.11	5.828	IO				2.80
60.917	0.00	1.11	5.820	IO				2.80
61.000	0.00	1.11	5.812	IO				2.79
61.083	0.00	1.11	5.805	IO				2.79
61.167	0.00	1.11	5.797	IO				2.79
61.250	0.00	1.11	5.789	IO				2.78
61.333	0.00	1.11	5.782	IO				2.78
61.417	0.00	1.11	5.774	IO				2.78
61.500	0.00	1.11	5.766	IO				2.77
61.583	0.00	1.11	5.759	IO				2.77
61.667	0.00	1.11	5.751	IO				2.77
61.750	0.00	1.11	5.743	IO				2.76
61.833	0.00	1.11	5.736	IO				2.76
61.917	0.00	1.11	5.728	IO				2.76
62.000	0.00	1.11	5.721	IO				2.75
62.083	0.00	1.11	5.713	IO				2.75
62.167	0.00	1.11	5.705	IO				2.75
62.250	0.00	1.11	5.698	IO				2.74
62.333	0.00	1.11	5.690	IO				2.74
62.417	0.00	1.11	5.682	IO				2.74
62.500	0.00	1.11	5.675	IO				2.73
62.583	0.00	1.11	5.667	IO				2.73
62.667	0.00	1.11	5.659	IO				2.73
62.750	0.00	1.11	5.652	IO				2.72
62.833	0.00	1.11	5.644	IO				2.72
62.917	0.00	1.11	5.636	IO				2.72
63.000	0.00	1.11	5.629	IO				2.71
63.083	0.00	1.11	5.621	IO				2.71
63.167	0.00	1.11	5.613	IO				2.71
63.250	0.00	1.11	5.606	IO				2.70
63.333	0.00	1.11	5.598	IO				2.70
63.417	0.00	1.11	5.590	IO				2.70
63.500	0.00	1.11	5.583	IO				2.69
63.583	0.00	1.11	5.575	IO				2.69
63.667	0.00	1.11	5.568	IO				2.69
63.750	0.00	1.11	5.560	IO				2.68
63.833	0.00	1.11	5.552	IO				2.68
63.917	0.00	1.11	5.545	IO				2.68
64.000	0.00	1.11	5.537	IO				2.67
64.083	0.00	1.11	5.529	IO				2.67
64.167	0.00	1.11	5.522	IO				2.67
64.250	0.00	1.11	5.514	IO				2.66
64.333	0.00	1.11	5.506	IO				2.66
64.417	0.00	1.11	5.499	IO				2.66
64.500	0.00	1.11	5.491	IO				2.65
64.583	0.00	1.11	5.483	IO				2.65
64.667	0.00	1.11	5.476	IO				2.65
64.750	0.00	1.11	5.468	IO				2.64
64.833	0.00	1.11	5.460	IO				2.64
64.917	0.00	1.11	5.453	IO				2.64
65.000	0.00	1.11	5.445	IO				2.63
65.083	0.00	1.11	5.437	IO				2.63
65.167	0.00	1.11	5.430	IO				2.63
65.250	0.00	1.11	5.422	IO				2.62

65.333	0.00	1.11	5.415	IO				2.62
65.417	0.00	1.11	5.407	IO				2.62
65.500	0.00	1.11	5.399	IO				2.61
65.583	0.00	1.11	5.392	IO				2.61
65.667	0.00	1.11	5.384	IO				2.61
65.750	0.00	1.11	5.376	IO				2.60
65.833	0.00	1.11	5.369	IO				2.60
65.917	0.00	1.11	5.361	IO				2.60
66.000	0.00	1.11	5.353	IO				2.59
66.083	0.00	1.11	5.346	IO				2.59
66.167	0.00	1.11	5.338	IO				2.59
66.250	0.00	1.11	5.330	IO				2.58
66.333	0.00	1.11	5.323	IO				2.58
66.417	0.00	1.11	5.315	IO				2.58
66.500	0.00	1.11	5.307	IO				2.57
66.583	0.00	1.11	5.300	IO				2.57
66.667	0.00	1.11	5.292	IO				2.57
66.750	0.00	1.11	5.284	IO				2.56
66.833	0.00	1.11	5.277	IO				2.56
66.917	0.00	1.11	5.269	IO				2.56
67.000	0.00	1.11	5.262	IO				2.55
67.083	0.00	1.11	5.254	IO				2.55
67.167	0.00	1.11	5.246	IO				2.55
67.250	0.00	1.11	5.239	IO				2.54
67.333	0.00	1.11	5.231	IO				2.54
67.417	0.00	1.11	5.223	IO				2.54
67.500	0.00	1.11	5.216	IO				2.53
67.583	0.00	1.11	5.208	IO				2.53
67.667	0.00	1.11	5.200	IO				2.53
67.750	0.00	1.11	5.193	IO				2.52
67.833	0.00	1.11	5.185	IO				2.52
67.917	0.00	1.11	5.177	IO				2.52
68.000	0.00	1.11	5.170	IO				2.51
68.083	0.00	1.11	5.162	IO				2.51
68.167	0.00	1.11	5.154	IO				2.51
68.250	0.00	1.11	5.147	IO				2.50
68.333	0.00	1.11	5.139	IO				2.50
68.417	0.00	1.11	5.131	IO				2.50
68.500	0.00	1.11	5.124	IO				2.49
68.583	0.00	1.11	5.116	IO				2.49
68.667	0.00	1.11	5.109	IO				2.49
68.750	0.00	1.11	5.101	IO				2.48
68.833	0.00	1.11	5.093	IO				2.48
68.917	0.00	1.11	5.086	IO				2.48
69.000	0.00	1.11	5.078	IO				2.47
69.083	0.00	1.11	5.070	IO				2.47
69.167	0.00	1.11	5.063	IO				2.47
69.250	0.00	1.11	5.055	IO				2.46
69.333	0.00	1.11	5.047	IO				2.46
69.417	0.00	1.11	5.040	IO				2.45
69.500	0.00	1.11	5.032	IO				2.45
69.583	0.00	1.11	5.024	IO				2.45
69.667	0.00	1.11	5.017	IO				2.44
69.750	0.00	1.11	5.009	IO				2.44

69.833	0.00	1.11	5.001	IO				2.44
69.917	0.00	1.11	4.994	IO				2.43
70.000	0.00	1.11	4.986	IO				2.43
70.083	0.00	1.11	4.979	IO				2.43
70.167	0.00	1.11	4.971	IO				2.42
70.250	0.00	1.11	4.963	IO				2.42
70.333	0.00	1.11	4.956	IO				2.42
70.417	0.00	1.11	4.948	IO				2.41
70.500	0.00	1.11	4.940	IO				2.41
70.583	0.00	1.11	4.933	IO				2.41
70.667	0.00	1.11	4.925	IO				2.40
70.750	0.00	1.11	4.917	IO				2.40
70.833	0.00	1.11	4.910	IO				2.40
70.917	0.00	1.11	4.902	IO				2.39
71.000	0.00	1.11	4.894	IO				2.39
71.083	0.00	1.11	4.887	IO				2.39
71.167	0.00	1.11	4.879	IO				2.38
71.250	0.00	1.11	4.871	IO				2.38
71.333	0.00	1.11	4.864	IO				2.38
71.417	0.00	1.11	4.856	IO				2.37
71.500	0.00	1.11	4.848	IO				2.37
71.583	0.00	1.11	4.841	IO				2.37
71.667	0.00	1.11	4.833	IO				2.36
71.750	0.00	1.11	4.826	IO				2.36
71.833	0.00	1.11	4.818	IO				2.35
71.917	0.00	1.11	4.810	IO				2.35
72.000	0.00	1.11	4.803	IO				2.35
72.083	0.00	1.11	4.795	IO				2.34
72.167	0.00	1.11	4.787	IO				2.34
72.250	0.00	1.11	4.780	IO				2.34
72.333	0.00	1.11	4.772	IO				2.33
72.417	0.00	1.11	4.764	IO				2.33
72.500	0.00	1.11	4.757	IO				2.33
72.583	0.00	1.11	4.749	IO				2.32
72.667	0.00	1.11	4.741	IO				2.32
72.750	0.00	1.11	4.734	IO				2.32
72.833	0.00	1.11	4.726	IO				2.31
72.917	0.00	1.11	4.718	IO				2.31
73.000	0.00	1.11	4.711	IO				2.31
73.083	0.00	1.11	4.703	IO				2.30
73.167	0.00	1.11	4.695	IO				2.30
73.250	0.00	1.11	4.688	IO				2.30
73.333	0.00	1.11	4.680	IO				2.29
73.417	0.00	1.11	4.673	IO				2.29
73.500	0.00	1.11	4.665	IO				2.29
73.583	0.00	1.11	4.657	IO				2.28
73.667	0.00	1.11	4.650	IO				2.28
73.750	0.00	1.11	4.642	IO				2.28
73.833	0.00	1.11	4.634	IO				2.27
73.917	0.00	1.11	4.627	IO				2.27
74.000	0.00	1.11	4.619	IO				2.27
74.083	0.00	1.11	4.611	IO				2.26
74.167	0.00	1.11	4.604	IO				2.26
74.250	0.00	1.11	4.596	IO				2.25

74.333	0.00	1.11	4.588	IO				2.25
74.417	0.00	1.11	4.581	IO				2.25
74.500	0.00	1.11	4.573	IO				2.24
74.583	0.00	1.11	4.565	IO				2.24
74.667	0.00	1.11	4.558	IO				2.24
74.750	0.00	1.11	4.550	IO				2.23
74.833	0.00	1.11	4.542	IO				2.23
74.917	0.00	1.11	4.535	IO				2.23
75.000	0.00	1.11	4.527	IO				2.22
75.083	0.00	1.11	4.520	IO				2.22
75.167	0.00	1.11	4.512	IO				2.22
75.250	0.00	1.11	4.504	IO				2.21
75.333	0.00	1.11	4.497	IO				2.21
75.417	0.00	1.11	4.489	IO				2.21
75.500	0.00	1.11	4.481	IO				2.20
75.583	0.00	1.11	4.474	IO				2.20
75.667	0.00	1.11	4.466	IO				2.20
75.750	0.00	1.11	4.458	IO				2.19
75.833	0.00	1.11	4.451	IO				2.19
75.917	0.00	1.11	4.443	IO				2.19
76.000	0.00	1.11	4.435	IO				2.18
76.083	0.00	1.11	4.428	IO				2.18
76.167	0.00	1.11	4.420	IO				2.18
76.250	0.00	1.11	4.412	IO				2.17
76.333	0.00	1.11	4.405	IO				2.17
76.417	0.00	1.11	4.397	IO				2.17
76.500	0.00	1.11	4.389	IO				2.16
76.583	0.00	1.11	4.382	IO				2.16
76.667	0.00	1.11	4.374	IO				2.16
76.750	0.00	1.11	4.367	IO				2.15
76.833	0.00	1.11	4.359	IO				2.15
76.917	0.00	1.11	4.351	IO				2.14
77.000	0.00	1.11	4.344	IO				2.14
77.083	0.00	1.11	4.336	IO				2.14
77.167	0.00	1.11	4.328	IO				2.13
77.250	0.00	1.11	4.321	IO				2.13
77.333	0.00	1.11	4.313	IO				2.13
77.417	0.00	1.11	4.305	IO				2.12
77.500	0.00	1.11	4.298	IO				2.12
77.583	0.00	1.11	4.290	IO				2.12
77.667	0.00	1.11	4.282	IO				2.11
77.750	0.00	1.11	4.275	IO				2.11
77.833	0.00	1.11	4.267	IO				2.11
77.917	0.00	1.11	4.259	IO				2.10
78.000	0.00	1.11	4.252	IO				2.10
78.083	0.00	1.11	4.244	IO				2.10
78.167	0.00	1.11	4.236	IO				2.09
78.250	0.00	1.11	4.229	IO				2.09
78.333	0.00	1.11	4.221	IO				2.09
78.417	0.00	1.11	4.214	IO				2.08
78.500	0.00	1.11	4.206	IO				2.08
78.583	0.00	1.11	4.198	IO				2.08
78.667	0.00	1.11	4.191	IO				2.07
78.750	0.00	1.11	4.183	IO				2.07

78.833	0.00	1.11	4.175	IO				2.07
78.917	0.00	1.11	4.168	IO				2.06
79.000	0.00	1.11	4.160	IO				2.06
79.083	0.00	1.11	4.152	IO				2.06
79.167	0.00	1.11	4.145	IO				2.05
79.250	0.00	1.11	4.137	IO				2.05
79.333	0.00	1.11	4.129	IO				2.04
79.417	0.00	1.11	4.122	IO				2.04
79.500	0.00	1.11	4.114	IO				2.04
79.583	0.00	1.11	4.106	IO				2.03
79.667	0.00	1.11	4.099	IO				2.03
79.750	0.00	1.11	4.091	IO				2.03
79.833	0.00	1.11	4.083	IO				2.02
79.917	0.00	1.11	4.076	IO				2.02
80.000	0.00	1.11	4.068	IO				2.02
80.083	0.00	1.11	4.061	IO				2.01
80.167	0.00	1.11	4.053	IO				2.01
80.250	0.00	1.11	4.045	IO				2.01
80.333	0.00	1.11	4.038	IO				2.00
80.417	0.00	1.11	4.030	IO				2.00
80.500	0.00	1.11	4.022	IO				2.00
80.583	0.00	1.11	4.015	IO				1.99
80.667	0.00	1.11	4.007	IO				1.99
80.750	0.00	1.11	3.999	IO				1.99
80.833	0.00	1.11	3.992	IO				1.98
80.917	0.00	1.11	3.984	IO				1.98
81.000	0.00	1.11	3.976	IO				1.97
81.083	0.00	1.11	3.969	IO				1.97
81.167	0.00	1.11	3.961	IO				1.97
81.250	0.00	1.11	3.953	IO				1.96
81.333	0.00	1.11	3.946	IO				1.96
81.417	0.00	1.11	3.938	IO				1.96
81.500	0.00	1.11	3.931	IO				1.95
81.583	0.00	1.11	3.923	IO				1.95
81.667	0.00	1.11	3.915	IO				1.95
81.750	0.00	1.11	3.908	IO				1.94
81.833	0.00	1.11	3.900	IO				1.94
81.917	0.00	1.11	3.892	IO				1.94
82.000	0.00	1.11	3.885	IO				1.93
82.083	0.00	1.11	3.877	IO				1.93
82.167	0.00	1.11	3.869	IO				1.92
82.250	0.00	1.11	3.862	IO				1.92
82.333	0.00	1.11	3.854	IO				1.92
82.417	0.00	1.11	3.846	IO				1.91
82.500	0.00	1.11	3.839	IO				1.91
82.583	0.00	1.11	3.831	IO				1.91
82.667	0.00	1.11	3.823	IO				1.90
82.750	0.00	1.11	3.816	IO				1.90
82.833	0.00	1.11	3.808	IO				1.90
82.917	0.00	1.11	3.800	IO				1.89
83.000	0.00	1.11	3.793	IO				1.89
83.083	0.00	1.11	3.785	IO				1.88
83.167	0.00	1.11	3.778	IO				1.88
83.250	0.00	1.11	3.770	IO				1.88

83.333	0.00	1.11	3.762	IO				1.87
83.417	0.00	1.11	3.755	IO				1.87
83.500	0.00	1.11	3.747	IO				1.87
83.583	0.00	1.11	3.739	IO				1.86
83.667	0.00	1.11	3.732	IO				1.86
83.750	0.00	1.11	3.724	IO				1.86
83.833	0.00	1.11	3.716	IO				1.85
83.917	0.00	1.11	3.709	IO				1.85
84.000	0.00	1.11	3.701	IO				1.84
84.083	0.00	1.11	3.693	IO				1.84
84.167	0.00	1.11	3.686	IO				1.84
84.250	0.00	1.11	3.678	IO				1.83
84.333	0.00	1.11	3.670	IO				1.83
84.417	0.00	1.11	3.663	IO				1.83
84.500	0.00	1.11	3.655	IO				1.82
84.583	0.00	1.11	3.647	IO				1.82
84.667	0.00	1.11	3.640	IO				1.82
84.750	0.00	1.11	3.632	IO				1.81
84.833	0.00	1.11	3.625	IO				1.81
84.917	0.00	1.11	3.617	IO				1.81
85.000	0.00	1.11	3.609	IO				1.80
85.083	0.00	1.11	3.602	IO				1.80
85.167	0.00	1.11	3.594	IO				1.79
85.250	0.00	1.11	3.586	IO				1.79
85.333	0.00	1.11	3.579	IO				1.79
85.417	0.00	1.11	3.571	IO				1.78
85.500	0.00	1.11	3.563	IO				1.78
85.583	0.00	1.11	3.556	IO				1.78
85.667	0.00	1.11	3.548	IO				1.77
85.750	0.00	1.11	3.540	IO				1.77
85.833	0.00	1.11	3.533	IO				1.77
85.917	0.00	1.11	3.525	IO				1.76
86.000	0.00	1.11	3.517	IO				1.76
86.083	0.00	1.11	3.510	IO				1.75
86.167	0.00	1.11	3.502	IO				1.75
86.250	0.00	1.11	3.494	IO				1.75
86.333	0.00	1.11	3.487	IO				1.74
86.417	0.00	1.11	3.479	IO				1.74
86.500	0.00	1.11	3.472	IO				1.74
86.583	0.00	1.11	3.464	IO				1.73
86.667	0.00	1.11	3.456	IO				1.73
86.750	0.00	1.11	3.449	IO				1.73
86.833	0.00	1.11	3.441	IO				1.72
86.917	0.00	1.11	3.433	IO				1.72
87.000	0.00	1.11	3.426	IO				1.71
87.083	0.00	1.11	3.418	IO				1.71
87.167	0.00	1.11	3.410	IO				1.71
87.250	0.00	1.11	3.403	IO				1.70
87.333	0.00	1.11	3.395	IO				1.70
87.417	0.00	1.11	3.387	IO				1.70
87.500	0.00	1.11	3.380	IO				1.69
87.583	0.00	1.11	3.372	IO				1.69
87.667	0.00	1.11	3.364	IO				1.69
87.750	0.00	1.11	3.357	IO				1.68

87.833	0.00	1.11	3.349	IO				1.68
87.917	0.00	1.11	3.341	IO				1.68
88.000	0.00	1.11	3.334	IO				1.67
88.083	0.00	1.11	3.326	IO				1.67
88.167	0.00	1.11	3.319	IO				1.66
88.250	0.00	1.11	3.311	IO				1.66
88.333	0.00	1.11	3.303	IO				1.66
88.417	0.00	1.11	3.296	IO				1.65
88.500	0.00	1.11	3.288	IO				1.65
88.583	0.00	1.11	3.280	IO				1.65
88.667	0.00	1.11	3.273	IO				1.64
88.750	0.00	1.11	3.265	IO				1.64
88.833	0.00	1.11	3.257	IO				1.64
88.917	0.00	1.11	3.250	IO				1.63
89.000	0.00	1.11	3.242	IO				1.63
89.083	0.00	1.11	3.234	IO				1.62
89.167	0.00	1.11	3.227	IO				1.62
89.250	0.00	1.11	3.219	IO				1.62
89.333	0.00	1.11	3.211	IO				1.61
89.417	0.00	1.11	3.204	IO				1.61
89.500	0.00	1.11	3.196	IO				1.61
89.583	0.00	1.11	3.188	IO				1.60
89.667	0.00	1.11	3.181	IO				1.60
89.750	0.00	1.11	3.173	IO				1.60
89.833	0.00	1.11	3.166	IO				1.59
89.917	0.00	1.11	3.158	IO				1.59
90.000	0.00	1.11	3.150	IO				1.59
90.083	0.00	1.11	3.143	IO				1.58
90.167	0.00	1.11	3.135	IO				1.58
90.250	0.00	1.11	3.127	IO				1.57
90.333	0.00	1.11	3.120	IO				1.57
90.417	0.00	1.11	3.112	IO				1.57
90.500	0.00	1.11	3.104	IO				1.56
90.583	0.00	1.11	3.097	IO				1.56
90.667	0.00	1.11	3.089	IO				1.56
90.750	0.00	1.11	3.081	IO				1.55
90.833	0.00	1.11	3.074	IO				1.55
90.917	0.00	1.11	3.066	IO				1.55
91.000	0.00	1.11	3.058	IO				1.54
91.083	0.00	1.11	3.051	IO				1.54
91.167	0.00	1.11	3.043	IO				1.53
91.250	0.00	1.11	3.036	IO				1.53
91.333	0.00	1.11	3.028	IO				1.53
91.417	0.00	1.11	3.020	IO				1.52
91.500	0.00	1.11	3.013	IO				1.52
91.583	0.00	1.11	3.005	IO				1.52
91.667	0.00	1.11	2.997	IO				1.51
91.750	0.00	1.11	2.990	IO				1.51
91.833	0.00	1.11	2.982	IO				1.51
91.917	0.00	1.11	2.974	IO				1.50
92.000	0.00	1.11	2.967	IO				1.50
92.083	0.00	1.11	2.959	IO				1.49
92.167	0.00	1.11	2.951	IO				1.49
92.250	0.00	1.11	2.944	IO				1.49

92.333	0.00	1.11	2.936	IO				1.48
92.417	0.00	1.11	2.928	IO				1.48
92.500	0.00	1.11	2.921	IO				1.48
92.583	0.00	1.11	2.913	IO				1.47
92.667	0.00	1.11	2.905	IO				1.47
92.750	0.00	1.11	2.898	IO				1.46
92.833	0.00	1.11	2.890	IO				1.46
92.917	0.00	1.11	2.883	IO				1.46
93.000	0.00	1.11	2.875	IO				1.45
93.083	0.00	1.11	2.867	IO				1.45
93.167	0.00	1.11	2.860	IO				1.45
93.250	0.00	1.11	2.852	IO				1.44
93.333	0.00	1.11	2.844	IO				1.44
93.417	0.00	1.11	2.837	IO				1.44
93.500	0.00	1.11	2.829	IO				1.43
93.583	0.00	1.11	2.821	IO				1.43
93.667	0.00	1.11	2.814	IO				1.42
93.750	0.00	1.11	2.806	IO				1.42
93.833	0.00	1.11	2.798	IO				1.42
93.917	0.00	1.11	2.791	IO				1.41
94.000	0.00	1.11	2.783	IO				1.41
94.083	0.00	1.11	2.775	IO				1.41
94.167	0.00	1.11	2.768	IO				1.40
94.250	0.00	1.11	2.760	IO				1.40
94.333	0.00	1.11	2.752	IO				1.39
94.417	0.00	1.11	2.745	IO				1.39
94.500	0.00	1.11	2.737	IO				1.39
94.583	0.00	1.11	2.730	IO				1.38
94.667	0.00	1.11	2.722	IO				1.38
94.750	0.00	1.11	2.714	IO				1.38
94.833	0.00	1.11	2.707	IO				1.37
94.917	0.00	1.11	2.699	IO				1.37
95.000	0.00	1.11	2.691	IO				1.36
95.083	0.00	1.11	2.684	IO				1.36
95.167	0.00	1.11	2.676	IO				1.36
95.250	0.00	1.11	2.668	IO				1.35
95.333	0.00	1.11	2.661	IO				1.35
95.417	0.00	1.11	2.653	IO				1.35
95.500	0.00	1.11	2.645	IO				1.34
95.583	0.00	1.11	2.638	IO				1.34
95.667	0.00	1.11	2.630	IO				1.33
95.750	0.00	1.11	2.622	IO				1.33
95.833	0.00	1.11	2.615	IO				1.33
95.917	0.00	1.11	2.607	IO				1.32
96.000	0.00	1.11	2.599	IO				1.32
96.083	0.00	1.11	2.592	IO				1.32
96.167	0.00	1.11	2.584	IO				1.31
96.250	0.00	1.11	2.577	IO				1.31
96.333	0.00	1.11	2.569	IO				1.31
96.417	0.00	1.11	2.561	IO				1.30
96.500	0.00	1.11	2.554	IO				1.30
96.583	0.00	1.11	2.546	IO				1.29
96.667	0.00	1.11	2.538	IO				1.29
96.750	0.00	1.11	2.531	IO				1.29

96.833	0.00	1.11	2.523	IO				1.28
96.917	0.00	1.11	2.515	IO				1.28
97.000	0.00	1.11	2.508	IO				1.28
97.083	0.00	1.11	2.500	IO				1.27
97.167	0.00	1.11	2.492	IO				1.27
97.250	0.00	1.11	2.485	IO				1.26
97.333	0.00	1.11	2.477	IO				1.26
97.417	0.00	1.11	2.469	IO				1.26
97.500	0.00	1.11	2.462	IO				1.25
97.583	0.00	1.11	2.454	IO				1.25
97.667	0.00	1.11	2.446	IO				1.25
97.750	0.00	1.11	2.439	IO				1.24
97.833	0.00	1.11	2.431	IO				1.24
97.917	0.00	1.11	2.424	IO				1.23
98.000	0.00	1.11	2.416	IO				1.23
98.083	0.00	1.11	2.408	IO				1.23
98.167	0.00	1.11	2.401	IO				1.22
98.250	0.00	1.11	2.393	IO				1.22
98.333	0.00	1.11	2.385	IO				1.22
98.417	0.00	1.11	2.378	IO				1.21
98.500	0.00	1.11	2.370	IO				1.21
98.583	0.00	1.11	2.362	IO				1.21
98.667	0.00	1.11	2.355	IO				1.20
98.750	0.00	1.11	2.347	IO				1.20
98.833	0.00	1.11	2.339	IO				1.19
98.917	0.00	1.11	2.332	IO				1.19
99.000	0.00	1.11	2.324	IO				1.19
99.083	0.00	1.11	2.316	IO				1.18
99.167	0.00	1.11	2.309	IO				1.18
99.250	0.00	1.11	2.301	IO				1.18
99.333	0.00	1.11	2.293	IO				1.17
99.417	0.00	1.11	2.286	IO				1.17
99.500	0.00	1.11	2.278	IO				1.16
99.583	0.00	1.11	2.271	IO				1.16
99.667	0.00	1.11	2.263	IO				1.16
99.750	0.00	1.11	2.255	IO				1.15
99.833	0.00	1.11	2.248	IO				1.15
99.917	0.00	1.11	2.240	IO				1.15
100.000	0.00	1.11	2.232	IO				1.14
100.083	0.00	1.11	2.225	IO				1.14
100.167	0.00	1.11	2.217	IO				1.13
100.250	0.00	1.11	2.209	IO				1.13
100.333	0.00	1.11	2.202	IO				1.13
100.417	0.00	1.11	2.194	IO				1.12
100.500	0.00	1.11	2.186	IO				1.12
100.583	0.00	1.11	2.179	IO				1.12
100.667	0.00	1.11	2.171	IO				1.11
100.750	0.00	1.11	2.163	IO				1.11
100.833	0.00	1.11	2.156	IO				1.10
100.917	0.00	1.11	2.148	IO				1.10
101.000	0.00	1.11	2.141	IO				1.10
101.083	0.00	1.11	2.133	IO				1.09
101.167	0.00	1.11	2.125	IO				1.09
101.250	0.00	1.11	2.118	IO				1.09

101.333	0.00	1.11	2.110	IO				1.08
101.417	0.00	1.11	2.102	IO				1.08
101.500	0.00	1.11	2.095	IO				1.08
101.583	0.00	1.11	2.087	IO				1.07
101.667	0.00	1.11	2.079	IO				1.07
101.750	0.00	1.11	2.072	IO				1.06
101.833	0.00	1.11	2.064	IO				1.06
101.917	0.00	1.11	2.056	IO				1.06
102.000	0.00	1.11	2.049	IO				1.05
102.083	0.00	1.11	2.041	IO				1.05
102.167	0.00	1.11	2.033	IO				1.05
102.250	0.00	1.11	2.026	IO				1.04
102.333	0.00	1.11	2.018	IO				1.04
102.417	0.00	1.11	2.010	IO				1.03
102.500	0.00	1.11	2.003	IO				1.03
102.583	0.00	1.11	1.995	IO				1.03
102.667	0.00	1.11	1.988	IO				1.02
102.750	0.00	1.11	1.980	IO				1.02
102.833	0.00	1.11	1.972	IO				1.02
102.917	0.00	1.11	1.965	IO				1.01
103.000	0.00	1.11	1.957	IO				1.01
103.083	0.00	1.11	1.949	IO				1.00
103.167	0.00	1.11	1.942	IO				1.00
103.250	0.00	1.11	1.934	IO				1.00
103.333	0.00	1.11	1.926	IO				0.99
103.417	0.00	1.11	1.919	IO				0.99
103.500	0.00	1.11	1.911	IO				0.99
103.583	0.00	1.11	1.903	IO				0.98
103.667	0.00	1.11	1.896	IO				0.98
103.750	0.00	1.11	1.888	IO				0.97
103.833	0.00	1.11	1.880	IO				0.97
103.917	0.00	1.11	1.873	IO				0.97
104.000	0.00	1.11	1.865	IO				0.96
104.083	0.00	1.11	1.857	IO				0.96
104.167	0.00	1.11	1.850	IO				0.95
104.250	0.00	1.11	1.842	IO				0.95
104.333	0.00	1.11	1.835	IO				0.95
104.417	0.00	1.11	1.827	IO				0.94
104.500	0.00	1.11	1.819	IO				0.94
104.583	0.00	1.11	1.812	IO				0.94
104.667	0.00	1.11	1.804	IO				0.93
104.750	0.00	1.11	1.796	IO				0.93
104.833	0.00	1.11	1.789	IO				0.92
104.917	0.00	1.11	1.781	IO				0.92
105.000	0.00	1.11	1.773	IO				0.92
105.083	0.00	1.11	1.766	IO				0.91
105.167	0.00	1.11	1.758	IO				0.91
105.250	0.00	1.11	1.750	IO				0.90
105.333	0.00	1.11	1.743	IO				0.90
105.417	0.00	1.11	1.735	IO				0.90
105.500	0.00	1.11	1.727	IO				0.89
105.583	0.00	1.11	1.720	IO				0.89
105.667	0.00	1.11	1.712	IO				0.88
105.750	0.00	1.11	1.704	IO				0.88

105.833	0.00	1.11	1.697	IO				0.88
105.917	0.00	1.11	1.689	IO				0.87
106.000	0.00	1.11	1.682	IO				0.87
106.083	0.00	1.11	1.674	IO				0.87
106.167	0.00	1.11	1.666	IO				0.86
106.250	0.00	1.11	1.659	IO				0.86
106.333	0.00	1.11	1.651	IO				0.85
106.417	0.00	1.11	1.643	IO				0.85
106.500	0.00	1.11	1.636	IO				0.85
106.583	0.00	1.11	1.628	IO				0.84
106.667	0.00	1.11	1.620	IO				0.84
106.750	0.00	1.11	1.613	IO				0.83
106.833	0.00	1.11	1.605	IO				0.83
106.917	0.00	1.11	1.597	IO				0.83
107.000	0.00	1.11	1.590	IO				0.82
107.083	0.00	1.11	1.582	IO				0.82
107.167	0.00	1.11	1.574	IO				0.82
107.250	0.00	1.11	1.567	IO				0.81
107.333	0.00	1.11	1.559	IO				0.81
107.417	0.00	1.11	1.551	IO				0.80
107.500	0.00	1.11	1.544	IO				0.80
107.583	0.00	1.11	1.536	IO				0.80
107.667	0.00	1.11	1.529	IO				0.79
107.750	0.00	1.11	1.521	IO				0.79
107.833	0.00	1.11	1.513	IO				0.78
107.917	0.00	1.11	1.506	IO				0.78
108.000	0.00	1.11	1.498	IO				0.78
108.083	0.00	1.11	1.490	IO				0.77
108.167	0.00	1.11	1.483	IO				0.77
108.250	0.00	1.11	1.475	IO				0.77
108.333	0.00	1.11	1.467	IO				0.76
108.417	0.00	1.11	1.460	IO				0.76
108.500	0.00	1.11	1.452	IO				0.75
108.583	0.00	1.11	1.444	IO				0.75
108.667	0.00	1.11	1.437	IO				0.75
108.750	0.00	1.11	1.429	IO				0.74
108.833	0.00	1.11	1.421	IO				0.74
108.917	0.00	1.11	1.414	IO				0.73
109.000	0.00	1.11	1.406	IO				0.73
109.083	0.00	1.11	1.398	IO				0.73
109.167	0.00	1.11	1.391	IO				0.72
109.250	0.00	1.11	1.383	IO				0.72
109.333	0.00	1.11	1.376	IO				0.71
109.417	0.00	1.11	1.368	IO				0.71
109.500	0.00	1.11	1.360	IO				0.71
109.583	0.00	1.11	1.353	IO				0.70
109.667	0.00	1.11	1.345	IO				0.70
109.750	0.00	1.11	1.337	IO				0.70
109.833	0.00	1.11	1.330	IO				0.69
109.917	0.00	1.11	1.322	IO				0.69
110.000	0.00	1.11	1.314	IO				0.68
110.083	0.00	1.11	1.307	IO				0.68
110.167	0.00	1.11	1.299	IO				0.68
110.250	0.00	1.11	1.291	IO				0.67

110.333	0.00	1.11	1.284	IO				0.67
110.417	0.00	1.11	1.276	IO				0.66
110.500	0.00	1.11	1.268	IO				0.66
110.583	0.00	1.11	1.261	IO				0.66
110.667	0.00	1.11	1.253	IO				0.65
110.750	0.00	1.11	1.246	IO				0.65
110.833	0.00	1.11	1.238	IO				0.65
110.917	0.00	1.11	1.230	IO				0.64
111.000	0.00	1.11	1.223	IO				0.64
111.083	0.00	1.11	1.215	IO				0.63
111.167	0.00	1.11	1.207	IO				0.63
111.250	0.00	1.11	1.200	IO				0.63
111.333	0.00	1.11	1.192	IO				0.62
111.417	0.00	1.11	1.184	IO				0.62
111.500	0.00	1.11	1.177	IO				0.61
111.583	0.00	1.11	1.169	IO				0.61
111.667	0.00	1.11	1.161	IO				0.61
111.750	0.00	1.11	1.154	IO				0.60
111.833	0.00	1.11	1.146	IO				0.60
111.917	0.00	1.11	1.138	IO				0.60
112.000	0.00	1.11	1.131	IO				0.59
112.083	0.00	1.11	1.123	IO				0.59
112.167	0.00	1.11	1.115	IO				0.58
112.250	0.00	1.11	1.108	IO				0.58
112.333	0.00	1.11	1.100	IO				0.58
112.417	0.00	1.11	1.093	IO				0.57
112.500	0.00	1.11	1.085	IO				0.57
112.583	0.00	1.11	1.077	IO				0.56
112.667	0.00	1.11	1.070	IO				0.56
112.750	0.00	1.11	1.062	IO				0.56
112.833	0.00	1.11	1.054	IO				0.55
112.917	0.00	1.11	1.047	IO				0.55
113.000	0.00	1.11	1.039	IO				0.54
113.083	0.00	1.11	1.031	IO				0.54
113.167	0.00	1.11	1.024	IO				0.54
113.250	0.00	1.11	1.016	IO				0.53
113.333	0.00	1.11	1.008	IO				0.53
113.417	0.00	1.11	1.001	IO				0.53
113.500	0.00	1.11	0.993	IO				0.52
113.583	0.00	1.11	0.985	IO				0.52
113.667	0.00	1.11	0.978	IO				0.51
113.750	0.00	1.11	0.970	IO				0.51
113.833	0.00	1.11	0.962	IO				0.51
113.917	0.00	1.11	0.955	IO				0.50
114.000	0.00	1.11	0.947	IO				0.50
114.083	0.00	1.10	0.940	IO				0.49
114.167	0.00	1.09	0.932	IO				0.49
114.250	0.00	1.08	0.925	IO				0.49
114.333	0.00	1.07	0.917	IO				0.48
114.417	0.00	1.06	0.910	IO				0.48
114.500	0.00	1.06	0.903	IO				0.48
114.583	0.00	1.05	0.895	IO				0.47
114.667	0.00	1.04	0.888	IO				0.47
114.750	0.00	1.03	0.881	IO				0.46

