Appendix G

Priority Development Project – Stormwater Quality Management Plan

City of Poway

Priority Development Project – Stormwater Quality Management Plan

The Farm at Poway
TTM19-002
17166 Stone Ridge Country Club Ln,
Poway, CA 92064
APN: 213-110-07-00, 08, & 18

ENGINEER OF WORK:

Alisa S. Vialpando, R.C.E. #47945

PREPARED FOR:
SMA VENTURES
12919 Corte Juanna
Poway, California 92064

PDP SWQMP PREPARED BY:
HUNSAKER & ASSOCIATES - SAN DIEGO, INC
9707 WAPLES STREET
SAN DIEGO, CA 92121
(858) 558-4500

DATE OF SWQMP:
October 1st, 2019
REVISED:
January 16th, 2020

PLANS PREPARED BY:
HUNSAKER & ASSOCIATES - SAN DIEGO, INC
9707 WAPLES STREET
SAN DIEGO, CA 92121
(858) 558-4500

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Acronyms

APN	Assessor's Parcel Number
BMP	Best Management Practice
HMP	Hydromodification Management Plan
HSG	Hydrologic Soil Group
MS4	Municipal Separate Storm Sewer System
N/A	Not Applicable
NRCS	Natural Resources Conservation Service
PDP	Priority Development Project
PE	Professional Engineer
SC	Source Control
SD	Site Design
SDRWQCB	San Diego Regional Water Quality Control Board
SIC	Standard Industrial Classification
SWQMP	Storm Water Quality Management Plan
WMAA	Watershed Management Area Analysis
WQIP	Water Quality Improvement Plan

PDP SWQMP Preparer's Certification Page

Project Name: The Farm
Project/Permit Number: TTM19-002

PREPARER'S CERTIFICATION

I hereby declare that I am the Engineer in Responsible Charge of design of storm water best management practices (BMPs) for this project, and that I have exercised responsible charge over the design of the BMPs as defined in Section 6703 of the Business and Professions Code, and that the design is consistent with the PDP requirements of the City of Poway BMP Design Manual, which is a design manual for compliance with the City of Poway Municipal Code Sections 16.100 through 16.105 and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100) requirements for storm water management.

I have read and understand that the City of Poway has adopted minimum requirements for managing urban runoff, including storm water, from land development activities, as described in the BMP Design Manual. I certify that this PDP SWQMP has been completed to the best of my ability and accurately reflects the project being proposed and the applicable BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this PDP SWQMP by City staff is confined to a review and does not relieve me, as the Engineer in Responsible Charge of design of storm water BMPs for this project, of my responsibilities for project design.

Alisa S. Vialpando 47945 12/31/2020
Engineer of Work's Signature, PE Number & Expiration Date

Alisa S. Vialpando
Print Name

Hunsaker & Associates – San Diego, INC.
Company

1/16/2020
Date

Engineer's Seal:



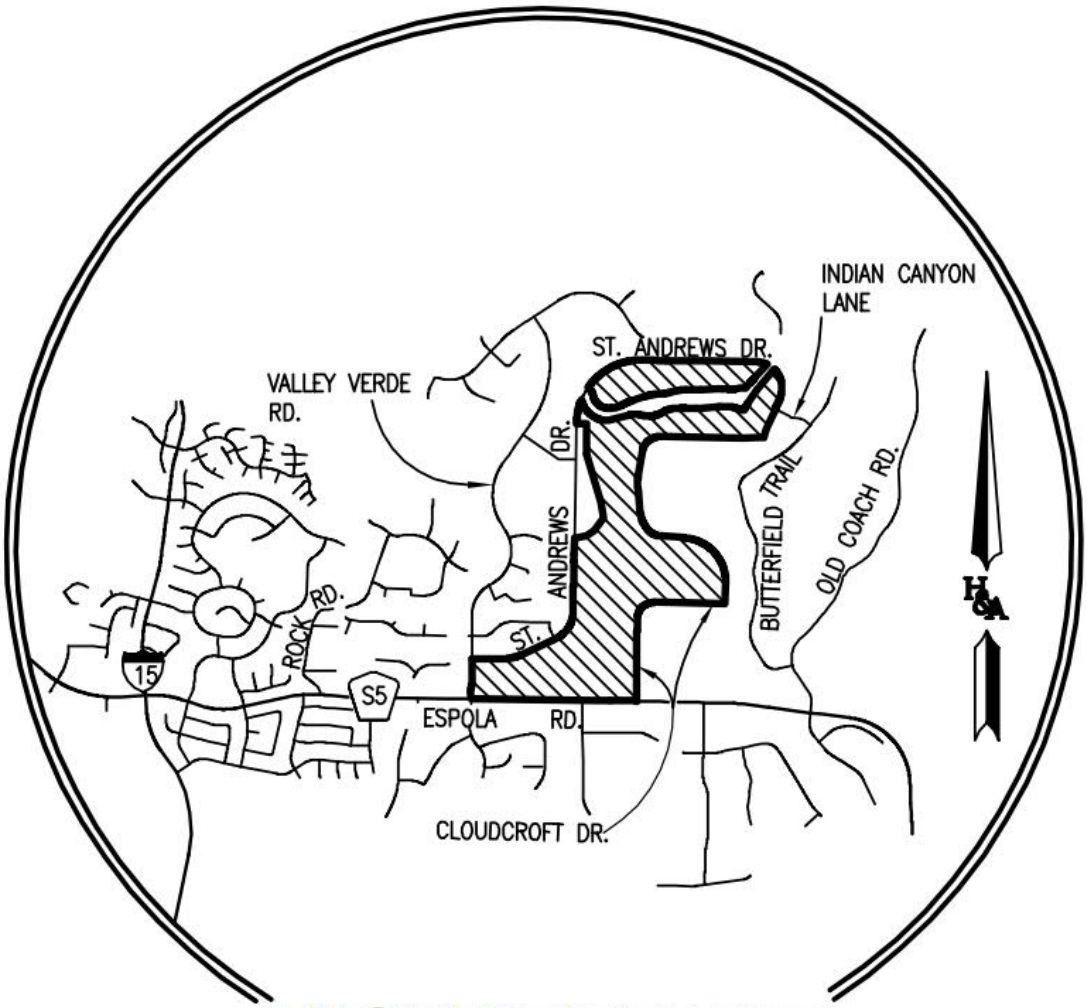
Submittal Record

Use this Table to keep a record of submittals of this PDP SWQMP. Each time the PDP SWQMP is re-submitted, provide the date and status of the project.

Submittal Number	Date	Summary of Changes
1	12/18/2018	Initial Submittal
2	4/15/2019	Plan Check Comments
3	10/1/2019	Plan Check Comments
4	11/16/2020	Plan Check Comments

Project Vicinity Map

Project Name: The Farm at Poway
Project ID: [Insert Project and/or Permit Number]



Step 1: Stormwater Intake Form

[Insert Storm Water Intake Form here]

County of San Diego
Stormwater Quality Management Plan (SWQMP)
Attachment 1: Storm Water Intake Form for All Permit Applications

This form establishes Stormwater Quality Management Plan (SWQMP) requirements for Development Projects per Sections 67.809 and 67.811 of the County of San Diego Watershed Protection Ordinance (WPO). See ***Storm Water Intake Form Instructions*** for additional guidance and explanation of terms.

Part 1. Project Information	
Project Name:	Camino del Cielo (formerly Lilac del Cielo
Record ID (Permit) No(s):	PDS2005-3500-05-026, 027 & 050
Assessor's Parcel No(s):	126-060-77 and 126-430-01
Street Address (or Intersection):	
City, State, Zip:	

Part 2. Applicant / Project Proponent Information	
Name:	Kurt Hubbell
Company:	D.R.Horton VEN, Inc.
Street Address:	5928 Pascal Court, Suite 150
City, State, Zip:	Carlsbad, CA 92008
Phone Number	(951) 407-8232
Email:	kahubbell@drhorton.com

Part 3. Required Information for All Development Projects

(A) 1. Existing (pre-development) impervious surfaces (ft²)	2. Created or replaced impervious surfaces (ft²)	3. Total disturbed area (acres or ft²)
72,000	218,000	400,000

(B) ☒ Check here and provide a WDID# if this project is subject to the California Construction General Permit (Order No. 2009-0009-DWQ)[1]	**WDID # (if issued)**

For County Use Only	Reviewed By:	Review Date:
☐ Standard SWQMP	☐ PDP SWQMP	☐ Green Streets PDP Exemption SWQMP

[1] Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html

Part 4. Priority Classification & SWQMP Form Selection

(A) *If your project is the following ... (select one)*	(B) *You must complete ...*
☐ **Standard Project** ☐ a. Project is East of the Pacific/Salton Sea Divide ☐ b. None of the PDP criteria below applies	→ **Standard *SWQMP Form***
☒ **Priority Development Project (PDP)** ☐ 1. Project is part of an existing PDP, OR ☒ 2. Project does any of the following: ☒ a. Creates or replaces a total of 10,000 ft² or more of impervious surface ☐ b. Creates or replaces a combined total of 5,000 ft² or more of impervious surface within one or more of the following uses: (1) parking lots; (2) streets, roads, highways, freeways, and/or driveways; (3) restaurants; and (4) hillsides ☐ c. Creates or replaces a combined total of 5,000 ft² or more of impervious surface within one or more of the following uses: (1) automotive repair shops; and (2) retail gasoline outlets ☐ d. Discharges directly to an Environmentally Sensitive Area (ESA) AND creates or replaces 2,500 ft² or more of impervious surface ☐ e. Disturbs one or more acres of land (43,560 ft²) and is expected to generate pollutants post-construction ☐ f. Is a redevelopment project that creates or replaces 5,000 ft² or more of impervious surface on a site already having at least 10,000 ft² of impervious surface	→ **PDP *SWQMP Form***
☐ **Green Streets PDP Exemption**[2]	→ **Green *Streets PDP Exemption SWQMP Form***

Part 5. Applicant Signature

I have reviewed the information in this form, and it is true and correct to the best of my knowledge.

Applicant / Project Proponent Signature: [signature] Date: 9-5-2019

- ***Upon completion*** *submit this form to the County.*
- ***If requested,*** *attach supporting documentation to justify selections made or exemptions claimed.*
- ***If this is a PDP that is part of a larger existing PDP,*** *you will be required to attach a copy of the existing SWQMP to the newer SWQMP submittal.*

[2] ***Green Streets PDP Exemption Projects*** are those claiming exemption from PDP classification per WPO Section 67.811(b)(2) because they consist exclusively of *either* 1) development of new sidewalks, bike lanes, and/or trails; *or* 2) improvements to existing roads, sidewalks, bike lanes, and/or trails.

Step 2: Site Information Checklist – Form I-3B

Site Information Checklist	Form I-3B (PDPs)
Project Summary Information	
Project Name	The Farm
Project Address	West side of Espola Road between Cloudcroft Drive and Valle Verde Road
Assessor's Parcel Number(s)	213-110-07-00, 08, & 18
Project/Permit Number	PA 18-010
Project Watershed (Hydrologic Unit)	Select One: ☐ San Dieguito 905 ☒ Penasquitos 906
Parcel Area (total area of Assessor's Parcel(s) associated with the project)	117.25 Acres (5107410 Square Feet)
Area to be disturbed by the project (Project Area)	73.36 Acres (3195561.6 Square Feet)
Project Proposed Impervious Area (subset of Project Area)	51.00 Acres (2221560 Square Feet)
Project Proposed Pervious Area (subset of Project Area)	22.36 Acres (974001.6 Square Feet)
Note: Proposed Impervious Area + Proposed Pervious Area = Area to be Disturbed by the Project. This may be less than the Parcel Area.	

Description of Existing Site Condition and Drainage Patterns

Current Status of the Site (select all that apply):

☒ Existing Development

☐ Previously graded but not built out

☐ Agricultural or other non-impervious use

☐ Vacant, undeveloped/natural

Description / Additional Information:

The existing development is the Stoneridge County Club. The majority of the property is a golf course with tennis courts, pool and spa areas, associated structures, parking lots, and walkways.

Existing Land Cover Includes (select all that apply):

☒ Vegetative Cover

☐ Non-Vegetated Pervious Areas

☒ Impervious Areas

Description / Additional Information:

The majority of the property consists of vegetative cover with the exception of associated parking lots, structures, and tennis courts.

Underlying Soil belongs to Hydrologic Soil Group (select all that apply):

☐ NRCS Type A

☒ NRCS Type B

☒ NRCS Type C

☐ NRCS Type D

Approximate Depth to Groundwater:

☐ Groundwater Depth < 5 feet

☐ 5 feet < Groundwater Depth < 10 feet

☐ 10 feet < Groundwater Depth < 20 feet

☐ Groundwater Depth > 20 feet

Existing Natural Hydrologic Features (select all that apply):

☐ Watercourses

☐ Seeps

☐ Springs

☐ Wetlands

☒ None

Description / Additional Information:

Description of Existing Site Topography and Drainage [How is storm water runoff conveyed from the site? At a minimum, this description should answer (1) whether existing drainage conveyance is natural or urban; (2) describe existing constructed storm water conveyance systems, if applicable; and (3) is runoff from offsite conveyed through the site? If so, describe]:

The site drains in a general southern direction with the exception of the north.

An existing brow ditch conveys offsite flows from St. Andrews Drive and flows from the southern portion of the stone ridge golf course south through the site discharging into a triple arch culvert beneath Espola Road.

Additionally, flows from Tom O'shanter Drive and Cloudcroft Court also are conveyed through the site southerly and are discharged into the same triple arch culvert beneath Espola Road as described above.

In the Northern portion of the site, flows from Boca Raton Lane flow into a brow ditch and are routed to a pipe that conveys the flow underneath Valle De Lobo Dr & Villamoura Dr, eventually discharging into the open space near Glen Arven Lane. The surrounding northern area on-site also discharges into the same outfall.

Form I-3B Page 4 of 9
Description of Proposed Site Development and Drainage Patterns
Project Description / Proposed Land Use and/or Activities: The Farms proposes the construction of 160 single-family homes with associated roads, driveways, sidewalks and an internal storm drain system.
List/describe proposed impervious features of the project (e.g., buildings, roadways, parking lots, courtyards, athletic courts, other impervious features): Impervious features include residential structures, access roads, sidewalks, driveways and walkways.
List/describe proposed pervious features of the project (e.g., landscape areas): Pervious features include biofiltration basins, community gardens, trails, open space, and landscaped area/slopes.
Does the project include grading and changes to site topography? ☒ Yes ☐ No Description / Additional Information:
Does the project include changes to site drainage (e.g., installation of new storm water conveyance systems)? ☒ Yes ☐ No Description / Additional Information:

Identify whether any of the following features, activities, and/or pollutant source areas will be present (select all that apply):

☒Onsite storm drain inlets

☐Interior floor drains and elevator shaft sump pumps

☐Interior parking garages

☐Need for future indoor & structural pest control

☒Landscape/outdoor pesticide use

☒Pools, spas, ponds, decorative fountains, and other water features

☒Food service

☒Refuse areas

☐Industrial processes

☐Outdoor storage of equipment or materials

☐Vehicle and equipment cleaning

☐Vehicle/equipment repair and maintenance

☐Fuel dispensing areas

☐Loading docks

☐Fire sprinkler test water

☒Miscellaneous drain or wash water

☒Plazas, sidewalks, and parking lots

Identification of Receiving Water Pollutants of Concern

Describe path of storm water from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable):

The project site north of Tom O'shanter Drive drains in a northerly direction, eventually discharging into Sycamore Creek. The southerly part of the project site flows towards Espola Blvd, comingling with flows from Tom O'shanter and Saint Andrew's Drive before entering the existing storm drain system. Southerly flows are eventually discharged into the Penasquitos 906 watershed.

List any 303(d) impaired water bodies within the path of storm water from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable), identify the pollutant(s)/stressor(s) causing impairment, and identify any TMDLs for the impaired water bodies:

303(d) Impaired Water Body	Pollutant(s)/Stressor(s)	TMDLs/WQIP Highest Priority Pollutant
Poway Creek	Selenium, Toxicity	Unknown

Identification of Project Site Pollutants

Identify pollutants anticipated from the project site based on all proposed use(s) of the site (see manual Appendix Table B.6-1):

Pollutant	Not Applicable to the Project Site	Anticipated from the Project Site	Receiving Water Pollutant of Concern	Primary or Secondary Pollutant of Concern
Sediment		X		
Nutrients		X		
Heavy Metals		X		Selenium, Toxicity
Organic Compounds		X		
Trash & Debris		X		
Oxygen Demanding Substances		X		
Oil & Grease		X		
Bacteria & Viruses		X		
Pesticides		X		

Identify whether each pollutant listed is Not Applicable to the Project Site, Anticipated from the Project Site, and/or a Receiving Water Pollutant of Concern with an X or ✓. Identify Primary or Secondary in the last column with a P or S unless Not Applicable to the Project Site has been selected.

Form I-3B Page 7 of 9

Hydromodification Management Requirements

Do hydromodification management requirements apply (see Section 1.6 of the manual)?

☒ Yes, hydromodification management flow control structural BMPs required.

☐ No, the project will discharge runoff directly to existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.

☐ No, the project will discharge runoff directly to conveyance channels whose bed and bank are concrete-lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.

☐ No, the project will discharge runoff directly to an area identified as appropriate for an exemption by the WMAA for the watershed in which the project resides.

Description / Additional Information (to be provided if a 'No' answer has been selected above):

Critical Coarse Sediment Yield Areas*

*This Section only required if hydromodification management requirements apply

Based on the maps provided within the WMAA, do potential critical coarse sediment yield areas exist within the project drainage boundaries?

☐ Yes

☒ No, no critical coarse sediment yield areas to be protected based on WMAA maps

If yes, have any of the optional analyses presented in Section 6.2 of the manual been performed?

☐ 6.2.1 Verification of GLUs Onsite

☐ 6.2.2 Downstream Systems Sensitivity to Coarse Sediment

☐ 6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite

☐ No optional analyses performed, the project will avoid critical coarse sediment yield areas identified based on WMAA maps

If optional analyses were performed, what is the final result?

☐ No critical coarse sediment yield areas to be protected based on verification of GLUs onsite.

☐ Critical coarse sediment yield areas exist but additional analysis has determined that protection is not required. Documentation attached in Attachment 8 of the SWQMP.

☐ Critical coarse sediment yield areas exist and require protection. The project will implement management measures described in Sections 6.2.4 and 6.2.5 as applicable, and the areas are identified on the SWQMP Exhibit.

Discussion / Additional Information:

Form I-3B Page 8 of 9
Flow Control for Post-Project Runoff* *This Section only required if hydromodification management requirements apply
List and describe point(s) of compliance (POCs) for flow control for hydromodification management (see Section 6.3.1). For each POC, provide a POC identification name or number correlating to the project's HMP Exhibit and a receiving channel identification name or number correlating to the project's HMP Exhibit. The facilities are sized using the BMP sizing calculator to address both Water Quality and Hydromodification requirements.
Has a geomorphic assessment been performed for the receiving channel(s)? ☒ No, the low flow threshold is 0.1Q2 (default low flow threshold) ☐ Yes, the result is the low flow threshold is 0.1Q2 ☐ Yes, the result is the low flow threshold is 0.3Q2 ☐ Yes, the result is the low flow threshold is 0.5Q2 If a geomorphic assessment has been performed, provide title, date, and preparer: Discussion / Additional Information: (optional)

Form I-3B Page 9 of 9
Other Site Requirements and Constraints
When applicable, list other site requirements or constraints that will influence storm water management design, such as zoning requirements including setbacks and open space, or local codes governing minimum street width, sidewalk construction, allowable pavement types, and drainage requirements.
Optional Additional Information or Continuation of Previous Sections As Needed
This space provided for additional information or continuation of information from previous sections as needed.

Step 3: Source Control BMP Checklist – Form I-4

Source Control BMP Checklist for All Development Projects	Form I-4

Project Identification

Project Name: The Farm

Project/Permit Number: PA 18-010

Source Control BMPs

All development projects must implement source control BMPs SC-1 through SC-6 where applicable and feasible. See Chapter 4 and Appendix E of the manual for information to implement source control BMPs shown in this checklist.

Answer each category below pursuant to the following.

- "Yes" means the project will implement the source control BMP as described in Chapter 4 and/or Appendix E of the manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project has no outdoor materials storage areas). Discussion / justification may be provided.

Source Control Requirement	Applied?		
SC-1 Prevention of Illicit Discharges into the MS4	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-1 not implemented:			
SC-2 Storm Drain Stenciling or Signage	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-2 not implemented:			
SC-3 Protect Outdoor Materials Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☐ Yes	☐ No	☒ N/A
Discussion / justification if SC-3 not implemented:			
SC-4 Protect Materials Stored in Outdoor Work Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☐ Yes	☐ No	☒ N/A
Discussion / justification if SC-4 not implemented:			

Form I-4 Page 2 of 2			
Source Control Requirement	Applied?		
SC-5 Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-5 not implemented:			
SC-6 Additional BMPs Based on Potential Sources of Runoff Pollutants (must answer for each source listed below)			
☐ Onsite storm drain inlets	☒Yes	☐ No	☐ N/A
☐ Interior floor drains and elevator shaft sump pumps	☐ Yes	☐ No	☒N/A
☐ Interior parking garages	☐ Yes	☐ No	☒N/A
☐ Need for future indoor & structural pest control	☐ Yes	☐ No	☒N/A
☐ Landscape/outdoor pesticide use	☒Yes	☐ No	☐ N/A
☐ Pools, spas, ponds, decorative fountains, and other water features	☒Yes	☐ No	☐ N/A
☐ Food service	☒Yes	☐ No	☐ N/A
☐ Refuse areas	☒Yes	☐ No	☐ N/A
☐ Industrial processes	☐ Yes	☐ No	☒N/A
☐ Outdoor storage of equipment or materials	☐ Yes	☐ No	☒N/A
☐ Vehicle and equipment cleaning	☐ Yes	☐ No	☒N/A
☐ Vehicle/equipment repair and maintenance	☐ Yes	☐ No	☒N/A
☐ Fuel dispensing areas	☐ Yes	☐ No	☒N/A
☐ Loading docks	☐ Yes	☐ No	☒N/A
☐ Fire sprinkler test water	☐ Yes	☐ No	☒N/A
☐ Miscellaneous drain or wash water	☒Yes	☐ No	☐ N/A
☐ Plazas, sidewalks, and parking lots	☒Yes	☐ No	☐ N/A
Discussion / justification if SC-6 not implemented. Clearly identify which sources of runoff pollutants are discussed. Justification must be provided for all "No" answers shown above.			

Step 4: Site Design BMP Checklist – Form I-5

Site Design BMP Checklist for All Development Projects	Form I-5

Project Identification

Project Name: The Farm

Project/Permit Number: PA 18-010

Site Design BMPs

All development projects must implement site design BMPs SD-1 through SD-8 where applicable and feasible. See Chapter 4 and Appendix E of the manual for information to implement site design BMPs shown in this checklist.

Answer each category below pursuant to the following.

- "Yes" means the project will implement the site design BMP as described in Chapter 4 and/or Appendix E of the manual. Discussion / justification is not required.
- "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided.
- "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project site has no existing natural areas to conserve). Discussion / justification may be provided.