114.833	0.00	1.02	0.874	IO				0.46
114.917	0.00	1.01	0.867	IO				0.46
115.000	0.00	1.01	0.860	IO				0.45
115.083	0.00	1.00	0.853	IO				0.45
115.167	0.00	0.99	0.846	IO				0.45
115.250	0.00	0.98	0.839	IO				0.44
115.333	0.00	0.97	0.833	IO				0.44
115.417	0.00	0.97	0.826	IO				0.43
115.500	0.00	0.96	0.819	IO				0.43
115.583	0.00	0.95	0.813	IO				0.43
115.667	0.00	0.94	0.806	IO				0.42
115.750	0.00	0.94	0.800	IO				0.42
115.833	0.00	0.93	0.793	IO				0.42
115.917	0.00	0.92	0.787	IO				0.41
116.000	0.00	0.91	0.781	IO				0.41
116.083	0.00	0.91	0.774	IO				0.41
116.167	0.00	0.90	0.768	IO				0.40
116.250	0.00	0.89	0.762	IO				0.40
116.333	0.00	0.88	0.756	IO				0.40
116.417	0.00	0.88	0.750	IO				0.39
116.500	0.00	0.87	0.744	IO				0.39
116.583	0.00	0.86	0.738	IO				0.39
116.667	0.00	0.86	0.732	IO				0.39
116.750	0.00	0.85	0.726	IO				0.38
116.833	0.00	0.84	0.720	IO				0.38
116.917	0.00	0.84	0.715	IO				0.38
117.000	0.00	0.83	0.709	IO				0.37
117.083	0.00	0.82	0.703	IO				0.37
117.167	0.00	0.82	0.697	IO				0.37
117.250	0.00	0.81	0.692	IO				0.36
117.333	0.00	0.80	0.686	IO				0.36
117.417	0.00	0.80	0.681	IO				0.36
117.500	0.00	0.79	0.675	IO				0.36
117.583	0.00	0.78	0.670	IO				0.35
117.667	0.00	0.78	0.665	IO				0.35
117.750	0.00	0.77	0.659	IO				0.35
117.833	0.00	0.76	0.654	IO				0.34
117.917	0.00	0.76	0.649	IO				0.34
118.000	0.00	0.75	0.644	IO				0.34
118.083	0.00	0.75	0.638	IO				0.34
118.167	0.00	0.74	0.633	IO				0.33
118.250	0.00	0.73	0.628	IO				0.33
118.333	0.00	0.73	0.623	IO				0.33
118.417	0.00	0.72	0.618	IO				0.33
118.500	0.00	0.72	0.613	IO				0.32
118.583	0.00	0.71	0.608	IO				0.32
118.667	0.00	0.71	0.603	IO				0.32
118.750	0.00	0.70	0.599	IO				0.32
118.833	0.00	0.69	0.594	IO				0.31
118.917	0.00	0.69	0.589	IO				0.31
119.000	0.00	0.68	0.584	IO				0.31
119.083	0.00	0.68	0.580	IO				0.31
119.167	0.00	0.67	0.575	IO				0.30
119.250	0.00	0.67	0.570	IO				0.30

119.333	0.00	0.66	0.566	IO				0.30
119.417	0.00	0.66	0.561	IO				0.30
119.500	0.00	0.65	0.557	IO				0.29
119.583	0.00	0.65	0.552	O				0.29
119.667	0.00	0.64	0.548	O				0.29
119.750	0.00	0.64	0.543	O				0.29
119.833	0.00	0.63	0.539	O				0.28
119.917	0.00	0.63	0.535	O				0.28
120.000	0.00	0.62	0.530	O				0.28
120.083	0.00	0.62	0.526	O				0.28
120.167	0.00	0.61	0.522	O				0.27
120.250	0.00	0.61	0.518	O				0.27
120.333	0.00	0.60	0.514	O				0.27
120.417	0.00	0.60	0.510	O				0.27
120.500	0.00	0.59	0.505	O				0.27
120.583	0.00	0.59	0.501	O				0.26
120.667	0.00	0.58	0.497	O				0.26
120.750	0.00	0.58	0.493	O				0.26
120.833	0.00	0.57	0.489	O				0.26
120.917	0.00	0.57	0.485	O				0.26
121.000	0.00	0.56	0.482	O				0.25
121.083	0.00	0.56	0.478	O				0.25
121.167	0.00	0.55	0.474	O				0.25
121.250	0.00	0.55	0.470	O				0.25
121.333	0.00	0.55	0.466	O				0.25
121.417	0.00	0.54	0.463	O				0.24
121.500	0.00	0.54	0.459	O				0.24
121.583	0.00	0.53	0.455	O				0.24
121.667	0.00	0.53	0.452	O				0.24
121.750	0.00	0.52	0.448	O				0.24
121.833	0.00	0.52	0.444	O				0.23
121.917	0.00	0.52	0.441	O				0.23
122.000	0.00	0.51	0.437	O				0.23
122.083	0.00	0.51	0.434	O				0.23
122.167	0.00	0.50	0.430	O				0.23
122.250	0.00	0.50	0.427	O				0.22
122.333	0.00	0.50	0.423	O				0.22
122.417	0.00	0.49	0.420	O				0.22
122.500	0.00	0.49	0.417	O				0.22
122.583	0.00	0.48	0.413	O				0.22
122.667	0.00	0.48	0.410	O				0.22
122.750	0.00	0.48	0.407	O				0.21
122.833	0.00	0.47	0.403	O				0.21
122.917	0.00	0.47	0.400	O				0.21
123.000	0.00	0.46	0.397	O				0.21
123.083	0.00	0.46	0.394	O				0.21
123.167	0.00	0.46	0.391	O				0.21
123.250	0.00	0.45	0.387	O				0.20
123.333	0.00	0.45	0.384	O				0.20
123.417	0.00	0.45	0.381	O				0.20
123.500	0.00	0.44	0.378	O				0.20
123.583	0.00	0.44	0.375	O				0.20
123.667	0.00	0.44	0.372	O				0.20
123.750	0.00	0.43	0.369	O				0.19

123.833	0.00	0.43	0.366	O	|	|	|	0.19
123.917	0.00	0.42	0.363	O	|	|	|	0.19
124.000	0.00	0.42	0.360	O	|	|	|	0.19
124.083	0.00	0.42	0.358	O	|	|	|	0.19
124.167	0.00	0.41	0.355	O	|	|	|	0.19
124.250	0.00	0.41	0.352	O	|	|	|	0.19
124.333	0.00	0.41	0.349	O	|	|	|	0.18
124.417	0.00	0.40	0.346	O	|	|	|	0.18
124.500	0.00	0.40	0.343	O	|	|	|	0.18
124.583	0.00	0.40	0.341	O	|	|	|	0.18
124.667	0.00	0.40	0.338	O	|	|	|	0.18
124.750	0.00	0.39	0.335	O	|	|	|	0.18
124.833	0.00	0.39	0.333	O	|	|	|	0.18
124.917	0.00	0.39	0.330	O	|	|	|	0.17
125.000	0.00	0.38	0.327	O	|	|	|	0.17
125.083	0.00	0.38	0.325	O	|	|	|	0.17
125.167	0.00	0.38	0.322	O	|	|	|	0.17
125.250	0.00	0.37	0.319	O	|	|	|	0.17
125.333	0.00	0.37	0.317	O	|	|	|	0.17
125.417	0.00	0.37	0.314	O	|	|	|	0.17
125.500	0.00	0.36	0.312	O	|	|	|	0.16
125.583	0.00	0.36	0.309	O	|	|	|	0.16
125.667	0.00	0.36	0.307	O	|	|	|	0.16
125.750	0.00	0.36	0.304	O	|	|	|	0.16
125.833	0.00	0.35	0.302	O	|	|	|	0.16
125.917	0.00	0.35	0.299	O	|	|	|	0.16
126.000	0.00	0.35	0.297	O	|	|	|	0.16
126.083	0.00	0.34	0.295	O	|	|	|	0.16
126.167	0.00	0.34	0.292	O	|	|	|	0.15
126.250	0.00	0.34	0.290	O	|	|	|	0.15
126.333	0.00	0.34	0.288	O	|	|	|	0.15
126.417	0.00	0.33	0.285	O	|	|	|	0.15
126.500	0.00	0.33	0.283	O	|	|	|	0.15
126.583	0.00	0.33	0.281	O	|	|	|	0.15
126.667	0.00	0.33	0.279	O	|	|	|	0.15
126.750	0.00	0.32	0.276	O	|	|	|	0.15
126.833	0.00	0.32	0.274	O	|	|	|	0.14
126.917	0.00	0.32	0.272	O	|	|	|	0.14
127.000	0.00	0.32	0.270	O	|	|	|	0.14
127.083	0.00	0.31	0.268	O	|	|	|	0.14
127.167	0.00	0.31	0.265	O	|	|	|	0.14
127.250	0.00	0.31	0.263	O	|	|	|	0.14
127.333	0.00	0.31	0.261	O	|	|	|	0.14
127.417	0.00	0.30	0.259	O	|	|	|	0.14
127.500	0.00	0.30	0.257	O	|	|	|	0.14
127.583	0.00	0.30	0.255	O	|	|	|	0.13
127.667	0.00	0.30	0.253	O	|	|	|	0.13
127.750	0.00	0.29	0.251	O	|	|	|	0.13
127.833	0.00	0.29	0.249	O	|	|	|	0.13
127.917	0.00	0.29	0.247	O	|	|	|	0.13
128.000	0.00	0.29	0.245	O	|	|	|	0.13
128.083	0.00	0.28	0.243	O	|	|	|	0.13
128.167	0.00	0.28	0.241	O	|	|	|	0.13
128.250	0.00	0.28	0.239	O	|	|	|	0.13

128.333	0.00	0.28	0.237	O	|	|	|	|	0.12
128.417	0.00	0.27	0.235	O	|	|	|	|	0.12
128.500	0.00	0.27	0.233	O	|	|	|	|	0.12
128.583	0.00	0.27	0.231	O	|	|	|	|	0.12
128.667	0.00	0.27	0.230	O	|	|	|	|	0.12
128.750	0.00	0.27	0.228	O	|	|	|	|	0.12
128.833	0.00	0.26	0.226	O	|	|	|	|	0.12
128.917	0.00	0.26	0.224	O	|	|	|	|	0.12
129.000	0.00	0.26	0.222	O	|	|	|	|	0.12
129.083	0.00	0.26	0.221	O	|	|	|	|	0.12
129.167	0.00	0.26	0.219	O	|	|	|	|	0.12
129.250	0.00	0.25	0.217	O	|	|	|	|	0.11
129.333	0.00	0.25	0.215	O	|	|	|	|	0.11
129.417	0.00	0.25	0.214	O	|	|	|	|	0.11
129.500	0.00	0.25	0.212	O	|	|	|	|	0.11
129.583	0.00	0.25	0.210	O	|	|	|	|	0.11
129.667	0.00	0.24	0.208	O	|	|	|	|	0.11
129.750	0.00	0.24	0.207	O	|	|	|	|	0.11
129.833	0.00	0.24	0.205	O	|	|	|	|	0.11
129.917	0.00	0.24	0.203	O	|	|	|	|	0.11
130.000	0.00	0.24	0.202	O	|	|	|	|	0.11
130.083	0.00	0.23	0.200	O	|	|	|	|	0.11
130.167	0.00	0.23	0.199	O	|	|	|	|	0.10
130.250	0.00	0.23	0.197	O	|	|	|	|	0.10
130.333	0.00	0.23	0.195	O	|	|	|	|	0.10
130.417	0.00	0.23	0.194	O	|	|	|	|	0.10
130.500	0.00	0.22	0.192	O	|	|	|	|	0.10
130.583	0.00	0.22	0.191	O	|	|	|	|	0.10
130.667	0.00	0.22	0.189	O	|	|	|	|	0.10
130.750	0.00	0.22	0.188	O	|	|	|	|	0.10
130.833	0.00	0.22	0.186	O	|	|	|	|	0.10
130.917	0.00	0.22	0.185	O	|	|	|	|	0.10
131.000	0.00	0.21	0.183	O	|	|	|	|	0.10
131.083	0.00	0.21	0.182	O	|	|	|	|	0.10
131.167	0.00	0.21	0.180	O	|	|	|	|	0.09
131.250	0.00	0.21	0.179	O	|	|	|	|	0.09
131.333	0.00	0.21	0.177	O	|	|	|	|	0.09
131.417	0.00	0.21	0.176	O	|	|	|	|	0.09
131.500	0.00	0.20	0.175	O	|	|	|	|	0.09
131.583	0.00	0.20	0.173	O	|	|	|	|	0.09
131.667	0.00	0.20	0.172	O	|	|	|	|	0.09
131.750	0.00	0.20	0.170	O	|	|	|	|	0.09
131.833	0.00	0.20	0.169	O	|	|	|	|	0.09
131.917	0.00	0.20	0.168	O	|	|	|	|	0.09
132.000	0.00	0.19	0.166	O	|	|	|	|	0.09
132.083	0.00	0.19	0.165	O	|	|	|	|	0.09
132.167	0.00	0.19	0.164	O	|	|	|	|	0.09
132.250	0.00	0.19	0.162	O	|	|	|	|	0.09
132.333	0.00	0.19	0.161	O	|	|	|	|	0.08
132.417	0.00	0.19	0.160	O	|	|	|	|	0.08
132.500	0.00	0.19	0.159	O	|	|	|	|	0.08
132.583	0.00	0.18	0.157	O	|	|	|	|	0.08
132.667	0.00	0.18	0.156	O	|	|	|	|	0.08
132.750	0.00	0.18	0.155	O	|	|	|	|	0.08

132.833	0.00	0.18	0.153	O	|	|	|	| 0.08
132.917	0.00	0.18	0.152	O	|	|	|	| 0.08
133.000	0.00	0.18	0.151	O	|	|	|	| 0.08
133.083	0.00	0.18	0.150	O	|	|	|	| 0.08
133.167	0.00	0.17	0.149	O	|	|	|	| 0.08
133.250	0.00	0.17	0.147	O	|	|	|	| 0.08
133.333	0.00	0.17	0.146	O	|	|	|	| 0.08
133.417	0.00	0.17	0.145	O	|	|	|	| 0.08
133.500	0.00	0.17	0.144	O	|	|	|	| 0.08
133.583	0.00	0.17	0.143	O	|	|	|	| 0.08
133.667	0.00	0.17	0.142	O	|	|	|	| 0.07
133.750	0.00	0.16	0.140	O	|	|	|	| 0.07
133.833	0.00	0.16	0.139	O	|	|	|	| 0.07
133.917	0.00	0.16	0.138	O	|	|	|	| 0.07
134.000	0.00	0.16	0.137	O	|	|	|	| 0.07
134.083	0.00	0.16	0.136	O	|	|	|	| 0.07
134.167	0.00	0.16	0.135	O	|	|	|	| 0.07
134.250	0.00	0.16	0.134	O	|	|	|	| 0.07
134.333	0.00	0.16	0.133	O	|	|	|	| 0.07
134.417	0.00	0.15	0.132	O	|	|	|	| 0.07
134.500	0.00	0.15	0.131	O	|	|	|	| 0.07
134.583	0.00	0.15	0.130	O	|	|	|	| 0.07
134.667	0.00	0.15	0.129	O	|	|	|	| 0.07
134.750	0.00	0.15	0.128	O	|	|	|	| 0.07
134.833	0.00	0.15	0.127	O	|	|	|	| 0.07
134.917	0.00	0.15	0.126	O	|	|	|	| 0.07
135.000	0.00	0.15	0.125	O	|	|	|	| 0.07
135.083	0.00	0.14	0.124	O	|	|	|	| 0.07
135.167	0.00	0.14	0.123	O	|	|	|	| 0.06
135.250	0.00	0.14	0.122	O	|	|	|	| 0.06
135.333	0.00	0.14	0.121	O	|	|	|	| 0.06
135.417	0.00	0.14	0.120	O	|	|	|	| 0.06
135.500	0.00	0.14	0.119	O	|	|	|	| 0.06
135.583	0.00	0.14	0.118	O	|	|	|	| 0.06
135.667	0.00	0.14	0.117	O	|	|	|	| 0.06
135.750	0.00	0.14	0.116	O	|	|	|	| 0.06
135.833	0.00	0.13	0.115	O	|	|	|	| 0.06
135.917	0.00	0.13	0.114	O	|	|	|	| 0.06
136.000	0.00	0.13	0.113	O	|	|	|	| 0.06
136.083	0.00	0.13	0.112	O	|	|	|	| 0.06
136.167	0.00	0.13	0.111	O	|	|	|	| 0.06
136.250	0.00	0.13	0.110	O	|	|	|	| 0.06
136.333	0.00	0.13	0.109	O	|	|	|	| 0.06
136.417	0.00	0.13	0.109	O	|	|	|	| 0.06
136.500	0.00	0.13	0.108	O	|	|	|	| 0.06
136.583	0.00	0.12	0.107	O	|	|	|	| 0.06
136.667	0.00	0.12	0.106	O	|	|	|	| 0.06
136.750	0.00	0.12	0.105	O	|	|	|	| 0.06
136.833	0.00	0.12	0.104	O	|	|	|	| 0.05
136.917	0.00	0.12	0.103	O	|	|	|	| 0.05
137.000	0.00	0.12	0.103	O	|	|	|	| 0.05
137.083	0.00	0.12	0.102	O	|	|	|	| 0.05
137.167	0.00	0.12	0.101	O	|	|	|	| 0.05
137.250	0.00	0.12	0.100	O	|	|	|	| 0.05

137.333	0.00	0.12	0.099	O	|	|	|	0.05
137.417	0.00	0.12	0.099	O	|	|	|	0.05
137.500	0.00	0.11	0.098	O	|	|	|	0.05
137.583	0.00	0.11	0.097	O	|	|	|	0.05
137.667	0.00	0.11	0.096	O	|	|	|	0.05
137.750	0.00	0.11	0.095	O	|	|	|	0.05
137.833	0.00	0.11	0.095	O	|	|	|	0.05
137.917	0.00	0.11	0.094	O	|	|	|	0.05
138.000	0.00	0.11	0.093	O	|	|	|	0.05
138.083	0.00	0.11	0.092	O	|	|	|	0.05
138.167	0.00	0.11	0.092	O	|	|	|	0.05
138.250	0.00	0.11	0.091	O	|	|	|	0.05
138.333	0.00	0.11	0.090	O	|	|	|	0.05
138.417	0.00	0.10	0.089	O	|	|	|	0.05
138.500	0.00	0.10	0.089	O	|	|	|	0.05
138.583	0.00	0.10	0.088	O	|	|	|	0.05
138.667	0.00	0.10	0.087	O	|	|	|	0.05
138.750	0.00	0.10	0.087	O	|	|	|	0.05
138.833	0.00	0.10	0.086	O	|	|	|	0.05
138.917	0.00	0.10	0.085	O	|	|	|	0.04
139.000	0.00	0.10	0.085	O	|	|	|	0.04
139.083	0.00	0.10	0.084	O	|	|	|	0.04
139.167	0.00	0.10	0.083	O	|	|	|	0.04
139.250	0.00	0.10	0.083	O	|	|	|	0.04
139.333	0.00	0.10	0.082	O	|	|	|	0.04
139.417	0.00	0.09	0.081	O	|	|	|	0.04
139.500	0.00	0.09	0.081	O	|	|	|	0.04
139.583	0.00	0.09	0.080	O	|	|	|	0.04
139.667	0.00	0.09	0.079	O	|	|	|	0.04
139.750	0.00	0.09	0.079	O	|	|	|	0.04
139.833	0.00	0.09	0.078	O	|	|	|	0.04
139.917	0.00	0.09	0.077	O	|	|	|	0.04
140.000	0.00	0.09	0.077	O	|	|	|	0.04
140.083	0.00	0.09	0.076	O	|	|	|	0.04
140.167	0.00	0.09	0.076	O	|	|	|	0.04
140.250	0.00	0.09	0.075	O	|	|	|	0.04
140.333	0.00	0.09	0.074	O	|	|	|	0.04
140.417	0.00	0.09	0.074	O	|	|	|	0.04
140.500	0.00	0.09	0.073	O	|	|	|	0.04
140.583	0.00	0.08	0.073	O	|	|	|	0.04
140.667	0.00	0.08	0.072	O	|	|	|	0.04
140.750	0.00	0.08	0.071	O	|	|	|	0.04
140.833	0.00	0.08	0.071	O	|	|	|	0.04
140.917	0.00	0.08	0.070	O	|	|	|	0.04
141.000	0.00	0.08	0.070	O	|	|	|	0.04
141.083	0.00	0.08	0.069	O	|	|	|	0.04
141.167	0.00	0.08	0.069	O	|	|	|	0.04
141.250	0.00	0.08	0.068	O	|	|	|	0.04
141.333	0.00	0.08	0.068	O	|	|	|	0.04
141.417	0.00	0.08	0.067	O	|	|	|	0.04
141.500	0.00	0.08	0.066	O	|	|	|	0.03
141.583	0.00	0.08	0.066	O	|	|	|	0.03
141.667	0.00	0.08	0.065	O	|	|	|	0.03
141.750	0.00	0.08	0.065	O	|	|	|	0.03

141.833	0.00	0.08	0.064	O	|	|	|	| 0.03
141.917	0.00	0.07	0.064	O	|	|	|	| 0.03
142.000	0.00	0.07	0.063	O	|	|	|	| 0.03
142.083	0.00	0.07	0.063	O	|	|	|	| 0.03
142.167	0.00	0.07	0.062	O	|	|	|	| 0.03
142.250	0.00	0.07	0.062	O	|	|	|	| 0.03
142.333	0.00	0.07	0.061	O	|	|	|	| 0.03
142.417	0.00	0.07	0.061	O	|	|	|	| 0.03
142.500	0.00	0.07	0.060	O	|	|	|	| 0.03
142.583	0.00	0.07	0.060	O	|	|	|	| 0.03
142.667	0.00	0.07	0.059	O	|	|	|	| 0.03
142.750	0.00	0.07	0.059	O	|	|	|	| 0.03
142.833	0.00	0.07	0.058	O	|	|	|	| 0.03
142.917	0.00	0.07	0.058	O	|	|	|	| 0.03
143.000	0.00	0.07	0.057	O	|	|	|	| 0.03
143.083	0.00	0.07	0.057	O	|	|	|	| 0.03
143.167	0.00	0.07	0.057	O	|	|	|	| 0.03
143.250	0.00	0.07	0.056	O	|	|	|	| 0.03
143.333	0.00	0.07	0.056	O	|	|	|	| 0.03
143.417	0.00	0.06	0.055	O	|	|	|	| 0.03
143.500	0.00	0.06	0.055	O	|	|	|	| 0.03
143.583	0.00	0.06	0.054	O	|	|	|	| 0.03
143.667	0.00	0.06	0.054	O	|	|	|	| 0.03
143.750	0.00	0.06	0.053	O	|	|	|	| 0.03
143.833	0.00	0.06	0.053	O	|	|	|	| 0.03
143.917	0.00	0.06	0.053	O	|	|	|	| 0.03
144.000	0.00	0.06	0.052	O	|	|	|	| 0.03
144.083	0.00	0.06	0.052	O	|	|	|	| 0.03
144.167	0.00	0.06	0.051	O	|	|	|	| 0.03
144.250	0.00	0.06	0.051	O	|	|	|	| 0.03
144.333	0.00	0.06	0.051	O	|	|	|	| 0.03
144.417	0.00	0.06	0.050	O	|	|	|	| 0.03
144.500	0.00	0.06	0.050	O	|	|	|	| 0.03
144.583	0.00	0.06	0.049	O	|	|	|	| 0.03
144.667	0.00	0.06	0.049	O	|	|	|	| 0.03
144.750	0.00	0.06	0.049	O	|	|	|	| 0.03
144.833	0.00	0.06	0.048	O	|	|	|	| 0.03
144.917	0.00	0.06	0.048	O	|	|	|	| 0.03
145.000	0.00	0.06	0.047	O	|	|	|	| 0.02
145.083	0.00	0.05	0.047	O	|	|	|	| 0.02
145.167	0.00	0.05	0.047	O	|	|	|	| 0.02
145.250	0.00	0.05	0.046	O	|	|	|	| 0.02
145.333	0.00	0.05	0.046	O	|	|	|	| 0.02
145.417	0.00	0.05	0.046	O	|	|	|	| 0.02
145.500	0.00	0.05	0.045	O	|	|	|	| 0.02
145.583	0.00	0.05	0.045	O	|	|	|	| 0.02
145.667	0.00	0.05	0.044	O	|	|	|	| 0.02
145.750	0.00	0.05	0.044	O	|	|	|	| 0.02
145.833	0.00	0.05	0.044	O	|	|	|	| 0.02
145.917	0.00	0.05	0.043	O	|	|	|	| 0.02
146.000	0.00	0.05	0.043	O	|	|	|	| 0.02
146.083	0.00	0.05	0.043	O	|	|	|	| 0.02
146.167	0.00	0.05	0.042	O	|	|	|	| 0.02
146.250	0.00	0.05	0.042	O	|	|	|	| 0.02

146.333	0.00	0.05	0.042	O	|	|	|	|	0.02
146.417	0.00	0.05	0.041	O	|	|	|	|	0.02
146.500	0.00	0.05	0.041	O	|	|	|	|	0.02
146.583	0.00	0.05	0.041	O	|	|	|	|	0.02
146.667	0.00	0.05	0.040	O	|	|	|	|	0.02
146.750	0.00	0.05	0.040	O	|	|	|	|	0.02
146.833	0.00	0.05	0.040	O	|	|	|	|	0.02
146.917	0.00	0.05	0.039	O	|	|	|	|	0.02
147.000	0.00	0.05	0.039	O	|	|	|	|	0.02
147.083	0.00	0.05	0.039	O	|	|	|	|	0.02
147.167	0.00	0.04	0.038	O	|	|	|	|	0.02
147.250	0.00	0.04	0.038	O	|	|	|	|	0.02
147.333	0.00	0.04	0.038	O	|	|	|	|	0.02
147.417	0.00	0.04	0.038	O	|	|	|	|	0.02
147.500	0.00	0.04	0.037	O	|	|	|	|	0.02
147.583	0.00	0.04	0.037	O	|	|	|	|	0.02
147.667	0.00	0.04	0.037	O	|	|	|	|	0.02
147.750	0.00	0.04	0.036	O	|	|	|	|	0.02
147.833	0.00	0.04	0.036	O	|	|	|	|	0.02
147.917	0.00	0.04	0.036	O	|	|	|	|	0.02
148.000	0.00	0.04	0.035	O	|	|	|	|	0.02
148.083	0.00	0.04	0.035	O	|	|	|	|	0.02
148.167	0.00	0.04	0.035	O	|	|	|	|	0.02
148.250	0.00	0.04	0.035	O	|	|	|	|	0.02
148.333	0.00	0.04	0.034	O	|	|	|	|	0.02
148.417	0.00	0.04	0.034	O	|	|	|	|	0.02
148.500	0.00	0.04	0.034	O	|	|	|	|	0.02
148.583	0.00	0.04	0.034	O	|	|	|	|	0.02
148.667	0.00	0.04	0.033	O	|	|	|	|	0.02
148.750	0.00	0.04	0.033	O	|	|	|	|	0.02
148.833	0.00	0.04	0.033	O	|	|	|	|	0.02
148.917	0.00	0.04	0.032	O	|	|	|	|	0.02
149.000	0.00	0.04	0.032	O	|	|	|	|	0.02
149.083	0.00	0.04	0.032	O	|	|	|	|	0.02
149.167	0.00	0.04	0.032	O	|	|	|	|	0.02
149.250	0.00	0.04	0.031	O	|	|	|	|	0.02
149.333	0.00	0.04	0.031	O	|	|	|	|	0.02
149.417	0.00	0.04	0.031	O	|	|	|	|	0.02
149.500	0.00	0.04	0.031	O	|	|	|	|	0.02
149.583	0.00	0.04	0.030	O	|	|	|	|	0.02
149.667	0.00	0.04	0.030	O	|	|	|	|	0.02
149.750	0.00	0.04	0.030	O	|	|	|	|	0.02
149.833	0.00	0.03	0.030	O	|	|	|	|	0.02
149.917	0.00	0.03	0.029	O	|	|	|	|	0.02
150.000	0.00	0.03	0.029	O	|	|	|	|	0.02
150.083	0.00	0.03	0.029	O	|	|	|	|	0.02
150.167	0.00	0.03	0.029	O	|	|	|	|	0.02
150.250	0.00	0.03	0.029	O	|	|	|	|	0.02
150.333	0.00	0.03	0.028	O	|	|	|	|	0.01
150.417	0.00	0.03	0.028	O	|	|	|	|	0.01
150.500	0.00	0.03	0.028	O	|	|	|	|	0.01
150.583	0.00	0.03	0.028	O	|	|	|	|	0.01
150.667	0.00	0.03	0.027	O	|	|	|	|	0.01
150.750	0.00	0.03	0.027	O	|	|	|	|	0.01

150.833	0.00	0.03	0.027	O	|	|	|	|	0.01
150.917	0.00	0.03	0.027	O	|	|	|	|	0.01
151.000	0.00	0.03	0.027	O	|	|	|	|	0.01
151.083	0.00	0.03	0.026	O	|	|	|	|	0.01
151.167	0.00	0.03	0.026	O	|	|	|	|	0.01
151.250	0.00	0.03	0.026	O	|	|	|	|	0.01
151.333	0.00	0.03	0.026	O	|	|	|	|	0.01
151.417	0.00	0.03	0.025	O	|	|	|	|	0.01
151.500	0.00	0.03	0.025	O	|	|	|	|	0.01
151.583	0.00	0.03	0.025	O	|	|	|	|	0.01
151.667	0.00	0.03	0.025	O	|	|	|	|	0.01
151.750	0.00	0.03	0.025	O	|	|	|	|	0.01
151.833	0.00	0.03	0.024	O	|	|	|	|	0.01
151.917	0.00	0.03	0.024	O	|	|	|	|	0.01
152.000	0.00	0.03	0.024	O	|	|	|	|	0.01
152.083	0.00	0.03	0.024	O	|	|	|	|	0.01
152.167	0.00	0.03	0.024	O	|	|	|	|	0.01
152.250	0.00	0.03	0.024	O	|	|	|	|	0.01
152.333	0.00	0.03	0.023	O	|	|	|	|	0.01
152.417	0.00	0.03	0.023	O	|	|	|	|	0.01
152.500	0.00	0.03	0.023	O	|	|	|	|	0.01
152.583	0.00	0.03	0.023	O	|	|	|	|	0.01
152.667	0.00	0.03	0.023	O	|	|	|	|	0.01
152.750	0.00	0.03	0.022	O	|	|	|	|	0.01
152.833	0.00	0.03	0.022	O	|	|	|	|	0.01
152.917	0.00	0.03	0.022	O	|	|	|	|	0.01
153.000	0.00	0.03	0.022	O	|	|	|	|	0.01
153.083	0.00	0.03	0.022	O	|	|	|	|	0.01
153.167	0.00	0.03	0.022	O	|	|	|	|	0.01
153.250	0.00	0.02	0.021	O	|	|	|	|	0.01
153.333	0.00	0.02	0.021	O	|	|	|	|	0.01
153.417	0.00	0.02	0.021	O	|	|	|	|	0.01
153.500	0.00	0.02	0.021	O	|	|	|	|	0.01
153.583	0.00	0.02	0.021	O	|	|	|	|	0.01
153.667	0.00	0.02	0.021	O	|	|	|	|	0.01
153.750	0.00	0.02	0.020	O	|	|	|	|	0.01
153.833	0.00	0.02	0.020	O	|	|	|	|	0.01
153.917	0.00	0.02	0.020	O	|	|	|	|	0.01
154.000	0.00	0.02	0.020	O	|	|	|	|	0.01
154.083	0.00	0.02	0.020	O	|	|	|	|	0.01
154.167	0.00	0.02	0.020	O	|	|	|	|	0.01
154.250	0.00	0.02	0.019	O	|	|	|	|	0.01
154.333	0.00	0.02	0.019	O	|	|	|	|	0.01
154.417	0.00	0.02	0.019	O	|	|	|	|	0.01
154.500	0.00	0.02	0.019	O	|	|	|	|	0.01
154.583	0.00	0.02	0.019	O	|	|	|	|	0.01
154.667	0.00	0.02	0.019	O	|	|	|	|	0.01
154.750	0.00	0.02	0.018	O	|	|	|	|	0.01
154.833	0.00	0.02	0.018	O	|	|	|	|	0.01
154.917	0.00	0.02	0.018	O	|	|	|	|	0.01
155.000	0.00	0.02	0.018	O	|	|	|	|	0.01
155.083	0.00	0.02	0.018	O	|	|	|	|	0.01
155.167	0.00	0.02	0.018	O	|	|	|	|	0.01
155.250	0.00	0.02	0.018	O	|	|	|	|	0.01

155.333	0.00	0.02	0.017	O	|	|	|	0.01
155.417	0.00	0.02	0.017	O	|	|	|	0.01
155.500	0.00	0.02	0.017	O	|	|	|	0.01
155.583	0.00	0.02	0.017	O	|	|	|	0.01
155.667	0.00	0.02	0.017	O	|	|	|	0.01
155.750	0.00	0.02	0.017	O	|	|	|	0.01
155.833	0.00	0.02	0.017	O	|	|	|	0.01
155.917	0.00	0.02	0.016	O	|	|	|	0.01
156.000	0.00	0.02	0.016	O	|	|	|	0.01
156.083	0.00	0.02	0.016	O	|	|	|	0.01
156.167	0.00	0.02	0.016	O	|	|	|	0.01
156.250	0.00	0.02	0.016	O	|	|	|	0.01
156.333	0.00	0.02	0.016	O	|	|	|	0.01
156.417	0.00	0.02	0.016	O	|	|	|	0.01
156.500	0.00	0.02	0.016	O	|	|	|	0.01
156.583	0.00	0.02	0.015	O	|	|	|	0.01
156.667	0.00	0.02	0.015	O	|	|	|	0.01
156.750	0.00	0.02	0.015	O	|	|	|	0.01
156.833	0.00	0.02	0.015	O	|	|	|	0.01
156.917	0.00	0.02	0.015	O	|	|	|	0.01
157.000	0.00	0.02	0.015	O	|	|	|	0.01
157.083	0.00	0.02	0.015	O	|	|	|	0.01
157.167	0.00	0.02	0.015	O	|	|	|	0.01
157.250	0.00	0.02	0.015	O	|	|	|	0.01
157.333	0.00	0.02	0.014	O	|	|	|	0.01
157.417	0.00	0.02	0.014	O	|	|	|	0.01
157.500	0.00	0.02	0.014	O	|	|	|	0.01
157.583	0.00	0.02	0.014	O	|	|	|	0.01
157.667	0.00	0.02	0.014	O	|	|	|	0.01
157.750	0.00	0.02	0.014	O	|	|	|	0.01
157.833	0.00	0.02	0.014	O	|	|	|	0.01
157.917	0.00	0.02	0.014	O	|	|	|	0.01
158.000	0.00	0.02	0.013	O	|	|	|	0.01
158.083	0.00	0.02	0.013	O	|	|	|	0.01
158.167	0.00	0.02	0.013	O	|	|	|	0.01
158.250	0.00	0.02	0.013	O	|	|	|	0.01
158.333	0.00	0.02	0.013	O	|	|	|	0.01
158.417	0.00	0.02	0.013	O	|	|	|	0.01
158.500	0.00	0.02	0.013	O	|	|	|	0.01
158.583	0.00	0.01	0.013	O	|	|	|	0.01
158.667	0.00	0.01	0.013	O	|	|	|	0.01
158.750	0.00	0.01	0.013	O	|	|	|	0.01
158.833	0.00	0.01	0.012	O	|	|	|	0.01
158.917	0.00	0.01	0.012	O	|	|	|	0.01
159.000	0.00	0.01	0.012	O	|	|	|	0.01
159.083	0.00	0.01	0.012	O	|	|	|	0.01
159.167	0.00	0.01	0.012	O	|	|	|	0.01
159.250	0.00	0.01	0.012	O	|	|	|	0.01
159.333	0.00	0.01	0.012	O	|	|	|	0.01
159.417	0.00	0.01	0.012	O	|	|	|	0.01
159.500	0.00	0.01	0.012	O	|	|	|	0.01
159.583	0.00	0.01	0.012	O	|	|	|	0.01
159.667	0.00	0.01	0.011	O	|	|	|	0.01
159.750	0.00	0.01	0.011	O	|	|	|	0.01