Site Design Requirement	Applied?		
SD-1 Maintain Natural Drainage Pathways and Hydrologic Features	☒Yes	☐ No	☐ N/A
Discussion / justification if SD-1 not implemented:			
SD-2 Conserve Natural Areas, Soils, and Vegetation	☒Yes	☐ No	☐ N/A
Discussion / justification if SD-2 not implemented:			
SD-3 Minimize Impervious Area	☒Yes	☐ No	☐ N/A
Discussion / justification if SD-3 not implemented:			
SD-4 Minimize Soil Compaction	☒Yes	☐ No	☐ N/A
Discussion / justification if SD-4 not implemented:			

Form I-5 Page 2 of 2			
Site Design Requirement	Applied?		
SD-5 Impervious Area Dispersion	☒Yes	☐ No	☐ N/A
Discussion / justification if SD-5 not implemented:			
SD-6 Runoff Collection	☒Yes	☐ No	☐ N/A
Discussion / justification if SD-6 not implemented:			
SD-7 Landscaping with Native or Drought Tolerant Species	☒Yes	☐ No	☐ N/A
Discussion / justification if SD-7 not implemented:			
SD-8 Harvesting and Using Precipitation	☐ Yes	☐ No	☒Yes
Discussion / justification if SD-8 not implemented:			

Step 5: Summary of PDP Structural BMPs – Form I-6

Summary of PDP Structural BMPs	Form I-6 (PDPs)
Project Identification	
Project Name: The Farm	
Project/Permit Number: PA 18-010	
PDP Structural BMPs	
All PDPs must implement structural BMPs for storm water pollutant control (see Chapter 5 of the manual). Selection of PDP structural BMPs for storm water pollutant control must be based on the selection process described in Chapter 5. PDPs subject to hydromodification management requirements must also implement structural BMPs for flow control for hydromodification management (see Chapter 6 of the manual). Both storm water pollutant control and flow control for hydromodification management can be achieved within the same structural BMP(s). PDP structural BMPs must be verified by the local jurisdiction at the completion of construction. This may include requiring the project owner or project owner's representative to certify construction of the structural BMPs (see Section 1.12 of the manual). PDP structural BMPs must be maintained into perpetuity, and the local jurisdiction must confirm the maintenance (see Section 7 of the manual). Use this form to provide narrative description of the general strategy for structural BMP implementation at the project site in the box below. Then complete the PDP structural BMP summary information sheet (page 3 of this form) for each structural BMP within the project (copy the BMP summary information page as many times as needed to provide summary information for each individual structural BMP).	

Describe the general strategy for structural BMP implementation at the site. This information must describe how the steps for selecting and designing storm water pollutant control BMPs presented in Section 5.1 of the manual were followed, and the results (type of BMPs selected). For projects requiring hydromodification flow control BMPs, indicate whether pollutant control and flow control BMPs are integrated or separate.

The selection, sizing, and preliminary design of stormwater treatment and other control measures in this plan was done based on City of Poway's Storm Water Design Manual meet the requirements of the San Diego Regional Water Quality Control Board Order R9-2013- 0001. Six biofiltration basins were designed to meet the Water Quality and Hydromodification Requirements. The basins were designed to capture 1.5 times the design capture volume (DCV).

Tree wells have been designed to provide water quality treatment for agricultural DMAs (AG DMAs 1-10). The tree wells will treat all pollutants of concern generated by these agricultural areas. Treewell design details and locations will be provided during final engineering.

Form I-6 Page 2 of 6
(Page reserved for continuation of description of general strategy for structural BMP implementation at the site)

Form I-6 Page 3 of 6	
Structural BMP Summary Information (Copy this page as needed to provide information for each individual proposed structural BMP)	
Structural BMP ID No. Combo BF-1	
Construction Plan Sheet No. TBD	
Type of structural BMP: ☐ Retention by harvest and use (HU-1) ☐ Retention by infiltration basin (INF-1) ☐ Retention by bioretention (INF-2) ☐ Retention by permeable pavement (INF-3) ☐ Partial retention by biofiltration with partial retention (PR-1) ☒ Biofiltration (BF-1) ☐ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below) ☐ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) ☐ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below) ☐ Detention pond or vault for hydromodification management ☐ Other (describe in discussion section below)	
Purpose: ☐ Pollutant control only ☐ Hydromodification control only ☒ Combined pollutant control and hydromodification control ☐ Pre-treatment/forebay for another structural BMP ☐ Other (describe in discussion section below)	
Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms if required by the [City Engineer] (See Section 1.12 of the manual)	Third party inspector TBD
Who will be the final owner of this BMP?	HOA
Who will maintain this BMP into perpetuity?	HOA
What is the funding mechanism for maintenance?	HOA dues
Discussion (as needed):	

Form I-6 Page 4 of 6	
Structural BMP Summary Information (Copy this page as needed to provide information for each individual proposed structural BMP)	
Structural BMP ID No. BF-2	
Construction Plan Sheet No. TBD	
Type of structural BMP: ☐ Retention by harvest and use (HU-1) ☐ Retention by infiltration basin (INF-1) ☐ Retention by bioretention (INF-2) ☐ Retention by permeable pavement (INF-3) ☐ Partial retention by biofiltration with partial retention (PR-1) ☒ Biofiltration (BF-1) ☐ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below) ☐ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) ☐ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below) ☐ Detention pond or vault for hydromodification management ☐ Other (describe in discussion section below)	
Purpose: ☐ Pollutant control only ☐ Hydromodification control only ☒ Combined pollutant control and hydromodification control ☐ Pre-treatment/forebay for another structural BMP ☐ Other (describe in discussion section below)	
Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms if required by the [City Engineer] (See Section 1.12 of the manual)	Third party inspector TBD
Who will be the final owner of this BMP?	HOA
Who will maintain this BMP into perpetuity?	HOA
What is the funding mechanism for maintenance?	HOA dues
Discussion (as needed):	

Form I-6 Page 5 of 6	
Structural BMP Summary Information (Copy this page as needed to provide information for each individual proposed structural BMP)	
Structural BMP ID No. BF-3	
Construction Plan Sheet No. TBD	
Type of structural BMP: ☐ Retention by harvest and use (HU-1) ☐ Retention by infiltration basin (INF-1) ☐ Retention by bioretention (INF-2) ☐ Retention by permeable pavement (INF-3) ☐ Partial retention by biofiltration with partial retention (PR-1) ☒ Biofiltration (BF-1) ☐ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below) ☐ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) ☐ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below) ☐ Detention pond or vault for hydromodification management ☐ Other (describe in discussion section below)	
Purpose: ☐ Pollutant control only ☐ Hydromodification control only ☒ Combined pollutant control and hydromodification control ☐ Pre-treatment/forebay for another structural BMP ☐ Other (describe in discussion section below)	
Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms if required by the [City Engineer] (See Section 1.12 of the manual)	Third party inspector TBD
Who will be the final owner of this BMP?	HOA
Who will maintain this BMP into perpetuity?	HOA
What is the funding mechanism for maintenance?	HOA dues
Discussion (as needed):	

Form I-6 Page 6 of 6	
Structural BMP Summary Information (Copy this page as needed to provide information for each individual proposed structural BMP)	
Structural BMP ID No. BF-4	
Construction Plan Sheet No. TBD	
Type of structural BMP: ☐ Retention by harvest and use (HU-1) ☐ Retention by infiltration basin (INF-1) ☐ Retention by bioretention (INF-2) ☐ Retention by permeable pavement (INF-3) ☐ Partial retention by biofiltration with partial retention (PR-1) ☒ Biofiltration (BF-1) ☐ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below) ☐ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) ☐ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below) ☐ Detention pond or vault for hydromodification management ☐ Other (describe in discussion section below)	
Purpose: ☐ Pollutant control only ☐ Hydromodification control only ☒ Combined pollutant control and hydromodification control ☐ Pre-treatment/forebay for another structural BMP ☐ Other (describe in discussion section below)	
Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms if required by the [City Engineer] (See Section 1.12 of the manual)	Third party inspector TBD
Who will be the final owner of this BMP?	HOA
Who will maintain this BMP into perpetuity?	HOA
What is the funding mechanism for maintenance?	HOA dues
Discussion (as needed):	

Form I-6 Page 7 of 8	
Structural BMP Summary Information (Copy this page as needed to provide information for each individual proposed structural BMP)	
Structural BMP ID No. BF-5	
Construction Plan Sheet No. TBD	
Type of structural BMP: ☐ Retention by harvest and use (HU-1) ☐ Retention by infiltration basin (INF-1) ☐ Retention by bioretention (INF-2) ☐ Retention by permeable pavement (INF-3) ☐ Partial retention by biofiltration with partial retention (PR-1) ☒ Biofiltration (BF-1) ☐ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below) ☐ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) ☐ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below) ☐ Detention pond or vault for hydromodification management ☐ Other (describe in discussion section below)	
Purpose: ☐ Pollutant control only ☐ Hydromodification control only ☒ Combined pollutant control and hydromodification control ☐ Pre-treatment/forebay for another structural BMP ☐ Other (describe in discussion section below)	
Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms if required by the [City Engineer] (See Section 1.12 of the manual)	Third party inspector TBD
Who will be the final owner of this BMP?	HOA
Who will maintain this BMP into perpetuity?	HOA
What is the funding mechanism for maintenance?	HOA dues
Discussion (as needed):	

Form I-6 Page 8 of 8	
Structural BMP Summary Information (Copy this page as needed to provide information for each individual proposed structural BMP)	
Structural BMP ID No. BF-6	
Construction Plan Sheet No. TBD	
Type of structural BMP: ☐ Retention by harvest and use (HU-1) ☐ Retention by infiltration basin (INF-1) ☐ Retention by bioretention (INF-2) ☐ Retention by permeable pavement (INF-3) ☐ Partial retention by biofiltration with partial retention (PR-1) ☒ Biofiltration (BF-1) ☐ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below) ☐ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) ☐ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below) ☐ Detention pond or vault for hydromodification management ☐ Other (describe in discussion section below)	
Purpose: ☐ Pollutant control only ☐ Hydromodification control only ☒ Combined pollutant control and hydromodification control ☐ Pre-treatment/forebay for another structural BMP ☐ Other (describe in discussion section below)	
Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms if required by the [City Engineer] (See Section 1.12 of the manual)	Third party inspector TBD
Who will be the final owner of this BMP?	HOA
Who will maintain this BMP into perpetuity?	HOA
What is the funding mechanism for maintenance?	HOA dues

Discussion (as needed):

Engineer of work does not provide inspection service, third party inspector will be provided during final engineering.

ATTACHMENT 1 – BACKUP FOR PDP POLLUTANT CONTROL BMPs

This is the cover sheet for Attachment 1.

Indicate which Items are Included behind this cover sheet:

Attachment Sequence	**Contents**	**Checklist**
Attachment 1a	Storm Water Pollutant Control Worksheet Calculations Worksheet B.1-1 (Required) Worksheet B.3-1 (Required) Worksheet B.4-1 (if applicable) Worksheet B.4-2 (if applicable) Worksheet B.5-1 (if applicable) Worksheet B.5-2 (if applicable) Worksheet B.5-3 (if applicable) Worksheet B.6-1 (if applicable) Summary Worksheet (optional)	☒ ~~B.1-1~~ Included (Worksheet B.2-1) ☒ B.3-1 Included ☐ B.4-1 Included ☐ B.4-2 Included ☒ B.5-1 Included ☐ B.5-2 Included ☐ B.5-3 Included ☐ B.6-1 Included ☐ Summary Worksheet Included
Attachment 1b	Form I-8, Categorization of Infiltration Feasibility Condition (Required unless the project will use harvest and use BMPs) Refer to Appendices C and D of the BMP Design Manual to complete Form I-8.	☒ Included ☐ Not included because the entire project will use harvest and use BMPs
Attachment 1c	DMA Exhibit (Required) See DMA Exhibit Checklist on the back of this Attachment cover sheet.	☒ Included

Harvest and Use Feasibility Checklist	Worksheet B.3-1

1. Is there a demand for harvested water (check all that apply) at the project site that is reliably present during the wet season?

☒ Toilet and urinal flushing

☒ Landscape irrigation

☐ Other

2. If there is a demand; estimate the anticipated average wet season demand over a period of 36 hours. Guidance for planning level demand calculations for toilet/urinal flushing and landscape irrigation is provided in Section B.3.2.

[Provide a summary of calculations here]

Mod. ETWU = $2.8\left[\left[\frac{(.70)(730501.5)}{.90}\right]\right](0.015)$ = 23,863 Cubic Feet

3. Calculate the DCV using worksheet B-2.1.

DCV = 118,822 Cubic Feet .25 (118,822) = 29,705 Cubic Feet

3a. Is the 36 hour demand greater than or equal to the DCV?	3b. Is the 36 hour demand greater than 0.25DCV but less than the full DCV?	3c. Is the 36 hour demand less than 0.25DCV?
☐ Yes / ☒ No ⇨ ⇩	☐ Yes / ☒ No ⇨ ⇩	☒ Yes ⇩
Harvest and use appears to be feasible. Conduct more detailed evaluation and sizing calculations to confirm that DCV can be used at an adequate rate to meet drawdown criteria.	Harvest and use may be feasible. Conduct more detailed evaluation and sizing calculations to determine feasibility. Harvest and use may only be able to be used for a portion of the site, or (optionally) the storage may need to be upsized to meet long term capture targets while draining in longer than 36 hours.	Harvest and use is considered to be infeasible.

The Harvest and Use calculations were performed for the residential DMA's only.

THE FARMS
BIOFILTRATION BMP SIZING CALCULATION

	Imp. RF	Pervious RF	% Imp	DMA 1 COMBO BF-1	Fraction of Total	Imp Area	Pervious Area	Summation RF x A	DMA 2 BF-2	Fraction of Total	Imp Area	Pervious Area	Summation RF x A
				(ac.)		(ac.)	(ac.)		(ac.)		(ac.)	(ac.)	
BASIN	0.90	0.10	0	0.80	0.00	0.00	0.80	0.08	0.25	0.00	0.00	0.25	0.03
INDUSTRIAL	0.90	0.10	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MULTIUSE/COMMERCIAL	0.90	0.10	80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL	0.90	0.10	70	22.69	0.52	15.88	6.81	14.97	5.92	0.56	4.14	1.78	3.91
SOCIAL AMENITIES	0.90	0.10	60	5.60	0.11	3.36	2.24	3.25	0.00	0.00	0.00	0.00	0.00
AGRI AMENITIES	0.90	0.10	40	3.47	0.05	1.39	2.08	1.46	2.94	0.18	1.18	1.76	1.23
ROAD	0.90	0.10	95	10.31	0.31	9.79	0.52	8.87	2.09	0.26	1.98	0.10	1.80
SLOPES	0.90	0.10	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PARK	0.90	0.10	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				42.87	1.00	30.42	12.45	28.62	11.20	1.00	7.30	3.90	6.96
							Weighted C =	0.67				Weighted C =	0.62

	Imp. RF	Pervious RF	% Imp	DMA 3 BF-3	Fraction of Total	Imp Area	Pervious Area	Summation RF x A	DMA 4 BF-4	Fraction of Total	Imp Area	Pervious Area	Summation RF x A
				(ac.)		(ac.)	(ac.)		(ac.)		(ac.)	(ac.)	
BASIN	0.90	0.10	0	0.11	0.00	0.00	0.11	0.01	0.11	0.00	0.00	0.11	0.01
INDUSTRIAL	0.90	0.10	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MULTIUSE/COMMERCIAL	0.90	0.10	80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL	0.90	0.10	70	2.93	0.45	2.05	0.88	1.93	2.95	0.52	2.07	0.89	1.95
SOCIAL AMENITIES	0.90	0.10	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AGRI AMENITIES	0.90	0.10	40	1.81	0.18	0.72	1.08	0.76	0.00	0.00	0.00	0.00	0.00
ROADS	0.90	0.10	95	1.81	0.37	1.72	0.09	1.56	1.88	0.43	1.78	0.09	1.61
SLOPES	0.90	0.10	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PARK	0.9	0.10	10	0.00	0.00	0.00	0.00	0.00	0.84	0.23	0.08	0.75	0.15
				6.65	1.00	4.49	2.16	4.26	5.77	1.19	3.93	1.84	3.72
							Weighted C =	0.64				Weighted C =	0.65

THE FARMS
BIOFILTRATION BMP SIZING CALCULATION

	Imp. RF	Pervious RF	% Imp	DMA 5 BF-5	Fraction of Total	Imp Area	Pervious Area	Summation RF x A	DMA 6 BF-6	Fraction of Total	Imp Area	Pervious Area	Summation RF x A
				(ac.)		(ac.)	(ac.)		(ac.)		(ac.)	(ac.)	
BASIN	0.90	0.10	0	0.06	0.00	0.00	0.06	0.01	0.10	0.00	0.00	0.10	0.01
INDUSTRIAL	0.90	0.10	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MULTIUSE/COMMERCIAL	0.90	0.10	80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RESIDENTIAL	0.90	0.10	70	2.50	0.65	1.75	0.75	1.65	2.86	0.79	2.00	0.86	1.89
SOCIAL AMENITIES	0.90	0.10	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AGRI AMENITIES	0.90	0.10	40	0.70	0.12	0.28	0.42	0.29	0.00	0.00	0.00	0.00	0.00
ROADS	0.90	0.10	95	0.41	0.14	0.39	0.02	0.35	0.52	0.19	0.50	0.03	0.45
SLOPES	0.90	0.10	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PARK	0.90	0.10	10	1.34	0.48	0.13	1.21	0.24	0.25	0.07	0.02	0.22	0.04
				5.00	1.38	2.55	2.45	2.54	3.73	1.05	2.52	1.20	2.39
							Weighted C =	0.51				Weighted C =	0.64

THE FARMS
BIOFILTRATION BMP SIZING CALCULATION

DMA 1 COMBO BF-1: Design Capture Volume		Worksheet B-2.1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.68	inches
2	Area tributary to BMP (s)	A=	42.87	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.71	unitless
4	Street trees volume reduction	TCV=	0.00	cubic-feet
5	Rain barrels volume reduction	RCV=	0.00	cubic-feet
6	Calculate DCV= (3630 x C x d x A) - TCV - RCV	DCV=	75,126	cubic-feet

DMA 2 BF-2: Design Capture Volume		Worksheet B-2.1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.68	inches
2	Area tributary to BMP (s)	A=	11.20	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.62	unitless
4	Street trees volume reduction	TCV=	0.00	cubic-feet
5	Rain barrels volume reduction	RCV=	0.00	cubic-feet
6	Calculate DCV= (3630 x C x d x A) - TCV - RCV	DCV=	17,184	cubic-feet

DMA 3 BF-3: Design Capture Volume		Worksheet B-2.1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.68	inches
2	Area tributary to BMP (s)	A=	6.65	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.64	unitless
4	Street trees volume reduction	TCV=	0.00	cubic-feet
5	Rain barrels volume reduction	RCV=	0.00	cubic-feet
6	Calculate DCV= (3630 x C x d x A) - TCV - RCV	DCV=	10,517	cubic-feet

DMA 4 BF-4: Design Capture Volume		Worksheet B-2.1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.68	inches
2	Area tributary to BMP (s)	A=	5.77	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.65	unitless
4	Street trees volume reduction	TCV=	0.00	cubic-feet
5	Rain barrels volume reduction	RCV=	0.00	cubic-feet
6	Calculate DCV= (3630 x C x d x A) - TCV - RCV	DCV=	9,194	cubic-feet

THE FARMS

BIOFILTRATION BMP SIZING CALCULATION

DMA 5 BF-5: Design Capture Volume		Worksheet B-2.1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.68	inches
2	Area tributary to BMP (s)	A=	5.00	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.51	unitless
4	Street trees volume reduction	TCV=	0.00	cubic-feet
5	Rain barrels volume reduction	RCV=	0.00	cubic-feet
6	Calculate DCV= (3630 x C x d x A) - TCV - RCV	DCV=	6,262	cubic-feet

DMA 6 BF-6: Design Capture Volume		Worksheet B-2.1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.68	inches
2	Area tributary to BMP (s)	A=	3.73	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.64	unitless
4	Street trees volume reduction	TCV=	0.00	cubic-feet
5	Rain barrels volume reduction	RCV=	0.00	cubic-feet
6	Calculate DCV= (3630 x C x d x A) - TCV - RCV	DCV=	5,904	cubic-feet

THE FARMS

BIOFILTRATION BMP SIZING CALCULATION

COMBO BF-1: Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1	
1	Remaining DCV after implementing retention BMP's	75,126	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible	0.00	in/hr.
3	Allowable drawdown time for aggregate storage below the underdrain	36.00	hours
4	Depth of runoff that can be infiltrated (Line 2 x Line 3)	0.00	inches
5	Aggregate pore space	0.40	in/in
6	Required depth of gravel below the underdrain (Line 4/ Line 5)	0.00	inches
7	Assumed surface area of the biofiltration BMP	38,500.0	sq-ft
8	Media retained pore storage	0.10	in/in
9	Volume retained by BMP (Line 4+(Line 12 x Line 8)/12) x Line 7	5,775	cubic-feet
10	DCV that requires biofiltration (Line 1 - Line 9)	69,351	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	6.00	inches
12	Media Thickness [18 inches minimum], also add mulch layer thickness to this line for sizing calculations	18.00	inches
13	Aggregate Storage above underdrain invert (12 inches typical) - use 0 inches for sizing if the agreagate is not over the entire bottom surface area	12.00	inches
14	Freely drained pore storage	0.20	in/in
15	Media filtration rate to be used for sizing (5 in/hr. with no outlet control; if the filtration rate is controlled by the outlet use the outlet controlled rate)	5.00	in/hr.
Baseline Calculations			
16	Allowable Routing Time for sizing	6.00	hours
17	Depth filtered during storm (Line 15 x Line 16)	30.00	inches
18	Depth of Detention Storage (Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5))	14.40	inches
19	Total Depth Treated (Line 17 + Line 18)	44.40	inches
Option 1 - Biofilter 1.5 times the DCV			
20	Required biofiltered volume (1.5 x Line 10)	104,027	cubic-feet
21	Required Footprint (Line 20/ Line 19) x 12	28,115	sq-ft
Option 2 - Store 0.75 of remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume (0.75 x Line 10)	28,875	cubic-feet
23	Required Footprint (Line 22/ Line 18) x 12	24,063	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	1,867,266	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	0.67	unitless
26	BMP Footprint Sizing Factor (Default 0.03 or an alternative minimum footprint sizing factor from Worksheet B.5-2, Line 11)	0.03	unitless
27	Minimum BMP Footprint (Line 24 x Line 25 x Line 26)	37,406	sq-ft
28	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 27)	37,406	sq-ft
Check for Volume Reduction [Not applicable for No Infiltration Condition]			
29	Calculate the fraction of DCV retained in the BMP [Line 9/Line 1]	N/A	unitless
30	Minimum required fraction of DCV retained for partial infiltration condition	N/A	unitless
31	Is the fraction of DCV retained ≥ 0.375? If the answer is no increase the footprint sizing factor in Line 26 until the answer is yes for this criterion.	☐Yes ☐No ☒N/A	