159.833	0.00	0.01	0.011	O	|	|	|	|	0.01
159.917	0.00	0.01	0.011	O	|	|	|	|	0.01
160.000	0.00	0.01	0.011	O	|	|	|	|	0.01
160.083	0.00	0.01	0.011	O	|	|	|	|	0.01
160.167	0.00	0.01	0.011	O	|	|	|	|	0.01
160.250	0.00	0.01	0.011	O	|	|	|	|	0.01
160.333	0.00	0.01	0.011	O	|	|	|	|	0.01
160.417	0.00	0.01	0.011	O	|	|	|	|	0.01
160.500	0.00	0.01	0.011	O	|	|	|	|	0.01
160.583	0.00	0.01	0.011	O	|	|	|	|	0.01
160.667	0.00	0.01	0.010	O	|	|	|	|	0.01
160.750	0.00	0.01	0.010	O	|	|	|	|	0.01
160.833	0.00	0.01	0.010	O	|	|	|	|	0.01
160.917	0.00	0.01	0.010	O	|	|	|	|	0.01
161.000	0.00	0.01	0.010	O	|	|	|	|	0.01
161.083	0.00	0.01	0.010	O	|	|	|	|	0.01
161.167	0.00	0.01	0.010	O	|	|	|	|	0.01
161.250	0.00	0.01	0.010	O	|	|	|	|	0.01
161.333	0.00	0.01	0.010	O	|	|	|	|	0.01
161.417	0.00	0.01	0.010	O	|	|	|	|	0.01
161.500	0.00	0.01	0.010	O	|	|	|	|	0.01
161.583	0.00	0.01	0.010	O	|	|	|	|	0.01
161.667	0.00	0.01	0.009	O	|	|	|	|	0.00
161.750	0.00	0.01	0.009	O	|	|	|	|	0.00
161.833	0.00	0.01	0.009	O	|	|	|	|	0.00
161.917	0.00	0.01	0.009	O	|	|	|	|	0.00
162.000	0.00	0.01	0.009	O	|	|	|	|	0.00
162.083	0.00	0.01	0.009	O	|	|	|	|	0.00
162.167	0.00	0.01	0.009	O	|	|	|	|	0.00
162.250	0.00	0.01	0.009	O	|	|	|	|	0.00
162.333	0.00	0.01	0.009	O	|	|	|	|	0.00
162.417	0.00	0.01	0.009	O	|	|	|	|	0.00
162.500	0.00	0.01	0.009	O	|	|	|	|	0.00
162.583	0.00	0.01	0.009	O	|	|	|	|	0.00
162.667	0.00	0.01	0.009	O	|	|	|	|	0.00
162.750	0.00	0.01	0.009	O	|	|	|	|	0.00
162.833	0.00	0.01	0.008	O	|	|	|	|	0.00
162.917	0.00	0.01	0.008	O	|	|	|	|	0.00
163.000	0.00	0.01	0.008	O	|	|	|	|	0.00
163.083	0.00	0.01	0.008	O	|	|	|	|	0.00
163.167	0.00	0.01	0.008	O	|	|	|	|	0.00
163.250	0.00	0.01	0.008	O	|	|	|	|	0.00
163.333	0.00	0.01	0.008	O	|	|	|	|	0.00
163.417	0.00	0.01	0.008	O	|	|	|	|	0.00
163.500	0.00	0.01	0.008	O	|	|	|	|	0.00
163.583	0.00	0.01	0.008	O	|	|	|	|	0.00
163.667	0.00	0.01	0.008	O	|	|	|	|	0.00
163.750	0.00	0.01	0.008	O	|	|	|	|	0.00
163.833	0.00	0.01	0.008	O	|	|	|	|	0.00
163.917	0.00	0.01	0.008	O	|	|	|	|	0.00
164.000	0.00	0.01	0.008	O	|	|	|	|	0.00
164.083	0.00	0.01	0.007	O	|	|	|	|	0.00
164.167	0.00	0.01	0.007	O	|	|	|	|	0.00
164.250	0.00	0.01	0.007	O	|	|	|	|	0.00

164.333	0.00	0.01	0.007	O	|	|	|	|	0.00
164.417	0.00	0.01	0.007	O	|	|	|	|	0.00
164.500	0.00	0.01	0.007	O	|	|	|	|	0.00
164.583	0.00	0.01	0.007	O	|	|	|	|	0.00
164.667	0.00	0.01	0.007	O	|	|	|	|	0.00
164.750	0.00	0.01	0.007	O	|	|	|	|	0.00
164.833	0.00	0.01	0.007	O	|	|	|	|	0.00
164.917	0.00	0.01	0.007	O	|	|	|	|	0.00
165.000	0.00	0.01	0.007	O	|	|	|	|	0.00
165.083	0.00	0.01	0.007	O	|	|	|	|	0.00
165.167	0.00	0.01	0.007	O	|	|	|	|	0.00
165.250	0.00	0.01	0.007	O	|	|	|	|	0.00
165.333	0.00	0.01	0.007	O	|	|	|	|	0.00
165.417	0.00	0.01	0.007	O	|	|	|	|	0.00
165.500	0.00	0.01	0.007	O	|	|	|	|	0.00
165.583	0.00	0.01	0.006	O	|	|	|	|	0.00
165.667	0.00	0.01	0.006	O	|	|	|	|	0.00
165.750	0.00	0.01	0.006	O	|	|	|	|	0.00
165.833	0.00	0.01	0.006	O	|	|	|	|	0.00
165.917	0.00	0.01	0.006	O	|	|	|	|	0.00
166.000	0.00	0.01	0.006	O	|	|	|	|	0.00
166.083	0.00	0.01	0.006	O	|	|	|	|	0.00
166.167	0.00	0.01	0.006	O	|	|	|	|	0.00
166.250	0.00	0.01	0.006	O	|	|	|	|	0.00
166.333	0.00	0.01	0.006	O	|	|	|	|	0.00
166.417	0.00	0.01	0.006	O	|	|	|	|	0.00
166.500	0.00	0.01	0.006	O	|	|	|	|	0.00
166.583	0.00	0.01	0.006	O	|	|	|	|	0.00
166.667	0.00	0.01	0.006	O	|	|	|	|	0.00
166.750	0.00	0.01	0.006	O	|	|	|	|	0.00
166.833	0.00	0.01	0.006	O	|	|	|	|	0.00
166.917	0.00	0.01	0.006	O	|	|	|	|	0.00
167.000	0.00	0.01	0.006	O	|	|	|	|	0.00
167.083	0.00	0.01	0.006	O	|	|	|	|	0.00
167.167	0.00	0.01	0.006	O	|	|	|	|	0.00
167.250	0.00	0.01	0.006	O	|	|	|	|	0.00
167.333	0.00	0.01	0.005	O	|	|	|	|	0.00
167.417	0.00	0.01	0.005	O	|	|	|	|	0.00
167.500	0.00	0.01	0.005	O	|	|	|	|	0.00
167.583	0.00	0.01	0.005	O	|	|	|	|	0.00
167.667	0.00	0.01	0.005	O	|	|	|	|	0.00
167.750	0.00	0.01	0.005	O	|	|	|	|	0.00
167.833	0.00	0.01	0.005	O	|	|	|	|	0.00
167.917	0.00	0.01	0.005	O	|	|	|	|	0.00
168.000	0.00	0.01	0.005	O	|	|	|	|	0.00
168.083	0.00	0.01	0.005	O	|	|	|	|	0.00
168.167	0.00	0.01	0.005	O	|	|	|	|	0.00
168.250	0.00	0.01	0.005	O	|	|	|	|	0.00
168.333	0.00	0.01	0.005	O	|	|	|	|	0.00
168.417	0.00	0.01	0.005	O	|	|	|	|	0.00
168.500	0.00	0.01	0.005	O	|	|	|	|	0.00
168.583	0.00	0.01	0.005	O	|	|	|	|	0.00
168.667	0.00	0.01	0.005	O	|	|	|	|	0.00
168.750	0.00	0.01	0.005	O	|	|	|	|	0.00

168.833	0.00	0.01	0.005	O	|	|	|	|	0.00
168.917	0.00	0.01	0.005	O	|	|	|	|	0.00
169.000	0.00	0.01	0.005	O	|	|	|	|	0.00
169.083	0.00	0.01	0.005	O	|	|	|	|	0.00
169.167	0.00	0.01	0.005	O	|	|	|	|	0.00
169.250	0.00	0.01	0.005	O	|	|	|	|	0.00
169.333	0.00	0.01	0.005	O	|	|	|	|	0.00
169.417	0.00	0.01	0.004	O	|	|	|	|	0.00
169.500	0.00	0.01	0.004	O	|	|	|	|	0.00
169.583	0.00	0.01	0.004	O	|	|	|	|	0.00
169.667	0.00	0.01	0.004	O	|	|	|	|	0.00
169.750	0.00	0.01	0.004	O	|	|	|	|	0.00
169.833	0.00	0.01	0.004	O	|	|	|	|	0.00
169.917	0.00	0.00	0.004	O	|	|	|	|	0.00
170.000	0.00	0.00	0.004	O	|	|	|	|	0.00
170.083	0.00	0.00	0.004	O	|	|	|	|	0.00
170.167	0.00	0.00	0.004	O	|	|	|	|	0.00
170.250	0.00	0.00	0.004	O	|	|	|	|	0.00
170.333	0.00	0.00	0.004	O	|	|	|	|	0.00
170.417	0.00	0.00	0.004	O	|	|	|	|	0.00
170.500	0.00	0.00	0.004	O	|	|	|	|	0.00
170.583	0.00	0.00	0.004	O	|	|	|	|	0.00
170.667	0.00	0.00	0.004	O	|	|	|	|	0.00
170.750	0.00	0.00	0.004	O	|	|	|	|	0.00
170.833	0.00	0.00	0.004	O	|	|	|	|	0.00
170.917	0.00	0.00	0.004	O	|	|	|	|	0.00
171.000	0.00	0.00	0.004	O	|	|	|	|	0.00
171.083	0.00	0.00	0.004	O	|	|	|	|	0.00
171.167	0.00	0.00	0.004	O	|	|	|	|	0.00
171.250	0.00	0.00	0.004	O	|	|	|	|	0.00
171.333	0.00	0.00	0.004	O	|	|	|	|	0.00
171.417	0.00	0.00	0.004	O	|	|	|	|	0.00
171.500	0.00	0.00	0.004	O	|	|	|	|	0.00
171.583	0.00	0.00	0.004	O	|	|	|	|	0.00
171.667	0.00	0.00	0.004	O	|	|	|	|	0.00
171.750	0.00	0.00	0.004	O	|	|	|	|	0.00
171.833	0.00	0.00	0.004	O	|	|	|	|	0.00
171.917	0.00	0.00	0.004	O	|	|	|	|	0.00
172.000	0.00	0.00	0.003	O	|	|	|	|	0.00
172.083	0.00	0.00	0.003	O	|	|	|	|	0.00
172.167	0.00	0.00	0.003	O	|	|	|	|	0.00
172.250	0.00	0.00	0.003	O	|	|	|	|	0.00
172.333	0.00	0.00	0.003	O	|	|	|	|	0.00
172.417	0.00	0.00	0.003	O	|	|	|	|	0.00
172.500	0.00	0.00	0.003	O	|	|	|	|	0.00
172.583	0.00	0.00	0.003	O	|	|	|	|	0.00
172.667	0.00	0.00	0.003	O	|	|	|	|	0.00
172.750	0.00	0.00	0.003	O	|	|	|	|	0.00
172.833	0.00	0.00	0.003	O	|	|	|	|	0.00
172.917	0.00	0.00	0.003	O	|	|	|	|	0.00
173.000	0.00	0.00	0.003	O	|	|	|	|	0.00
173.083	0.00	0.00	0.003	O	|	|	|	|	0.00
173.167	0.00	0.00	0.003	O	|	|	|	|	0.00
173.250	0.00	0.00	0.003	O	|	|	|	|	0.00

173.333	0.00	0.00	0.003	O	|	|	|	0.00
173.417	0.00	0.00	0.003	O	|	|	|	0.00
173.500	0.00	0.00	0.003	O	|	|	|	0.00
173.583	0.00	0.00	0.003	O	|	|	|	0.00
173.667	0.00	0.00	0.003	O	|	|	|	0.00
173.750	0.00	0.00	0.003	O	|	|	|	0.00
173.833	0.00	0.00	0.003	O	|	|	|	0.00
173.917	0.00	0.00	0.003	O	|	|	|	0.00
174.000	0.00	0.00	0.003	O	|	|	|	0.00
174.083	0.00	0.00	0.003	O	|	|	|	0.00
174.167	0.00	0.00	0.003	O	|	|	|	0.00
174.250	0.00	0.00	0.003	O	|	|	|	0.00
174.333	0.00	0.00	0.003	O	|	|	|	0.00
174.417	0.00	0.00	0.003	O	|	|	|	0.00
174.500	0.00	0.00	0.003	O	|	|	|	0.00
174.583	0.00	0.00	0.003	O	|	|	|	0.00
174.667	0.00	0.00	0.003	O	|	|	|	0.00
174.750	0.00	0.00	0.003	O	|	|	|	0.00
174.833	0.00	0.00	0.003	O	|	|	|	0.00
174.917	0.00	0.00	0.003	O	|	|	|	0.00
175.000	0.00	0.00	0.003	O	|	|	|	0.00
175.083	0.00	0.00	0.003	O	|	|	|	0.00
175.167	0.00	0.00	0.003	O	|	|	|	0.00
175.250	0.00	0.00	0.003	O	|	|	|	0.00
175.333	0.00	0.00	0.003	O	|	|	|	0.00
175.417	0.00	0.00	0.003	O	|	|	|	0.00
175.500	0.00	0.00	0.002	O	|	|	|	0.00
175.583	0.00	0.00	0.002	O	|	|	|	0.00
175.667	0.00	0.00	0.002	O	|	|	|	0.00
175.750	0.00	0.00	0.002	O	|	|	|	0.00
175.833	0.00	0.00	0.002	O	|	|	|	0.00
175.917	0.00	0.00	0.002	O	|	|	|	0.00
176.000	0.00	0.00	0.002	O	|	|	|	0.00
176.083	0.00	0.00	0.002	O	|	|	|	0.00
176.167	0.00	0.00	0.002	O	|	|	|	0.00
176.250	0.00	0.00	0.002	O	|	|	|	0.00
176.333	0.00	0.00	0.002	O	|	|	|	0.00
176.417	0.00	0.00	0.002	O	|	|	|	0.00
176.500	0.00	0.00	0.002	O	|	|	|	0.00
176.583	0.00	0.00	0.002	O	|	|	|	0.00
176.667	0.00	0.00	0.002	O	|	|	|	0.00
176.750	0.00	0.00	0.002	O	|	|	|	0.00
176.833	0.00	0.00	0.002	O	|	|	|	0.00
176.917	0.00	0.00	0.002	O	|	|	|	0.00
177.000	0.00	0.00	0.002	O	|	|	|	0.00
177.083	0.00	0.00	0.002	O	|	|	|	0.00
177.167	0.00	0.00	0.002	O	|	|	|	0.00
177.250	0.00	0.00	0.002	O	|	|	|	0.00
177.333	0.00	0.00	0.002	O	|	|	|	0.00
177.417	0.00	0.00	0.002	O	|	|	|	0.00
177.500	0.00	0.00	0.002	O	|	|	|	0.00
177.583	0.00	0.00	0.002	O	|	|	|	0.00
177.667	0.00	0.00	0.002	O	|	|	|	0.00
177.750	0.00	0.00	0.002	O	|	|	|	0.00

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177.833    0.00    0.00      0.002  O       |       |       |       |     0.00
177.917    0.00    0.00      0.002  O       |       |       |       |     0.00
178.000    0.00    0.00      0.002  O       |       |       |       |     0.00
178.083    0.00    0.00      0.002  O       |       |       |       |     0.00
178.167    0.00    0.00      0.002  O       |       |       |       |     0.00
178.250    0.00    0.00      0.002  O       |       |       |       |     0.00
178.333    0.00    0.00      0.002  O       |       |       |       |     0.00

        Remaining water in basin =    0.00 (Ac.Ft)


        ***************************HYDROGRAPH
DATA***************************
                      Number of intervals =  2140
                      Time interval =    5.0 (Min.)
                      Maximum/Peak flow rate =        1.111 (CFS)
                      Total volume =      11.104 (Ac.Ft)
               Status of hydrographs being held in storage
                         Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
               Peak (CFS)      0.000     0.000     0.000     0.000     0.000
               Vol (Ac.Ft)      0.000     0.000     0.000     0.000     0.000

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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 05/02/23

BEAUMONT POINTE
DMA 16
BMP BASIN 1
HYDROMODIFICATION

Program License Serial Number 6094

********** HYDROGRAPH INFORMATION **********

From study/file name: Area16242.rte
**********HYDROGRAPH DATA**********
Number of intervals = 295
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 20.615 (CFS)
Total volume = 11.708 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

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Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

Program computation of outflow v. depth

CALCULATED OUTFLOW DATA AT DEPTH = 0.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.46(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.46(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter

Depth above pipe = 0.50(Ft.) Capacity = 0.92(CFS)

Total outflow at this depth = 0.92(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.46(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.46(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 1.00(Ft.) Capacity = 0.92(CFS)

Total outflow at this depth = 0.92(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.46(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.46(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 1.50(Ft.) Capacity = 0.92(CFS)

Total outflow at this depth = 0.92(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 2.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.46(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.46(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 2.00(Ft.) Capacity = 0.92(CFS)

Total outflow at this depth = 0.92(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 2.50(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.46(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.46(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe = 2.50(Ft.) Capacity = 0.92(CFS)

Total outflow at this depth = 0.92(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 3.00(Ft.))

Free outlet pipe flow: Pipe Diameter = 0.46(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of 0.46(Ft.) is greater than diameter of pipe,

```
flow capacity is being calculated using depth = diameter
Depth above pipe =   3.00(Ft.)    Capacity =   0.92(CFS)

Total outflow at this depth =      0.92(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    3.50(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.46(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.46(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   3.50(Ft.)    Capacity =   0.92(CFS)

Total outflow at this depth =      0.92(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.00(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.46(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.46(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   4.00(Ft.)    Capacity =   0.92(CFS)

Total outflow at this depth =      0.92(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    4.50(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.46(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.46(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   4.50(Ft.)    Capacity =   0.92(CFS)

Total outflow at this depth =      0.92(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    5.00(Ft.))

Free outlet pipe flow:  Pipe Diameter =     0.46(Ft.)
Capacity = 8 * Pipe area * depth ^ 0.5(Using feet as units)
Note: Depth of   0.46(Ft.) is greater than diameter of pipe,
flow capacity is being calculated using depth = diameter
Depth above pipe =   5.00(Ft.)    Capacity =   0.92(CFS)

Total outflow at this depth =      0.92(CFS)

------------------------------------------------------------------
Total number of inflow hydrograph intervals = 295
Hydrograph time unit =  5.000 (Min.)
Initial depth in storage basin =   0.00(Ft.)
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Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.810	0.916	0.807	0.813
1.000	1.670	0.916	1.667	1.673
1.500	2.590	0.916	2.587	2.593
2.000	3.540	0.916	3.537	3.543
2.500	4.550	0.916	4.547	4.553
3.000	5.610	0.916	5.607	5.613
3.500	6.720	0.916	6.717	6.723
4.000	7.880	0.916	7.877	7.883
4.500	9.090	0.916	9.087	9.093
5.000	10.350	0.916	10.347	10.353

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 5.2 10.31 15.46 20.62	Depth (Ft.)
0.083	0.12	0.00	0.000	O | | | |	0.00
0.167	0.72	0.00	0.003	OI | | | |	0.00
0.250	0.96	0.01	0.009	OI | | | |	0.01
0.333	1.12	0.02	0.016	OI | | | |	0.01
0.417	1.46	0.03	0.025	O I | | | |	0.02
0.500	1.59	0.04	0.035	O I | | | |	0.02
0.583	1.65	0.05	0.046	O I | | | |	0.03
0.667	1.68	0.06	0.057	O I | | | |	0.04
0.750	1.68	0.08	0.068	O I | | | |	0.04
0.833	1.75	0.09	0.079	O I | | | |	0.05
0.917	2.05	0.10	0.092	O I | | | |	0.06
1.000	2.17	0.12	0.105	O I | | | |	0.07
1.083	2.16	0.14	0.120	O I | | | |	0.07
1.167	1.88	0.15	0.132	O I | | | |	0.08
1.250	1.77	0.16	0.144	O I | | | |	0.09
1.333	1.72	0.18	0.155	O I | | | |	0.10
1.417	1.70	0.19	0.165	O I | | | |	0.10
1.500	1.70	0.20	0.176	O I | | | |	0.11
1.583	1.69	0.21	0.186	O I | | | |	0.11
1.667	1.69	0.22	0.196	O I | | | |	0.12
1.750	1.69	0.23	0.206	O I | | | |	0.13
1.833	1.75	0.24	0.217	O I | | | |	0.13
1.917	2.05	0.26	0.228	O I | | | |	0.14
2.000	2.17	0.27	0.241	O I | | | |	0.15
2.083	2.22	0.29	0.254	O I | | | |	0.16

2.167	2.24	0.30	0.267	O	I	|	|	|	0.16
2.250	2.25	0.32	0.280	O	I	|	|	|	0.17
2.333	2.25	0.33	0.294	O	I	|	|	|	0.18
2.417	2.26	0.35	0.307	O	I	|	|	|	0.19
2.500	2.26	0.36	0.320	O	I	|	|	|	0.20
2.583	2.32	0.38	0.333	O	I	|	|	|	0.21
2.667	2.61	0.39	0.347	O	I	|	|	|	0.21
2.750	2.73	0.41	0.363	O	I	|	|	|	0.22
2.833	2.78	0.43	0.379	O	I	|	|	|	0.23
2.917	2.81	0.45	0.395	O	I	|	|	|	0.24
3.000	2.81	0.47	0.412	O	I	|	|	|	0.25
3.083	2.82	0.48	0.428	O	I	|	|	|	0.26
3.167	2.82	0.50	0.444	O	I	|	|	|	0.27
3.250	2.82	0.52	0.460	O	I	|	|	|	0.28
3.333	2.82	0.54	0.475	O	I	|	|	|	0.29
3.417	2.82	0.56	0.491	O	I	|	|	|	0.30
3.500	2.82	0.57	0.507	O	I	|	|	|	0.31
3.583	2.82	0.59	0.522	O	I	|	|	|	0.32
3.667	2.82	0.61	0.537	O	I	|	|	|	0.33
3.750	2.82	0.63	0.552	O	I	|	|	|	0.34
3.833	2.88	0.64	0.568	O	I	|	|	|	0.35
3.917	3.18	0.66	0.584	|O	I	|	|	|	0.36
4.000	3.30	0.68	0.602	|O	I	|	|	|	0.37
4.083	3.35	0.70	0.620	|O	I	|	|	|	0.38
4.167	3.37	0.72	0.638	|O	I	|	|	|	0.39
4.250	3.38	0.74	0.656	|O	I	|	|	|	0.41
4.333	3.44	0.76	0.675	|O	I	|	|	|	0.42
4.417	3.74	0.79	0.694	|O	I	|	|	|	0.43
4.500	3.86	0.81	0.715	|O	I	|	|	|	0.44
4.583	3.91	0.83	0.736	|O	I	|	|	|	0.45
4.667	3.93	0.86	0.757	|O	I	|	|	|	0.47
4.750	3.94	0.88	0.778	|O	I	|	|	|	0.48
4.833	4.00	0.90	0.799	|O	I	|	|	|	0.49
4.917	4.30	0.92	0.822	|O	I	|	|	|	0.51
5.000	4.43	0.92	0.845	|O	I	|	|	|	0.52
5.083	4.35	0.92	0.869	|O	I	|	|	|	0.53
5.167	3.78	0.92	0.891	|O	I	|	|	|	0.55
5.250	3.55	0.92	0.910	|O	I	|	|	|	0.56
5.333	3.51	0.92	0.928	|O	I	|	|	|	0.57
5.417	3.77	0.92	0.947	|O	I	|	|	|	0.58
5.500	3.87	0.92	0.967	|O	I	|	|	|	0.59
5.583	3.98	0.92	0.987	|O	I	|	|	|	0.60
5.667	4.29	0.92	1.010	|O	I	|	|	|	0.62
5.750	4.42	0.92	1.033	|O	I	|	|	|	0.63
5.833	4.47	0.92	1.058	|O	I	|	|	|	0.64
5.917	4.50	0.92	1.082	|O	I	|	|	|	0.66
6.000	4.50	0.92	1.107	|O	I	|	|	|	0.67
6.083	4.57	0.92	1.132	|O	I	|	|	|	0.69
6.167	4.87	0.92	1.158	|O	I	|	|	|	0.70
6.250	4.99	0.92	1.186	|O	I	|	|	|	0.72
6.333	5.04	0.92	1.214	|O	I	|	|	|	0.73
6.417	5.06	0.92	1.242	|O	I	|	|	|	0.75
6.500	5.07	0.92	1.271	|O	I	|	|	|	0.77
6.583	5.13	0.92	1.300	|O	I	|	|	|	0.78

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 6.667    5.43    0.92      1.330  |O      I       |       |       |     0.80
 6.750    5.55    0.92      1.361  |O      I       |       |       |     0.82
 6.833    5.60    0.92      1.393  |O      I       |       |       |     0.84
 6.917    5.62    0.92      1.426  |O      I       |       |       |     0.86
 7.000    5.63    0.92      1.458  |O      I       |       |       |     0.88
 7.083    5.63    0.92      1.491  |O      I       |       |       |     0.90
 7.167    5.64    0.92      1.523  |O      I       |       |       |     0.91
 7.250    5.64    0.92      1.556  |O      I       |       |       |     0.93
 7.333    5.70    0.92      1.588  |O      I       |       |       |     0.95
 7.417    6.00    0.92      1.622  |O      |I      |       |       |     0.97
 7.500    6.12    0.92      1.658  |O      |I      |       |       |     0.99
 7.583    6.23    0.92      1.694  |O      |I      |       |       |     1.01
 7.667    6.55    0.92      1.732  |O      | I     |       |       |     1.03
 7.750    6.67    0.92      1.771  |O      | I     |       |       |     1.05
 7.833    6.79    0.92      1.811  |O      | I     |       |       |     1.08
 7.917    7.11    0.92      1.852  |O      |  I    |       |       |     1.10
 8.000    7.24    0.92      1.895  |O      |  I    |       |       |     1.12
 8.083    7.41    0.92      1.940  |O      |  I    |       |       |     1.15
 8.167    8.03    0.92      1.987  |O      |   I   |       |       |     1.17
 8.250    8.28    0.92      2.036  |O      |   I   |       |       |     1.20
 8.333    8.38    0.92      2.087  |O      |    I  |       |       |     1.23
 8.417    8.43    0.92      2.139  |O      |    I  |       |       |     1.25
 8.500    8.44    0.92      2.191  |O      |    I  |       |       |     1.28
 8.583    8.51    0.92      2.243  |O      |    I  |       |       |     1.31
 8.667    8.81    0.92      2.296  |O      |    I  |       |       |     1.34
 8.750    8.94    0.92      2.351  |O      |    I  |       |       |     1.37
 8.833    9.05    0.92      2.407  |O      |     I |       |       |     1.40
 8.917    9.37    0.92      2.464  |O      |     I |       |       |     1.43
 9.000    9.49    0.92      2.522  |O      |     I |       |       |     1.46
 9.083    9.67    0.92      2.582  |O      |      I|       |       |     1.50
 9.167   10.29    0.92      2.644  |O      |      I|       |       |     1.53
 9.250   10.54    0.92      2.710  |O      |       I       |       |     1.56
 9.333   10.70    0.92      2.777  |O      |       I       |       |     1.60
 9.417   11.04    0.92      2.845  |O      |       |I      |       |     1.63
 9.500   11.18    0.92      2.915  |O      |       |I      |       |     1.67
 9.583   11.30    0.92      2.987  |O      |       |I      |       |     1.71
 9.667   11.62    0.92      3.059  |O      |       | I     |       |     1.75
 9.750   11.75    0.92      3.133  |O      |       | I     |       |     1.79
 9.833   11.86    0.92      3.208  |O      |       | I     |       |     1.83
 9.917   12.18    0.92      3.285  |O      |       | I     |       |     1.87
10.000   12.31    0.92      3.363  |O      |       |  I    |       |     1.91
10.083   11.94    0.92      3.440  |O      |       | I     |       |     1.95
10.167    9.88    0.92      3.509  |O      |      I|       |       |     1.98
10.250    9.04    0.92      3.568  |O      |     I |       |       |     2.01
10.333    8.70    0.92      3.622  |O      |    I  |       |       |     2.04
10.417    8.55    0.92      3.676  |O      |    I  |       |       |     2.07
10.500    8.50    0.92      3.728  |O      |    I  |       |       |     2.09
10.583    8.78    0.92      3.781  |O      |    I  |       |       |     2.12
10.667   10.25    0.92      3.840  |O      |      I|       |       |     2.15
10.750   10.85    0.92      3.907  |O      |       I       |       |     2.18
10.833   11.10    0.92      3.976  |O      |       |I      |       |     2.22
10.917   11.21    0.92      4.047  |O      |       |I      |       |     2.25
11.000   11.24    0.92      4.118  |O      |       |I      |       |     2.29
11.083   11.20    0.92      4.188  |O      |       |I      |       |     2.32
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11.167   10.92    0.92      4.258  |O      |       I       |       |     2.36
11.250   10.80    0.92      4.327  |O      |       I       |       |     2.39
11.333   10.75    0.92      4.395  |O      |       I       |       |     2.42
11.417   10.73    0.92      4.462  |O      |       I       |       |     2.46
11.500   10.72    0.92      4.530  |O      |       I       |       |     2.49
11.583   10.59    0.92      4.597  |O      |       I       |       |     2.52
11.667   10.00    0.92      4.661  |O      |      I|       |       |     2.55
11.750    9.75    0.92      4.723  |O      |      I|       |       |     2.58
11.833    9.72    0.92      4.784  |O      |      I|       |       |     2.61
11.917    9.97    0.92      4.845  |O      |      I|       |       |     2.64
12.000   10.08    0.92      4.908  |O      |      I|       |       |     2.67
12.083   10.55    0.92      4.973  |O      |       I       |       |     2.70
12.167   12.64    0.92      5.046  |O      |       |  I    |       |     2.73
12.250   13.49    0.92      5.130  |O      |       |   I   |       |     2.77
12.333   13.91    0.92      5.218  |O      |       |    I  |       |     2.82
12.417   14.36    0.92      5.309  |O      |       |     I |       |     2.86
12.500   14.53    0.92      5.402  |O      |       |     I |       |     2.90
12.583   14.72    0.92      5.497  |O      |       |     I |       |     2.95
12.667   15.36    0.92      5.594  |O      |       |      I|       |     2.99
12.750   15.61    0.92      5.694  |O      |       |       I       |     3.04
12.833   15.77    0.92      5.796  |O      |       |       I       |     3.08
12.917   16.12    0.92      5.900  |O      |       |       |I      |     3.13
13.000   16.25    0.92      6.005  |O      |       |       |I      |     3.18
13.083   16.76    0.92      6.112  |O      |       |       | I     |     3.23
13.167   18.98    0.92      6.229  |O      |       |       |    I  |     3.28
13.250   19.90    0.92      6.356  |O      |       |       |     I |     3.34
13.333   20.31    0.92      6.489  |O      |       |       |      I|     3.40
13.417   20.52    0.92      6.623  |O      |       |       |      I|     3.46
13.500   20.62    0.92      6.758  |O      |       |       |       I     3.52
13.583   19.84    0.92      6.891  |O      |       |       |     I |     3.57
13.667   15.79    0.92      7.008  |O      |       |       I       |     3.62
13.750   14.13    0.92      7.104  |O      |       |    I  |       |     3.67
13.833   13.45    0.92      7.193  |O      |       |   I   |       |     3.70
13.917   13.15    0.92      7.278  |O      |       |   I   |       |     3.74
14.000   13.06    0.92      7.362  |O      |       |   I   |       |     3.78
14.083   13.25    0.92      7.446  |O      |       |   I   |       |     3.81
14.167   14.40    0.92      7.535  |O      |       |     I |       |     3.85
14.250   14.88    0.92      7.630  |O      |       |      I|       |     3.89
14.333   15.02    0.92      7.727  |O      |       |      I|       |     3.93
14.417   14.81    0.92      7.823  |O      |       |     I |       |     3.98
14.500   14.72    0.92      7.918  |O      |       |     I |       |     4.02
14.583   14.68    0.92      8.013  |O      |       |     I |       |     4.06
14.667   14.67    0.92      8.108  |O      |       |     I |       |     4.09
14.750   14.66    0.92      8.203  |O      |       |     I |       |     4.13
14.833   14.60    0.92      8.297  |O      |       |     I |       |     4.17
14.917   14.30    0.92      8.390  |O      |       |     I |       |     4.21
15.000   14.18    0.92      8.482  |O      |       |     I |       |     4.25
15.083   14.07    0.92      8.573  |O      |       |    I  |       |     4.29
15.167   13.75    0.92      8.663  |O      |       |    I  |       |     4.32
15.250   13.62    0.92      8.751  |O      |       |    I  |       |     4.36
15.333   13.51    0.92      8.838  |O      |       |   I   |       |     4.40
15.417   13.19    0.92      8.923  |O      |       |   I   |       |     4.43
15.500   13.06    0.92      9.007  |O      |       |   I   |       |     4.47
15.583   12.76    0.92      9.090  |O      |       |  I    |       |     4.50
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15.667	11.55	0.92	9.167	O		I		4.53
15.750	11.06	0.92	9.239	O		I		4.56
15.833	10.86	0.92	9.308	O		I		4.59
15.917	10.77	0.92	9.376	O		I		4.61
16.000	10.74	0.92	9.444	O		I		4.64
16.083	9.81	0.92	9.508	O		I		4.67
16.167	5.34	0.92	9.554	O	I			4.68
16.250	3.53	0.92	9.578	O	I			4.69
16.333	2.78	0.92	9.594	O	I			4.70
16.417	2.46	0.92	9.605	O I				4.70
16.500	2.35	0.92	9.616	O I				4.71
16.583	2.24	0.92	9.625	O I				4.71
16.667	1.90	0.92	9.633	OI				4.72
16.750	1.78	0.92	9.640	OI				4.72
16.833	1.73	0.92	9.645	OI				4.72
16.917	1.70	0.92	9.651	OI				4.72
17.000	1.70	0.92	9.656	OI				4.72
17.083	1.82	0.92	9.662	OI				4.73
17.167	2.41	0.92	9.670	O I				4.73
17.250	2.65	0.92	9.681	O	I			4.73
17.333	2.75	0.92	9.694	O	I			4.74
17.417	2.79	0.92	9.706	O	I			4.74
17.500	2.81	0.92	9.719	O	I			4.75
17.583	2.81	0.92	9.732	O	I			4.75
17.667	2.82	0.92	9.745	O	I			4.76
17.750	2.82	0.92	9.759	O	I			4.77
17.833	2.76	0.92	9.771	O	I			4.77
17.917	2.46	0.92	9.783	O I				4.78
18.000	2.34	0.92	9.793	O I				4.78
18.083	2.29	0.92	9.803	O I				4.78
18.167	2.27	0.92	9.812	O I				4.79
18.250	2.26	0.92	9.822	O I				4.79
18.333	2.26	0.92	9.831	O I				4.79
18.417	2.26	0.92	9.840	O I				4.80
18.500	2.26	0.92	9.849	O I				4.80
18.583	2.19	0.92	9.858	O I				4.80
18.667	1.90	0.92	9.866	OI				4.81
18.750	1.78	0.92	9.872	OI				4.81
18.833	1.67	0.92	9.878	OI				4.81
18.917	1.35	0.92	9.882	OI				4.81
19.000	1.22	0.92	9.885	O				4.82
19.083	1.23	0.92	9.887	O				4.82
19.167	1.50	0.92	9.890	OI				4.82
19.250	1.61	0.92	9.894	OI				4.82
19.333	1.72	0.92	9.899	OI				4.82
19.417	2.04	0.92	9.906	O I				4.82
19.500	2.16	0.92	9.914	O I				4.83
19.583	2.16	0.92	9.923	O I				4.83
19.667	1.88	0.92	9.930	OI				4.83
19.750	1.77	0.92	9.936	OI				4.84
19.833	1.66	0.92	9.942	OI				4.84
19.917	1.35	0.92	9.946	OI				4.84
20.000	1.22	0.92	9.949	O				4.84
20.083	1.23	0.92	9.951	O				4.84

20.167	1.50	0.92	9.954	|OI	|	|	|	4.84
20.250	1.61	0.92	9.958	|OI	|	|	|	4.84
20.333	1.66	0.92	9.963	|OI	|	|	|	4.85
20.417	1.68	0.92	9.968	|OI	|	|	|	4.85
20.500	1.68	0.92	9.974	|OI	|	|	|	4.85
20.583	1.69	0.92	9.979	|OI	|	|	|	4.85
20.667	1.69	0.92	9.984	|OI	|	|	|	4.85
20.750	1.69	0.92	9.990	|OI	|	|	|	4.86
20.833	1.63	0.92	9.995	|OI	|	|	|	4.86
20.917	1.33	0.92	9.999	|OI	|	|	|	4.86
21.000	1.21	0.92	10.001	|O	|	|	|	4.86
21.083	1.22	0.92	10.003	|O	|	|	|	4.86
21.167	1.50	0.92	10.006	|OI	|	|	|	4.86
21.250	1.61	0.92	10.011	|OI	|	|	|	4.87
21.333	1.60	0.92	10.015	|OI	|	|	|	4.87
21.417	1.32	0.92	10.019	|OI	|	|	|	4.87
21.500	1.21	0.92	10.021	|O	|	|	|	4.87
21.583	1.22	0.92	10.023	|O	|	|	|	4.87
21.667	1.50	0.92	10.027	|OI	|	|	|	4.87
21.750	1.61	0.92	10.031	|OI	|	|	|	4.87
21.833	1.60	0.92	10.036	|OI	|	|	|	4.88
21.917	1.32	0.92	10.039	|OI	|	|	|	4.88
22.000	1.21	0.92	10.042	|O	|	|	|	4.88
22.083	1.22	0.92	10.044	|O	|	|	|	4.88
22.167	1.50	0.92	10.047	|OI	|	|	|	4.88
22.250	1.61	0.92	10.051	|OI	|	|	|	4.88
22.333	1.60	0.92	10.056	|OI	|	|	|	4.88
22.417	1.32	0.92	10.060	|OI	|	|	|	4.88
22.500	1.21	0.92	10.062	|O	|	|	|	4.89
22.583	1.16	0.92	10.064	|O	|	|	|	4.89
22.667	1.14	0.92	10.066	|O	|	|	|	4.89
22.750	1.13	0.92	10.067	|O	|	|	|	4.89
22.833	1.13	0.92	10.069	|O	|	|	|	4.89
22.917	1.13	0.92	10.070	|O	|	|	|	4.89
23.000	1.13	0.92	10.072	|O	|	|	|	4.89
23.083	1.13	0.92	10.073	|O	|	|	|	4.89
23.167	1.13	0.92	10.074	|O	|	|	|	4.89
23.250	1.13	0.92	10.076	|O	|	|	|	4.89
23.333	1.13	0.92	10.077	|O	|	|	|	4.89
23.417	1.13	0.92	10.079	|O	|	|	|	4.89
23.500	1.13	0.92	10.080	|O	|	|	|	4.89
23.583	1.13	0.92	10.082	|O	|	|	|	4.89
23.667	1.13	0.92	10.083	|O	|	|	|	4.89
23.750	1.13	0.92	10.085	|O	|	|	|	4.89
23.833	1.13	0.92	10.086	|O	|	|	|	4.90
23.917	1.13	0.92	10.088	|O	|	|	|	4.90
24.000	1.13	0.92	10.089	|O	|	|	|	4.90
24.083	1.01	0.92	10.090	|O	|	|	|	4.90
24.167	0.41	0.92	10.089	IO	|	|	|	4.90
24.250	0.17	0.92	10.084	IO	|	|	|	4.89
24.333	0.07	0.92	10.079	IO	|	|	|	4.89
24.417	0.03	0.92	10.073	IO	|	|	|	4.89
24.500	0.01	0.92	10.067	IO	|	|	|	4.89
24.583	0.01	0.92	10.060	IO	|	|	|	4.89

24.667	0.00	0.92	10.054	IO				4.88
24.750	0.00	0.92	10.048	IO				4.88
24.833	0.00	0.92	10.041	IO				4.88
24.917	0.00	0.92	10.035	IO				4.88
25.000	0.00	0.92	10.029	IO				4.87
25.083	0.00	0.92	10.023	IO				4.87
25.167	0.00	0.92	10.016	IO				4.87
25.250	0.00	0.92	10.010	IO				4.87
25.333	0.00	0.92	10.004	IO				4.86
25.417	0.00	0.92	9.997	IO				4.86
25.500	0.00	0.92	9.991	IO				4.86
25.583	0.00	0.92	9.985	IO				4.86
25.667	0.00	0.92	9.978	IO				4.85
25.750	0.00	0.92	9.972	IO				4.85
25.833	0.00	0.92	9.966	IO				4.85
25.917	0.00	0.92	9.959	IO				4.85
26.000	0.00	0.92	9.953	IO				4.84
26.083	0.00	0.92	9.947	IO				4.84
26.167	0.00	0.92	9.940	IO				4.84
26.250	0.00	0.92	9.934	IO				4.83
26.333	0.00	0.92	9.928	IO				4.83
26.417	0.00	0.92	9.922	IO				4.83
26.500	0.00	0.92	9.915	IO				4.83
26.583	0.00	0.92	9.909	IO				4.82
26.667	0.00	0.92	9.903	IO				4.82
26.750	0.00	0.92	9.896	IO				4.82
26.833	0.00	0.92	9.890	IO				4.82
26.917	0.00	0.92	9.884	IO				4.81
27.000	0.00	0.92	9.877	IO				4.81
27.083	0.00	0.92	9.871	IO				4.81
27.167	0.00	0.92	9.865	IO				4.81
27.250	0.00	0.92	9.858	IO				4.80
27.333	0.00	0.92	9.852	IO				4.80
27.417	0.00	0.92	9.846	IO				4.80
27.500	0.00	0.92	9.839	IO				4.80
27.583	0.00	0.92	9.833	IO				4.79
27.667	0.00	0.92	9.827	IO				4.79
27.750	0.00	0.92	9.821	IO				4.79
27.833	0.00	0.92	9.814	IO				4.79
27.917	0.00	0.92	9.808	IO				4.78
28.000	0.00	0.92	9.802	IO				4.78
28.083	0.00	0.92	9.795	IO				4.78
28.167	0.00	0.92	9.789	IO				4.78
28.250	0.00	0.92	9.783	IO				4.77
28.333	0.00	0.92	9.776	IO				4.77
28.417	0.00	0.92	9.770	IO				4.77
28.500	0.00	0.92	9.764	IO				4.77
28.583	0.00	0.92	9.757	IO				4.76
28.667	0.00	0.92	9.751	IO				4.76
28.750	0.00	0.92	9.745	IO				4.76
28.833	0.00	0.92	9.738	IO				4.76
28.917	0.00	0.92	9.732	IO				4.75
29.000	0.00	0.92	9.726	IO				4.75
29.083	0.00	0.92	9.720	IO				4.75

29.167	0.00	0.92	9.713	IO				4.75
29.250	0.00	0.92	9.707	IO				4.74
29.333	0.00	0.92	9.701	IO				4.74
29.417	0.00	0.92	9.694	IO				4.74
29.500	0.00	0.92	9.688	IO				4.74
29.583	0.00	0.92	9.682	IO				4.73
29.667	0.00	0.92	9.675	IO				4.73
29.750	0.00	0.92	9.669	IO				4.73
29.833	0.00	0.92	9.663	IO				4.73
29.917	0.00	0.92	9.656	IO				4.72
30.000	0.00	0.92	9.650	IO				4.72
30.083	0.00	0.92	9.644	IO				4.72
30.167	0.00	0.92	9.637	IO				4.72
30.250	0.00	0.92	9.631	IO				4.71
30.333	0.00	0.92	9.625	IO				4.71
30.417	0.00	0.92	9.619	IO				4.71
30.500	0.00	0.92	9.612	IO				4.71
30.583	0.00	0.92	9.606	IO				4.70
30.667	0.00	0.92	9.600	IO				4.70
30.750	0.00	0.92	9.593	IO				4.70
30.833	0.00	0.92	9.587	IO				4.70
30.917	0.00	0.92	9.581	IO				4.69
31.000	0.00	0.92	9.574	IO				4.69
31.083	0.00	0.92	9.568	IO				4.69
31.167	0.00	0.92	9.562	IO				4.69
31.250	0.00	0.92	9.555	IO				4.68
31.333	0.00	0.92	9.549	IO				4.68
31.417	0.00	0.92	9.543	IO				4.68
31.500	0.00	0.92	9.537	IO				4.68
31.583	0.00	0.92	9.530	IO				4.67
31.667	0.00	0.92	9.524	IO				4.67
31.750	0.00	0.92	9.518	IO				4.67
31.833	0.00	0.92	9.511	IO				4.67
31.917	0.00	0.92	9.505	IO				4.66
32.000	0.00	0.92	9.499	IO				4.66
32.083	0.00	0.92	9.492	IO				4.66
32.167	0.00	0.92	9.486	IO				4.66
32.250	0.00	0.92	9.480	IO				4.65
32.333	0.00	0.92	9.473	IO				4.65
32.417	0.00	0.92	9.467	IO				4.65
32.500	0.00	0.92	9.461	IO				4.65
32.583	0.00	0.92	9.454	IO				4.64
32.667	0.00	0.92	9.448	IO				4.64
32.750	0.00	0.92	9.442	IO				4.64
32.833	0.00	0.92	9.436	IO				4.64
32.917	0.00	0.92	9.429	IO				4.63
33.000	0.00	0.92	9.423	IO				4.63
33.083	0.00	0.92	9.417	IO				4.63
33.167	0.00	0.92	9.410	IO				4.63
33.250	0.00	0.92	9.404	IO				4.62
33.333	0.00	0.92	9.398	IO				4.62
33.417	0.00	0.92	9.391	IO				4.62
33.500	0.00	0.92	9.385	IO				4.62
33.583	0.00	0.92	9.379	IO				4.61

33.667	0.00	0.92	9.372	IO				4.61
33.750	0.00	0.92	9.366	IO				4.61
33.833	0.00	0.92	9.360	IO				4.61
33.917	0.00	0.92	9.353	IO				4.60
34.000	0.00	0.92	9.347	IO				4.60
34.083	0.00	0.92	9.341	IO				4.60
34.167	0.00	0.92	9.335	IO				4.60
34.250	0.00	0.92	9.328	IO				4.59
34.333	0.00	0.92	9.322	IO				4.59
34.417	0.00	0.92	9.316	IO				4.59
34.500	0.00	0.92	9.309	IO				4.59
34.583	0.00	0.92	9.303	IO				4.58
34.667	0.00	0.92	9.297	IO				4.58
34.750	0.00	0.92	9.290	IO				4.58
34.833	0.00	0.92	9.284	IO				4.58
34.917	0.00	0.92	9.278	IO				4.57
35.000	0.00	0.92	9.271	IO				4.57
35.083	0.00	0.92	9.265	IO				4.57
35.167	0.00	0.92	9.259	IO				4.57
35.250	0.00	0.92	9.252	IO				4.56
35.333	0.00	0.92	9.246	IO				4.56
35.417	0.00	0.92	9.240	IO				4.56
35.500	0.00	0.92	9.234	IO				4.56
35.583	0.00	0.92	9.227	IO				4.55
35.667	0.00	0.92	9.221	IO				4.55
35.750	0.00	0.92	9.215	IO				4.55
35.833	0.00	0.92	9.208	IO				4.55
35.917	0.00	0.92	9.202	IO				4.54
36.000	0.00	0.92	9.196	IO				4.54
36.083	0.00	0.92	9.189	IO				4.54
36.167	0.00	0.92	9.183	IO				4.54
36.250	0.00	0.92	9.177	IO				4.53
36.333	0.00	0.92	9.170	IO				4.53
36.417	0.00	0.92	9.164	IO				4.53
36.500	0.00	0.92	9.158	IO				4.53
36.583	0.00	0.92	9.151	IO				4.52
36.667	0.00	0.92	9.145	IO				4.52
36.750	0.00	0.92	9.139	IO				4.52
36.833	0.00	0.92	9.133	IO				4.52
36.917	0.00	0.92	9.126	IO				4.51
37.000	0.00	0.92	9.120	IO				4.51
37.083	0.00	0.92	9.114	IO				4.51
37.167	0.00	0.92	9.107	IO				4.51
37.250	0.00	0.92	9.101	IO				4.50
37.333	0.00	0.92	9.095	IO				4.50
37.417	0.00	0.92	9.088	IO				4.50
37.500	0.00	0.92	9.082	IO				4.50
37.583	0.00	0.92	9.076	IO				4.49
37.667	0.00	0.92	9.069	IO				4.49
37.750	0.00	0.92	9.063	IO				4.49
37.833	0.00	0.92	9.057	IO				4.49
37.917	0.00	0.92	9.050	IO				4.48
38.000	0.00	0.92	9.044	IO				4.48
38.083	0.00	0.92	9.038	IO				4.48

38.167	0.00	0.92	9.032	IO				4.48
38.250	0.00	0.92	9.025	IO				4.47
38.333	0.00	0.92	9.019	IO				4.47
38.417	0.00	0.92	9.013	IO				4.47
38.500	0.00	0.92	9.006	IO				4.47
38.583	0.00	0.92	9.000	IO				4.46
38.667	0.00	0.92	8.994	IO				4.46
38.750	0.00	0.92	8.987	IO				4.46
38.833	0.00	0.92	8.981	IO				4.45
38.917	0.00	0.92	8.975	IO				4.45
39.000	0.00	0.92	8.968	IO				4.45
39.083	0.00	0.92	8.962	IO				4.45
39.167	0.00	0.92	8.956	IO				4.44
39.250	0.00	0.92	8.949	IO				4.44
39.333	0.00	0.92	8.943	IO				4.44
39.417	0.00	0.92	8.937	IO				4.44
39.500	0.00	0.92	8.931	IO				4.43
39.583	0.00	0.92	8.924	IO				4.43
39.667	0.00	0.92	8.918	IO				4.43
39.750	0.00	0.92	8.912	IO				4.43
39.833	0.00	0.92	8.905	IO				4.42
39.917	0.00	0.92	8.899	IO				4.42
40.000	0.00	0.92	8.893	IO				4.42
40.083	0.00	0.92	8.886	IO				4.42
40.167	0.00	0.92	8.880	IO				4.41
40.250	0.00	0.92	8.874	IO				4.41
40.333	0.00	0.92	8.867	IO				4.41
40.417	0.00	0.92	8.861	IO				4.41
40.500	0.00	0.92	8.855	IO				4.40
40.583	0.00	0.92	8.848	IO				4.40
40.667	0.00	0.92	8.842	IO				4.40
40.750	0.00	0.92	8.836	IO				4.39
40.833	0.00	0.92	8.830	IO				4.39
40.917	0.00	0.92	8.823	IO				4.39
41.000	0.00	0.92	8.817	IO				4.39
41.083	0.00	0.92	8.811	IO				4.38
41.167	0.00	0.92	8.804	IO				4.38
41.250	0.00	0.92	8.798	IO				4.38
41.333	0.00	0.92	8.792	IO				4.38
41.417	0.00	0.92	8.785	IO				4.37