THE FARMS
BIOFILTRATION BMP SIZING CALCULATION

BF-2: Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1	
1	Remaining DCV after implementing retention BMP's	17,184	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible	0.00	in/hr.
3	Allowable drawdown time for aggregate storage below the underdrain	36.00	hours
4	Depth of runoff that can be infiltrated (Line 2 x Line 3)	0.00	inches
5	Aggregate pore space	0.40	in/in
6	Required depth of gravel below the underdrain (Line 4/ Line 5)	0.00	inches
7	Assumed surface area of the biofiltration BMP	11,000.00	sq-ft
8	Media retained pore storage	0.10	in/in
9	Volume retained by BMP (Line 4+(Line 12 x Line 8)/12) x Line 7	1,100.00	cubic-feet
10	DCV that requires biofiltration (Line 1 - Line 9)	16,083.95	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	6.00	inches
12	Media Thickness [18 inches minimum], also add mulch layer thickness to this line for sizing calculations	12.00	inches
13	Aggregate Storage above underdrain invert (12 inches typical) - use 0 inches for sizing if the agreagate is not over the entire bottom surface area	18.00	inches
14	Freely drained pore storage	0.20	in/in
15	Media filtration rate to be used for sizing (5 in/hr. with no outlet control; if the filtration rate is controlled by the outlet use the outlet controlled rate)	5.00	in/hr.
Baseline Calculations			
16	Allowable Routing Time for sizing	6.00	hours
17	Depth filtered during storm (Line 15 x Line 16)	30.00	inches
18	Depth of Detention Storage (Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5))	15.60	inches
19	Total Depth Treated (Line 17 + Line 18)	45.60	inches
Option 1 - Biofilter 1.5 times the DCV			
20	Required biofiltered volume (1.5 x Line 10)	24,125.92	cubic-feet
21	Required Footprint (Line 20/ Line 19) x 12	6,349	sq-ft
Option 2 - Store 0.75 of remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume (0.75 x Line 10)	8,250.00	cubic-feet
23	Required Footprint (Line 22/ Line 18) x 12	6,346	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	487,777.53	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	0.62	unitless
26	BMP Footprint Sizing Factor (Default 0.03 or an alternative minimum footprint sizing factor from Worksheet B.5-2, Line 11)	0.03000	unitless
27	Minimum BMP Footprint (Line 24 x Line 25 x Line 26)	9,097	sq-ft
28	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 27)	9,097	sq-ft
Check for Volume Reduction [Not applicable for No Infiltration Condition]			
29	Calculate the fraction of DCV retained in the BMP [Line 9/Line 1]	N/A	unitless
30	Minimum required fraction of DCV retained for partial infiltration condition	N/A	unitless
31	Is the fraction of DCV retained ≥ 0.375? If the answer is no increase the footprint sizing factor in Line 26 until the answer is yes for this criterion.	☐Yes ☐No ☒N/A	

THE FARMS
BIOFILTRATION BMP SIZING CALCULATION

	BF-3: Simple Sizing Method for Biofiltration BMPs	Worksheet B.5-1	
1	Remaining DCV after implementing retention BMP's	10,517	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible	0.00	in/hr.
3	Allowable drawdown time for aggregate storage below the underdrain	36.00	hours
4	Depth of runoff that can be infiltrated (Line 2 x Line 3)	0.00	inches
5	Aggregate pore space	0.40	in/in
6	Required depth of gravel below the underdrain (Line 4/ Line 5)	0.00	inches
7	Assumed surface area of the biofiltration BMP	5,800.00	sq-ft
8	Media retained pore storage	0.10	in/in
9	Volume retained by BMP (Line 4+(Line 12 x Line 8)/12) x Line 7	870.00	cubic-feet
10	DCV that requires biofiltration (Line 1 - Line 9)	9,647.01	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	6.00	inches
12	Media Thickness [18 inches minimum], also add mulch layer thickness to this line for sizing calculations	18.00	inches
13	Aggregate Storage above underdrain invert (12 inches typical) - use 0 inches for sizing if the agreagate is not over the entire bottom surface area	12.00	inches
14	Freely drained pore storage	0.20	in/in
15	Media filtration rate to be used for sizing (5 in/hr. with no outlet control; if the filtration rate is controlled by the outlet use the outlet controlled rate)	5.00	in/hr.
Baseline Calculations			
16	Allowable Routing Time for sizing	6.00	hours
17	Depth filtered during storm (Line 15 x Line 16)	30.00	inches
18	Depth of Detention Storage (Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5))	14.40	inches
19	Total Depth Treated (Line 17 + Line 18)	44.40	inches
Option 1 - Biofilter 1.5 times the DCV			
20	Required biofiltered volume (1.5 x Line 10)	14,470.51	cubic-feet
21	Required Footprint (Line 20/ Line 19) x 12	3,911	sq-ft
Option 2 - Store 0.75 of remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume (0.75 x Line 10)	4,350.00	cubic-feet
23	Required Footprint (Line 22/ Line 18) x 12	3,625	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	289,818.50	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	0.64	unitless
26	BMP Footprint Sizing Factor (Default 0.03 or an alternative minimum footprint sizing factor from Worksheet B.5-2, Line 11)	0.03000	unitless
27	Minimum BMP Footprint (Line 24 x Line 25 x Line 26)	5,568	sq-ft
28	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 27)	5,568	sq-ft
Check for Volume Reduction [Not applicable for No Infiltration Condition]			
29	Calculate the fraction of DCV retained in the BMP [Line 9/Line 1]	N/A	unitless
30	Minimum required fraction of DCV retained for partial infiltration condition	N/A	unitless
31	Is the fraction of DCV retained ≥ 0.375? If the answer is no increase the footprint sizing factor in Line 26 until the answer is yes for this criterion.	☐Yes ☐No ☒N/A	

THE FARMS
BIOFILTRATION BMP SIZING CALCULATION

	BF-4: Simple Sizing Method for Biofiltration BMPs	Worksheet B.5-1	
1	Remaining DCV after implementing retention BMP's	9,194	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible	0.00	in/hr.
3	Allowable drawdown time for aggregate storage below the underdrain	36.00	hours
4	Depth of runoff that can be infiltrated (Line 2 x Line 3)	0.00	inches
5	Aggregate pore space	0.40	in/in
6	Required depth of gravel below the underdrain (Line 4/ Line 5)	0.00	inches
7	Assumed surface area of the biofiltration BMP	5,000.00	sq-ft
8	Media retained pore storage	0.10	in/in
9	Volume retained by BMP (Line 4+(Line 12 x Line 8)/12) x Line 7	500.00	cubic-feet
10	DCV that requires biofiltration (Line 1 - Line 9)	8,693.99	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	6.00	inches
12	Media Thickness [18 inches minimum], also add mulch layer thickness to this line for sizing calculations	12.00	inches
13	Aggregate Storage above underdrain invert (12 inches typical) - use 0 inches for sizing if the agreagate is not over the entire bottom surface area	18.00	inches
14	Freely drained pore storage	0.20	in/in
15	Media filtration rate to be used for sizing (5 in/hr. with no outlet control; if the filtration rate is controlled by the outlet use the outlet controlled rate)	5.00	in/hr.
Baseline Calculations			
16	Allowable Routing Time for sizing	6.00	hours
17	Depth filtered during storm (Line 15 x Line 16)	30.00	inches
18	Depth of Detention Storage (Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5))	15.60	inches
19	Total Depth Treated (Line 17 + Line 18)	45.60	inches
Option 1 - Biofilter 1.5 times the DCV			
20	Required biofiltered volume (1.5 x Line 10)	13,040.98	cubic-feet
21	Required Footprint (Line 20/ Line 19) x 12	3,432	sq-ft
Option 2 - Store 0.75 of remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume (0.75 x Line 10)	3,750.00	cubic-feet
23	Required Footprint (Line 22/ Line 18) x 12	2,885	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	251,518.00	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	0.65	unitless
26	BMP Footprint Sizing Factor (Default 0.03 or an alternative minimum footprint sizing factor from Worksheet B.5-2, Line 11)	0.03000	unitless
27	Minimum BMP Footprint (Line 24 x Line 25 x Line 26)	4,867	sq-ft
28	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 27)	4,867	sq-ft
Check for Volume Reduction [Not applicable for No Infiltration Condition]			
29	Calculate the fraction of DCV retained in the BMP [Line 9/Line 1]	N/A	unitless
30	Minimum required fraction of DCV retained for partial infiltration condition	N/A	unitless
31	Is the fraction of DCV retained ≥ 0.375? If the answer is no increase the footprint sizing factor in Line 26 until the answer is yes for this criterion.	☐Yes ☐No ☒N/A	

THE FARMS
BIOFILTRATION BMP SIZING CALCULATION

	BF-5: Simple Sizing Method for Biofiltration BMPs	Worksheet B.5-1	
1	Remaining DCV after implementing retention BMP's	6,262	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible	0.00	in/hr.
3	Allowable drawdown time for aggregate storage below the underdrain	36.00	hours
4	Depth of runoff that can be infiltrated (Line 2 x Line 3)	0.00	inches
5	Aggregate pore space	0.40	in/in
6	Required depth of gravel below the underdrain (Line 4/ Line 5)	0.00	inches
7	Assumed surface area of the biofiltration BMP	2,700.00	sq-ft
8	Media retained pore storage	0.10	in/in
9	Volume retained by BMP (Line 4+(Line 12 x Line 8)/12) x Line 7	405.00	cubic-feet
10	DCV that requires biofiltration (Line 1 - Line 9)	5,857.12	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	6.00	inches
12	Media Thickness [18 inches minimum], also add mulch layer thickness to this line for sizing calculations	18.00	inches
13	Aggregate Storage above underdrain invert (12 inches typical) - use 0 inches for sizing if the agreagate is not over the entire bottom surface area	12.00	inches
14	Freely drained pore storage	0.20	in/in
15	Media filtration rate to be used for sizing (5 in/hr. with no outlet control; if the filtration rate is controlled by the outlet use the outlet controlled rate)	5.00	in/hr.
Baseline Calculations			
16	Allowable Routing Time for sizing	6.00	hours
17	Depth filtered during storm (Line 15 x Line 16)	30.00	inches
18	Depth of Detention Storage (Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5))	14.40	inches
19	Total Depth Treated (Line 17 + Line 18)	44.40	inches
Option 1 - Biofilter 1.5 times the DCV			
20	Required biofiltered volume (1.5 x Line 10)	8,785.68	cubic-feet
21	Required Footprint (Line 20/ Line 19) x 12	2,375	sq-ft
Option 2 - Store 0.75 of remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume (0.75 x Line 10)	2,025.00	cubic-feet
23	Required Footprint (Line 22/ Line 18) x 12	1,688	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	0.00	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	0.51	unitless
26	BMP Footprint Sizing Factor (Default 0.03 or an alternative minimum footprint sizing factor from Worksheet B.5-2, Line 11)	0.03000	unitless
27	Minimum BMP Footprint (Line 24 x Line 25 x Line 26)	0	sq-ft
28	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 27)	1,688	sq-ft
Check for Volume Reduction [Not applicable for No Infiltration Condition]			
29	Calculate the fraction of DCV retained in the BMP [Line 9/Line 1]	N/A	unitless
30	Minimum required fraction of DCV retained for partial infiltration condition	N/A	unitless
31	Is the fraction of DCV retained ≥ 0.375? If the answer is no increase the footprint sizing factor in Line 26 until the answer is yes for this criterion.	☐Yes ☐No ☒N/A	