41.500	0.00	0.92	8.779	IO				4.37
41.583	0.00	0.92	8.773	IO				4.37
41.667	0.00	0.92	8.766	IO				4.37
41.750	0.00	0.92	8.760	IO				4.36
41.833	0.00	0.92	8.754	IO				4.36
41.917	0.00	0.92	8.748	IO				4.36
42.000	0.00	0.92	8.741	IO				4.36
42.083	0.00	0.92	8.735	IO				4.35
42.167	0.00	0.92	8.729	IO				4.35
42.250	0.00	0.92	8.722	IO				4.35
42.333	0.00	0.92	8.716	IO				4.35
42.417	0.00	0.92	8.710	IO				4.34
42.500	0.00	0.92	8.703	IO				4.34
42.583	0.00	0.92	8.697	IO				4.34

42.667	0.00	0.92	8.691	IO				4.33
42.750	0.00	0.92	8.684	IO				4.33
42.833	0.00	0.92	8.678	IO				4.33
42.917	0.00	0.92	8.672	IO				4.33
43.000	0.00	0.92	8.665	IO				4.32
43.083	0.00	0.92	8.659	IO				4.32
43.167	0.00	0.92	8.653	IO				4.32
43.250	0.00	0.92	8.647	IO				4.32
43.333	0.00	0.92	8.640	IO				4.31
43.417	0.00	0.92	8.634	IO				4.31
43.500	0.00	0.92	8.628	IO				4.31
43.583	0.00	0.92	8.621	IO				4.31
43.667	0.00	0.92	8.615	IO				4.30
43.750	0.00	0.92	8.609	IO				4.30
43.833	0.00	0.92	8.602	IO				4.30
43.917	0.00	0.92	8.596	IO				4.30
44.000	0.00	0.92	8.590	IO				4.29
44.083	0.00	0.92	8.583	IO				4.29
44.167	0.00	0.92	8.577	IO				4.29
44.250	0.00	0.92	8.571	IO				4.29
44.333	0.00	0.92	8.564	IO				4.28
44.417	0.00	0.92	8.558	IO				4.28
44.500	0.00	0.92	8.552	IO				4.28
44.583	0.00	0.92	8.546	IO				4.28
44.667	0.00	0.92	8.539	IO				4.27
44.750	0.00	0.92	8.533	IO				4.27
44.833	0.00	0.92	8.527	IO				4.27
44.917	0.00	0.92	8.520	IO				4.26
45.000	0.00	0.92	8.514	IO				4.26
45.083	0.00	0.92	8.508	IO				4.26
45.167	0.00	0.92	8.501	IO				4.26
45.250	0.00	0.92	8.495	IO				4.25
45.333	0.00	0.92	8.489	IO				4.25
45.417	0.00	0.92	8.482	IO				4.25
45.500	0.00	0.92	8.476	IO				4.25
45.583	0.00	0.92	8.470	IO				4.24
45.667	0.00	0.92	8.463	IO				4.24
45.750	0.00	0.92	8.457	IO				4.24
45.833	0.00	0.92	8.451	IO				4.24
45.917	0.00	0.92	8.445	IO				4.23
46.000	0.00	0.92	8.438	IO				4.23
46.083	0.00	0.92	8.432	IO				4.23
46.167	0.00	0.92	8.426	IO				4.23
46.250	0.00	0.92	8.419	IO				4.22
46.333	0.00	0.92	8.413	IO				4.22
46.417	0.00	0.92	8.407	IO				4.22
46.500	0.00	0.92	8.400	IO				4.22
46.583	0.00	0.92	8.394	IO				4.21
46.667	0.00	0.92	8.388	IO				4.21
46.750	0.00	0.92	8.381	IO				4.21
46.833	0.00	0.92	8.375	IO				4.20
46.917	0.00	0.92	8.369	IO				4.20
47.000	0.00	0.92	8.362	IO				4.20
47.083	0.00	0.92	8.356	IO				4.20

47.167	0.00	0.92	8.350	IO				4.19
47.250	0.00	0.92	8.344	IO				4.19
47.333	0.00	0.92	8.337	IO				4.19
47.417	0.00	0.92	8.331	IO				4.19
47.500	0.00	0.92	8.325	IO				4.18
47.583	0.00	0.92	8.318	IO				4.18
47.667	0.00	0.92	8.312	IO				4.18
47.750	0.00	0.92	8.306	IO				4.18
47.833	0.00	0.92	8.299	IO				4.17
47.917	0.00	0.92	8.293	IO				4.17
48.000	0.00	0.92	8.287	IO				4.17
48.083	0.00	0.92	8.280	IO				4.17
48.167	0.00	0.92	8.274	IO				4.16
48.250	0.00	0.92	8.268	IO				4.16
48.333	0.00	0.92	8.261	IO				4.16
48.417	0.00	0.92	8.255	IO				4.16
48.500	0.00	0.92	8.249	IO				4.15
48.583	0.00	0.92	8.243	IO				4.15
48.667	0.00	0.92	8.236	IO				4.15
48.750	0.00	0.92	8.230	IO				4.14
48.833	0.00	0.92	8.224	IO				4.14
48.917	0.00	0.92	8.217	IO				4.14
49.000	0.00	0.92	8.211	IO				4.14
49.083	0.00	0.92	8.205	IO				4.13
49.167	0.00	0.92	8.198	IO				4.13
49.250	0.00	0.92	8.192	IO				4.13
49.333	0.00	0.92	8.186	IO				4.13
49.417	0.00	0.92	8.179	IO				4.12
49.500	0.00	0.92	8.173	IO				4.12
49.583	0.00	0.92	8.167	IO				4.12
49.667	0.00	0.92	8.160	IO				4.12
49.750	0.00	0.92	8.154	IO				4.11
49.833	0.00	0.92	8.148	IO				4.11
49.917	0.00	0.92	8.142	IO				4.11
50.000	0.00	0.92	8.135	IO				4.11
50.083	0.00	0.92	8.129	IO				4.10
50.167	0.00	0.92	8.123	IO				4.10
50.250	0.00	0.92	8.116	IO				4.10
50.333	0.00	0.92	8.110	IO				4.10
50.417	0.00	0.92	8.104	IO				4.09
50.500	0.00	0.92	8.097	IO				4.09
50.583	0.00	0.92	8.091	IO				4.09
50.667	0.00	0.92	8.085	IO				4.08
50.750	0.00	0.92	8.078	IO				4.08
50.833	0.00	0.92	8.072	IO				4.08
50.917	0.00	0.92	8.066	IO				4.08
51.000	0.00	0.92	8.060	IO				4.07
51.083	0.00	0.92	8.053	IO				4.07
51.167	0.00	0.92	8.047	IO				4.07
51.250	0.00	0.92	8.041	IO				4.07
51.333	0.00	0.92	8.034	IO				4.06
51.417	0.00	0.92	8.028	IO				4.06
51.500	0.00	0.92	8.022	IO				4.06
51.583	0.00	0.92	8.015	IO				4.06

51.667	0.00	0.92	8.009	IO				4.05
51.750	0.00	0.92	8.003	IO				4.05
51.833	0.00	0.92	7.996	IO				4.05
51.917	0.00	0.92	7.990	IO				4.05
52.000	0.00	0.92	7.984	IO				4.04
52.083	0.00	0.92	7.977	IO				4.04
52.167	0.00	0.92	7.971	IO				4.04
52.250	0.00	0.92	7.965	IO				4.04
52.333	0.00	0.92	7.959	IO				4.03
52.417	0.00	0.92	7.952	IO				4.03
52.500	0.00	0.92	7.946	IO				4.03
52.583	0.00	0.92	7.940	IO				4.02
52.667	0.00	0.92	7.933	IO				4.02
52.750	0.00	0.92	7.927	IO				4.02
52.833	0.00	0.92	7.921	IO				4.02
52.917	0.00	0.92	7.914	IO				4.01
53.000	0.00	0.92	7.908	IO				4.01
53.083	0.00	0.92	7.902	IO				4.01
53.167	0.00	0.92	7.895	IO				4.01
53.250	0.00	0.92	7.889	IO				4.00
53.333	0.00	0.92	7.883	IO				4.00
53.417	0.00	0.92	7.876	IO				4.00
53.500	0.00	0.92	7.870	IO				4.00
53.583	0.00	0.92	7.864	IO				3.99
53.667	0.00	0.92	7.858	IO				3.99
53.750	0.00	0.92	7.851	IO				3.99
53.833	0.00	0.92	7.845	IO				3.98
53.917	0.00	0.92	7.839	IO				3.98
54.000	0.00	0.92	7.832	IO				3.98
54.083	0.00	0.92	7.826	IO				3.98
54.167	0.00	0.92	7.820	IO				3.97
54.250	0.00	0.92	7.813	IO				3.97
54.333	0.00	0.92	7.807	IO				3.97
54.417	0.00	0.92	7.801	IO				3.97
54.500	0.00	0.92	7.794	IO				3.96
54.583	0.00	0.92	7.788	IO				3.96
54.667	0.00	0.92	7.782	IO				3.96
54.750	0.00	0.92	7.775	IO				3.95
54.833	0.00	0.92	7.769	IO				3.95
54.917	0.00	0.92	7.763	IO				3.95
55.000	0.00	0.92	7.757	IO				3.95
55.083	0.00	0.92	7.750	IO				3.94
55.167	0.00	0.92	7.744	IO				3.94
55.250	0.00	0.92	7.738	IO				3.94
55.333	0.00	0.92	7.731	IO				3.94
55.417	0.00	0.92	7.725	IO				3.93
55.500	0.00	0.92	7.719	IO				3.93
55.583	0.00	0.92	7.712	IO				3.93
55.667	0.00	0.92	7.706	IO				3.93
55.750	0.00	0.92	7.700	IO				3.92
55.833	0.00	0.92	7.693	IO				3.92
55.917	0.00	0.92	7.687	IO				3.92
56.000	0.00	0.92	7.681	IO				3.91
56.083	0.00	0.92	7.674	IO				3.91

56.167	0.00	0.92	7.668	IO				3.91
56.250	0.00	0.92	7.662	IO				3.91
56.333	0.00	0.92	7.656	IO				3.90
56.417	0.00	0.92	7.649	IO				3.90
56.500	0.00	0.92	7.643	IO				3.90
56.583	0.00	0.92	7.637	IO				3.90
56.667	0.00	0.92	7.630	IO				3.89
56.750	0.00	0.92	7.624	IO				3.89
56.833	0.00	0.92	7.618	IO				3.89
56.917	0.00	0.92	7.611	IO				3.88
57.000	0.00	0.92	7.605	IO				3.88
57.083	0.00	0.92	7.599	IO				3.88
57.167	0.00	0.92	7.592	IO				3.88
57.250	0.00	0.92	7.586	IO				3.87
57.333	0.00	0.92	7.580	IO				3.87
57.417	0.00	0.92	7.573	IO				3.87
57.500	0.00	0.92	7.567	IO				3.87
57.583	0.00	0.92	7.561	IO				3.86
57.667	0.00	0.92	7.555	IO				3.86
57.750	0.00	0.92	7.548	IO				3.86
57.833	0.00	0.92	7.542	IO				3.85
57.917	0.00	0.92	7.536	IO				3.85
58.000	0.00	0.92	7.529	IO				3.85
58.083	0.00	0.92	7.523	IO				3.85
58.167	0.00	0.92	7.517	IO				3.84
58.250	0.00	0.92	7.510	IO				3.84
58.333	0.00	0.92	7.504	IO				3.84
58.417	0.00	0.92	7.498	IO				3.84
58.500	0.00	0.92	7.491	IO				3.83
58.583	0.00	0.92	7.485	IO				3.83
58.667	0.00	0.92	7.479	IO				3.83
58.750	0.00	0.92	7.472	IO				3.82
58.833	0.00	0.92	7.466	IO				3.82
58.917	0.00	0.92	7.460	IO				3.82
59.000	0.00	0.92	7.454	IO				3.82
59.083	0.00	0.92	7.447	IO				3.81
59.167	0.00	0.92	7.441	IO				3.81
59.250	0.00	0.92	7.435	IO				3.81
59.333	0.00	0.92	7.428	IO				3.81
59.417	0.00	0.92	7.422	IO				3.80
59.500	0.00	0.92	7.416	IO				3.80
59.583	0.00	0.92	7.409	IO				3.80
59.667	0.00	0.92	7.403	IO				3.79
59.750	0.00	0.92	7.397	IO				3.79
59.833	0.00	0.92	7.390	IO				3.79
59.917	0.00	0.92	7.384	IO				3.79
60.000	0.00	0.92	7.378	IO				3.78
60.083	0.00	0.92	7.371	IO				3.78
60.167	0.00	0.92	7.365	IO				3.78
60.250	0.00	0.92	7.359	IO				3.78
60.333	0.00	0.92	7.353	IO				3.77
60.417	0.00	0.92	7.346	IO				3.77
60.500	0.00	0.92	7.340	IO				3.77
60.583	0.00	0.92	7.334	IO				3.76

60.667	0.00	0.92	7.327	IO				3.76
60.750	0.00	0.92	7.321	IO				3.76
60.833	0.00	0.92	7.315	IO				3.76
60.917	0.00	0.92	7.308	IO				3.75
61.000	0.00	0.92	7.302	IO				3.75
61.083	0.00	0.92	7.296	IO				3.75
61.167	0.00	0.92	7.289	IO				3.75
61.250	0.00	0.92	7.283	IO				3.74
61.333	0.00	0.92	7.277	IO				3.74
61.417	0.00	0.92	7.271	IO				3.74
61.500	0.00	0.92	7.264	IO				3.73
61.583	0.00	0.92	7.258	IO				3.73
61.667	0.00	0.92	7.252	IO				3.73
61.750	0.00	0.92	7.245	IO				3.73
61.833	0.00	0.92	7.239	IO				3.72
61.917	0.00	0.92	7.233	IO				3.72
62.000	0.00	0.92	7.226	IO				3.72
62.083	0.00	0.92	7.220	IO				3.72
62.167	0.00	0.92	7.214	IO				3.71
62.250	0.00	0.92	7.207	IO				3.71
62.333	0.00	0.92	7.201	IO				3.71
62.417	0.00	0.92	7.195	IO				3.70
62.500	0.00	0.92	7.188	IO				3.70
62.583	0.00	0.92	7.182	IO				3.70
62.667	0.00	0.92	7.176	IO				3.70
62.750	0.00	0.92	7.170	IO				3.69
62.833	0.00	0.92	7.163	IO				3.69
62.917	0.00	0.92	7.157	IO				3.69
63.000	0.00	0.92	7.151	IO				3.69
63.083	0.00	0.92	7.144	IO				3.68
63.167	0.00	0.92	7.138	IO				3.68
63.250	0.00	0.92	7.132	IO				3.68
63.333	0.00	0.92	7.125	IO				3.67
63.417	0.00	0.92	7.119	IO				3.67
63.500	0.00	0.92	7.113	IO				3.67
63.583	0.00	0.92	7.106	IO				3.67
63.667	0.00	0.92	7.100	IO				3.66
63.750	0.00	0.92	7.094	IO				3.66
63.833	0.00	0.92	7.087	IO				3.66
63.917	0.00	0.92	7.081	IO				3.66
64.000	0.00	0.92	7.075	IO				3.65
64.083	0.00	0.92	7.069	IO				3.65
64.167	0.00	0.92	7.062	IO				3.65
64.250	0.00	0.92	7.056	IO				3.64
64.333	0.00	0.92	7.050	IO				3.64
64.417	0.00	0.92	7.043	IO				3.64
64.500	0.00	0.92	7.037	IO				3.64
64.583	0.00	0.92	7.031	IO				3.63
64.667	0.00	0.92	7.024	IO				3.63
64.750	0.00	0.92	7.018	IO				3.63
64.833	0.00	0.92	7.012	IO				3.63
64.917	0.00	0.92	7.005	IO				3.62
65.000	0.00	0.92	6.999	IO				3.62
65.083	0.00	0.92	6.993	IO				3.62

65.167	0.00	0.92	6.986	IO				3.61
65.250	0.00	0.92	6.980	IO				3.61
65.333	0.00	0.92	6.974	IO				3.61
65.417	0.00	0.92	6.968	IO				3.61
65.500	0.00	0.92	6.961	IO				3.60
65.583	0.00	0.92	6.955	IO				3.60
65.667	0.00	0.92	6.949	IO				3.60
65.750	0.00	0.92	6.942	IO				3.60
65.833	0.00	0.92	6.936	IO				3.59
65.917	0.00	0.92	6.930	IO				3.59
66.000	0.00	0.92	6.923	IO				3.59
66.083	0.00	0.92	6.917	IO				3.58
66.167	0.00	0.92	6.911	IO				3.58
66.250	0.00	0.92	6.904	IO				3.58
66.333	0.00	0.92	6.898	IO				3.58
66.417	0.00	0.92	6.892	IO				3.57
66.500	0.00	0.92	6.885	IO				3.57
66.583	0.00	0.92	6.879	IO				3.57
66.667	0.00	0.92	6.873	IO				3.57
66.750	0.00	0.92	6.867	IO				3.56
66.833	0.00	0.92	6.860	IO				3.56
66.917	0.00	0.92	6.854	IO				3.56
67.000	0.00	0.92	6.848	IO				3.56
67.083	0.00	0.92	6.841	IO				3.55
67.167	0.00	0.92	6.835	IO				3.55
67.250	0.00	0.92	6.829	IO				3.55
67.333	0.00	0.92	6.822	IO				3.54
67.417	0.00	0.92	6.816	IO				3.54
67.500	0.00	0.92	6.810	IO				3.54
67.583	0.00	0.92	6.803	IO				3.54
67.667	0.00	0.92	6.797	IO				3.53
67.750	0.00	0.92	6.791	IO				3.53
67.833	0.00	0.92	6.784	IO				3.53
67.917	0.00	0.92	6.778	IO				3.53
68.000	0.00	0.92	6.772	IO				3.52
68.083	0.00	0.92	6.766	IO				3.52
68.167	0.00	0.92	6.759	IO				3.52
68.250	0.00	0.92	6.753	IO				3.51
68.333	0.00	0.92	6.747	IO				3.51
68.417	0.00	0.92	6.740	IO				3.51
68.500	0.00	0.92	6.734	IO				3.51
68.583	0.00	0.92	6.728	IO				3.50
68.667	0.00	0.92	6.721	IO				3.50
68.750	0.00	0.92	6.715	IO				3.50
68.833	0.00	0.92	6.709	IO				3.49
68.917	0.00	0.92	6.702	IO				3.49
69.000	0.00	0.92	6.696	IO				3.49
69.083	0.00	0.92	6.690	IO				3.49
69.167	0.00	0.92	6.683	IO				3.48
69.250	0.00	0.92	6.677	IO				3.48
69.333	0.00	0.92	6.671	IO				3.48
69.417	0.00	0.92	6.665	IO				3.48
69.500	0.00	0.92	6.658	IO				3.47
69.583	0.00	0.92	6.652	IO				3.47

69.667	0.00	0.92	6.646	IO				3.47
69.750	0.00	0.92	6.639	IO				3.46
69.833	0.00	0.92	6.633	IO				3.46
69.917	0.00	0.92	6.627	IO				3.46
70.000	0.00	0.92	6.620	IO				3.46
70.083	0.00	0.92	6.614	IO				3.45
70.167	0.00	0.92	6.608	IO				3.45
70.250	0.00	0.92	6.601	IO				3.45
70.333	0.00	0.92	6.595	IO				3.44
70.417	0.00	0.92	6.589	IO				3.44
70.500	0.00	0.92	6.582	IO				3.44
70.583	0.00	0.92	6.576	IO				3.44
70.667	0.00	0.92	6.570	IO				3.43
70.750	0.00	0.92	6.564	IO				3.43
70.833	0.00	0.92	6.557	IO				3.43
70.917	0.00	0.92	6.551	IO				3.42
71.000	0.00	0.92	6.545	IO				3.42
71.083	0.00	0.92	6.538	IO				3.42
71.167	0.00	0.92	6.532	IO				3.42
71.250	0.00	0.92	6.526	IO				3.41
71.333	0.00	0.92	6.519	IO				3.41
71.417	0.00	0.92	6.513	IO				3.41
71.500	0.00	0.92	6.507	IO				3.40
71.583	0.00	0.92	6.500	IO				3.40
71.667	0.00	0.92	6.494	IO				3.40
71.750	0.00	0.92	6.488	IO				3.40
71.833	0.00	0.92	6.482	IO				3.39
71.917	0.00	0.92	6.475	IO				3.39
72.000	0.00	0.92	6.469	IO				3.39
72.083	0.00	0.92	6.463	IO				3.38
72.167	0.00	0.92	6.456	IO				3.38
72.250	0.00	0.92	6.450	IO				3.38
72.333	0.00	0.92	6.444	IO				3.38
72.417	0.00	0.92	6.437	IO				3.37
72.500	0.00	0.92	6.431	IO				3.37
72.583	0.00	0.92	6.425	IO				3.37
72.667	0.00	0.92	6.418	IO				3.36
72.750	0.00	0.92	6.412	IO				3.36
72.833	0.00	0.92	6.406	IO				3.36
72.917	0.00	0.92	6.399	IO				3.36
73.000	0.00	0.92	6.393	IO				3.35
73.083	0.00	0.92	6.387	IO				3.35
73.167	0.00	0.92	6.381	IO				3.35
73.250	0.00	0.92	6.374	IO				3.34
73.333	0.00	0.92	6.368	IO				3.34
73.417	0.00	0.92	6.362	IO				3.34
73.500	0.00	0.92	6.355	IO				3.34
73.583	0.00	0.92	6.349	IO				3.33
73.667	0.00	0.92	6.343	IO				3.33
73.750	0.00	0.92	6.336	IO				3.33
73.833	0.00	0.92	6.330	IO				3.32
73.917	0.00	0.92	6.324	IO				3.32
74.000	0.00	0.92	6.317	IO				3.32
74.083	0.00	0.92	6.311	IO				3.32

74.167	0.00	0.92	6.305	IO				3.31
74.250	0.00	0.92	6.298	IO				3.31
74.333	0.00	0.92	6.292	IO				3.31
74.417	0.00	0.92	6.286	IO				3.30
74.500	0.00	0.92	6.280	IO				3.30
74.583	0.00	0.92	6.273	IO				3.30
74.667	0.00	0.92	6.267	IO				3.30
74.750	0.00	0.92	6.261	IO				3.29
74.833	0.00	0.92	6.254	IO				3.29
74.917	0.00	0.92	6.248	IO				3.29
75.000	0.00	0.92	6.242	IO				3.28
75.083	0.00	0.92	6.235	IO				3.28
75.167	0.00	0.92	6.229	IO				3.28
75.250	0.00	0.92	6.223	IO				3.28
75.333	0.00	0.92	6.216	IO				3.27
75.417	0.00	0.92	6.210	IO				3.27
75.500	0.00	0.92	6.204	IO				3.27
75.583	0.00	0.92	6.197	IO				3.26
75.667	0.00	0.92	6.191	IO				3.26
75.750	0.00	0.92	6.185	IO				3.26
75.833	0.00	0.92	6.179	IO				3.26
75.917	0.00	0.92	6.172	IO				3.25
76.000	0.00	0.92	6.166	IO				3.25
76.083	0.00	0.92	6.160	IO				3.25
76.167	0.00	0.92	6.153	IO				3.24
76.250	0.00	0.92	6.147	IO				3.24
76.333	0.00	0.92	6.141	IO				3.24
76.417	0.00	0.92	6.134	IO				3.24
76.500	0.00	0.92	6.128	IO				3.23
76.583	0.00	0.92	6.122	IO				3.23
76.667	0.00	0.92	6.115	IO				3.23
76.750	0.00	0.92	6.109	IO				3.22
76.833	0.00	0.92	6.103	IO				3.22
76.917	0.00	0.92	6.096	IO				3.22
77.000	0.00	0.92	6.090	IO				3.22
77.083	0.00	0.92	6.084	IO				3.21
77.167	0.00	0.92	6.078	IO				3.21
77.250	0.00	0.92	6.071	IO				3.21
77.333	0.00	0.92	6.065	IO				3.20
77.417	0.00	0.92	6.059	IO				3.20
77.500	0.00	0.92	6.052	IO				3.20
77.583	0.00	0.92	6.046	IO				3.20
77.667	0.00	0.92	6.040	IO				3.19
77.750	0.00	0.92	6.033	IO				3.19
77.833	0.00	0.92	6.027	IO				3.19
77.917	0.00	0.92	6.021	IO				3.19
78.000	0.00	0.92	6.014	IO				3.18
78.083	0.00	0.92	6.008	IO				3.18
78.167	0.00	0.92	6.002	IO				3.18
78.250	0.00	0.92	5.995	IO				3.17
78.333	0.00	0.92	5.989	IO				3.17
78.417	0.00	0.92	5.983	IO				3.17
78.500	0.00	0.92	5.977	IO				3.17
78.583	0.00	0.92	5.970	IO				3.16

78.667	0.00	0.92	5.964	IO				3.16
78.750	0.00	0.92	5.958	IO				3.16
78.833	0.00	0.92	5.951	IO				3.15
78.917	0.00	0.92	5.945	IO				3.15
79.000	0.00	0.92	5.939	IO				3.15
79.083	0.00	0.92	5.932	IO				3.15
79.167	0.00	0.92	5.926	IO				3.14
79.250	0.00	0.92	5.920	IO				3.14
79.333	0.00	0.92	5.913	IO				3.14
79.417	0.00	0.92	5.907	IO				3.13
79.500	0.00	0.92	5.901	IO				3.13
79.583	0.00	0.92	5.894	IO				3.13
79.667	0.00	0.92	5.888	IO				3.13
79.750	0.00	0.92	5.882	IO				3.12
79.833	0.00	0.92	5.876	IO				3.12
79.917	0.00	0.92	5.869	IO				3.12
80.000	0.00	0.92	5.863	IO				3.11
80.083	0.00	0.92	5.857	IO				3.11
80.167	0.00	0.92	5.850	IO				3.11
80.250	0.00	0.92	5.844	IO				3.11
80.333	0.00	0.92	5.838	IO				3.10
80.417	0.00	0.92	5.831	IO				3.10
80.500	0.00	0.92	5.825	IO				3.10
80.583	0.00	0.92	5.819	IO				3.09
80.667	0.00	0.92	5.812	IO				3.09
80.750	0.00	0.92	5.806	IO				3.09
80.833	0.00	0.92	5.800	IO				3.09
80.917	0.00	0.92	5.793	IO				3.08
81.000	0.00	0.92	5.787	IO				3.08
81.083	0.00	0.92	5.781	IO				3.08
81.167	0.00	0.92	5.775	IO				3.07
81.250	0.00	0.92	5.768	IO				3.07
81.333	0.00	0.92	5.762	IO				3.07
81.417	0.00	0.92	5.756	IO				3.07
81.500	0.00	0.92	5.749	IO				3.06
81.583	0.00	0.92	5.743	IO				3.06
81.667	0.00	0.92	5.737	IO				3.06
81.750	0.00	0.92	5.730	IO				3.05
81.833	0.00	0.92	5.724	IO				3.05
81.917	0.00	0.92	5.718	IO				3.05
82.000	0.00	0.92	5.711	IO				3.05
82.083	0.00	0.92	5.705	IO				3.04
82.167	0.00	0.92	5.699	IO				3.04
82.250	0.00	0.92	5.693	IO				3.04
82.333	0.00	0.92	5.686	IO				3.03
82.417	0.00	0.92	5.680	IO				3.03
82.500	0.00	0.92	5.674	IO				3.03
82.583	0.00	0.92	5.667	IO				3.03
82.667	0.00	0.92	5.661	IO				3.02
82.750	0.00	0.92	5.655	IO				3.02
82.833	0.00	0.92	5.648	IO				3.02
82.917	0.00	0.92	5.642	IO				3.01
83.000	0.00	0.92	5.636	IO				3.01
83.083	0.00	0.92	5.629	IO				3.01

83.167	0.00	0.92	5.623	IO				3.01
83.250	0.00	0.92	5.617	IO				3.00
83.333	0.00	0.92	5.610	IO				3.00
83.417	0.00	0.92	5.604	IO				3.00
83.500	0.00	0.92	5.598	IO				2.99
83.583	0.00	0.92	5.592	IO				2.99
83.667	0.00	0.92	5.585	IO				2.99
83.750	0.00	0.92	5.579	IO				2.99
83.833	0.00	0.92	5.573	IO				2.98
83.917	0.00	0.92	5.566	IO				2.98
84.000	0.00	0.92	5.560	IO				2.98
84.083	0.00	0.92	5.554	IO				2.97
84.167	0.00	0.92	5.547	IO				2.97
84.250	0.00	0.92	5.541	IO				2.97
84.333	0.00	0.92	5.535	IO				2.96
84.417	0.00	0.92	5.528	IO				2.96
84.500	0.00	0.92	5.522	IO				2.96
84.583	0.00	0.92	5.516	IO				2.96
84.667	0.00	0.92	5.509	IO				2.95
84.750	0.00	0.92	5.503	IO				2.95
84.833	0.00	0.92	5.497	IO				2.95
84.917	0.00	0.92	5.491	IO				2.94
85.000	0.00	0.92	5.484	IO				2.94
85.083	0.00	0.92	5.478	IO				2.94
85.167	0.00	0.92	5.472	IO				2.93
85.250	0.00	0.92	5.465	IO				2.93
85.333	0.00	0.92	5.459	IO				2.93
85.417	0.00	0.92	5.453	IO				2.93
85.500	0.00	0.92	5.446	IO				2.92
85.583	0.00	0.92	5.440	IO				2.92
85.667	0.00	0.92	5.434	IO				2.92
85.750	0.00	0.92	5.427	IO				2.91
85.833	0.00	0.92	5.421	IO				2.91
85.917	0.00	0.92	5.415	IO				2.91
86.000	0.00	0.92	5.408	IO				2.90
86.083	0.00	0.92	5.402	IO				2.90
86.167	0.00	0.92	5.396	IO				2.90
86.250	0.00	0.92	5.390	IO				2.90
86.333	0.00	0.92	5.383	IO				2.89
86.417	0.00	0.92	5.377	IO				2.89
86.500	0.00	0.92	5.371	IO				2.89
86.583	0.00	0.92	5.364	IO				2.88
86.667	0.00	0.92	5.358	IO				2.88
86.750	0.00	0.92	5.352	IO				2.88
86.833	0.00	0.92	5.345	IO				2.88
86.917	0.00	0.92	5.339	IO				2.87
87.000	0.00	0.92	5.333	IO				2.87
87.083	0.00	0.92	5.326	IO				2.87
87.167	0.00	0.92	5.320	IO				2.86
87.250	0.00	0.92	5.314	IO				2.86
87.333	0.00	0.92	5.307	IO				2.86
87.417	0.00	0.92	5.301	IO				2.85
87.500	0.00	0.92	5.295	IO				2.85
87.583	0.00	0.92	5.289	IO				2.85

87.667	0.00	0.92	5.282	IO				2.85
87.750	0.00	0.92	5.276	IO				2.84
87.833	0.00	0.92	5.270	IO				2.84
87.917	0.00	0.92	5.263	IO				2.84
88.000	0.00	0.92	5.257	IO				2.83
88.083	0.00	0.92	5.251	IO				2.83
88.167	0.00	0.92	5.244	IO				2.83
88.250	0.00	0.92	5.238	IO				2.82
88.333	0.00	0.92	5.232	IO				2.82
88.417	0.00	0.92	5.225	IO				2.82
88.500	0.00	0.92	5.219	IO				2.82
88.583	0.00	0.92	5.213	IO				2.81
88.667	0.00	0.92	5.206	IO				2.81
88.750	0.00	0.92	5.200	IO				2.81
88.833	0.00	0.92	5.194	IO				2.80
88.917	0.00	0.92	5.188	IO				2.80
89.000	0.00	0.92	5.181	IO				2.80
89.083	0.00	0.92	5.175	IO				2.79
89.167	0.00	0.92	5.169	IO				2.79
89.250	0.00	0.92	5.162	IO				2.79
89.333	0.00	0.92	5.156	IO				2.79
89.417	0.00	0.92	5.150	IO				2.78
89.500	0.00	0.92	5.143	IO				2.78
89.583	0.00	0.92	5.137	IO				2.78
89.667	0.00	0.92	5.131	IO				2.77
89.750	0.00	0.92	5.124	IO				2.77
89.833	0.00	0.92	5.118	IO				2.77
89.917	0.00	0.92	5.112	IO				2.77
90.000	0.00	0.92	5.105	IO				2.76
90.083	0.00	0.92	5.099	IO				2.76
90.167	0.00	0.92	5.093	IO				2.76
90.250	0.00	0.92	5.087	IO				2.75
90.333	0.00	0.92	5.080	IO				2.75
90.417	0.00	0.92	5.074	IO				2.75
90.500	0.00	0.92	5.068	IO				2.74
90.583	0.00	0.92	5.061	IO				2.74
90.667	0.00	0.92	5.055	IO				2.74
90.750	0.00	0.92	5.049	IO				2.74
90.833	0.00	0.92	5.042	IO				2.73
90.917	0.00	0.92	5.036	IO				2.73
91.000	0.00	0.92	5.030	IO				2.73
91.083	0.00	0.92	5.023	IO				2.72
91.167	0.00	0.92	5.017	IO				2.72
91.250	0.00	0.92	5.011	IO				2.72
91.333	0.00	0.92	5.005	IO				2.71
91.417	0.00	0.92	4.998	IO				2.71
91.500	0.00	0.92	4.992	IO				2.71
91.583	0.00	0.92	4.986	IO				2.71
91.667	0.00	0.92	4.979	IO				2.70
91.750	0.00	0.92	4.973	IO				2.70
91.833	0.00	0.92	4.967	IO				2.70
91.917	0.00	0.92	4.960	IO				2.69
92.000	0.00	0.92	4.954	IO				2.69
92.083	0.00	0.92	4.948	IO				2.69

92.167	0.00	0.92	4.941	IO				2.68
92.250	0.00	0.92	4.935	IO				2.68
92.333	0.00	0.92	4.929	IO				2.68
92.417	0.00	0.92	4.922	IO				2.68
92.500	0.00	0.92	4.916	IO				2.67
92.583	0.00	0.92	4.910	IO				2.67
92.667	0.00	0.92	4.904	IO				2.67
92.750	0.00	0.92	4.897	IO				2.66
92.833	0.00	0.92	4.891	IO				2.66
92.917	0.00	0.92	4.885	IO				2.66
93.000	0.00	0.92	4.878	IO				2.65
93.083	0.00	0.92	4.872	IO				2.65
93.167	0.00	0.92	4.866	IO				2.65
93.250	0.00	0.92	4.859	IO				2.65
93.333	0.00	0.92	4.853	IO				2.64
93.417	0.00	0.92	4.847	IO				2.64
93.500	0.00	0.92	4.840	IO				2.64
93.583	0.00	0.92	4.834	IO				2.63
93.667	0.00	0.92	4.828	IO				2.63
93.750	0.00	0.92	4.821	IO				2.63
93.833	0.00	0.92	4.815	IO				2.63
93.917	0.00	0.92	4.809	IO				2.62
94.000	0.00	0.92	4.803	IO				2.62
94.083	0.00	0.92	4.796	IO				2.62
94.167	0.00	0.92	4.790	IO				2.61
94.250	0.00	0.92	4.784	IO				2.61
94.333	0.00	0.92	4.777	IO				2.61
94.417	0.00	0.92	4.771	IO				2.60
94.500	0.00	0.92	4.765	IO				2.60
94.583	0.00	0.92	4.758	IO				2.60
94.667	0.00	0.92	4.752	IO				2.60
94.750	0.00	0.92	4.746	IO				2.59
94.833	0.00	0.92	4.739	IO				2.59
94.917	0.00	0.92	4.733	IO				2.59
95.000	0.00	0.92	4.727	IO				2.58
95.083	0.00	0.92	4.720	IO				2.58
95.167	0.00	0.92	4.714	IO				2.58
95.250	0.00	0.92	4.708	IO				2.57
95.333	0.00	0.92	4.702	IO				2.57
95.417	0.00	0.92	4.695	IO				2.57
95.500	0.00	0.92	4.689	IO				2.57
95.583	0.00	0.92	4.683	IO				2.56
95.667	0.00	0.92	4.676	IO				2.56
95.750	0.00	0.92	4.670	IO				2.56
95.833	0.00	0.92	4.664	IO				2.55
95.917	0.00	0.92	4.657	IO				2.55
96.000	0.00	0.92	4.651	IO				2.55
96.083	0.00	0.92	4.645	IO				2.54
96.167	0.00	0.92	4.638	IO				2.54
96.250	0.00	0.92	4.632	IO				2.54
96.333	0.00	0.92	4.626	IO				2.54
96.417	0.00	0.92	4.619	IO				2.53
96.500	0.00	0.92	4.613	IO				2.53
96.583	0.00	0.92	4.607	IO				2.53

96.667	0.00	0.92	4.601	IO				2.52
96.750	0.00	0.92	4.594	IO				2.52
96.833	0.00	0.92	4.588	IO				2.52
96.917	0.00	0.92	4.582	IO				2.51
97.000	0.00	0.92	4.575	IO				2.51
97.083	0.00	0.92	4.569	IO				2.51
97.167	0.00	0.92	4.563	IO				2.51
97.250	0.00	0.92	4.556	IO				2.50
97.333	0.00	0.92	4.550	IO				2.50
97.417	0.00	0.92	4.544	IO				2.50
97.500	0.00	0.92	4.537	IO				2.49
97.583	0.00	0.92	4.531	IO				2.49
97.667	0.00	0.92	4.525	IO				2.49
97.750	0.00	0.92	4.518	IO				2.48
97.833	0.00	0.92	4.512	IO				2.48
97.917	0.00	0.92	4.506	IO				2.48
98.000	0.00	0.92	4.500	IO				2.48
98.083	0.00	0.92	4.493	IO				2.47
98.167	0.00	0.92	4.487	IO				2.47
98.250	0.00	0.92	4.481	IO				2.47
98.333	0.00	0.92	4.474	IO				2.46
98.417	0.00	0.92	4.468	IO				2.46
98.500	0.00	0.92	4.462	IO				2.46
98.583	0.00	0.92	4.455	IO				2.45
98.667	0.00	0.92	4.449	IO				2.45
98.750	0.00	0.92	4.443	IO				2.45
98.833	0.00	0.92	4.436	IO				2.44
98.917	0.00	0.92	4.430	IO				2.44
99.000	0.00	0.92	4.424	IO				2.44
99.083	0.00	0.92	4.417	IO				2.43
99.167	0.00	0.92	4.411	IO				2.43
99.250	0.00	0.92	4.405	IO				2.43
99.333	0.00	0.92	4.399	IO				2.43
99.417	0.00	0.92	4.392	IO				2.42
99.500	0.00	0.92	4.386	IO				2.42
99.583	0.00	0.92	4.380	IO				2.42
99.667	0.00	0.92	4.373	IO				2.41
99.750	0.00	0.92	4.367	IO				2.41
99.833	0.00	0.92	4.361	IO				2.41
99.917	0.00	0.92	4.354	IO				2.40
100.000	0.00	0.92	4.348	IO				2.40
100.083	0.00	0.92	4.342	IO				2.40
100.167	0.00	0.92	4.335	IO				2.39
100.250	0.00	0.92	4.329	IO				2.39
100.333	0.00	0.92	4.323	IO				2.39
100.417	0.00	0.92	4.316	IO				2.38
100.500	0.00	0.92	4.310	IO				2.38
100.583	0.00	0.92	4.304	IO				2.38
100.667	0.00	0.92	4.298	IO				2.38
100.750	0.00	0.92	4.291	IO				2.37
100.833	0.00	0.92	4.285	IO				2.37
100.917	0.00	0.92	4.279	IO				2.37
101.000	0.00	0.92	4.272	IO				2.36
101.083	0.00	0.92	4.266	IO				2.36

101.167	0.00	0.92	4.260	IO				2.36
101.250	0.00	0.92	4.253	IO				2.35
101.333	0.00	0.92	4.247	IO				2.35
101.417	0.00	0.92	4.241	IO				2.35
101.500	0.00	0.92	4.234	IO				2.34
101.583	0.00	0.92	4.228	IO				2.34
101.667	0.00	0.92	4.222	IO				2.34
101.750	0.00	0.92	4.216	IO				2.33
101.833	0.00	0.92	4.209	IO				2.33
101.917	0.00	0.92	4.203	IO				2.33
102.000	0.00	0.92	4.197	IO				2.33
102.083	0.00	0.92	4.190	IO				2.32
102.167	0.00	0.92	4.184	IO				2.32
102.250	0.00	0.92	4.178	IO				2.32
102.333	0.00	0.92	4.171	IO				2.31
102.417	0.00	0.92	4.165	IO				2.31
102.500	0.00	0.92	4.159	IO				2.31
102.583	0.00	0.92	4.152	IO				2.30
102.667	0.00	0.92	4.146	IO				2.30
102.750	0.00	0.92	4.140	IO				2.30
102.833	0.00	0.92	4.133	IO				2.29
102.917	0.00	0.92	4.127	IO				2.29
103.000	0.00	0.92	4.121	IO				2.29
103.083	0.00	0.92	4.115	IO				2.28
103.167	0.00	0.92	4.108	IO				2.28
103.250	0.00	0.92	4.102	IO				2.28
103.333	0.00	0.92	4.096	IO				2.28
103.417	0.00	0.92	4.089	IO				2.27
103.500	0.00	0.92	4.083	IO				2.27
103.583	0.00	0.92	4.077	IO				2.27
103.667	0.00	0.92	4.070	IO				2.26
103.750	0.00	0.92	4.064	IO				2.26
103.833	0.00	0.92	4.058	IO				2.26
103.917	0.00	0.92	4.051	IO				2.25
104.000	0.00	0.92	4.045	IO				2.25
104.083	0.00	0.92	4.039	IO				2.25
104.167	0.00	0.92	4.032	IO				2.24
104.250	0.00	0.92	4.026	IO				2.24
104.333	0.00	0.92	4.020	IO				2.24
104.417	0.00	0.92	4.014	IO				2.23
104.500	0.00	0.92	4.007	IO				2.23
104.583	0.00	0.92	4.001	IO				2.23
104.667	0.00	0.92	3.995	IO				2.23
104.750	0.00	0.92	3.988	IO				2.22
104.833	0.00	0.92	3.982	IO				2.22
104.917	0.00	0.92	3.976	IO				2.22
105.000	0.00	0.92	3.969	IO				2.21
105.083	0.00	0.92	3.963	IO				2.21
105.167	0.00	0.92	3.957	IO				2.21
105.250	0.00	0.92	3.950	IO				2.20
105.333	0.00	0.92	3.944	IO				2.20
105.417	0.00	0.92	3.938	IO				2.20
105.500	0.00	0.92	3.931	IO				2.19
105.583	0.00	0.92	3.925	IO				2.19

105.667	0.00	0.92	3.919	IO				2.19
105.750	0.00	0.92	3.913	IO				2.18
105.833	0.00	0.92	3.906	IO				2.18
105.917	0.00	0.92	3.900	IO				2.18
106.000	0.00	0.92	3.894	IO				2.18
106.083	0.00	0.92	3.887	IO				2.17
106.167	0.00	0.92	3.881	IO				2.17
106.250	0.00	0.92	3.875	IO				2.17
106.333	0.00	0.92	3.868	IO				2.16
106.417	0.00	0.92	3.862	IO				2.16
106.500	0.00	0.92	3.856	IO				2.16
106.583	0.00	0.92	3.849	IO				2.15
106.667	0.00	0.92	3.843	IO				2.15
106.750	0.00	0.92	3.837	IO				2.15
106.833	0.00	0.92	3.830	IO				2.14
106.917	0.00	0.92	3.824	IO				2.14
107.000	0.00	0.92	3.818	IO				2.14
107.083	0.00	0.92	3.812	IO				2.13
107.167	0.00	0.92	3.805	IO				2.13
107.250	0.00	0.92	3.799	IO				2.13
107.333	0.00	0.92	3.793	IO				2.13
107.417	0.00	0.92	3.786	IO				2.12
107.500	0.00	0.92	3.780	IO				2.12
107.583	0.00	0.92	3.774	IO				2.12
107.667	0.00	0.92	3.767	IO				2.11
107.750	0.00	0.92	3.761	IO				2.11
107.833	0.00	0.92	3.755	IO				2.11
107.917	0.00	0.92	3.748	IO				2.10
108.000	0.00	0.92	3.742	IO				2.10
108.083	0.00	0.92	3.736	IO				2.10
108.167	0.00	0.92	3.729	IO				2.09
108.250	0.00	0.92	3.723	IO				2.09
108.333	0.00	0.92	3.717	IO				2.09
108.417	0.00	0.92	3.711	IO				2.08
108.500	0.00	0.92	3.704	IO				2.08
108.583	0.00	0.92	3.698	IO				2.08
108.667	0.00	0.92	3.692	IO				2.08
108.750	0.00	0.92	3.685	IO				2.07
108.833	0.00	0.92	3.679	IO				2.07
108.917	0.00	0.92	3.673	IO				2.07
109.000	0.00	0.92	3.666	IO				2.06
109.083	0.00	0.92	3.660	IO				2.06
109.167	0.00	0.92	3.654	IO				2.06
109.250	0.00	0.92	3.647	IO				2.05
109.333	0.00	0.92	3.641	IO				2.05
109.417	0.00	0.92	3.635	IO				2.05
109.500	0.00	0.92	3.628	IO				2.04
109.583	0.00	0.92	3.622	IO				2.04
109.667	0.00	0.92	3.616	IO				2.04
109.750	0.00	0.92	3.610	IO				2.03
109.833	0.00	0.92	3.603	IO				2.03
109.917	0.00	0.92	3.597	IO				2.03
110.000	0.00	0.92	3.591	IO				2.03
110.083	0.00	0.92	3.584	IO				2.02

110.167	0.00	0.92	3.578	IO				2.02
110.250	0.00	0.92	3.572	IO				2.02
110.333	0.00	0.92	3.565	IO				2.01
110.417	0.00	0.92	3.559	IO				2.01
110.500	0.00	0.92	3.553	IO				2.01
110.583	0.00	0.92	3.546	IO				2.00
110.667	0.00	0.92	3.540	IO				2.00
110.750	0.00	0.92	3.534	IO				2.00
110.833	0.00	0.92	3.527	IO				1.99
110.917	0.00	0.92	3.521	IO				1.99
111.000	0.00	0.92	3.515	IO				1.99
111.083	0.00	0.92	3.509	IO				1.98
111.167	0.00	0.92	3.502	IO				1.98
111.250	0.00	0.92	3.496	IO				1.98
111.333	0.00	0.92	3.490	IO				1.97
111.417	0.00	0.92	3.483	IO				1.97
111.500	0.00	0.92	3.477	IO				1.97
111.583	0.00	0.92	3.471	IO				1.96
111.667	0.00	0.92	3.464	IO				1.96
111.750	0.00	0.92	3.458	IO				1.96
111.833	0.00	0.92	3.452	IO				1.95
111.917	0.00	0.92	3.445	IO				1.95
112.000	0.00	0.92	3.439	IO				1.95
112.083	0.00	0.92	3.433	IO				1.94
112.167	0.00	0.92	3.427	IO				1.94
112.250	0.00	0.92	3.420	IO				1.94
112.333	0.00	0.92	3.414	IO				1.93
112.417	0.00	0.92	3.408	IO				1.93
112.500	0.00	0.92	3.401	IO				1.93
112.583	0.00	0.92	3.395	IO				1.92
112.667	0.00	0.92	3.389	IO				1.92
112.750	0.00	0.92	3.382	IO				1.92
112.833	0.00	0.92	3.376	IO				1.91
112.917	0.00	0.92	3.370	IO				1.91
113.000	0.00	0.92	3.363	IO				1.91
113.083	0.00	0.92	3.357	IO				1.90
113.167	0.00	0.92	3.351	IO				1.90
113.250	0.00	0.92	3.344	IO				1.90
113.333	0.00	0.92	3.338	IO				1.89
113.417	0.00	0.92	3.332	IO				1.89
113.500	0.00	0.92	3.326	IO				1.89
113.583	0.00	0.92	3.319	IO				1.88
113.667	0.00	0.92	3.313	IO				1.88
113.750	0.00	0.92	3.307	IO				1.88
113.833	0.00	0.92	3.300	IO				1.87
113.917	0.00	0.92	3.294	IO				1.87
114.000	0.00	0.92	3.288	IO				1.87
114.083	0.00	0.92	3.281	IO				1.86
114.167	0.00	0.92	3.275	IO				1.86
114.250	0.00	0.92	3.269	IO				1.86
114.333	0.00	0.92	3.262	IO				1.85
114.417	0.00	0.92	3.256	IO				1.85
114.500	0.00	0.92	3.250	IO				1.85
114.583	0.00	0.92	3.243	IO				1.84

114.667	0.00	0.92	3.237	IO				1.84
114.750	0.00	0.92	3.231	IO				1.84
114.833	0.00	0.92	3.225	IO				1.83
114.917	0.00	0.92	3.218	IO				1.83
115.000	0.00	0.92	3.212	IO				1.83
115.083	0.00	0.92	3.206	IO				1.82
115.167	0.00	0.92	3.199	IO				1.82
115.250	0.00	0.92	3.193	IO				1.82
115.333	0.00	0.92	3.187	IO				1.81
115.417	0.00	0.92	3.180	IO				1.81
115.500	0.00	0.92	3.174	IO				1.81
115.583	0.00	0.92	3.168	IO				1.80
115.667	0.00	0.92	3.161	IO				1.80
115.750	0.00	0.92	3.155	IO				1.80
115.833	0.00	0.92	3.149	IO				1.79
115.917	0.00	0.92	3.142	IO				1.79
116.000	0.00	0.92	3.136	IO				1.79
116.083	0.00	0.92	3.130	IO				1.78
116.167	0.00	0.92	3.124	IO				1.78
116.250	0.00	0.92	3.117	IO				1.78
116.333	0.00	0.92	3.111	IO				1.77
116.417	0.00	0.92	3.105	IO				1.77
116.500	0.00	0.92	3.098	IO				1.77
116.583	0.00	0.92	3.092	IO				1.76
116.667	0.00	0.92	3.086	IO				1.76
116.750	0.00	0.92	3.079	IO				1.76
116.833	0.00	0.92	3.073	IO				1.75
116.917	0.00	0.92	3.067	IO				1.75
117.000	0.00	0.92	3.060	IO				1.75
117.083	0.00	0.92	3.054	IO				1.74
117.167	0.00	0.92	3.048	IO				1.74
117.250	0.00	0.92	3.041	IO				1.74
117.333	0.00	0.92	3.035	IO				1.73
117.417	0.00	0.92	3.029	IO				1.73
117.500	0.00	0.92	3.023	IO				1.73
117.583	0.00	0.92	3.016	IO				1.72
117.667	0.00	0.92	3.010	IO				1.72
117.750	0.00	0.92	3.004	IO				1.72
117.833	0.00	0.92	2.997	IO				1.71
117.917	0.00	0.92	2.991	IO				1.71
118.000	0.00	0.92	2.985	IO				1.71
118.083	0.00	0.92	2.978	IO				1.70
118.167	0.00	0.92	2.972	IO				1.70
118.250	0.00	0.92	2.966	IO				1.70
118.333	0.00	0.92	2.959	IO				1.69
118.417	0.00	0.92	2.953	IO				1.69
118.500	0.00	0.92	2.947	IO				1.69
118.583	0.00	0.92	2.940	IO				1.68
118.667	0.00	0.92	2.934	IO				1.68
118.750	0.00	0.92	2.928	IO				1.68
118.833	0.00	0.92	2.922	IO				1.67
118.917	0.00	0.92	2.915	IO				1.67
119.000	0.00	0.92	2.909	IO				1.67
119.083	0.00	0.92	2.903	IO				1.66

119.167	0.00	0.92	2.896	IO				1.66
119.250	0.00	0.92	2.890	IO				1.66
119.333	0.00	0.92	2.884	IO				1.65
119.417	0.00	0.92	2.877	IO				1.65
119.500	0.00	0.92	2.871	IO				1.65
119.583	0.00	0.92	2.865	IO				1.64
119.667	0.00	0.92	2.858	IO				1.64
119.750	0.00	0.92	2.852	IO				1.64
119.833	0.00	0.92	2.846	IO				1.63
119.917	0.00	0.92	2.839	IO				1.63
120.000	0.00	0.92	2.833	IO				1.63
120.083	0.00	0.92	2.827	IO				1.62
120.167	0.00	0.92	2.821	IO				1.62
120.250	0.00	0.92	2.814	IO				1.62
120.333	0.00	0.92	2.808	IO				1.61
120.417	0.00	0.92	2.802	IO				1.61
120.500	0.00	0.92	2.795	IO				1.61
120.583	0.00	0.92	2.789	IO				1.60
120.667	0.00	0.92	2.783	IO				1.60
120.750	0.00	0.92	2.776	IO				1.60
120.833	0.00	0.92	2.770	IO				1.59
120.917	0.00	0.92	2.764	IO				1.59
121.000	0.00	0.92	2.757	IO				1.59
121.083	0.00	0.92	2.751	IO				1.58
121.167	0.00	0.92	2.745	IO				1.58
121.250	0.00	0.92	2.739	IO				1.58
121.333	0.00	0.92	2.732	IO				1.57
121.417	0.00	0.92	2.726	IO				1.57
121.500	0.00	0.92	2.720	IO				1.57
121.583	0.00	0.92	2.713	IO				1.56
121.667	0.00	0.92	2.707	IO				1.56
121.750	0.00	0.92	2.701	IO				1.56
121.833	0.00	0.92	2.694	IO				1.55
121.917	0.00	0.92	2.688	IO				1.55
122.000	0.00	0.92	2.682	IO				1.55
122.083	0.00	0.92	2.675	IO				1.54
122.167	0.00	0.92	2.669	IO				1.54
122.250	0.00	0.92	2.663	IO				1.54
122.333	0.00	0.92	2.656	IO				1.53
122.417	0.00	0.92	2.650	IO				1.53
122.500	0.00	0.92	2.644	IO				1.53
122.583	0.00	0.92	2.638	IO				1.53
122.667	0.00	0.92	2.631	IO				1.52
122.750	0.00	0.92	2.625	IO				1.52
122.833	0.00	0.92	2.619	IO				1.52
122.917	0.00	0.92	2.612	IO				1.51
123.000	0.00	0.92	2.606	IO				1.51
123.083	0.00	0.92	2.600	IO				1.51
123.167	0.00	0.92	2.593	IO				1.50
123.250	0.00	0.92	2.587	IO				1.50
123.333	0.00	0.92	2.581	IO				1.49
123.417	0.00	0.92	2.574	IO				1.49
123.500	0.00	0.92	2.568	IO				1.49
123.583	0.00	0.92	2.562	IO				1.48

123.667	0.00	0.92	2.555	IO				1.48
123.750	0.00	0.92	2.549	IO				1.48
123.833	0.00	0.92	2.543	IO				1.47
123.917	0.00	0.92	2.537	IO				1.47
124.000	0.00	0.92	2.530	IO				1.47
124.083	0.00	0.92	2.524	IO				1.46
124.167	0.00	0.92	2.518	IO				1.46
124.250	0.00	0.92	2.511	IO				1.46
124.333	0.00	0.92	2.505	IO				1.45
124.417	0.00	0.92	2.499	IO				1.45
124.500	0.00	0.92	2.492	IO				1.45
124.583	0.00	0.92	2.486	IO				1.44
124.667	0.00	0.92	2.480	IO				1.44
124.750	0.00	0.92	2.473	IO				1.44
124.833	0.00	0.92	2.467	IO				1.43
124.917	0.00	0.92	2.461	IO				1.43
125.000	0.00	0.92	2.454	IO				1.43
125.083	0.00	0.92	2.448	IO				1.42
125.167	0.00	0.92	2.442	IO				1.42
125.250	0.00	0.92	2.436	IO				1.42
125.333	0.00	0.92	2.429	IO				1.41
125.417	0.00	0.92	2.423	IO				1.41
125.500	0.00	0.92	2.417	IO				1.41
125.583	0.00	0.92	2.410	IO				1.40
125.667	0.00	0.92	2.404	IO				1.40
125.750	0.00	0.92	2.398	IO				1.40
125.833	0.00	0.92	2.391	IO				1.39
125.917	0.00	0.92	2.385	IO				1.39
126.000	0.00	0.92	2.379	IO				1.39
126.083	0.00	0.92	2.372	IO				1.38
126.167	0.00	0.92	2.366	IO				1.38
126.250	0.00	0.92	2.360	IO				1.37
126.333	0.00	0.92	2.353	IO				1.37
126.417	0.00	0.92	2.347	IO				1.37
126.500	0.00	0.92	2.341	IO				1.36
126.583	0.00	0.92	2.335	IO				1.36
126.667	0.00	0.92	2.328	IO				1.36
126.750	0.00	0.92	2.322	IO				1.35
126.833	0.00	0.92	2.316	IO				1.35
126.917	0.00	0.92	2.309	IO				1.35
127.000	0.00	0.92	2.303	IO				1.34
127.083	0.00	0.92	2.297	IO				1.34
127.167	0.00	0.92	2.290	IO				1.34
127.250	0.00	0.92	2.284	IO				1.33
127.333	0.00	0.92	2.278	IO				1.33
127.417	0.00	0.92	2.271	IO				1.33
127.500	0.00	0.92	2.265	IO				1.32
127.583	0.00	0.92	2.259	IO				1.32
127.667	0.00	0.92	2.252	IO				1.32
127.750	0.00	0.92	2.246	IO				1.31
127.833	0.00	0.92	2.240	IO				1.31
127.917	0.00	0.92	2.234	IO				1.31
128.000	0.00	0.92	2.227	IO				1.30
128.083	0.00	0.92	2.221	IO				1.30

128.167	0.00	0.92	2.215	IO				1.30
128.250	0.00	0.92	2.208	IO				1.29
128.333	0.00	0.92	2.202	IO				1.29
128.417	0.00	0.92	2.196	IO				1.29
128.500	0.00	0.92	2.189	IO				1.28
128.583	0.00	0.92	2.183	IO				1.28
128.667	0.00	0.92	2.177	IO				1.28
128.750	0.00	0.92	2.170	IO				1.27
128.833	0.00	0.92	2.164	IO				1.27
128.917	0.00	0.92	2.158	IO				1.27
129.000	0.00	0.92	2.151	IO				1.26
129.083	0.00	0.92	2.145	IO				1.26
129.167	0.00	0.92	2.139	IO				1.25
129.250	0.00	0.92	2.133	IO				1.25
129.333	0.00	0.92	2.126	IO				1.25
129.417	0.00	0.92	2.120	IO				1.24
129.500	0.00	0.92	2.114	IO				1.24
129.583	0.00	0.92	2.107	IO				1.24
129.667	0.00	0.92	2.101	IO				1.23
129.750	0.00	0.92	2.095	IO				1.23
129.833	0.00	0.92	2.088	IO				1.23
129.917	0.00	0.92	2.082	IO				1.22
130.000	0.00	0.92	2.076	IO				1.22
130.083	0.00	0.92	2.069	IO				1.22
130.167	0.00	0.92	2.063	IO				1.21
130.250	0.00	0.92	2.057	IO				1.21
130.333	0.00	0.92	2.050	IO				1.21
130.417	0.00	0.92	2.044	IO				1.20
130.500	0.00	0.92	2.038	IO				1.20
130.583	0.00	0.92	2.032	IO				1.20
130.667	0.00	0.92	2.025	IO				1.19
130.750	0.00	0.92	2.019	IO				1.19
130.833	0.00	0.92	2.013	IO				1.19
130.917	0.00	0.92	2.006	IO				1.18
131.000	0.00	0.92	2.000	IO				1.18
131.083	0.00	0.92	1.994	IO				1.18
131.167	0.00	0.92	1.987	IO				1.17
131.250	0.00	0.92	1.981	IO				1.17
131.333	0.00	0.92	1.975	IO				1.17
131.417	0.00	0.92	1.968	IO				1.16
131.500	0.00	0.92	1.962	IO				1.16
131.583	0.00	0.92	1.956	IO				1.16
131.667	0.00	0.92	1.950	IO				1.15
131.750	0.00	0.92	1.943	IO				1.15
131.833	0.00	0.92	1.937	IO				1.15
131.917	0.00	0.92	1.931	IO				1.14
132.000	0.00	0.92	1.924	IO				1.14
132.083	0.00	0.92	1.918	IO				1.13
132.167	0.00	0.92	1.912	IO				1.13
132.250	0.00	0.92	1.905	IO				1.13
132.333	0.00	0.92	1.899	IO				1.12
132.417	0.00	0.92	1.893	IO				1.12
132.500	0.00	0.92	1.886	IO				1.12
132.583	0.00	0.92	1.880	IO				1.11

132.667	0.00	0.92	1.874	IO				1.11
132.750	0.00	0.92	1.867	IO				1.11
132.833	0.00	0.92	1.861	IO				1.10
132.917	0.00	0.92	1.855	IO				1.10
133.000	0.00	0.92	1.849	IO				1.10
133.083	0.00	0.92	1.842	IO				1.09
133.167	0.00	0.92	1.836	IO				1.09
133.250	0.00	0.92	1.830	IO				1.09
133.333	0.00	0.92	1.823	IO				1.08
133.417	0.00	0.92	1.817	IO				1.08
133.500	0.00	0.92	1.811	IO				1.08
133.583	0.00	0.92	1.804	IO				1.07
133.667	0.00	0.92	1.798	IO				1.07
133.750	0.00	0.92	1.792	IO				1.07
133.833	0.00	0.92	1.785	IO				1.06
133.917	0.00	0.92	1.779	IO				1.06
134.000	0.00	0.92	1.773	IO				1.06
134.083	0.00	0.92	1.766	IO				1.05
134.167	0.00	0.92	1.760	IO				1.05
134.250	0.00	0.92	1.754	IO				1.05
134.333	0.00	0.92	1.748	IO				1.04
134.417	0.00	0.92	1.741	IO				1.04
134.500	0.00	0.92	1.735	IO				1.04
134.583	0.00	0.92	1.729	IO				1.03
134.667	0.00	0.92	1.722	IO				1.03
134.750	0.00	0.92	1.716	IO				1.02
134.833	0.00	0.92	1.710	IO				1.02
134.917	0.00	0.92	1.703	IO				1.02
135.000	0.00	0.92	1.697	IO				1.01
135.083	0.00	0.92	1.691	IO				1.01
135.167	0.00	0.92	1.684	IO				1.01
135.250	0.00	0.92	1.678	IO				1.00
135.333	0.00	0.92	1.672	IO				1.00
135.417	0.00	0.92	1.665	IO				1.00
135.500	0.00	0.92	1.659	IO				0.99
135.583	0.00	0.92	1.653	IO				0.99
135.667	0.00	0.92	1.647	IO				0.99
135.750	0.00	0.92	1.640	IO				0.98
135.833	0.00	0.92	1.634	IO				0.98
135.917	0.00	0.92	1.628	IO				0.98
136.000	0.00	0.92	1.621	IO				0.97
136.083	0.00	0.92	1.615	IO				0.97
136.167	0.00	0.92	1.609	IO				0.96
136.250	0.00	0.92	1.602	IO				0.96
136.333	0.00	0.92	1.596	IO				0.96
136.417	0.00	0.92	1.590	IO				0.95
136.500	0.00	0.92	1.583	IO				0.95
136.583	0.00	0.92	1.577	IO				0.95
136.667	0.00	0.92	1.571	IO				0.94
136.750	0.00	0.92	1.564	IO				0.94
136.833	0.00	0.92	1.558	IO				0.93
136.917	0.00	0.92	1.552	IO				0.93
137.000	0.00	0.92	1.546	IO				0.93
137.083	0.00	0.92	1.539	IO				0.92

137.167	0.00	0.92	1.533	IO				0.92
137.250	0.00	0.92	1.527	IO				0.92
137.333	0.00	0.92	1.520	IO				0.91
137.417	0.00	0.92	1.514	IO				0.91
137.500	0.00	0.92	1.508	IO				0.91
137.583	0.00	0.92	1.501	IO				0.90
137.667	0.00	0.92	1.495	IO				0.90
137.750	0.00	0.92	1.489	IO				0.89
137.833	0.00	0.92	1.482	IO				0.89
137.917	0.00	0.92	1.476	IO				0.89
138.000	0.00	0.92	1.470	IO				0.88
138.083	0.00	0.92	1.463	IO				0.88
138.167	0.00	0.92	1.457	IO				0.88
138.250	0.00	0.92	1.451	IO				0.87
138.333	0.00	0.92	1.445	IO				0.87
138.417	0.00	0.92	1.438	IO				0.87
138.500	0.00	0.92	1.432	IO				0.86
138.583	0.00	0.92	1.426	IO				0.86
138.667	0.00	0.92	1.419	IO				0.85
138.750	0.00	0.92	1.413	IO				0.85
138.833	0.00	0.92	1.407	IO				0.85
138.917	0.00	0.92	1.400	IO				0.84
139.000	0.00	0.92	1.394	IO				0.84
139.083	0.00	0.92	1.388	IO				0.84
139.167	0.00	0.92	1.381	IO				0.83
139.250	0.00	0.92	1.375	IO				0.83
139.333	0.00	0.92	1.369	IO				0.82
139.417	0.00	0.92	1.362	IO				0.82
139.500	0.00	0.92	1.356	IO				0.82
139.583	0.00	0.92	1.350	IO				0.81
139.667	0.00	0.92	1.344	IO				0.81
139.750	0.00	0.92	1.337	IO				0.81
139.833	0.00	0.92	1.331	IO				0.80
139.917	0.00	0.92	1.325	IO				0.80
140.000	0.00	0.92	1.318	IO				0.80
140.083	0.00	0.92	1.312	IO				0.79
140.167	0.00	0.92	1.306	IO				0.79
140.250	0.00	0.92	1.299	IO				0.78
140.333	0.00	0.92	1.293	IO				0.78
140.417	0.00	0.92	1.287	IO				0.78
140.500	0.00	0.92	1.280	IO				0.77
140.583	0.00	0.92	1.274	IO				0.77
140.667	0.00	0.92	1.268	IO				0.77
140.750	0.00	0.92	1.261	IO				0.76
140.833	0.00	0.92	1.255	IO				0.76
140.917	0.00	0.92	1.249	IO				0.76
141.000	0.00	0.92	1.243	IO				0.75
141.083	0.00	0.92	1.236	IO				0.75
141.167	0.00	0.92	1.230	IO				0.74
141.250	0.00	0.92	1.224	IO				0.74
141.333	0.00	0.92	1.217	IO				0.74
141.417	0.00	0.92	1.211	IO				0.73
141.500	0.00	0.92	1.205	IO				0.73
141.583	0.00	0.92	1.198	IO				0.73

141.667	0.00	0.92	1.192	IO				0.72
141.750	0.00	0.92	1.186	IO				0.72
141.833	0.00	0.92	1.179	IO				0.71
141.917	0.00	0.92	1.173	IO				0.71
142.000	0.00	0.92	1.167	IO				0.71
142.083	0.00	0.92	1.161	IO				0.70
142.167	0.00	0.92	1.154	IO				0.70
142.250	0.00	0.92	1.148	IO				0.70
142.333	0.00	0.92	1.142	IO				0.69
142.417	0.00	0.92	1.135	IO				0.69
142.500	0.00	0.92	1.129	IO				0.69
142.583	0.00	0.92	1.123	IO				0.68
142.667	0.00	0.92	1.116	IO				0.68
142.750	0.00	0.92	1.110	IO				0.67
142.833	0.00	0.92	1.104	IO				0.67
142.917	0.00	0.92	1.097	IO				0.67
143.000	0.00	0.92	1.091	IO				0.66
143.083	0.00	0.92	1.085	IO				0.66
143.167	0.00	0.92	1.078	IO				0.66
143.250	0.00	0.92	1.072	IO				0.65
143.333	0.00	0.92	1.066	IO				0.65
143.417	0.00	0.92	1.060	IO				0.65
143.500	0.00	0.92	1.053	IO				0.64
143.583	0.00	0.92	1.047	IO				0.64
143.667	0.00	0.92	1.041	IO				0.63
143.750	0.00	0.92	1.034	IO				0.63
143.833	0.00	0.92	1.028	IO				0.63
143.917	0.00	0.92	1.022	IO				0.62
144.000	0.00	0.92	1.015	IO				0.62
144.083	0.00	0.92	1.009	IO				0.62
144.167	0.00	0.92	1.003	IO				0.61
144.250	0.00	0.92	0.996	IO				0.61
144.333	0.00	0.92	0.990	IO				0.60
144.417	0.00	0.92	0.984	IO				0.60
144.500	0.00	0.92	0.977	IO				0.60
144.583	0.00	0.92	0.971	IO				0.59
144.667	0.00	0.92	0.965	IO				0.59
144.750	0.00	0.92	0.959	IO				0.59
144.833	0.00	0.92	0.952	IO				0.58
144.917	0.00	0.92	0.946	IO				0.58
145.000	0.00	0.92	0.940	IO				0.58
145.083	0.00	0.92	0.933	IO				0.57
145.167	0.00	0.92	0.927	IO				0.57
145.250	0.00	0.92	0.921	IO				0.56
145.333	0.00	0.92	0.914	IO				0.56
145.417	0.00	0.92	0.908	IO				0.56
145.500	0.00	0.92	0.902	IO				0.55
145.583	0.00	0.92	0.895	IO				0.55
145.667	0.00	0.92	0.889	IO				0.55
145.750	0.00	0.92	0.883	IO				0.54
145.833	0.00	0.92	0.876	IO				0.54
145.917	0.00	0.92	0.870	IO				0.53
146.000	0.00	0.92	0.864	IO				0.53
146.083	0.00	0.92	0.858	IO				0.53

146.167	0.00	0.92	0.851	IO				0.52
146.250	0.00	0.92	0.845	IO				0.52
146.333	0.00	0.92	0.839	IO				0.52
146.417	0.00	0.92	0.832	IO				0.51
146.500	0.00	0.92	0.826	IO				0.51
146.583	0.00	0.92	0.820	IO				0.51
146.667	0.00	0.92	0.813	IO				0.50
146.750	0.00	0.91	0.807	IO				0.50
146.833	0.00	0.91	0.801	IO				0.49
146.917	0.00	0.90	0.795	IO				0.49
147.000	0.00	0.89	0.788	IO				0.49
147.083	0.00	0.89	0.782	IO				0.48
147.167	0.00	0.88	0.776	IO				0.48
147.250	0.00	0.87	0.770	IO				0.48
147.333	0.00	0.86	0.764	IO				0.47
147.417	0.00	0.86	0.758	IO				0.47
147.500	0.00	0.85	0.752	IO				0.46
147.583	0.00	0.84	0.747	IO				0.46
147.667	0.00	0.84	0.741	IO				0.46
147.750	0.00	0.83	0.735	IO				0.45
147.833	0.00	0.83	0.729	IO				0.45
147.917	0.00	0.82	0.724	IO				0.45
148.000	0.00	0.81	0.718	IO				0.44
148.083	0.00	0.81	0.712	IO				0.44
148.167	0.00	0.80	0.707	IO				0.44
148.250	0.00	0.79	0.701	IO				0.43
148.333	0.00	0.79	0.696	IO				0.43
148.417	0.00	0.78	0.691	IO				0.43
148.500	0.00	0.78	0.685	IO				0.42
148.583	0.00	0.77	0.680	IO				0.42
148.667	0.00	0.76	0.675	IO				0.42
148.750	0.00	0.76	0.669	IO				0.41
148.833	0.00	0.75	0.664	IO				0.41
148.917	0.00	0.75	0.659	IO				0.41
149.000	0.00	0.74	0.654	IO				0.40
149.083	0.00	0.73	0.649	IO				0.40
149.167	0.00	0.73	0.644	IO				0.40
149.250	0.00	0.72	0.639	IO				0.39
149.333	0.00	0.72	0.634	IO				0.39
149.417	0.00	0.71	0.629	IO				0.39
149.500	0.00	0.71	0.624	IO				0.39
149.583	0.00	0.70	0.619	IO				0.38
149.667	0.00	0.70	0.614	IO				0.38
149.750	0.00	0.69	0.610	IO				0.38
149.833	0.00	0.68	0.605	IO				0.37
149.917	0.00	0.68	0.600	IO				0.37
150.000	0.00	0.67	0.596	IO				0.37
150.083	0.00	0.67	0.591	IO				0.36
150.167	0.00	0.66	0.586	IO				0.36
150.250	0.00	0.66	0.582	IO				0.36
150.333	0.00	0.65	0.577	IO				0.36
150.417	0.00	0.65	0.573	IO				0.35
150.500	0.00	0.64	0.568	O				0.35
150.583	0.00	0.64	0.564	O				0.35

150.667	0.00	0.63	0.560	O	|	|	|	0.35
150.750	0.00	0.63	0.555	O	|	|	|	0.34
150.833	0.00	0.62	0.551	O	|	|	|	0.34
150.917	0.00	0.62	0.547	O	|	|	|	0.34
151.000	0.00	0.61	0.542	O	|	|	|	0.33
151.083	0.00	0.61	0.538	O	|	|	|	0.33
151.167	0.00	0.60	0.534	O	|	|	|	0.33
151.250	0.00	0.60	0.530	O	|	|	|	0.33
151.333	0.00	0.59	0.526	O	|	|	|	0.32
151.417	0.00	0.59	0.522	O	|	|	|	0.32
151.500	0.00	0.59	0.518	O	|	|	|	0.32
151.583	0.00	0.58	0.514	O	|	|	|	0.32
151.667	0.00	0.58	0.510	O	|	|	|	0.31
151.750	0.00	0.57	0.506	O	|	|	|	0.31
151.833	0.00	0.57	0.502	O	|	|	|	0.31
151.917	0.00	0.56	0.498	O	|	|	|	0.31
152.000	0.00	0.56	0.494	O	|	|	|	0.30
152.083	0.00	0.55	0.490	O	|	|	|	0.30
152.167	0.00	0.55	0.486	O	|	|	|	0.30
152.250	0.00	0.55	0.483	O	|	|	|	0.30
152.333	0.00	0.54	0.479	O	|	|	|	0.30
152.417	0.00	0.54	0.475	O	|	|	|	0.29
152.500	0.00	0.53	0.471	O	|	|	|	0.29
152.583	0.00	0.53	0.468	O	|	|	|	0.29
152.667	0.00	0.53	0.464	O	|	|	|	0.29
152.750	0.00	0.52	0.460	O	|	|	|	0.28
152.833	0.00	0.52	0.457	O	|	|	|	0.28
152.917	0.00	0.51	0.453	O	|	|	|	0.28
153.000	0.00	0.51	0.450	O	|	|	|	0.28
153.083	0.00	0.51	0.446	O	|	|	|	0.28
153.167	0.00	0.50	0.443	O	|	|	|	0.27
153.250	0.00	0.50	0.439	O	|	|	|	0.27
153.333	0.00	0.49	0.436	O	|	|	|	0.27
153.417	0.00	0.49	0.433	O	|	|	|	0.27
153.500	0.00	0.49	0.429	O	|	|	|	0.27
153.583	0.00	0.48	0.426	O	|	|	|	0.26
153.667	0.00	0.48	0.423	O	|	|	|	0.26
153.750	0.00	0.47	0.419	O	|	|	|	0.26
153.833	0.00	0.47	0.416	O	|	|	|	0.26
153.917	0.00	0.47	0.413	O	|	|	|	0.25
154.000	0.00	0.46	0.410	O	|	|	|	0.25
154.083	0.00	0.46	0.407	O	|	|	|	0.25
154.167	0.00	0.46	0.403	O	|	|	|	0.25
154.250	0.00	0.45	0.400	O	|	|	|	0.25
154.333	0.00	0.45	0.397	O	|	|	|	0.25
154.417	0.00	0.45	0.394	O	|	|	|	0.24
154.500	0.00	0.44	0.391	O	|	|	|	0.24
154.583	0.00	0.44	0.388	O	|	|	|	0.24
154.667	0.00	0.44	0.385	O	|	|	|	0.24
154.750	0.00	0.43	0.382	O	|	|	|	0.24
154.833	0.00	0.43	0.379	O	|	|	|	0.23
154.917	0.00	0.43	0.376	O	|	|	|	0.23
155.000	0.00	0.42	0.373	O	|	|	|	0.23
155.083	0.00	0.42	0.370	O	|	|	|	0.23

155.167	0.00	0.42	0.367	O	|	|	|	0.23
155.250	0.00	0.41	0.365	O	|	|	|	0.23
155.333	0.00	0.41	0.362	O	|	|	|	0.22
155.417	0.00	0.41	0.359	O	|	|	|	0.22
155.500	0.00	0.40	0.356	O	|	|	|	0.22
155.583	0.00	0.40	0.353	O	|	|	|	0.22
155.667	0.00	0.40	0.351	O	|	|	|	0.22
155.750	0.00	0.39	0.348	O	|	|	|	0.21
155.833	0.00	0.39	0.345	O	|	|	|	0.21
155.917	0.00	0.39	0.342	O	|	|	|	0.21
156.000	0.00	0.38	0.340	O	|	|	|	0.21
156.083	0.00	0.38	0.337	O	|	|	|	0.21
156.167	0.00	0.38	0.335	O	|	|	|	0.21
156.250	0.00	0.38	0.332	O	|	|	|	0.20
156.333	0.00	0.37	0.329	O	|	|	|	0.20
156.417	0.00	0.37	0.327	O	|	|	|	0.20
156.500	0.00	0.37	0.324	O	|	|	|	0.20
156.583	0.00	0.36	0.322	O	|	|	|	0.20
156.667	0.00	0.36	0.319	O	|	|	|	0.20
156.750	0.00	0.36	0.317	O	|	|	|	0.20
156.833	0.00	0.36	0.314	O	|	|	|	0.19
156.917	0.00	0.35	0.312	O	|	|	|	0.19
157.000	0.00	0.35	0.309	O	|	|	|	0.19
157.083	0.00	0.35	0.307	O	|	|	|	0.19
157.167	0.00	0.34	0.305	O	|	|	|	0.19
157.250	0.00	0.34	0.302	O	|	|	|	0.19
157.333	0.00	0.34	0.300	O	|	|	|	0.19
157.417	0.00	0.34	0.298	O	|	|	|	0.18
157.500	0.00	0.33	0.295	O	|	|	|	0.18
157.583	0.00	0.33	0.293	O	|	|	|	0.18
157.667	0.00	0.33	0.291	O	|	|	|	0.18
157.750	0.00	0.33	0.289	O	|	|	|	0.18
157.833	0.00	0.32	0.286	O	|	|	|	0.18
157.917	0.00	0.32	0.284	O	|	|	|	0.18
158.000	0.00	0.32	0.282	O	|	|	|	0.17
158.083	0.00	0.32	0.280	O	|	|	|	0.17
158.167	0.00	0.31	0.277	O	|	|	|	0.17
158.250	0.00	0.31	0.275	O	|	|	|	0.17
158.333	0.00	0.31	0.273	O	|	|	|	0.17
158.417	0.00	0.31	0.271	O	|	|	|	0.17
158.500	0.00	0.30	0.269	O	|	|	|	0.17
158.583	0.00	0.30	0.267	O	|	|	|	0.16
158.667	0.00	0.30	0.265	O	|	|	|	0.16
158.750	0.00	0.30	0.263	O	|	|	|	0.16
158.833	0.00	0.30	0.261	O	|	|	|	0.16
158.917	0.00	0.29	0.259	O	|	|	|	0.16
159.000	0.00	0.29	0.257	O	|	|	|	0.16
159.083	0.00	0.29	0.255	O	|	|	|	0.16
159.167	0.00	0.29	0.253	O	|	|	|	0.16
159.250	0.00	0.28	0.251	O	|	|	|	0.15
159.333	0.00	0.28	0.249	O	|	|	|	0.15
159.417	0.00	0.28	0.247	O	|	|	|	0.15
159.500	0.00	0.28	0.245	O	|	|	|	0.15
159.583	0.00	0.28	0.243	O	|	|	|	0.15

159.667	0.00	0.27	0.241	O	|	|	|	| 0.15
159.750	0.00	0.27	0.239	O	|	|	|	| 0.15
159.833	0.00	0.27	0.237	O	|	|	|	| 0.15
159.917	0.00	0.27	0.236	O	|	|	|	| 0.15
160.000	0.00	0.26	0.234	O	|	|	|	| 0.14
160.083	0.00	0.26	0.232	O	|	|	|	| 0.14