THE FARMS
BIOFILTRATION BMP SIZING CALCULATION

BF-6: Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1	
1	Remaining DCV after implementing retention BMP's	5,904	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible	0.00	in/hr.
3	Allowable drawdown time for aggregate storage below the underdrain	36.00	hours
4	Depth of runoff that can be infiltrated (Line 2 x Line 3)	0.00	inches
5	Aggregate pore space	0.40	in/in
6	Required depth of gravel below the underdrain (Line 4/ Line 5)	0.00	inches
7	Assumed surface area of the biofiltration BMP	4,200.00	sq-ft
8	Media retained pore storage	0.10	in/in
9	Volume retained by BMP (Line 4+(Line 12 x Line 8)/12) x Line 7	420.00	cubic-feet
10	DCV that requires biofiltration (Line 1 - Line 9)	5,483.80	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	6.00	inches
12	Media Thickness [18 inches minimum], also add mulch layer thickness to this line for sizing calculations	12.00	inches
13	Aggregate Storage above underdrain invert (12 inches typical) - use 0 inches for sizing if the agreagate is not over the entire bottom surface area	18.00	inches
14	Freely drained pore storage	0.20	in/in
15	Media filtration rate to be used for sizing (5 in/hr. with no outlet control; if the filtration rate is controlled by the outlet use the outlet controlled rate)	5.00	in/hr.
Baseline Calculations			
16	Allowable Routing Time for sizing	6.00	hours
17	Depth filtered during storm (Line 15 x Line 16)	30.00	inches
18	Depth of Detention Storage (Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5))	15.60	inches
19	Total Depth Treated (Line 17 + Line 18)	45.60	inches
Option 1 - Biofilter 1.5 times the DCV			
20	Required biofiltered volume (1.5 x Line 10)	8,225.70	cubic-feet
21	Required Footprint (Line 20/ Line 19) x 12	2,165	sq-ft
Option 2 - Store 0.75 of remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume (0.75 x Line 10)	3,150.00	cubic-feet
23	Required Footprint (Line 22/ Line 18) x 12	2,423	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	217,812.60	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	0.64	unitless
26	BMP Footprint Sizing Factor (Default 0.03 or an alternative minimum footprint sizing factor from Worksheet B.5-2, Line 11)	0.03000	unitless
27	Minimum BMP Footprint (Line 24 x Line 25 x Line 26)	4,195	sq-ft
28	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 27)	4,195	sq-ft
Check for Volume Reduction [Not applicable for No Infiltration Condition]			
29	Calculate the fraction of DCV retained in the BMP [Line 9/Line 1]	N/A	unitless
30	Minimum required fraction of DCV retained for partial infiltration condition	N/A	unitless
31	Is the fraction of DCV retained ≥ 0.375? If the answer is no increase the footprint sizing factor in Line 26 until the answer is yes for this criterion.	☐Yes ☐No ☒N/A	

TREE WELL SIZING FOR AGRICULTURAL DMAs

County of San Diego Automated Stormwater Pollutant Control Worksheets
(Version 2.0)

WELCOME:

Welcome to the County of San Diego Automated Stormwater Pollutant Control Worksheets. These worksheets may be used to demonstrate compliance with stormwater pollutant control standards set forth in the 2013 MS4 Permit for Priority Development Projects and Green Street Projects.

INSTRUCTIONS:

General: To use this workbook, navigate to each of the worksheet tabs below and populate all yellow cells with project specific information. Yellow cells require user input, white cells are locked for editing and are automatically calculated, blue cells are also locked for editing and are automatically populated based on results from previous worksheet tabs, grey cells are items that do not require user input because of previous user inputs, orange cells represent warnings where supplemental information and/or revisions may be required for compliance. The worksheets are formatted to accommodate calculations for up to 10 drainage areas and associated BMPs. Each drainage area and BMP is represented as a discrete column with corresponding user inputs and calculations appearing in the rows below. Please note that projects with more than 10 drainage areas may need to use more than one workbook to accommodate the entire project.

Step 1. DCV: Provide the required inputs to determine the design capture volume for each PDP drainage area. The calculations in this worksheet determine the initial design capture volume and also apply any applicable reductions associated with site design techniques including dispersion to pervious surfaces, incorporation of tree wells, and incorporation of rain barrels.

Step 2. Retention Requirements: Provide required inputs to determine the minimum retention requirements for each drainage area.

Step 3. BMP Performance: Provide required inputs to determine the portion of the pollutant control performance standards that are satisfied by the proposed BMPs.

Reduced Size BMP Maintenance (optional): If BMPs with a footprint of less than 3% of the effective impervious tributary are proposed, provide required inputs to determine the anticipated frequency for major BMP maintenance activities.

DISCLAIMER:

The County of San Diego has developed this tool in an effort to streamline traditionally complex efforts associated with planning, design, submittal, and review of PDPs that are subject to stormwater pollutant control requirements set forth in the 2013 MS4 Permit. While the calculations performed herein are deemed to be in compliance with Permit requirements, applicants may elect to provide their own calculations. Use of this tool is optional and the County will not be held liable for any errors or other negative impacts associated with its use. In the event that the County performs updates to these worksheets, applicants that have not established reliance on previous versions of the worksheet via discretionary approval may be required to utilize the latest version of the worksheets. A summary of version releases is included below.

QUESTIONS:

-Questions relating to specific projects, submittal requirements, approval process, and/or policy-related issues should be directed your PDS Land Development Project Manager (link below).

PDS Land Development Project Manager

-General questions/comments on this worksheet may be directed to Charles Mohrlock in the County of San Diego Watershed Protection Program (link below).

charles.mohrlock@sdcounty.ca.gov

Automated Worksheet B.1: Calculation of Design Capture Volume (V2.0)

Category	#	Description	i	ii	iii	iv	v	vi	vii	viii	ix	x	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name	AG DMA 1	AG DMA 2	AG DMA 3	AG DMA 4	AG DMA 5	AG DMA 6	AG DMA 7	AG DMA 8	AG DMA 9	AG DMA 10	unitless
	2	85th Percentile 24-hr Storm Depth	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	inches
	3	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	37,508	24,546	22,334	68,755	116,239	46,853	65,842	85,671	26,934	160,058	sq-ft
	4	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)											sq-ft
	5	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)											sq-ft
	6	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)											sq-ft
	7	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)											sq-ft
	8	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)	337,569	36,819	33,501	103,133	174,358	70,279	98,763	128,507	40,401	240,087	sq-ft
	9	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)											sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	10	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	yes/no
	11	Impervious Surfaces Directed to Dispersion Area per SD-B (Ci=0.90)											sq-ft
	12	Semi-Pervious Surfaces Serving as Dispersion Area per SD-B (Ci=0.30)											sq-ft
	13	Engineered Pervious Surfaces Serving as Dispersion Area per SD-B (Ci=0.10)											sq-ft
	14	Natural Type A Soil Serving as Dispersion Area per SD-B (Ci=0.10)											sq-ft
	15	Natural Type B Soil Serving as Dispersion Area per SD-B (Ci=0.14)											sq-ft
	16	Natural Type C Soil Serving as Dispersion Area per SD-B (Ci=0.23)											sq-ft
	17	Natural Type D Soil Serving as Dispersion Area per SD-B (Ci=0.30)											sq-ft
	18	Number of Tree Wells Proposed per SD-A	16	5	4	12	20	8	12	15	5	27	#
	19	Average Mature Tree Canopy Diameter	30	30	30	30	30	30	30	30	30	30	ft
	20	Number of Rain Barrels Proposed per SD-E											#
	21	Average Rain Barrel Size											gal
Initial Runoff Factor Calculation	22	Total Tributary Area	375,077	61,365	55,835	171,889	290,597	117,132	164,605	214,178	67,334	400,146	sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas	0.30	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	unitless
	25	Initial Weighted Runoff Factor	0.30	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	unitless
	26	Initial Design Capture Volume	6,376	1,739	1,582	4,870	8,234	3,319	4,664	6,068	1,908	11,337	cubic-feet
Dispersion Area Adjustments	27	Total Impervious Area Dispersed to Pervious Surface	0	0	0	0	0	0	0	0	0	0	sq-ft
	28	Total Pervious Dispersion Area	0	0	0	0	0	0	0	0	0	0	sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	ratio
	30	Adjustment Factor for Dispersed & Dispersion Areas	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	ratio
	31	Runoff Factor After Dispersion Techniques	0.30	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	unitless
	32	Design Capture Volume After Dispersion Techniques	6,376	1,739	1,582	4,870	8,234	3,319	4,664	6,068	1,908	11,337	cubic-feet
Tree & Barrel Adjustments	33	Total Tree Well Volume Reduction	6,720	2,100	1,680	5,040	8,400	3,360	5,040	6,300	2,100	11,340	cubic-feet
	34	Total Rain Barrel Volume Reduction	0	0	0	0	0	0	0	0	0	0	cubic-feet
Results	35	Final Adjusted Runoff Factor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	unitless
	36	Final Effective Tributary Area	0	0	0	0	0	0	0	0	0	0	sq-ft
	37	Initial Design Capture Volume Retained by Site Design Elements	6,720	2,100	1,680	5,040	8,400	3,360	5,040	6,300	2,100	11,340	cubic-feet
	38	Final Design Capture Volume Tributary to BMP	0	0	0	0	0	0	0	0	0	0	cubic-feet

No Warning Messages

Categorization of Infiltration Feasibility Condition	Form I-8

Part 1 - Full Infiltration Feasibility Screening Criteria

Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
1	**Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		X

Based on information collected from the USDA NRCS website, The entire property is underlain with soils classified as Hydrologic Soil Group C and D, which are not considered suitable for full infiltration BMP's. All of basins will be graded and result in compacted fill ranging between 15 to 18 feet thick, or will expose competent granitic rock possibly requiring blasting to excavate. Infiltration BMP's supported by compacted fill are not recommended due to the increased potential for soil saturation, settlement of granular fill soils, heaving of expansive soils, and lateral water migration. Lateral water migration could result in distress to downgradient public and private properties and improvements. In addition, compacted fill will not exhibit design infiltration rates of 0.5 inches per hour or greater. The underlying granitic rock is considered practically impermeable and will not exhibit design infiltration rates of 0.5 iph or greater.

2	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.		X

Provide basis:

Infiltration BMP's supported by compacted fill are not recommended. The potential for long-term settlement of the granular fill soils, heaving of the near surface expansive soils, and lateral water migration to adversely impact existing and proposed utilities and to adversely impact existing and proposed foundations and improvements is high. The underlying granitic rock is considered practically impermeable, therefore basins supported on the granitic rock will result in daylight water seepage, lateral water migration, ponding of water for extended time periods, and slope instability if the water migrates laterally into compacted fill and slope areas.

Form I-8 Page 2 of 4			
Criteria	Screening Question	**Yes**	**No**
3	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Groundwater is not located within 10 feet from the bottom of any proposed basins, therefore the risk of storm water infiltration BMP's adversely impacting groundwater is considered negligible.			
4	**Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
It is our opinion there are no adverse impacts to groundwater, water balance impacts to stream flow, or impacts on any downstream water rights. It should be noted that researching downstream water rights or evaluating water balance issues to stream flows is beyond the scope of the geotechnical consultant.			
Part 1 Result *	If all answers to rows 1 - 4 are "**Yes**" a full infiltration design is potentially feasible. The feasibility screening category is **Full Infiltration** If any answer from row 1-4 is "**No**", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2		No

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

Form I-8 Page 3 of 4

Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria

Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
5	**Do soil and geologic conditions allow for infiltration in any appreciable rate or volume?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	X	

Unless infiltration testing is performed and results in design infiltration rates of 0.05 iph or less, which is considered the recognized low bound design rate for partial infiltration, partial infiltration BMP's incorporating side liners and subdrains could be used to reasonably mitigate the adverse impacts of infiltration.

6	**Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level**? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	X	

Unless infiltration testing is performed and results in design infiltration rates of 0.05 iph or less, which is considered the recognized low bound design rate for partial infiltration, partial infiltration BMP's incorporating side liners and subdrains could be used to reasonably mitigate the adverse impacts of infiltration.