160.167	0.00	0.26	0.230	O	|	|	|	| 0.14
160.250	0.00	0.26	0.228	O	|	|	|	| 0.14
160.333	0.00	0.26	0.227	O	|	|	|	| 0.14
160.417	0.00	0.25	0.225	O	|	|	|	| 0.14
160.500	0.00	0.25	0.223	O	|	|	|	| 0.14
160.583	0.00	0.25	0.221	O	|	|	|	| 0.14
160.667	0.00	0.25	0.220	O	|	|	|	| 0.14
160.750	0.00	0.25	0.218	O	|	|	|	| 0.13
160.833	0.00	0.24	0.216	O	|	|	|	| 0.13
160.917	0.00	0.24	0.215	O	|	|	|	| 0.13
161.000	0.00	0.24	0.213	O	|	|	|	| 0.13
161.083	0.00	0.24	0.211	O	|	|	|	| 0.13
161.167	0.00	0.24	0.210	O	|	|	|	| 0.13
161.250	0.00	0.24	0.208	O	|	|	|	| 0.13
161.333	0.00	0.23	0.206	O	|	|	|	| 0.13
161.417	0.00	0.23	0.205	O	|	|	|	| 0.13
161.500	0.00	0.23	0.203	O	|	|	|	| 0.13
161.583	0.00	0.23	0.202	O	|	|	|	| 0.12
161.667	0.00	0.23	0.200	O	|	|	|	| 0.12
161.750	0.00	0.22	0.198	O	|	|	|	| 0.12
161.833	0.00	0.22	0.197	O	|	|	|	| 0.12
161.917	0.00	0.22	0.195	O	|	|	|	| 0.12
162.000	0.00	0.22	0.194	O	|	|	|	| 0.12
162.083	0.00	0.22	0.192	O	|	|	|	| 0.12
162.167	0.00	0.22	0.191	O	|	|	|	| 0.12
162.250	0.00	0.21	0.189	O	|	|	|	| 0.12
162.333	0.00	0.21	0.188	O	|	|	|	| 0.12
162.417	0.00	0.21	0.186	O	|	|	|	| 0.12
162.500	0.00	0.21	0.185	O	|	|	|	| 0.11
162.583	0.00	0.21	0.184	O	|	|	|	| 0.11
162.667	0.00	0.21	0.182	O	|	|	|	| 0.11
162.750	0.00	0.20	0.181	O	|	|	|	| 0.11
162.833	0.00	0.20	0.179	O	|	|	|	| 0.11
162.917	0.00	0.20	0.178	O	|	|	|	| 0.11
163.000	0.00	0.20	0.177	O	|	|	|	| 0.11
163.083	0.00	0.20	0.175	O	|	|	|	| 0.11
163.167	0.00	0.20	0.174	O	|	|	|	| 0.11
163.250	0.00	0.20	0.173	O	|	|	|	| 0.11
163.333	0.00	0.19	0.171	O	|	|	|	| 0.11
163.417	0.00	0.19	0.170	O	|	|	|	| 0.10
163.500	0.00	0.19	0.169	O	|	|	|	| 0.10
163.583	0.00	0.19	0.167	O	|	|	|	| 0.10
163.667	0.00	0.19	0.166	O	|	|	|	| 0.10
163.750	0.00	0.19	0.165	O	|	|	|	| 0.10
163.833	0.00	0.18	0.163	O	|	|	|	| 0.10
163.917	0.00	0.18	0.162	O	|	|	|	| 0.10
164.000	0.00	0.18	0.161	O	|	|	|	| 0.10
164.083	0.00	0.18	0.160	O	|	|	|	| 0.10

164.167	0.00	0.18	0.158	O	|	|	|	0.10
164.250	0.00	0.18	0.157	O	|	|	|	0.10
164.333	0.00	0.18	0.156	O	|	|	|	0.10
164.417	0.00	0.18	0.155	O	|	|	|	0.10
164.500	0.00	0.17	0.153	O	|	|	|	0.09
164.583	0.00	0.17	0.152	O	|	|	|	0.09
164.667	0.00	0.17	0.151	O	|	|	|	0.09
164.750	0.00	0.17	0.150	O	|	|	|	0.09
164.833	0.00	0.17	0.149	O	|	|	|	0.09
164.917	0.00	0.17	0.148	O	|	|	|	0.09
165.000	0.00	0.17	0.146	O	|	|	|	0.09
165.083	0.00	0.16	0.145	O	|	|	|	0.09
165.167	0.00	0.16	0.144	O	|	|	|	0.09
165.250	0.00	0.16	0.143	O	|	|	|	0.09
165.333	0.00	0.16	0.142	O	|	|	|	0.09
165.417	0.00	0.16	0.141	O	|	|	|	0.09
165.500	0.00	0.16	0.140	O	|	|	|	0.09
165.583	0.00	0.16	0.139	O	|	|	|	0.09
165.667	0.00	0.16	0.138	O	|	|	|	0.08
165.750	0.00	0.15	0.137	O	|	|	|	0.08
165.833	0.00	0.15	0.135	O	|	|	|	0.08
165.917	0.00	0.15	0.134	O	|	|	|	0.08
166.000	0.00	0.15	0.133	O	|	|	|	0.08
166.083	0.00	0.15	0.132	O	|	|	|	0.08
166.167	0.00	0.15	0.131	O	|	|	|	0.08
166.250	0.00	0.15	0.130	O	|	|	|	0.08
166.333	0.00	0.15	0.129	O	|	|	|	0.08
166.417	0.00	0.15	0.128	O	|	|	|	0.08
166.500	0.00	0.14	0.127	O	|	|	|	0.08
166.583	0.00	0.14	0.126	O	|	|	|	0.08
166.667	0.00	0.14	0.125	O	|	|	|	0.08
166.750	0.00	0.14	0.124	O	|	|	|	0.08
166.833	0.00	0.14	0.123	O	|	|	|	0.08
166.917	0.00	0.14	0.122	O	|	|	|	0.08
167.000	0.00	0.14	0.121	O	|	|	|	0.07
167.083	0.00	0.14	0.121	O	|	|	|	0.07
167.167	0.00	0.14	0.120	O	|	|	|	0.07
167.250	0.00	0.13	0.119	O	|	|	|	0.07
167.333	0.00	0.13	0.118	O	|	|	|	0.07
167.417	0.00	0.13	0.117	O	|	|	|	0.07
167.500	0.00	0.13	0.116	O	|	|	|	0.07
167.583	0.00	0.13	0.115	O	|	|	|	0.07
167.667	0.00	0.13	0.114	O	|	|	|	0.07
167.750	0.00	0.13	0.113	O	|	|	|	0.07
167.833	0.00	0.13	0.112	O	|	|	|	0.07
167.917	0.00	0.13	0.112	O	|	|	|	0.07
168.000	0.00	0.13	0.111	O	|	|	|	0.07
168.083	0.00	0.12	0.110	O	|	|	|	0.07
168.167	0.00	0.12	0.109	O	|	|	|	0.07
168.250	0.00	0.12	0.108	O	|	|	|	0.07
168.333	0.00	0.12	0.107	O	|	|	|	0.07
168.417	0.00	0.12	0.106	O	|	|	|	0.07
168.500	0.00	0.12	0.106	O	|	|	|	0.07
168.583	0.00	0.12	0.105	O	|	|	|	0.06

168.667	0.00	0.12	0.104	O	|	|	|	|	0.06
168.750	0.00	0.12	0.103	O	|	|	|	|	0.06
168.833	0.00	0.12	0.102	O	|	|	|	|	0.06
168.917	0.00	0.11	0.102	O	|	|	|	|	0.06
169.000	0.00	0.11	0.101	O	|	|	|	|	0.06
169.083	0.00	0.11	0.100	O	|	|	|	|	0.06
169.167	0.00	0.11	0.099	O	|	|	|	|	0.06
169.250	0.00	0.11	0.098	O	|	|	|	|	0.06
169.333	0.00	0.11	0.098	O	|	|	|	|	0.06
169.417	0.00	0.11	0.097	O	|	|	|	|	0.06
169.500	0.00	0.11	0.096	O	|	|	|	|	0.06
169.583	0.00	0.11	0.095	O	|	|	|	|	0.06
169.667	0.00	0.11	0.095	O	|	|	|	|	0.06
169.750	0.00	0.11	0.094	O	|	|	|	|	0.06
169.833	0.00	0.11	0.093	O	|	|	|	|	0.06
169.917	0.00	0.10	0.092	O	|	|	|	|	0.06
170.000	0.00	0.10	0.092	O	|	|	|	|	0.06
170.083	0.00	0.10	0.091	O	|	|	|	|	0.06
170.167	0.00	0.10	0.090	O	|	|	|	|	0.06
170.250	0.00	0.10	0.090	O	|	|	|	|	0.06
170.333	0.00	0.10	0.089	O	|	|	|	|	0.05
170.417	0.00	0.10	0.088	O	|	|	|	|	0.05
170.500	0.00	0.10	0.088	O	|	|	|	|	0.05
170.583	0.00	0.10	0.087	O	|	|	|	|	0.05
170.667	0.00	0.10	0.086	O	|	|	|	|	0.05
170.750	0.00	0.10	0.086	O	|	|	|	|	0.05
170.833	0.00	0.10	0.085	O	|	|	|	|	0.05
170.917	0.00	0.10	0.084	O	|	|	|	|	0.05
171.000	0.00	0.09	0.084	O	|	|	|	|	0.05
171.083	0.00	0.09	0.083	O	|	|	|	|	0.05
171.167	0.00	0.09	0.082	O	|	|	|	|	0.05
171.250	0.00	0.09	0.082	O	|	|	|	|	0.05
171.333	0.00	0.09	0.081	O	|	|	|	|	0.05
171.417	0.00	0.09	0.080	O	|	|	|	|	0.05
171.500	0.00	0.09	0.080	O	|	|	|	|	0.05
171.583	0.00	0.09	0.079	O	|	|	|	|	0.05
171.667	0.00	0.09	0.079	O	|	|	|	|	0.05
171.750	0.00	0.09	0.078	O	|	|	|	|	0.05
171.833	0.00	0.09	0.077	O	|	|	|	|	0.05
171.917	0.00	0.09	0.077	O	|	|	|	|	0.05
172.000	0.00	0.09	0.076	O	|	|	|	|	0.05
172.083	0.00	0.09	0.076	O	|	|	|	|	0.05
172.167	0.00	0.08	0.075	O	|	|	|	|	0.05
172.250	0.00	0.08	0.074	O	|	|	|	|	0.05
172.333	0.00	0.08	0.074	O	|	|	|	|	0.05
172.417	0.00	0.08	0.073	O	|	|	|	|	0.05
172.500	0.00	0.08	0.073	O	|	|	|	|	0.04
172.583	0.00	0.08	0.072	O	|	|	|	|	0.04
172.667	0.00	0.08	0.072	O	|	|	|	|	0.04
172.750	0.00	0.08	0.071	O	|	|	|	|	0.04
172.833	0.00	0.08	0.070	O	|	|	|	|	0.04
172.917	0.00	0.08	0.070	O	|	|	|	|	0.04
173.000	0.00	0.08	0.069	O	|	|	|	|	0.04
173.083	0.00	0.08	0.069	O	|	|	|	|	0.04

173.167	0.00	0.08	0.068	O	|	|	|	|	0.04
173.250	0.00	0.08	0.068	O	|	|	|	|	0.04
173.333	0.00	0.08	0.067	O	|	|	|	|	0.04
173.417	0.00	0.08	0.067	O	|	|	|	|	0.04
173.500	0.00	0.07	0.066	O	|	|	|	|	0.04
173.583	0.00	0.07	0.066	O	|	|	|	|	0.04
173.667	0.00	0.07	0.065	O	|	|	|	|	0.04
173.750	0.00	0.07	0.065	O	|	|	|	|	0.04
173.833	0.00	0.07	0.064	O	|	|	|	|	0.04
173.917	0.00	0.07	0.064	O	|	|	|	|	0.04
174.000	0.00	0.07	0.063	O	|	|	|	|	0.04
174.083	0.00	0.07	0.063	O	|	|	|	|	0.04
174.167	0.00	0.07	0.062	O	|	|	|	|	0.04
174.250	0.00	0.07	0.062	O	|	|	|	|	0.04
174.333	0.00	0.07	0.061	O	|	|	|	|	0.04
174.417	0.00	0.07	0.061	O	|	|	|	|	0.04
174.500	0.00	0.07	0.060	O	|	|	|	|	0.04
174.583	0.00	0.07	0.060	O	|	|	|	|	0.04
174.667	0.00	0.07	0.059	O	|	|	|	|	0.04
174.750	0.00	0.07	0.059	O	|	|	|	|	0.04
174.833	0.00	0.07	0.058	O	|	|	|	|	0.04
174.917	0.00	0.07	0.058	O	|	|	|	|	0.04
175.000	0.00	0.07	0.057	O	|	|	|	|	0.04
175.083	0.00	0.06	0.057	O	|	|	|	|	0.04
175.167	0.00	0.06	0.057	O	|	|	|	|	0.03
175.250	0.00	0.06	0.056	O	|	|	|	|	0.03
175.333	0.00	0.06	0.056	O	|	|	|	|	0.03
175.417	0.00	0.06	0.055	O	|	|	|	|	0.03
175.500	0.00	0.06	0.055	O	|	|	|	|	0.03
175.583	0.00	0.06	0.054	O	|	|	|	|	0.03
175.667	0.00	0.06	0.054	O	|	|	|	|	0.03
175.750	0.00	0.06	0.054	O	|	|	|	|	0.03
175.833	0.00	0.06	0.053	O	|	|	|	|	0.03
175.917	0.00	0.06	0.053	O	|	|	|	|	0.03
176.000	0.00	0.06	0.052	O	|	|	|	|	0.03
176.083	0.00	0.06	0.052	O	|	|	|	|	0.03
176.167	0.00	0.06	0.052	O	|	|	|	|	0.03
176.250	0.00	0.06	0.051	O	|	|	|	|	0.03
176.333	0.00	0.06	0.051	O	|	|	|	|	0.03
176.417	0.00	0.06	0.050	O	|	|	|	|	0.03
176.500	0.00	0.06	0.050	O	|	|	|	|	0.03
176.583	0.00	0.06	0.050	O	|	|	|	|	0.03
176.667	0.00	0.06	0.049	O	|	|	|	|	0.03
176.750	0.00	0.06	0.049	O	|	|	|	|	0.03
176.833	0.00	0.05	0.048	O	|	|	|	|	0.03
176.917	0.00	0.05	0.048	O	|	|	|	|	0.03
177.000	0.00	0.05	0.048	O	|	|	|	|	0.03
177.083	0.00	0.05	0.047	O	|	|	|	|	0.03
177.167	0.00	0.05	0.047	O	|	|	|	|	0.03
177.250	0.00	0.05	0.047	O	|	|	|	|	0.03
177.333	0.00	0.05	0.046	O	|	|	|	|	0.03
177.417	0.00	0.05	0.046	O	|	|	|	|	0.03
177.500	0.00	0.05	0.046	O	|	|	|	|	0.03
177.583	0.00	0.05	0.045	O	|	|	|	|	0.03

177.667	0.00	0.05	0.045	O	|	|	|	|	0.03
177.750	0.00	0.05	0.044	O	|	|	|	|	0.03
177.833	0.00	0.05	0.044	O	|	|	|	|	0.03
177.917	0.00	0.05	0.044	O	|	|	|	|	0.03
178.000	0.00	0.05	0.043	O	|	|	|	|	0.03
178.083	0.00	0.05	0.043	O	|	|	|	|	0.03
178.167	0.00	0.05	0.043	O	|	|	|	|	0.03
178.250	0.00	0.05	0.042	O	|	|	|	|	0.03
178.333	0.00	0.05	0.042	O	|	|	|	|	0.03
178.417	0.00	0.05	0.042	O	|	|	|	|	0.03
178.500	0.00	0.05	0.041	O	|	|	|	|	0.03
178.583	0.00	0.05	0.041	O	|	|	|	|	0.03
178.667	0.00	0.05	0.041	O	|	|	|	|	0.03
178.750	0.00	0.05	0.040	O	|	|	|	|	0.02
178.833	0.00	0.05	0.040	O	|	|	|	|	0.02
178.917	0.00	0.05	0.040	O	|	|	|	|	0.02
179.000	0.00	0.04	0.040	O	|	|	|	|	0.02
179.083	0.00	0.04	0.039	O	|	|	|	|	0.02
179.167	0.00	0.04	0.039	O	|	|	|	|	0.02
179.250	0.00	0.04	0.039	O	|	|	|	|	0.02
179.333	0.00	0.04	0.038	O	|	|	|	|	0.02
179.417	0.00	0.04	0.038	O	|	|	|	|	0.02
179.500	0.00	0.04	0.038	O	|	|	|	|	0.02
179.583	0.00	0.04	0.037	O	|	|	|	|	0.02
179.667	0.00	0.04	0.037	O	|	|	|	|	0.02
179.750	0.00	0.04	0.037	O	|	|	|	|	0.02
179.833	0.00	0.04	0.037	O	|	|	|	|	0.02
179.917	0.00	0.04	0.036	O	|	|	|	|	0.02
180.000	0.00	0.04	0.036	O	|	|	|	|	0.02
180.083	0.00	0.04	0.036	O	|	|	|	|	0.02
180.167	0.00	0.04	0.035	O	|	|	|	|	0.02
180.250	0.00	0.04	0.035	O	|	|	|	|	0.02
180.333	0.00	0.04	0.035	O	|	|	|	|	0.02
180.417	0.00	0.04	0.035	O	|	|	|	|	0.02
180.500	0.00	0.04	0.034	O	|	|	|	|	0.02
180.583	0.00	0.04	0.034	O	|	|	|	|	0.02
180.667	0.00	0.04	0.034	O	|	|	|	|	0.02
180.750	0.00	0.04	0.034	O	|	|	|	|	0.02
180.833	0.00	0.04	0.033	O	|	|	|	|	0.02
180.917	0.00	0.04	0.033	O	|	|	|	|	0.02
181.000	0.00	0.04	0.033	O	|	|	|	|	0.02
181.083	0.00	0.04	0.033	O	|	|	|	|	0.02
181.167	0.00	0.04	0.032	O	|	|	|	|	0.02
181.250	0.00	0.04	0.032	O	|	|	|	|	0.02
181.333	0.00	0.04	0.032	O	|	|	|	|	0.02
181.417	0.00	0.04	0.032	O	|	|	|	|	0.02
181.500	0.00	0.04	0.031	O	|	|	|	|	0.02
181.583	0.00	0.04	0.031	O	|	|	|	|	0.02
181.667	0.00	0.03	0.031	O	|	|	|	|	0.02
181.750	0.00	0.03	0.031	O	|	|	|	|	0.02
181.833	0.00	0.03	0.030	O	|	|	|	|	0.02
181.917	0.00	0.03	0.030	O	|	|	|	|	0.02
182.000	0.00	0.03	0.030	O	|	|	|	|	0.02
182.083	0.00	0.03	0.030	O	|	|	|	|	0.02

182.167	0.00	0.03	0.029	O	|	|	|	|	0.02
182.250	0.00	0.03	0.029	O	|	|	|	|	0.02
182.333	0.00	0.03	0.029	O	|	|	|	|	0.02
182.417	0.00	0.03	0.029	O	|	|	|	|	0.02
182.500	0.00	0.03	0.029	O	|	|	|	|	0.02
182.583	0.00	0.03	0.028	O	|	|	|	|	0.02
182.667	0.00	0.03	0.028	O	|	|	|	|	0.02
182.750	0.00	0.03	0.028	O	|	|	|	|	0.02
182.833	0.00	0.03	0.028	O	|	|	|	|	0.02
182.917	0.00	0.03	0.027	O	|	|	|	|	0.02
183.000	0.00	0.03	0.027	O	|	|	|	|	0.02
183.083	0.00	0.03	0.027	O	|	|	|	|	0.02
183.167	0.00	0.03	0.027	O	|	|	|	|	0.02
183.250	0.00	0.03	0.027	O	|	|	|	|	0.02
183.333	0.00	0.03	0.026	O	|	|	|	|	0.02
183.417	0.00	0.03	0.026	O	|	|	|	|	0.02
183.500	0.00	0.03	0.026	O	|	|	|	|	0.02
183.583	0.00	0.03	0.026	O	|	|	|	|	0.02
183.667	0.00	0.03	0.026	O	|	|	|	|	0.02
183.750	0.00	0.03	0.025	O	|	|	|	|	0.02
183.833	0.00	0.03	0.025	O	|	|	|	|	0.02
183.917	0.00	0.03	0.025	O	|	|	|	|	0.02
184.000	0.00	0.03	0.025	O	|	|	|	|	0.02
184.083	0.00	0.03	0.025	O	|	|	|	|	0.02
184.167	0.00	0.03	0.024	O	|	|	|	|	0.02
184.250	0.00	0.03	0.024	O	|	|	|	|	0.01
184.333	0.00	0.03	0.024	O	|	|	|	|	0.01
184.417	0.00	0.03	0.024	O	|	|	|	|	0.01
184.500	0.00	0.03	0.024	O	|	|	|	|	0.01
184.583	0.00	0.03	0.023	O	|	|	|	|	0.01
184.667	0.00	0.03	0.023	O	|	|	|	|	0.01
184.750	0.00	0.03	0.023	O	|	|	|	|	0.01
184.833	0.00	0.03	0.023	O	|	|	|	|	0.01
184.917	0.00	0.03	0.023	O	|	|	|	|	0.01
185.000	0.00	0.03	0.023	O	|	|	|	|	0.01
185.083	0.00	0.03	0.022	O	|	|	|	|	0.01
185.167	0.00	0.03	0.022	O	|	|	|	|	0.01
185.250	0.00	0.02	0.022	O	|	|	|	|	0.01
185.333	0.00	0.02	0.022	O	|	|	|	|	0.01
185.417	0.00	0.02	0.022	O	|	|	|	|	0.01
185.500	0.00	0.02	0.022	O	|	|	|	|	0.01
185.583	0.00	0.02	0.021	O	|	|	|	|	0.01
185.667	0.00	0.02	0.021	O	|	|	|	|	0.01
185.750	0.00	0.02	0.021	O	|	|	|	|	0.01
185.833	0.00	0.02	0.021	O	|	|	|	|	0.01
185.917	0.00	0.02	0.021	O	|	|	|	|	0.01
186.000	0.00	0.02	0.021	O	|	|	|	|	0.01
186.083	0.00	0.02	0.020	O	|	|	|	|	0.01
186.167	0.00	0.02	0.020	O	|	|	|	|	0.01
186.250	0.00	0.02	0.020	O	|	|	|	|	0.01
186.333	0.00	0.02	0.020	O	|	|	|	|	0.01
186.417	0.00	0.02	0.020	O	|	|	|	|	0.01
186.500	0.00	0.02	0.020	O	|	|	|	|	0.01
186.583	0.00	0.02	0.019	O	|	|	|	|	0.01

186.667	0.00	0.02	0.019	O	|	|	|	|	0.01
186.750	0.00	0.02	0.019	O	|	|	|	|	0.01
186.833	0.00	0.02	0.019	O	|	|	|	|	0.01
186.917	0.00	0.02	0.019	O	|	|	|	|	0.01
187.000	0.00	0.02	0.019	O	|	|	|	|	0.01
187.083	0.00	0.02	0.019	O	|	|	|	|	0.01
187.167	0.00	0.02	0.018	O	|	|	|	|	0.01
187.250	0.00	0.02	0.018	O	|	|	|	|	0.01
187.333	0.00	0.02	0.018	O	|	|	|	|	0.01
187.417	0.00	0.02	0.018	O	|	|	|	|	0.01
187.500	0.00	0.02	0.018	O	|	|	|	|	0.01
187.583	0.00	0.02	0.018	O	|	|	|	|	0.01
187.667	0.00	0.02	0.018	O	|	|	|	|	0.01
187.750	0.00	0.02	0.017	O	|	|	|	|	0.01
187.833	0.00	0.02	0.017	O	|	|	|	|	0.01
187.917	0.00	0.02	0.017	O	|	|	|	|	0.01
188.000	0.00	0.02	0.017	O	|	|	|	|	0.01
188.083	0.00	0.02	0.017	O	|	|	|	|	0.01
188.167	0.00	0.02	0.017	O	|	|	|	|	0.01
188.250	0.00	0.02	0.017	O	|	|	|	|	0.01
188.333	0.00	0.02	0.017	O	|	|	|	|	0.01
188.417	0.00	0.02	0.016	O	|	|	|	|	0.01
188.500	0.00	0.02	0.016	O	|	|	|	|	0.01
188.583	0.00	0.02	0.016	O	|	|	|	|	0.01
188.667	0.00	0.02	0.016	O	|	|	|	|	0.01
188.750	0.00	0.02	0.016	O	|	|	|	|	0.01
188.833	0.00	0.02	0.016	O	|	|	|	|	0.01
188.917	0.00	0.02	0.016	O	|	|	|	|	0.01
189.000	0.00	0.02	0.016	O	|	|	|	|	0.01
189.083	0.00	0.02	0.015	O	|	|	|	|	0.01
189.167	0.00	0.02	0.015	O	|	|	|	|	0.01
189.250	0.00	0.02	0.015	O	|	|	|	|	0.01
189.333	0.00	0.02	0.015	O	|	|	|	|	0.01
189.417	0.00	0.02	0.015	O	|	|	|	|	0.01
189.500	0.00	0.02	0.015	O	|	|	|	|	0.01
189.583	0.00	0.02	0.015	O	|	|	|	|	0.01
189.667	0.00	0.02	0.015	O	|	|	|	|	0.01
189.750	0.00	0.02	0.014	O	|	|	|	|	0.01
189.833	0.00	0.02	0.014	O	|	|	|	|	0.01
189.917	0.00	0.02	0.014	O	|	|	|	|	0.01
190.000	0.00	0.02	0.014	O	|	|	|	|	0.01
190.083	0.00	0.02	0.014	O	|	|	|	|	0.01
190.167	0.00	0.02	0.014	O	|	|	|	|	0.01
190.250	0.00	0.02	0.014	O	|	|	|	|	0.01
190.333	0.00	0.02	0.014	O	|	|	|	|	0.01
190.417	0.00	0.02	0.014	O	|	|	|	|	0.01
190.500	0.00	0.02	0.013	O	|	|	|	|	0.01
190.583	0.00	0.02	0.013	O	|	|	|	|	0.01
190.667	0.00	0.02	0.013	O	|	|	|	|	0.01
190.750	0.00	0.01	0.013	O	|	|	|	|	0.01
190.833	0.00	0.01	0.013	O	|	|	|	|	0.01
190.917	0.00	0.01	0.013	O	|	|	|	|	0.01
191.000	0.00	0.01	0.013	O	|	|	|	|	0.01
191.083	0.00	0.01	0.013	O	|	|	|	|	0.01

191.167	0.00	0.01	0.013	O	|	|	|	|	0.01
191.250	0.00	0.01	0.013	O	|	|	|	|	0.01
191.333	0.00	0.01	0.012	O	|	|	|	|	0.01
191.417	0.00	0.01	0.012	O	|	|	|	|	0.01
191.500	0.00	0.01	0.012	O	|	|	|	|	0.01
191.583	0.00	0.01	0.012	O	|	|	|	|	0.01
191.667	0.00	0.01	0.012	O	|	|	|	|	0.01
191.750	0.00	0.01	0.012	O	|	|	|	|	0.01
191.833	0.00	0.01	0.012	O	|	|	|	|	0.01
191.917	0.00	0.01	0.012	O	|	|	|	|	0.01
192.000	0.00	0.01	0.012	O	|	|	|	|	0.01
192.083	0.00	0.01	0.012	O	|	|	|	|	0.01
192.167	0.00	0.01	0.012	O	|	|	|	|	0.01
192.250	0.00	0.01	0.011	O	|	|	|	|	0.01
192.333	0.00	0.01	0.011	O	|	|	|	|	0.01
192.417	0.00	0.01	0.011	O	|	|	|	|	0.01
192.500	0.00	0.01	0.011	O	|	|	|	|	0.01
192.583	0.00	0.01	0.011	O	|	|	|	|	0.01
192.667	0.00	0.01	0.011	O	|	|	|	|	0.01
192.750	0.00	0.01	0.011	O	|	|	|	|	0.01
192.833	0.00	0.01	0.011	O	|	|	|	|	0.01
192.917	0.00	0.01	0.011	O	|	|	|	|	0.01
193.000	0.00	0.01	0.011	O	|	|	|	|	0.01
193.083	0.00	0.01	0.011	O	|	|	|	|	0.01
193.167	0.00	0.01	0.011	O	|	|	|	|	0.01
193.250	0.00	0.01	0.010	O	|	|	|	|	0.01
193.333	0.00	0.01	0.010	O	|	|	|	|	0.01
193.417	0.00	0.01	0.010	O	|	|	|	|	0.01
193.500	0.00	0.01	0.010	O	|	|	|	|	0.01
193.583	0.00	0.01	0.010	O	|	|	|	|	0.01
193.667	0.00	0.01	0.010	O	|	|	|	|	0.01
193.750	0.00	0.01	0.010	O	|	|	|	|	0.01
193.833	0.00	0.01	0.010	O	|	|	|	|	0.01
193.917	0.00	0.01	0.010	O	|	|	|	|	0.01
194.000	0.00	0.01	0.010	O	|	|	|	|	0.01
194.083	0.00	0.01	0.010	O	|	|	|	|	0.01
194.167	0.00	0.01	0.010	O	|	|	|	|	0.01
194.250	0.00	0.01	0.010	O	|	|	|	|	0.01
194.333	0.00	0.01	0.009	O	|	|	|	|	0.01
194.417	0.00	0.01	0.009	O	|	|	|	|	0.01
194.500	0.00	0.01	0.009	O	|	|	|	|	0.01
194.583	0.00	0.01	0.009	O	|	|	|	|	0.01
194.667	0.00	0.01	0.009	O	|	|	|	|	0.01
194.750	0.00	0.01	0.009	O	|	|	|	|	0.01
194.833	0.00	0.01	0.009	O	|	|	|	|	0.01
194.917	0.00	0.01	0.009	O	|	|	|	|	0.01
195.000	0.00	0.01	0.009	O	|	|	|	|	0.01
195.083	0.00	0.01	0.009	O	|	|	|	|	0.01
195.167	0.00	0.01	0.009	O	|	|	|	|	0.01
195.250	0.00	0.01	0.009	O	|	|	|	|	0.01
195.333	0.00	0.01	0.009	O	|	|	|	|	0.01
195.417	0.00	0.01	0.009	O	|	|	|	|	0.01
195.500	0.00	0.01	0.008	O	|	|	|	|	0.01
195.583	0.00	0.01	0.008	O	|	|	|	|	0.01

195.667	0.00	0.01	0.008	O	|	|	|	|	0.01
195.750	0.00	0.01	0.008	O	|	|	|	|	0.01
195.833	0.00	0.01	0.008	O	|	|	|	|	0.01
195.917	0.00	0.01	0.008	O	|	|	|	|	0.01
196.000	0.00	0.01	0.008	O	|	|	|	|	0.00
196.083	0.00	0.01	0.008	O	|	|	|	|	0.00
196.167	0.00	0.01	0.008	O	|	|	|	|	0.00
196.250	0.00	0.01	0.008	O	|	|	|	|	0.00
196.333	0.00	0.01	0.008	O	|	|	|	|	0.00
196.417	0.00	0.01	0.008	O	|	|	|	|	0.00
196.500	0.00	0.01	0.008	O	|	|	|	|	0.00
196.583	0.00	0.01	0.008	O	|	|	|	|	0.00
196.667	0.00	0.01	0.008	O	|	|	|	|	0.00
196.750	0.00	0.01	0.008	O	|	|	|	|	0.00
196.833	0.00	0.01	0.007	O	|	|	|	|	0.00
196.917	0.00	0.01	0.007	O	|	|	|	|	0.00
197.000	0.00	0.01	0.007	O	|	|	|	|	0.00
197.083	0.00	0.01	0.007	O	|	|	|	|	0.00
197.167	0.00	0.01	0.007	O	|	|	|	|	0.00
197.250	0.00	0.01	0.007	O	|	|	|	|	0.00
197.333	0.00	0.01	0.007	O	|	|	|	|	0.00
197.417	0.00	0.01	0.007	O	|	|	|	|	0.00
197.500	0.00	0.01	0.007	O	|	|	|	|	0.00
197.583	0.00	0.01	0.007	O	|	|	|	|	0.00
197.667	0.00	0.01	0.007	O	|	|	|	|	0.00
197.750	0.00	0.01	0.007	O	|	|	|	|	0.00
197.833	0.00	0.01	0.007	O	|	|	|	|	0.00
197.917	0.00	0.01	0.007	O	|	|	|	|	0.00
198.000	0.00	0.01	0.007	O	|	|	|	|	0.00
198.083	0.00	0.01	0.007	O	|	|	|	|	0.00
198.167	0.00	0.01	0.007	O	|	|	|	|	0.00
198.250	0.00	0.01	0.007	O	|	|	|	|	0.00
198.333	0.00	0.01	0.006	O	|	|	|	|	0.00
198.417	0.00	0.01	0.006	O	|	|	|	|	0.00
198.500	0.00	0.01	0.006	O	|	|	|	|	0.00
198.583	0.00	0.01	0.006	O	|	|	|	|	0.00
198.667	0.00	0.01	0.006	O	|	|	|	|	0.00
198.750	0.00	0.01	0.006	O	|	|	|	|	0.00
198.833	0.00	0.01	0.006	O	|	|	|	|	0.00
198.917	0.00	0.01	0.006	O	|	|	|	|	0.00
199.000	0.00	0.01	0.006	O	|	|	|	|	0.00
199.083	0.00	0.01	0.006	O	|	|	|	|	0.00
199.167	0.00	0.01	0.006	O	|	|	|	|	0.00
199.250	0.00	0.01	0.006	O	|	|	|	|	0.00
199.333	0.00	0.01	0.006	O	|	|	|	|	0.00
199.417	0.00	0.01	0.006	O	|	|	|	|	0.00
199.500	0.00	0.01	0.006	O	|	|	|	|	0.00
199.583	0.00	0.01	0.006	O	|	|	|	|	0.00
199.667	0.00	0.01	0.006	O	|	|	|	|	0.00
199.750	0.00	0.01	0.006	O	|	|	|	|	0.00
199.833	0.00	0.01	0.006	O	|	|	|	|	0.00
199.917	0.00	0.01	0.006	O	|	|	|	|	0.00
200.000	0.00	0.01	0.006	O	|	|	|	|	0.00
200.083	0.00	0.01	0.006	O	|	|	|	|	0.00

200.167	0.00	0.01	0.005	O	|	|	|	0.00
200.250	0.00	0.01	0.005	O	|	|	|	0.00
200.333	0.00	0.01	0.005	O	|	|	|	0.00
200.417	0.00	0.01	0.005	O	|	|	|	0.00
200.500	0.00	0.01	0.005	O	|	|	|	0.00
200.583	0.00	0.01	0.005	O	|	|	|	0.00
200.667	0.00	0.01	0.005	O	|	|	|	0.00
200.750	0.00	0.01	0.005	O	|	|	|	0.00
200.833	0.00	0.01	0.005	O	|	|	|	0.00
200.917	0.00	0.01	0.005	O	|	|	|	0.00
201.000	0.00	0.01	0.005	O	|	|	|	0.00
201.083	0.00	0.01	0.005	O	|	|	|	0.00
201.167	0.00	0.01	0.005	O	|	|	|	0.00
201.250	0.00	0.01	0.005	O	|	|	|	0.00
201.333	0.00	0.01	0.005	O	|	|	|	0.00
201.417	0.00	0.01	0.005	O	|	|	|	0.00
201.500	0.00	0.01	0.005	O	|	|	|	0.00
201.583	0.00	0.01	0.005	O	|	|	|	0.00
201.667	0.00	0.01	0.005	O	|	|	|	0.00
201.750	0.00	0.01	0.005	O	|	|	|	0.00
201.833	0.00	0.01	0.005	O	|	|	|	0.00
201.917	0.00	0.01	0.005	O	|	|	|	0.00
202.000	0.00	0.01	0.005	O	|	|	|	0.00
202.083	0.00	0.01	0.005	O	|	|	|	0.00
202.167	0.00	0.01	0.005	O	|	|	|	0.00
202.250	0.00	0.01	0.004	O	|	|	|	0.00
202.333	0.00	0.01	0.004	O	|	|	|	0.00
202.417	0.00	0.01	0.004	O	|	|	|	0.00
202.500	0.00	0.00	0.004	O	|	|	|	0.00
202.583	0.00	0.00	0.004	O	|	|	|	0.00
202.667	0.00	0.00	0.004	O	|	|	|	0.00
202.750	0.00	0.00	0.004	O	|	|	|	0.00
202.833	0.00	0.00	0.004	O	|	|	|	0.00
202.917	0.00	0.00	0.004	O	|	|	|	0.00
203.000	0.00	0.00	0.004	O	|	|	|	0.00
203.083	0.00	0.00	0.004	O	|	|	|	0.00
203.167	0.00	0.00	0.004	O	|	|	|	0.00
203.250	0.00	0.00	0.004	O	|	|	|	0.00
203.333	0.00	0.00	0.004	O	|	|	|	0.00
203.417	0.00	0.00	0.004	O	|	|	|	0.00
203.500	0.00	0.00	0.004	O	|	|	|	0.00
203.583	0.00	0.00	0.004	O	|	|	|	0.00
203.667	0.00	0.00	0.004	O	|	|	|	0.00
203.750	0.00	0.00	0.004	O	|	|	|	0.00
203.833	0.00	0.00	0.004	O	|	|	|	0.00
203.917	0.00	0.00	0.004	O	|	|	|	0.00
204.000	0.00	0.00	0.004	O	|	|	|	0.00
204.083	0.00	0.00	0.004	O	|	|	|	0.00
204.167	0.00	0.00	0.004	O	|	|	|	0.00
204.250	0.00	0.00	0.004	O	|	|	|	0.00
204.333	0.00	0.00	0.004	O	|	|	|	0.00
204.417	0.00	0.00	0.004	O	|	|	|	0.00
204.500	0.00	0.00	0.004	O	|	|	|	0.00
204.583	0.00	0.00	0.004	O	|	|	|	0.00

204.667	0.00	0.00	0.004	O	|	|	|	|	0.00
204.750	0.00	0.00	0.004	O	|	|	|	|	0.00
204.833	0.00	0.00	0.004	O	|	|	|	|	0.00
204.917	0.00	0.00	0.004	O	|	|	|	|	0.00
205.000	0.00	0.00	0.003	O	|	|	|	|	0.00
205.083	0.00	0.00	0.003	O	|	|	|	|	0.00
205.167	0.00	0.00	0.003	O	|	|	|	|	0.00
205.250	0.00	0.00	0.003	O	|	|	|	|	0.00
205.333	0.00	0.00	0.003	O	|	|	|	|	0.00
205.417	0.00	0.00	0.003	O	|	|	|	|	0.00
205.500	0.00	0.00	0.003	O	|	|	|	|	0.00
205.583	0.00	0.00	0.003	O	|	|	|	|	0.00
205.667	0.00	0.00	0.003	O	|	|	|	|	0.00
205.750	0.00	0.00	0.003	O	|	|	|	|	0.00
205.833	0.00	0.00	0.003	O	|	|	|	|	0.00
205.917	0.00	0.00	0.003	O	|	|	|	|	0.00
206.000	0.00	0.00	0.003	O	|	|	|	|	0.00
206.083	0.00	0.00	0.003	O	|	|	|	|	0.00
206.167	0.00	0.00	0.003	O	|	|	|	|	0.00
206.250	0.00	0.00	0.003	O	|	|	|	|	0.00
206.333	0.00	0.00	0.003	O	|	|	|	|	0.00
206.417	0.00	0.00	0.003	O	|	|	|	|	0.00
206.500	0.00	0.00	0.003	O	|	|	|	|	0.00
206.583	0.00	0.00	0.003	O	|	|	|	|	0.00
206.667	0.00	0.00	0.003	O	|	|	|	|	0.00
206.750	0.00	0.00	0.003	O	|	|	|	|	0.00
206.833	0.00	0.00	0.003	O	|	|	|	|	0.00
206.917	0.00	0.00	0.003	O	|	|	|	|	0.00
207.000	0.00	0.00	0.003	O	|	|	|	|	0.00
207.083	0.00	0.00	0.003	O	|	|	|	|	0.00
207.167	0.00	0.00	0.003	O	|	|	|	|	0.00
207.250	0.00	0.00	0.003	O	|	|	|	|	0.00
207.333	0.00	0.00	0.003	O	|	|	|	|	0.00
207.417	0.00	0.00	0.003	O	|	|	|	|	0.00
207.500	0.00	0.00	0.003	O	|	|	|	|	0.00
207.583	0.00	0.00	0.003	O	|	|	|	|	0.00
207.667	0.00	0.00	0.003	O	|	|	|	|	0.00
207.750	0.00	0.00	0.003	O	|	|	|	|	0.00
207.833	0.00	0.00	0.003	O	|	|	|	|	0.00
207.917	0.00	0.00	0.003	O	|	|	|	|	0.00
208.000	0.00	0.00	0.003	O	|	|	|	|	0.00
208.083	0.00	0.00	0.003	O	|	|	|	|	0.00
208.167	0.00	0.00	0.003	O	|	|	|	|	0.00
208.250	0.00	0.00	0.003	O	|	|	|	|	0.00
208.333	0.00	0.00	0.003	O	|	|	|	|	0.00
208.417	0.00	0.00	0.003	O	|	|	|	|	0.00
208.500	0.00	0.00	0.003	O	|	|	|	|	0.00
208.583	0.00	0.00	0.002	O	|	|	|	|	0.00
208.667	0.00	0.00	0.002	O	|	|	|	|	0.00
208.750	0.00	0.00	0.002	O	|	|	|	|	0.00
208.833	0.00	0.00	0.002	O	|	|	|	|	0.00
208.917	0.00	0.00	0.002	O	|	|	|	|	0.00
209.000	0.00	0.00	0.002	O	|	|	|	|	0.00
209.083	0.00	0.00	0.002	O	|	|	|	|	0.00

209.167	0.00	0.00	0.002	O	|	|	|	|	0.00
209.250	0.00	0.00	0.002	O	|	|	|	|	0.00
209.333	0.00	0.00	0.002	O	|	|	|	|	0.00
209.417	0.00	0.00	0.002	O	|	|	|	|	0.00
209.500	0.00	0.00	0.002	O	|	|	|	|	0.00
209.583	0.00	0.00	0.002	O	|	|	|	|	0.00
209.667	0.00	0.00	0.002	O	|	|	|	|	0.00
209.750	0.00	0.00	0.002	O	|	|	|	|	0.00
209.833	0.00	0.00	0.002	O	|	|	|	|	0.00
209.917	0.00	0.00	0.002	O	|	|	|	|	0.00
210.000	0.00	0.00	0.002	O	|	|	|	|	0.00
210.083	0.00	0.00	0.002	O	|	|	|	|	0.00
210.167	0.00	0.00	0.002	O	|	|	|	|	0.00
210.250	0.00	0.00	0.002	O	|	|	|	|	0.00
210.333	0.00	0.00	0.002	O	|	|	|	|	0.00
210.417	0.00	0.00	0.002	O	|	|	|	|	0.00
210.500	0.00	0.00	0.002	O	|	|	|	|	0.00
210.583	0.00	0.00	0.002	O	|	|	|	|	0.00
210.667	0.00	0.00	0.002	O	|	|	|	|	0.00
210.750	0.00	0.00	0.002	O	|	|	|	|	0.00
210.833	0.00	0.00	0.002	O	|	|	|	|	0.00
210.917	0.00	0.00	0.002	O	|	|	|	|	0.00
211.000	0.00	0.00	0.002	O	|	|	|	|	0.00
211.083	0.00	0.00	0.002	O	|	|	|	|	0.00
211.167	0.00	0.00	0.002	O	|	|	|	|	0.00
211.250	0.00	0.00	0.002	O	|	|	|	|	0.00
211.333	0.00	0.00	0.002	O	|	|	|	|	0.00
211.417	0.00	0.00	0.002	O	|	|	|	|	0.00
211.500	0.00	0.00	0.002	O	|	|	|	|	0.00
211.583	0.00	0.00	0.002	O	|	|	|	|	0.00
211.667	0.00	0.00	0.002	O	|	|	|	|	0.00
211.750	0.00	0.00	0.002	O	|	|	|	|	0.00
211.833	0.00	0.00	0.002	O	|	|	|	|	0.00
211.917	0.00	0.00	0.002	O	|	|	|	|	0.00
212.000	0.00	0.00	0.002	O	|	|	|	|	0.00
212.083	0.00	0.00	0.002	O	|	|	|	|	0.00
212.167	0.00	0.00	0.002	O	|	|	|	|	0.00
212.250	0.00	0.00	0.002	O	|	|	|	|	0.00
212.333	0.00	0.00	0.002	O	|	|	|	|	0.00
212.417	0.00	0.00	0.002	O	|	|	|	|	0.00
212.500	0.00	0.00	0.002	O	|	|	|	|	0.00
212.583	0.00	0.00	0.002	O	|	|	|	|	0.00
212.667	0.00	0.00	0.002	O	|	|	|	|	0.00
212.750	0.00	0.00	0.002	O	|	|	|	|	0.00
212.833	0.00	0.00	0.002	O	|	|	|	|	0.00
212.917	0.00	0.00	0.002	O	|	|	|	|	0.00
213.000	0.00	0.00	0.002	O	|	|	|	|	0.00
213.083	0.00	0.00	0.002	O	|	|	|	|	0.00
213.167	0.00	0.00	0.002	O	|	|	|	|	0.00
213.250	0.00	0.00	0.002	O	|	|	|	|	0.00

Remaining water in basin = 0.00 (Ac.Ft)

```
        ***************************HYDROGRAPH
DATA***************************
                        Number of intervals =  2559
                        Time interval =    5.0 (Min.)
                        Maximum/Peak flow rate =        0.916 (CFS)
                        Total volume =      11.707 (Ac.Ft)
                Status of hydrographs being held in storage
                           Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
                Peak (CFS)      0.000     0.000     0.000     0.000     0.000
                Vol (Ac.Ft)      0.000     0.000     0.000     0.000     0.000

*******************************************************************************

        ---------------------------------------------------------------------
```

Appendix 8: Source Control

Pollutant Sources/Source Control Checklist

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

How to use this worksheet (also see instructions in Section G of the WQMP Template):

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your WQMP Exhibit.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs in your WQMP. Use the format shown in Table G.1on page 23 of this WQMP Template. Describe your specific BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting BMPs or substituting alternative BMPs for those shown here.

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	**… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE**		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
☒ **A.** On-site storm drain inlets	☒ Locations of inlets. (shown on Rough Grading Plans)	☒ Mark all inlets with the words "Only Rain Down the Storm Drain" or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify.	☒ Maintain and periodically repaint or replace inlet markings. ☒ Provide stormwater pollution prevention information to new site owners, lessees, or operators. ☒ See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
☒ **B.** Interior floor drains and elevator shaft sump pumps		☒ State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	☒ Inspect and maintain drains to prevent blockages and overflow.
☐ **C.** Interior parking garages		☐ State that parking garage floor drains will be plumbed to the sanitary sewer.	☐ Inspect and maintain drains to prevent blockages and overflow.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **D1.** Need for future indoor & structural pest control		☐ Note building design features that discourage entry of pests.	☐ Provide Integrated Pest Management information to owners, lessees, and operators.
☒ **D2.** Landscape/ Outdoor Pesticide Use	☒ Landscape/ Outdoor Pesticide Use	State that final landscape plans will accomplish all of the following. ☒ Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. ☒ Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater by following manufacturers guidelines. ☒ Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. ☒ Consider using pest-resistant plants, especially adjacent to hardscape. ☒ To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	☒ Maintain landscaping using minimum or no pesticides. ☒ See applicable operational BMPs in **"What you should know for…..Landscape and Gardening"** at http://rcflood.org/stormwater/**Error! Hyperlink reference not valid.** ☐ Provide IPM information to new owners, lessees and operators.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **E.** Pools, spas, ponds, decorative fountains, and other water features.	☐ Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet. (Exception: Public pools must be plumbed according to County Department of Environmental Health Guidelines.)	If the Co-Permittee requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	☐ See applicable operational BMPs in "Guidelines for Maintaining Your Swimming Pool, Jacuzzi and Garden Fountain" at http://rcflood.org/stormwater/
☐ **F.** Food service	☐ For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. ☐ On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	☐ Describe the location and features of the designated cleaning area. ☐ Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	☐ See the brochure, "The Food Service Industry Best Management Practices for: Restaurants, Grocery Stores, Delicatessens and Bakeries" at http://rcflood.org/stormwater/ Provide this brochure to new site owners, lessees, and operators.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

☒ **G.** Refuse areas	☒ Show where site refuse and recycled materials will be handled and stored securely for pickup. See local municipal requirements for sizes and other details of refuse areas. ☒ If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area.	☒ State how site refuse will be handled and provide supporting detail to what is shown on plans. ☒ State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	☒ State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. See Fact Sheet WM-4 "Spill Prevention and Control" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
☐ **H.** Industrial processes.	☐ Show process area.	☐ If industrial processes are to be located on site, state: "All process activities to be performed indoors. No processes to drain to exterior or to storm drain system."	☐ See Fact Sheet SC-10, "Non-Stormwater Discharges" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com See the brochure "Industrial & Commercial Facilities Best Management Practices for: Industrial, Commercial Facilities" at http://rcflood.org/stormwater/

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **I.** Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)	☐ Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area. ☐ Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. ☐ Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.	Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains. Where appropriate, reference documentation of compliance with the requirements of Hazardous Materials Programs for: ▪ Hazardous Waste Generation ▪ Hazardous Materials Release Response and Inventory ▪ California Accidental Release (CalARP) ▪ Aboveground Storage Tank ▪ Uniform Fire Code Article 80 Section 103(b) & (c) 1991 ▪ Underground Storage Tank www.cchealth.org/groups/hazmat	☐ See the Fact Sheets SC-31, "Outdoor Liquid Container Storage" and SC-33, "Outdoor Storage of Raw Materials " in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
☐ **J.** Vehicle and Equipment Cleaning	☐ **Show on drawings as appropriate:** **(1) Commercial/industrial facilities having vehicle/equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses.** **(2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use).** **(3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer.** **(4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.**	☐ **If a car wash area is not provided, describe any measures taken to discourage on-site car washing and explain how these will be enforced.**	**Describe operational measures to implement the following (if applicable):** ☐ **Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system.** Refer to "Outdoor Cleaning Activities and Professional Mobile Service Providers" for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/ ❑**Car dealerships and similar may rinse cars with water only.**

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **K.** Vehicle/Equipment Repair and Maintenance	☐ Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater. ☐ Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas. ☐ Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.	☐ State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. ☐ State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements. ☐ State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.	In the Stormwater Control Plan, note that all of the following restrictions apply to use the site: ☐ No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains. ☐ No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately. ☐ No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment. Refer to "Automotive Maintenance & Car Care Best Management Practices for Auto Body Shops, Auto Repair Shops, Car Dealerships, Gas Stations and Fleet Service Operations". Brochure can be found at http://rcflood.org/stormwater/ Refer to Outdoor Cleaning Activities and Professional Mobile Service Providers for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☐ **L.** Fuel Dispensing Areas	☐ Fueling areas[6] shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable. ☐ Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area[1].] The canopy [or cover] shall not drain onto the fueling area.		☐ The property owner shall dry sweep the fueling area routinely. ☐ See the Fact Sheet SD-30 , "Fueling Areas" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

[6] The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☒ **M.** Loading Docks	☒ Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas shall be drained to the sanitary sewer, or diverted and collected for ultimate discharge to the sanitary sewer. ☐ Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. ☐ Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		☒ Move loaded and unloaded items indoors as soon as possible. ☒ See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
☒ **N.** Fire Sprinkler Test Water		☒ Provide a means to drain fire sprinkler test water to the sanitary sewer.	☒ See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
O. Miscellaneous Drain or Wash Water or Other Sources ☐ Boiler drain lines ☐ Condensate drain lines ☒ Rooftop equipment ☐ Drainage sumps ☒ Roofing, gutters, and trim. ☐ Other sources		☐ Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. ☐ Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. ☒ Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment. ☐ Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. ☒ Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff. ☐ Include controls for other sources as specified by local reviewer.	

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☒ **P.** Plazas, sidewalks, and parking lots.			☒ Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Use absorbent to collect fluids, oil and greases and dispose of properly to prevent entry into the storm drain system. In the event washwater is required, it is to be contained and collected without entering the storm drain system.

Appendix 9: O&M

Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms

Operation and Maintenance Plan for the Stormwater Quality BMP Facilities
for
Beaumont Pointe

May 8, 2023

I. PURPOSE

The primary purpose of this Operations & Maintenance Plan (O&M Plan) shall be to provide a routine maintenance program that maintains the treatment facilities effectiveness.

II. COVERAGE AREA

This project will utilize 4 primary treatment facility type located on-site:

1. Extended Detention “Basin 1” – Located between proposed buildings 1 and 2.
2. Extended Detention “Basin 2” – Located between proposed buildings 2 and 3.
3. Extended Detention “Basin 3” – Located between proposed buildings 3 and 4.
4. Extended Detention “Basin 4” – Located between proposed buildings 4 and 5.
5. Bioretention “Basin 5” – Located at the northeast corner of the property, adjacent to Jackrabbit Trail.
6. Self-treating areas “DMA PA-1” for mass graded condition– Located at northeast corner of the property, intersection of Entertainment Avenue and Jackrabbit Trail
7. Self-treating areas “DMA PA-2” for mass graded condition– Located at northeast corner of the property, adjacent to Jackrabbit Trail

These facilities treat stormwater runoff from the site and outlet into various natural detention areas of which all cross the 60 Freeway via existing culverts. All of the culverts confluence with the San Timoteo Creek. From here the flows drain to the Santa Ana River and ultimately ending up at the Pacific Ocean.

III. ROUTINE MAINTENANCE ACTIVITIES

Primary maintenance activities include vegetation management, trash and sediment removal, irrigation maintenance and storm drain outlet inspections. Although mosquito abatement is a concern, the basins and swales are designed to fully drain within 24-72 hours and not include permanent pools or standing water. Routine maintenance activities, and the frequency at which they will be conducted, are shown in Table 1 below.

NOTE: Landscape Maintenance Plan should also be reviewed for consistency with vegetation maintenance and any applicable needs for specific plants, shrubs or trees.

Table 1 Routine Maintenance Activities for Basins & Swales		
No.	**Maintenance Task**	**Frequency of Task**
1	Conduct annual vegetation management during the summer, removing weeds and harvesting vegetation. Remove all grass cuttings and other green waste.	Once a year
2	Trim vegetation at beginning and end of wet season to prevent establishment of woody vegetation, and for aesthetics and mosquito control.	Twice a year (spring and fall)
3	Evaluate health of vegetation and remove or replace any dead or dying plants. Remove all green waste and dispose of properly.	Twice a year
4	If turf grass is included in basin/swale design, conduct regular mowing and remove all grass cuttings. Avoid producing ruts when mowing.	As necessary to not allow grass over-growth
7	Remove accumulated trash and debris from the middle and end of the wet season and dispose of trash and debris properly.	Twice a year (January and April)
8	Irrigate during dry weather.	Per Landscape Plans
9	Inspect basins and swales using the attached inspection checklists.	Quarterly, or as needed

IV. PROHIBITIONS

The use of pesticides and quick release fertilizers shall be minimized, and the principles of integrated pest management (IPM) followed:

1. Employ non-chemical controls (biological, physical and cultural controls) before using chemicals to treat a pest problem.
2. Prune plants properly and at the appropriate time of year.
3. Provide adequate irrigation for landscape plants. Do not over water.
4. Limit fertilizer use unless soil testing indicates a deficiency. Slow-release or organic fertilizer is preferable. Check with municipality for specific requirements.

5. Pest control should avoid harming non-target organisms, or negatively affecting air and water quality and public health. Apply chemical controls only when monitoring indicates that preventative and non-chemical methods are not keeping pests below acceptable levels. When pesticides are required, apply the least toxic and the least persistent pesticide that will provide adequate pest control. Do not apply pesticides on a prescheduled basis.
6. Sweep up spilled fertilizer and pesticides. Do not wash away or bury such spills.
7. Do not over apply pesticide. Spray only where the infestation exists. Follow the manufacturer's instructions for mixing and applying materials.
8. Only licensed, trained pesticide applicators shall apply pesticides.
9. Apply pesticides at the appropriate time to maximize their effectiveness and minimize the likelihood of discharging pesticides into runoff. With the exception of pre-emergent pesticides, avoid application if rain is expected.
10. Unwanted/unused pesticides shall be disposed as hazardous waste.

Standing water shall not remain in the treatment and/or hydromodification management measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the City of Beaumont for the appropriate contact for Mosquito Abatement, as needed for assistance. Mosquito larvicides shall be applied only when absolutely necessary and then only by a licensed professional or contractor. Contact information for the Riverside County Environmental Health – Vector Control is provided below.

Riverside County Department of Environmental Health – Vector Control

Downtown Riverside Office
3880 Lemon Street, 2nd Floor
Riverside, CA 92501
Phone: (951) 955-8980
Emergency After Hours: (951) 782-2968
http://www.rivcoeh.org/opencms/rivcoeh/ProgServices/Food_Program/Vector.html

V. INSPECTIONS

The attached Inspection and Maintenance Checklists shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

Basin Inspection and Maintenance Checklist

Property Address: _____ Property Owner: _____

Treatment Measure No.: _____ Date of Inspection: _____ Type of Inspection: □ Monthly □ Pre-Wet Season
□ After heavy runoff □ End of Wet Season
Inspector(s): _____ □ Other:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	**Results Expected When Maintenance Is Performed**
General				
Trash & Debris	• Trash and debris accumulated in basin. • Visual evidence of dumping.			Trash and debris cleared from site and disposed of properly.
Poisonous Vegetation and noxious weeds	Poisonous or nuisance vegetation or noxious weeds, e.g., morning glory, English ivy, reed canary grass, Japanese knotweed, purple loosestrife, blackberry, Scotch broom, poison oak, stinging nettles, or devil's club.			Use Integrated Pest Management techniques to control noxious weeds or invasive species.
Contaminants and Pollution	Any evidence of oil, gasoline, contaminants or other pollutants.			No contaminants or pollutants present.
Rodent Holes	If facility acts as a dam or berm, any evidence of rodent holes, or any evidence of water piping through dam, berm or into slopes via rodent holes.			The design specifications are not compromised by holes. Any rodent control activities are in accordance with applicable laws and do not affect any protected species.
Insects	Insects such as wasps and hornets interfere with maintenance activities.			Insects do not interfere with maintenance activities.

Basin & Swales Inspection and Maintenance Checklist

Date of Inspection:_____

Property Address: _____

Treatment Measure No.:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	**Results Expected When Maintenance Is Performed**
Tree/Brush Growth and Hazard Trees	• Growth does not allow maintenance access or interferes with maintenance activity. • Dead, diseased, or dying trees/shrubs.			• Trees do not hinder maintenance activities. • Remove hazard trees as approved by the City. (Use a certified Arborist to determine health of tree or removal requirements).
Drainage time	Standing water remains in basin more than five days.			Correct any circumstances that restrict the flow of water from the system. Restore drainage to design condition. If the problem cannot be corrected and problems with standing water recur, then mosquitoes should be controlled with larvicides, applied by a licensed pesticide applicator.
Outfall structure	Debris or silt build-up obstructs an outfall structure.			Remove debris and/or silt build-up and dispose of properly.
Side Slopes				
Erosion	• Eroded over 2 in. deep where cause of damage is still present or where there is potential for continued erosion. • Any erosion on a compacted berm embankment.			Cause of erosion is managed appropriately. Side slopes or berm are restored to design specifications, as needed.
Storage Area				
Sediment	Accumulated sediment >10% of designed basin depth or affects inletting or outletting condition of the facility.			Sediment cleaned out to designed basin shape and depth; basin reseeded if necessary to control erosion. Sediment disposed of properly.
Liner (If Applicable)	Liner is visible and has more than three 1/4-inch holes in it.			Liner repaired or replaced. Liner is fully covered.
Emergency Overflow / Spillway and Berms				
Settlement	Berm settlement 4 inches lower than the design elevation.			Dike is built back to the design elevation.

Basin & Swales Inspection and Maintenance Checklist

Date of Inspection:_____

Property Address: _____

Treatment Measure No.:_____

Defect	Conditions When Maintenance Is Needed	Maintenance Needed? (Y/N)	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Tree Growth	Tree growth on berms or emergency spillway >4 ft in height or covering more than 10% of spillway.			• Trees should be removed. If root system is small (base less than 4 inches) the root system may be left in place. Otherwise the roots should be removed and the berm restored. • A civil engineer should be consulted for proper berm/spillway restoration.
Emergency Overflow/ Spillway	Rock is missing and soil is exposed at top of spillway or outside slope.			Rocks and pad depth are restored to design standards.
Debris Barriers (e.g., Trash Racks)				
Trash and Debris	Trash or debris is plugging openings in the barrier.			Trash or debris is removed and disposed of properly.
Damaged/ Missing Bars	Bars are missing, loose, bent out of shape, or deteriorating due to excessive rust.			Bars are repaired or replaced to allow proper functioning of trash rack.
Inlet/Outlet Pipe	Debris barrier is missing or not attached to pipe.			Debris barrier is repaired or replaced to allow proper functioning of trash rack.
Fencing and Gates				
Missing or broken parts	Any defect in or damage to the fence or gate that permits easy entry to a facility.			Fencing and gate are restored to design specifications.
Deteriorating Paint or Protective Coating	Part or parts that have a rusting or scaling condition that has affected structural adequacy.			Paint or protective coating is sufficient to protect structural adequacy of fence or gate.
Flow Duration Control Outlet (if included in design to meet Hydromodification Management Standard)				
Risers, orifices and screens	Any debris or clogging			Restore unobstructed flow through discharge structure; to meet original design; dispose of debris properly.
Drawdown time	Noticeable ponding exceeding 72-hours after a design storm event			Restore infiltration and ponded waters permeate. Scarification should only be performed when there are signs of clogging rather than on a routine basis. Always remove deposited sediments before scarification and use a hand-guided rotary tiller.
Swales (in addition to general items listed above)				

Basin & Swales Inspection and Maintenance Checklist

Date of Inspection:_____

Property Address: _____

Treatment Measure No.:_____

Defect	**Conditions When Maintenance Is Needed**	**Maintenance Needed? (Y/N)**	**Comments** (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	**Results Expected When Maintenance Is Performed**
Impeded Flow	Twice annually at beginning and end of wet season. After heavy runoff. Visible blockage or impediments.			Trash and debris cleared from swale and disposed of properly especially prior to mowing.
Landscaping or Vegetative Overgrowth	Twice annually at beginning and end of wet season or as needed for aesthetics.			Maintained flow and healthy vegetation.
Miscellaneous				
Miscellaneous	Any condition not covered above that needs attention to restore infiltration basin to design conditions.			Meets the design specifications.

Recording requested by and mail to:

City Clerk
City of Beaumont
550 E. Sixth Street
Beaumont, CA 92223

SPACE ABOVE THIS LINE FOR RECORDER'S USE
EXEMPT FROM RECORDER'S FEES PURSUANT TO GOVERNMENT CODE SECTION 6103 AND 27383

APN: 422-060-002, 422-060-005, 422-060-009, 422-060-010, 422-060-016, 422-060-017, A Portion of 422-060-18, 422-060-021, 422-060-022, 422-170-005, 422-170-008, 422-170-009, 422-170-010, 422-170-010, 422-170-007, 422-170-011

STORM WATER MANAGEMENT WQMP/BMP FACILITIES

COVENANT AND AGREEMENT NO. 1

City of Beaumont, Riverside County, California

THIS COVENANT AND AGREEMENT is made and entered into this of 2022, by and between Beaumont Pointe, ("Owner"), and the City of Beaumont, California, ("City").

The Owner hereby certifies I am (we are) the sole owner of certain real property located at Jackrabbit Trail (Site Address) in the City of Beaumont, County of Riverside, State of California, more specifically described in **Exhibit "A"** and depicted in **Exhibit "B" (**"Property").

The Owner covenants and agrees to comply with the Project Water Quality Management Plan ("WQMP"), attached hereto as **Exhibit "C"**, providing for storm water quality treatment within the confines of the Property.

The Owner covenants and agrees that the health, safety and welfare of the residents of the City of Beaumont, require that the Best Management Practice ("BMP") facilities, more specifically described in the WQMP (for example bio- swales, catch basins, roof drains and appurtenances) be constructed and maintained to minimize pollutants in urban runoff by the Owner.

The Owner further covenants and agrees as follows:

1. The on-site storm water management/BMP facilities mentioned above shall be constructed by the Owner at its sole cost and expense, in accordance with the plans and specifications identified in the WQMP approved by City.

2. The Owner shall adequately maintain the storm water management/BMP facilities in a manner assuring peak performance at all times, including source control BMPs at all times as its sole responsibility, at its sole cost and expense. This includes all pipes and channels built to convey storm water on the Property, including

catch basin inserts, underground detention ponds, swales and vegetation provided to control the quantity and quality of the storm water. Adequate maintenance is herein defined as good working condition so that these facilities are performing in accordance with their design functions continuously at all times.

3. The Owner shall annually inspect the storm water management/BMP facilities mentioned above and submit an inspection report annually to the Public Works Department by the anniversary of the date of this Agreement of each year. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the storm water management BMPs listed in the WQMP such as bio-swales, catch basins and related filter units, etc. Deficiencies shall be noted in the inspection report and corrected by Owner promptly.

4. The Owner hereby grants permission to City, its authorized agents and employees, to enter upon the Property and to inspect the storm water management/BMP facilities, take samples and perform testing whenever the City deems necessary and as required by the City's most current National Pollutant Discharge Elimination System (NPDES) Permit. The purpose of the inspection, testing and sampling is to follow up on apparent and reported deficiencies and/or to respond to citizen complaints and meet the requirements of the City's NPDES Permit issued by the State Water Resources Control Board – Santa Ana River Region. The City shall provide the Owner with advanced notice of entering upon the Property, except in the event of an emergency, as determined by the City. The City shall provide the Owner copies of the inspection findings and a directive to commence with the repairs if necessary. Owner or Owner's successors or assigns shall pay City for all costs incurred by City in the inspection, sampling, testing of the BMPs within thirty (30) calendar days of City invoice.

5. In the event the Owner fails to maintain the storm water management/BMP facilities in good working condition acceptable to the City, upon five (5) days advanced written notice, the City may enter upon the Property and take whatever steps necessary to correct deficiencies identified in any inspection report and to charge the costs of such repairs to the Owner the cost of which shall constitute a lien against the Property. In the event of an emergency, as determined by City, advanced notice as aforesaid, shall not be required. Notwithstanding the forgoing, it is expressly understood and agreed that the City is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation to the City.

6. The Owner will perform the work necessary to keep these facilities in good working order as appropriate. The maintenance schedule for the storm water management BMP facilities (including sediment removal) is outlined in the approved WQMP and the schedule must be followed at all times. In the future, City of Beaumont may adopt an annual Stormwater Inspection Fee that would be assessed to the Owner.

7. In the event the City, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials and the like, the Owner, its successors and assigns shall reimburse the City upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City hereunder.

8. This Agreement imposes no liability of any kind whatsoever on the City. Owner agrees to indemnify, defend (with counsel reasonably approved by the City) and hold harmless the City and its authorized officers, employees, agents and volunteers from any and all claims, actions, losses, damages, and/or liability arising out of this Agreement from any cause whatsoever, including the acts, errors or omissions of any person and

for any costs or expenses incurred by the City on account of any claim except where such indemnification is prohibited by law. This indemnification provision shall apply regardless of the existence or degree of fault of indemnitees. The Owner's indemnification obligation applies to the City's "active" as well as "passive" negligence but does not apply to the City's "sole negligence" or "willful misconduct" within the meaning of Civil Code Section 2782, or to any claims, actions, losses, damages, and/or liabilities, to the extent caused by the acts or omissions of any third party contractors undertaking any work (other than field inspections) or other maintenance on the Property on behalf of the City under this Agreement.

9. This Agreement shall be recorded with the County Recorder for the County of Riverside and shall constitute a covenant running with the land, equitable servitude and lien against the Property, and shall be binding on the Owner, its successors, assigns, transferees, administrators, executors, heirs, encumbrancers and any other successors in interests, including any homeowner's association.

10. In addition to any remedy available to City under this Agreement, if Owner violates any term of this Agreement and does not cure the violation within the time already provided in this Agreement, or, if not provided, within thirty (30) calendar days, or within such time authorized by the City if said cure reasonably requires more than the subject time, the City may bring an action at law or in equity in a court of competent jurisdiction to enforce compliance by the Owner with the terms of this Agreement. In such action, the City may recover any damages to which the City may be entitled for the violation, enjoin the violation by temporary or permanent injunction without the necessity of proving actual damages or the inadequacy of otherwise available legal remedies, or obtain other equitable relief, including, but not limited to, the restoration of the Property and/or the BMPs identified in the WQMP to the condition in which it/they existed prior to any such violation or injury.

11. Owner shall provide printed educational materials with any sale of the Property which provide information on what storm water management facilities are present, the types and locations of maintenance signs that are required and how the necessary maintenance can be maintained.

12. Owner shall provide actual notice of this Agreement and its terms to any respective buyers or successor(s) in interest.

13. In order to be valid, amendment or change to this Agreement including the WQMP and BMPs requires an amendment executed by the City and Owner which is recorded with the Riverside County Recorder.

WITNESS the following signatures:

OWNER:

By: _____ By: _____

Name: _____ Name: _____

Title: _____ Title: _____

CITY OF BEAUMONT

By: _____
Director of Public Works, Beaumont

ATTEST:

_____
City Clerk, City of Beaumont

All signatures on this Agreement on behalf of the Owner must be acknowledged before a Notary Public. In the event that the owner is a corporation, the President/Vice President and the corporate secretary of the corporation must sign.

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Riverside)

On _____, 2022, before me, _____, notary public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: _____ (Seal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Riverside)

On _____, 2019, before me, _____, notary public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature: (Seal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Riverside)

On _____, 2022, before me, _____, notary public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: _____ (Seal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Riverside)

On _____, 2022, before me, _____, notary public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature: (Seal)

EXHIBIT "A"
LEGAL DESCRIPTION

EXHIBIT "B"
DIAGRAM OF PROPERTY

EXHIBIT "C"
WQMP

Appendix 10: Educational Materials

BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information

Site Design & Landscape Planning SD-10



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- ☑ Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Integrating and incorporating appropriate landscape planning methodologies into the project design is the most effective action that can be done to minimize surface and groundwater contamination from stormwater.

Approach

Landscape planning should couple consideration of land suitability for urban uses with consideration of community goals and projected growth. Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for site design and landscapes planning should conform to applicable standards and specifications of agencies with jurisdiction and be consistent with applicable General Plan and Local Area Plan policies.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

Designing New Installations

Begin the development of a plan for the landscape unit with attention to the following general principles:

- Formulate the plan on the basis of clearly articulated community goals. Carefully identify conflicts and choices between retaining and protecting desired resources and community growth.
- Map and assess land suitability for urban uses. Include the following landscape features in the assessment: wooded land, open unwooded land, steep slopes, erosion-prone soils, foundation suitability, soil suitability for waste disposal, aquifers, aquifer recharge areas, wetlands, floodplains, surface waters, agricultural lands, and various categories of urban land use. When appropriate, the assessment can highlight outstanding local or regional resources that the community determines should be protected (e.g., a scenic area, recreational area, threatened species habitat, farmland, fish run). Mapping and assessment should recognize not only these resources but also additional areas needed for their sustenance.

Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Conserve Natural Areas during Landscape Planning

If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

- Cluster development on least-sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.
- Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
- Promote natural vegetation by using parking lot islands and other landscaped areas.
- Preserve riparian areas and wetlands.

Maximize Natural Water Storage and Infiltration Opportunities Within the Landscape Unit

- Promote the conservation of forest cover. Building on land that is already deforested affects basin hydrology to a lesser extent than converting forested land. Loss of forest cover reduces interception storage, detention in the organic forest floor layer, and water losses by evapotranspiration, resulting in large peak runoff increases and either their negative effects or the expense of countering them with structural solutions.
- Maintain natural storage reservoirs and drainage corridors, including depressions, areas of permeable soils, swales, and intermittent streams. Develop and implement policies and

regulations to discourage the clearing, filling, and channelization of these features. Utilize them in drainage networks in preference to pipes, culverts, and engineered ditches.

- Evaluating infiltration opportunities by referring to the stormwater management manual for the jurisdiction and pay particular attention to the selection criteria for avoiding groundwater contamination, poor soils, and hydrogeological conditions that cause these facilities to fail. If necessary, locate developments with large amounts of impervious surfaces or a potential to produce relatively contaminated runoff away from groundwater recharge areas.

Protection of Slopes and Channels during Landscape Design

- Convey runoff safely from the tops of slopes.
- Avoid disturbing steep or unstable slopes.
- Avoid disturbing natural channels.
- Stabilize disturbed slopes as quickly as possible.
- Vegetate slopes with native or drought tolerant vegetation.
- Control and treat flows in landscaping and/or other controls prior to reaching existing natural drainage systems.
- Stabilize temporary and permanent channel crossings as quickly as possible, and ensure that increases in run-off velocity and frequency caused by the project do not erode the channel.
- Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
- Line on-site conveyance channels where appropriate, to reduce erosion caused by increased flow velocity due to increases in tributary impervious area. The first choice for linings should be grass or some other vegetative surface, since these materials not only reduce runoff velocities, but also provide water quality benefits from filtration and infiltration. If velocities in the channel are high enough to erode grass or other vegetative linings, riprap, concrete, soil cement, or geo-grid stabilization are other alternatives.
- Consider other design principles that are comparable and equally effective.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define “redevelopment” in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of “ redevelopment” must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under “designing new installations” above should be followed.

Redevelopment may present significant opportunity to add features which had not previously been implemented. Examples include incorporation of depressions, areas of permeable soils, and swales in newly redeveloped areas. While some site constraints may exist due to the status of already existing infrastructure, opportunities should not be missed to maximize infiltration, slow runoff, reduce impervious areas, disconnect directly connected impervious areas.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Stormwater Management Manual for Western Washington, Washington State Department of Ecology, August 2001.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Drainage System Maintenance SC-44



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize

Description

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff and stormwater that may contain certain pollutants. The protocols in this fact sheet are intended to reduce pollutants reaching receiving waters through proper conveyance system operation and maintenance.

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	
Bacteria	✓
Oil and Grease	
Organics	

Approach

Pollution Prevention

Maintain catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis to remove pollutants, reduce high pollutant concentrations during the first flush of storms, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

Suggested Protocols

Catch Basins/Inlet Structures

- Staff should regularly inspect facilities to ensure compliance with the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
  - Stenciling of catch basins and inlets (see SC34 Waste Handling and Disposal).

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- Clean catch basins, storm drain inlets, and other conveyance structures before the wet season to remove sediments and debris accumulated during the summer.
- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes if necessary with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed. Do not dewater near a storm drain or stream.

Storm Drain Conveyance System

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect and pump flushed effluent to the sanitary sewer for treatment whenever possible.

Pump Stations

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge to reach the storm drain system when cleaning a storm drain pump station or other facility.
- Conduct routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.

Open Channel

- Modify storm channel characteristics to improve channel hydraulics, increase pollutant removals, and enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural (emphasis added) state of any river, stream, or lake in California, must enter into a Steam or Lake Alteration Agreement with the Department of Fish and Game. The developer-applicant should also contact local governments (city, county, special districts), other state agencies (SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Federal Corps of Engineers and USFWS.

Illicit Connections and Discharges

- Look for evidence of illegal discharges or illicit connections during routine maintenance of conveyance system and drainage structures:
  - Is there evidence of spills such as paints, discoloring, etc?

- Are there any odors associated with the drainage system?
- Record locations of apparent illegal discharges/illicit connections?
- Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of upgradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
- Eliminate the discharge once the origin of flow is established.

- Stencil or demarcate storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Illegal Dumping

- Inspect and clean up hot spots and other storm drainage areas regularly where illegal dumping and disposal occurs.
- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties
- Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Training

- Train crews in proper maintenance activities, including record keeping and disposal.
- Allow only properly trained individuals to handle hazardous materials/wastes.
- Have staff involved in detection and removal of illicit connections trained in the following:
  - OSHA-required Health and Safety Training (29 CFR 1910.120) plus annual refresher training (as needed).

- OSHA Confined Space Entry training (Cal-OSHA Confined Space, Title 8 and Federal OSHA 29 CFR 1910.146).
- Procedural training (field screening, sampling, smoke/dye testing, TV inspection).

Spill Response and Prevention

- Investigate all reports of spills, leaks, and/or illegal dumping promptly.
- Clean up all spills and leaks using "dry" methods (with absorbent materials and/or rags) or dig up, remove, and properly dispose of contaminated soil.
- Refer to fact sheet SC-11 Spill Prevention, Control, and Cleanup.

Other Considerations (Limitations and Regulations)

- Clean-up activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and prohibition against disposal of flushed effluent to sanitary sewer in some areas.
- Regulations may include adoption of substantial penalties for illegal dumping and disposal.
- Local municipal codes may include sections prohibiting discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.

Requirements

Costs

- An aggressive catch basin cleaning program could require a significant capital and O&M budget.
- The elimination of illegal dumping is dependent on the availability, convenience, and cost of alternative means of disposal. The primary cost is for staff time. Cost depends on how aggressively a program is implemented. Other cost considerations for an illegal dumping program include:
  - Purchase and installation of signs.
  - Rental of vehicle(s) to haul illegally-disposed items and material to landfills.
  - Rental of heavy equipment to remove larger items (e.g., car bodies) from channels.
  - Purchase of landfill space to dispose of illegally-dumped items and material.

- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary.

Maintenance

- Two-person teams may be required to clean catch basins with vactor trucks.
- Teams of at least two people plus administrative personnel are required to identify illicit discharges, depending on the complexity of the storm sewer system.
- Arrangements must be made for proper disposal of collected wastes.
- Technical staff are required to detect and investigate illegal dumping violations.

Supplemental Information

Further Detail of the BMP

Storm Drain Flushing

Flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in storm drainage systems. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as an open channel, another point where flushing will be initiated, or the sanitary sewer and the treatment facilities, thus preventing resuspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. Deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, thereby releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce impacts of stormwater pollution, a second inflatable device placed well downstream may be used to recollect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to recollect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75% for organics and 55-65% for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used or that fire hydrant line flushing coincide with storm sewer flushing.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

Ferguson, B.K. 1991. Urban Stream Reclamation, p. 324-322, Journal of Soil and Water Conservation.

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Storm Drain System Cleaning. On line:
http://www.epa.gov/npdes/menuofbmps/poll_16.htm

Efficient Irrigation SD-12



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Designing New Installations

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.

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- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
  - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
  - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
  - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
  - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Storm Drain Signage SD-13



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include “NO DUMPING

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– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.

- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Trash Storage Areas SD-32

Description

Trash storage areas are areas where a trash receptacle (s) are located for use as a repository for solid wastes. Stormwater runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. Waste handling operations that may be sources of stormwater pollution include dumpsters, litter control, and waste piles.

Approach

This fact sheet contains details on the specific measures required to prevent or reduce pollutants in stormwater runoff associated with trash storage and handling. Preventative measures including enclosures, containment structures, and impervious pavements to mitigate spills, should be used to reduce the likelihood of contamination.

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Design requirements for waste handling areas are governed by Building and Fire Codes, and by current local agency ordinances and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements. Hazardous waste should be handled in accordance with legal requirements established in Title 22, California Code of Regulation.

Wastes from commercial and industrial sites are typically hauled by either public or commercial carriers that may have design or access requirements for waste storage areas. The design criteria in this fact sheet are recommendations and are not intended to be in conflict with requirements established by the waste hauler. The waste hauler should be contacted prior to the design of your site trash collection areas. Conflicts or issues should be discussed with the local agency.

Designing New Installations

Trash storage areas should be designed to consider the following structural or treatment control BMPs:

- Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash.

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- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Maintenance Considerations

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Vehicle Washing Areas SD-33

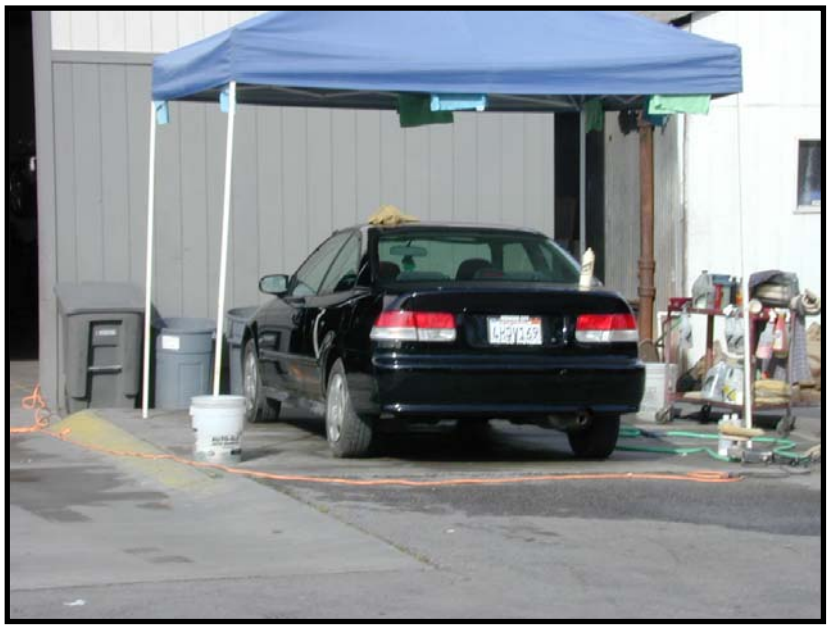


Photo Credit: Geoff Brosseau

Design Objectives

- ☑ Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- ☑ Collect and Convey

Description

Vehicle washing, equipment washing, and steam cleaning may contribute high concentrations of metals, oil and grease, solvents, phosphates, and suspended solids to wash waters that drain to stormwater conveyance systems.

Approach

Project plans should include appropriately designed area(s) for washing-steam cleaning of vehicles and equipment. Depending on the size and other parameters of the wastewater facility, wash water may be conveyed to a sewer, an infiltration system, recycling system or other alternative. Pretreatment may be required for conveyance to a sanitary sewer.

Suitable Applications

Appropriate applications include commercial developments, restaurants, retail gasoline outlets, automotive repair shops and others.

Design Considerations

Design requirements for vehicle maintenance are governed by Building and Fire Codes, and by current local agency ordinances, and zoning requirements. Design criteria described in this fact sheet are meant to enhance and be consistent with these code requirements.

Designing New Installations

Areas for washing/steam cleaning should incorporate one of the following features:

- Be self-contained and/or covered with a roof or overhang
- Be equipped with a clarifier or other pretreatment facility
- Have a proper connection to a sanitary sewer

- Include other features which are comparable and equally effective

CAR WASH AREAS - Some jurisdictions' stormwater management plans include vehicle-cleaning area source control design requirements for community car wash racks in complexes with a large number of dwelling units. In these cases, wash water from the areas may be directed to the sanitary sewer, to an engineered infiltration system, or to an equally effective alternative. Pre-treatment may also be required.

Depending on the jurisdiction, developers may be directed to divert surface water runoff away from the exposed area around the wash pad (parking lot, storage areas), and wash pad itself to alternatives other than the sanitary sewer. Roofing may be required for exposed wash pads.

It is generally advisable to cover areas used for regular washing of vehicles, trucks, or equipment, surround them with a perimeter berm, and clearly mark them as a designated washing area. Sumps or drain lines can be installed to collect wash water, which may be treated for reuse or recycling, or for discharge to the sanitary sewer. Jurisdictions may require some form of pretreatment, such as a trap, for these areas.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment.

Additional Information

Maintenance Considerations

Stormwater and non-stormwater will accumulate in containment areas and sumps with impervious surfaces. Contaminated accumulated water must be disposed of in accordance with applicable laws and cannot be discharged directly to the storm drain or sanitary sewer system without the appropriate permit.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

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Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

After the Storm

A Citizen's Guide to Understanding Stormwater

WHEN IT RAINS IT DRAINS

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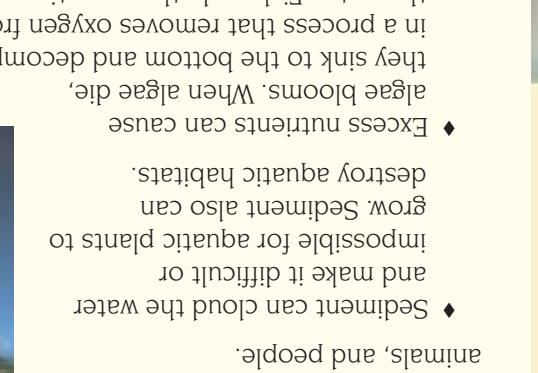
or visit
www.epa.gov/npdes/stormwater
www.epa.gov/nps

The effects of pollution



Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

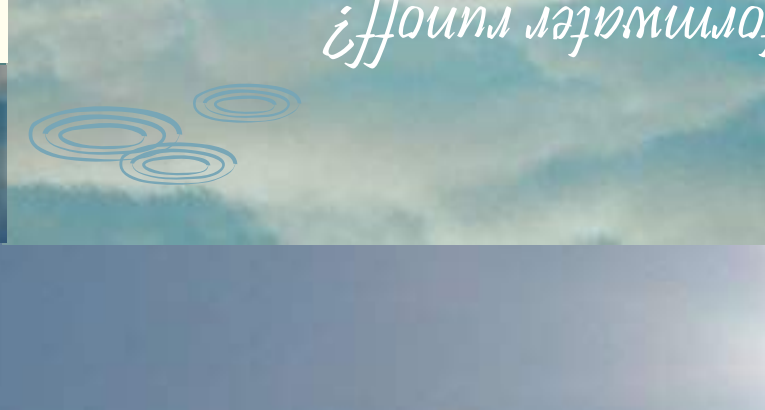
- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.



What is stormwater runoff?



Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.



Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

Why is stormwater runoff a problem?

Stormwater Pollution Solutions



Residential

Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Lawn care



Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

- Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- Cover piles of dirt or mulch being used in landscaping projects.

Septic systems



Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

- Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- Don't dispose of household hazardous waste in sinks or toilets.

Auto care



Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Pet waste



Pet waste can be a major source of bacteria and excess nutrients in local waters.

- When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.



Education is essential to changing people's behavior. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through, decreasing stormwater runoff.



Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas.

Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains.



Vegetated Filter Strips—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.



Commercial

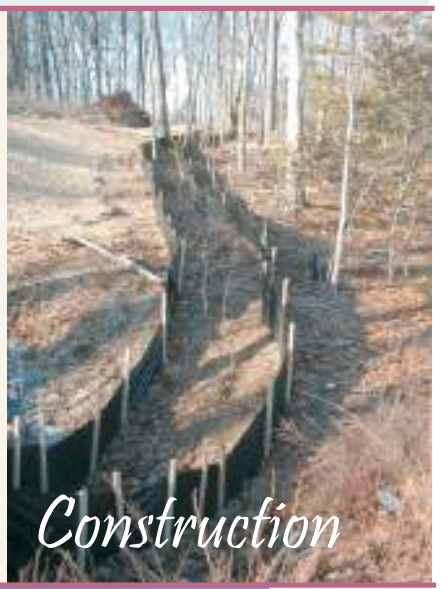
Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local waterbodies.

- Sweep up litter and debris from sidewalks, driveways and parking lots, especially around storm drains.
- Cover grease storage and dumpsters and keep them clean to avoid leaks.
- Report any chemical spill to the local hazardous waste cleanup team. They'll know the best way to keep spills from harming the environment.

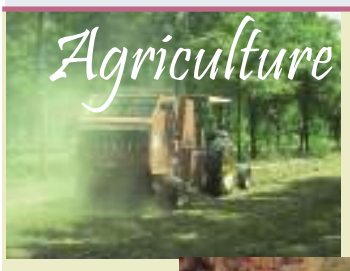
Construction

Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

- Divert stormwater away from disturbed or exposed areas of the construction site.
- Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls and properly maintain them, especially after rainstorms.
- Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.



Agriculture

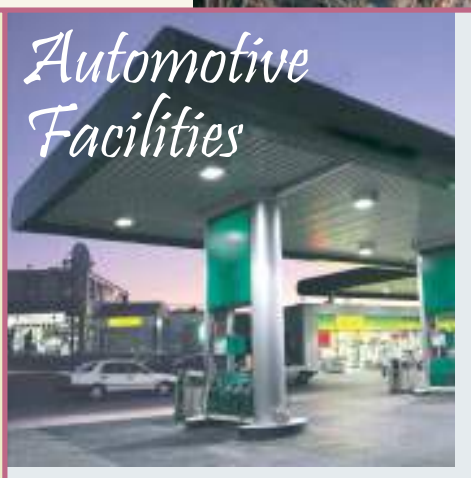


Lack of vegetation on streambanks can lead to erosion. Overgrazed pastures can also contribute excessive amounts of sediment to local waterbodies. Excess fertilizers and pesticides can poison aquatic animals and lead to destructive algae blooms. Livestock in streams can contaminate waterways with bacteria, making them unsafe for human contact.



- Keep livestock away from streambanks and provide them a water source away from waterbodies.
- Store and apply manure away from waterbodies and in accordance with a nutrient management plan.
- Vegetate riparian areas along waterways.
- Rotate animal grazing to prevent soil erosion in fields.
- Apply fertilizers and pesticides according to label instructions to save money and minimize pollution.

Automotive Facilities



Uncovered fueling stations allow spills to be washed into storm drains. Cars waiting to be repaired can leak fuel, oil, and other harmful fluids that can be picked up by stormwater.

- Clean up spills immediately and properly dispose of cleanup materials.
- Provide cover over fueling stations and design or retrofit facilities for spill containment.
- Properly maintain fleet vehicles to prevent oil, gas, and other discharges from being washed into local waterbodies.
- Install and maintain oil/water separators.

Forestry



Improperly managed logging operations can result in erosion and sedimentation.

- Conduct preharvest planning to prevent erosion and lower costs.
- Use logging methods and equipment that minimize soil disturbance.
- Plan and design skid trails, yard areas, and truck access roads to minimize stream crossings and avoid disturbing the forest floor.
- Construct stream crossings so that they minimize erosion and physical changes to streams.
- Expedite revegetation of cleared areas.