Form I-8 Page 4 of 4			
Criteria	Screening Question	**Yes**	**No**
7	**Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Groundwater is not located within 10 feet from the bottom of any proposed basins, therefore the risk of storm water infiltration BMP's adversely impacting groundwater is considered negligible.			
8	**Can infiltration be allowed without violating downstream water rights**? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
It is our opinion there are no adverse impacts to groundwater, water balance impacts to stream flow, or impacts on any downstream water rights. It should be noted that researching downstream water rights or evaluating water balance issues to stream flows is beyond the scope of the geotechnical consultant.			
Part 2 Result*	If all answers from row 5-8 are yes then partial infiltration design is potentially feasible. The feasibility screening category is **Partial Infiltration.** If any answer from row 5-8 is no, then infiltration of any volume is considered to be **infeasible** within the drainage area. The feasibility screening category is **No Infiltration.**	Partial Infiltration	

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

Use this checklist to ensure the required information has been included on the DMA Exhibit. Include checklist in submittal and check all boxes that are applicable. Provide justification for items not included.

The DMA Exhibit must identify:

☒ Underlying hydrologic soil group
☒ Approximate depth to groundwater
☒ Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
☒ Critical coarse sediment yield areas to be protected
☒ Existing topography and impervious areas
☒ Existing and proposed site drainage network and connections to drainage offsite
☒ Proposed demolition
☒ Proposed grading
☒ Proposed impervious features
☒ Proposed design features and surface treatments used to minimize imperviousness
☒ Drainage management area (DMA) boundaries, DMA ID numbers, and DMA areas (square footage or acreage), and DMA type (i.e., drains to BMP, self-retaining, or self-mitigating)
☒ Structural BMPs (identify location, structural BMP ID#, type of BMP, and size/detail)

Justification for items not included in DMA Exhibit:

LEGEND

- PROJECT BOUNDARY
- DMA BOUNDARY
- AGRICULTURAL DMA's
- DMA 1 - TRIBUTARY TO COMBO BASIN 1
- DMA 2-- TRIBUTARY TO BASIN 2
- DMA 3- TRIBUTARY TO BASIN 3
- DMA 4 - TRIBUTARY TO BASIN 4
- DMA 5 - TRIBUTARY TO BASIN 5
- DMA 6- TRIBUTARY TO BASIN 6
- HYDROLOGIC SOIL TYPE PER NRCS WEB SOIL SURVEY DATA: C & B

TREATMENT CONTROL(STRUCTURAL) BMP's

- BIOFILTRATION BASIN
- WATER QUALITY TREE-WELLS

SOURCE CONTROL BMP's (FORM I-4 IN SWQMP)

SC-1 PREVENTION OF ILLICIT DISCHARGE TO THE MS4

SC-2 STORM DRAIN STENCILING AND SINAGE - MARK ALL INLETS WITH "NO DUMPING! FLOWS TO BAY" OR SIMILAR

SC-5 PROTECT TRASH STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL

SC-6 ONSITE STORM DRAIN INLETS - MARK ALL INLETS WITH "NO DUMPING! FLOWS TO BAY" OR SIMILAR

SC-6 LANDSCAPE/OUTDOOR PESTICIDE USE - SPECIFIC LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING

SC-6 POOLS, SPAS, PONDS, DECORATIVE FOUNTAINS, AND OTHER WATER FEATURES - SPECIFIC LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING

SC-6 FOOD SERVICE - SPECIFIC LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING

SC-6 REFUSE AREAS- SPECIFIC LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING.

SC-6 MISCELLANEOUS DRAIN OR WASH WATER - SPECIFIC LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING

SC-6 PLAZAS, SIDEWALKS, AND PARKING LOTS - PLAZAS. SIDEWALKS AND PARKING LOTS WILL BE SWEPT REGULARLY TO PREVENT THE ACCUMULATION OF DEBRIS AND LITTER

SITE DESIGN BMPS (FORM I-5 IN SWQMP)

SD-1 MAINTAIN NATURAL DRAINAGE PATHWAYS AND HYDROLOGIC FEATURES

SD-2 CONSERVE NATURAL AREAS, SOILS, AND VEGETATION

SD-3 MINIMIZE IMPERVIOUS AREA

SD-4 MINIMIZE SOIL COMPACTION

SD-5 IMPERVIOUS AREA DISPERSION

SD-6 RUNOFF COLLECTION

SD-7 LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES

SD-8 HARVESTING AND USING PRECIPITATION

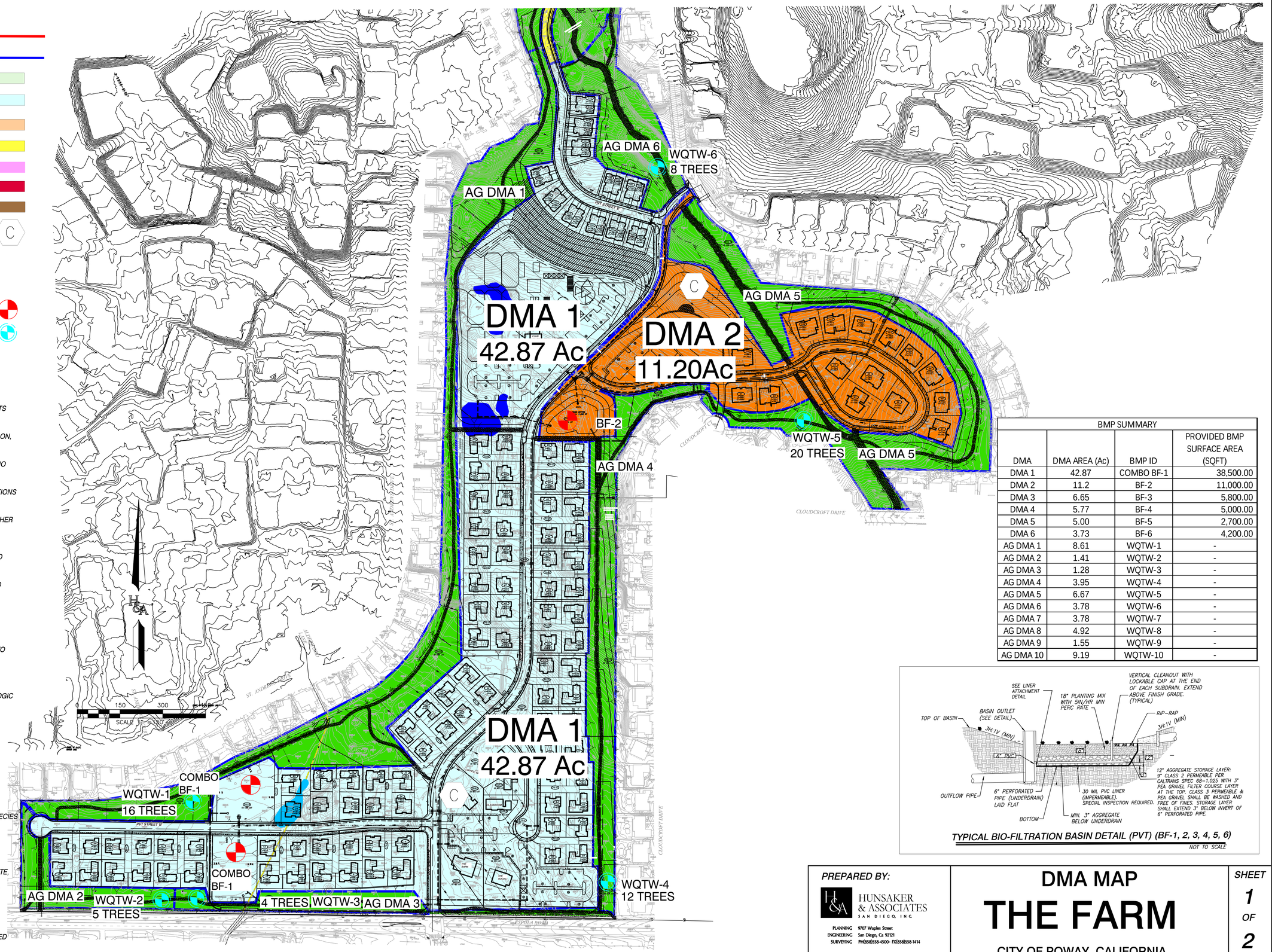
NOTES:

NO EXISTING NATURAL HYDROLOGIC FEATURES FOUND ON-SITE,

GROUNDWATER DEPTH APPROXIMATELY 15' - 20' FEET BELOW SURFACE.

NO CCSYAS FOUND ONSITE.

TREEWELL DESIGN DETAILS AND LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING.



BMP SUMMARY			
DMA	DMA AREA (Ac)	BMP ID	PROVIDED BMP SURFACE AREA (SQFT)
DMA 1	42.87	COMBO BF-1	38,500.00
DMA 2	11.2	BF-2	11,000.00
DMA 3	6.65	BF-3	5,800.00
DMA 4	5.77	BF-4	5,000.00
DMA 5	5.00	BF-5	2,700.00
DMA 6	3.73	BF-6	4,200.00
AG DMA 1	8.61	WQTW-1	-
AG DMA 2	1.41	WQTW-2	-
AG DMA 3	1.28	WQTW-3	-
AG DMA 4	3.95	WQTW-4	-
AG DMA 5	6.67	WQTW-5	-
AG DMA 6	3.78	WQTW-6	-
AG DMA 7	3.78	WQTW-7	-
AG DMA 8	4.92	WQTW-8	-
AG DMA 9	1.55	WQTW-9	-
AG DMA 10	9.19	WQTW-10	-

TYPICAL BIO-FILTRATION BASIN DETAIL (PVT) (BF-1, 2, 3, 4, 5, 6)

NOT TO SCALE

PREPARED BY:

HUNSAKER & ASSOCIATES SAN DIEGO, INC

PLANNING
ENGINEERING
SURVEYING

9707 Waples Street
San Diego, Ca 92121
PH(858)558-4500 - FX(858)558-1414

DMA MAP

THE FARM

CITY OF POWAY, CALIFORNIA

SHEET 1 OF 2

W.O. 3355-01

LEGEND

PROJECT BOUNDARY

DMA BOUNDARY

AGRICULTURAL DMA's

DMA 1 - TRIBUTARY TO COMBO BASIN 1

DMA 2-- TRIBUTARY TO BASIN 2

DMA 3- TRIBUTARY TO BASIN 3

DMA 4 - TRIBUTARY TO BASIN 4

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DMA 6- TRIBUTARY TO BASIN 6

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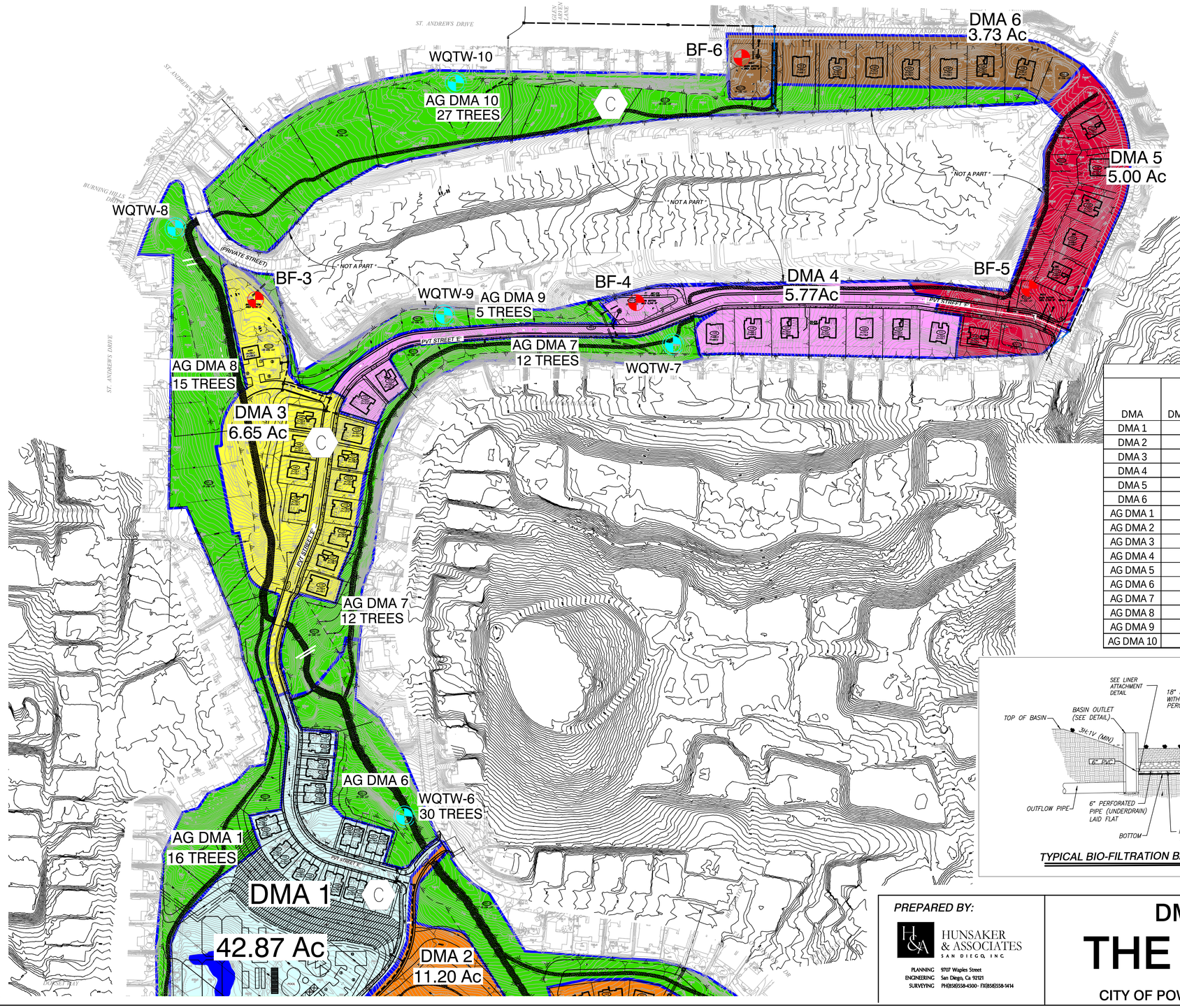
NOTES:

NO EXISTING NATURAL HYDROLOGIC FEATURES FOUND ON-SITE,

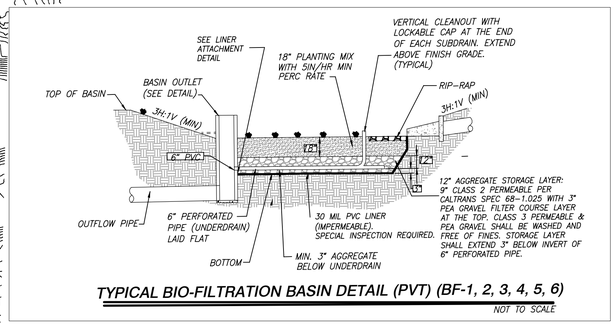
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AG DMA 10	9.19	WQTW-10	-



TYPICAL BIO-FILTRATION BASIN DETAIL (PVT) (BF-1, 2, 3, 4, 5, 6)

NOT TO SCALE

PREPARED BY:

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DMA MAP

THE FARM

CITY OF POWAY, CALIFORNIA

SHEET 2 OF 2

W.O. 3355-01

ATTACHMENT 2 – BACKUP FOR PDP HYDROMODIFICATION CONTROL MEASURES

This is the cover sheet for Attachment 2.

☐ Mark this box if this attachment is empty because the project is exempt from PDP hydromodification management requirements.

Indicate which Items are Included behind this cover sheet:

Attachment Sequence	**Contents**	**Checklist**
Attachment 2a	Flow Control Facility Design, including Structural BMP Drawdown Calculations and Overflow Design Summary (Required) See Chapter 6 and Appendix G of the BMP Design Manual	☒ Included ☐ Submitted as separate stand-alone document
Attachment 2b	Hydromodification Management Exhibit (Required)	☒ Included See Hydromodification Management Exhibit Checklist on the back of this Attachment cover sheet.
Attachment 2c	Management of Critical Coarse Sediment Yield Areas See Section 6.2 and Appendix H of the BMP Design Manual.	☒ Exhibit depicting onsite and/or upstream sources of critical coarse sediment as mapped by Regional or Jurisdictional approaches outlined in Appendix H.1 AND, ☒ Demonstration that the project effectively avoids and bypasses sources of mapped critical coarse sediment per approaches outlined in Appendix H.2 and H.3. OR, ☐ Demonstration that project does not generate a net impact on the receiving water per approaches outlined in Appendix H.4.
Attachment 2d	Geomorphic Assessment of Receiving Channels (Optional) See Section 6.3.4 of the BMP Design Manual.	☒ Not performed ☐ Included ☐ Submitted as separate stand-alone document
Attachment 2e	Vector Control Plan (Required when structural BMPs will not drain in 96 hours)	☐ Included ☒ Not required because BMPs will drain in less than 96 hours

Attachment 2: Flow Control Facility Design and Summary of Hydromodification Compliance for The Farm, City of Poway, CA

Introduction

This report summarizes the approach used to model The Farm project site in the City of Poway to achieve flow control requirements for hydromodification management using the Environmental Protection Agency (EPA) Storm Water Management Model 5.1 (SWMM). SWMM models will be provided in the next submittal for the pre and post developed conditions at the site in order to determine if the proposed biofiltration facilities have sufficient storage volume to meet the current Hydromodification Management Plan (HMP) requirements from the Regional Water Quality Control Board (RWQCB).

SWMM Model Development

The Farm development plan proposes the construction of single family homes, agricultural areas, and social amenities.

Three Points of Compliance (POC) will be analyzed in the SWMM analysis. The applicable POCs for The Farm project are numbered POC 1, 2, 3.

An assumed impervious was used for each pad based on its proposed land use and Table 3-1 from the San Diego County Hydrology Manual to provide preliminary sizing for basins necessary for ultimate land use for hydromodification management. Basin design is also modeled as a basin with vertical sides in order to simplify calculations. Development for each pad must provide the same basin bottom with 3:1 slope required in the City BMP DM.

Two SWMM models will be prepared for each of the three POCs, one for the pre, and one for the post development.

The inputs required to run a SWMM analysis are rainfall, evaporation rate, area, drainage soil, and any BMP configuration applicable to the project based on the 2016 BMP DM. The rain gauge used is the Poway Gage as it is the most representative of the area based on location. Evaporation for the project site will be taken from BMP DM for Zone 4 for the monthly average evapotranspiration. Hydrologic soil type C will be assumed for the entire site based on the web soil survey.

HMP Modeling

POC 1

POC 1 is located offsite to the south of Espola Road and discharges via a triple arch culvert. It receives runoff from DMA 1 and DMA 2

- DMA 1 consists of the roads, single family homes, gardens, and social amenities located on the northern side of Espola Blvd. The flow that is generated by DMA 1 is intercepted by inlets and routed to the combo basin titled Combo BF-1. After W.Q. treatment is provided by the biofiltration basin, Flow is routed to POC-1 via a storm drain network.
- DMA 2 consists of the roads, single family homes, and gardens located just west of Tom O'Shanter Dr. The flow that is generated by DMA 2 is intercepted by inlets and routed to the biofiltration basin titled BF-2. After W.Q. treatment is provided by the biofiltration basin, Flow is routed to POC-1 via a storm drain network.
- The offsite residential areas consist of the neighborhoods along Tom O'shanter Drive and Cloudcroft Court (Offsite Residential Areas 1 and 2 on the HMP map) that are conveyed through the site to the east and west. These areas are routed through the site and no water quality treatment is required.
- The agricultural DMAs tributary to POC 1 include AG DMA 1, AG DMA 2, AG DMA 3, AG DMA 4, AG DMA 5, AG DMA 6, & AG DMA 7.

POC 2

The drainage area for POC5 collects drainage from DMA 3, DMA 4, and DMA 6.

- DMA 3 consists of the roads, single family homes, and gardens located just north of DMA 1. The flow that is generated by DMA 3 is intercepted by inlets and routed to the biofiltration basin titled BF-3. After W.Q. treatment is provided by the biofiltration basin, Flow is routed to POC-2 via a storm drain network.
- DMA 4 consists of the roads, single family homes, and gardens located just east of DMA 3. The flow that is generated by DMA 4 is intercepted by inlets and routed to the biofiltration basin titled BF-4. After W.Q. treatment is provided by the biofiltration basin, Flow is routed to POC-2 via a brow ditch and storm drain network.
- DMA 6 consists of the roads, single family homes, and gardens located north of DMA 4. The flow that is generated by DMA 6 is intercepted by inlets and routed to the biofiltration basin titled BF-4. After W.Q. treatment is provided by the biofiltration basin, Flow is routed to POC-2 via an open brow ditch and storm drain network.
- The agricultural DMAs tributary to POC 1 include AG DMA 7, AG DMA 8, AG DMA 9, AG DMA 10.

POC 3 receives flow from DMA 5.

- DMA 5 consists of the roads, single family homes, and gardens located east of DMA 4. The flow that is generated by DMA 5 is intercepted by inlets and routed to the biofiltration basin titled BF-4. After W.Q. treatment is provided by the biofiltration basin, Flow is routed to POC-2 via a natural channel and storm drain network.

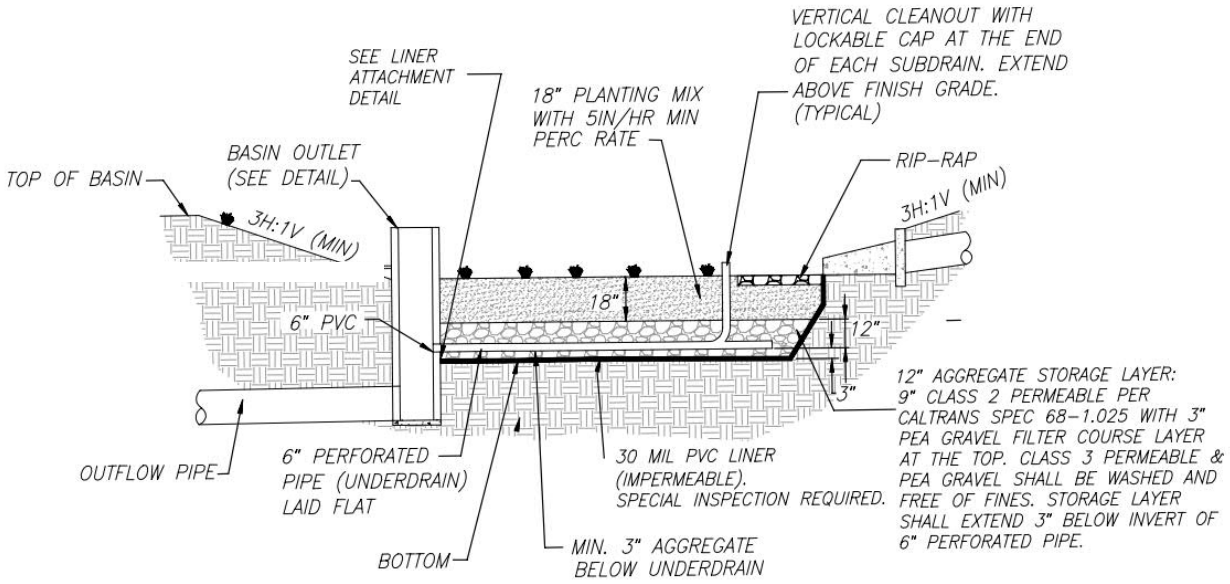
Biofiltration Modeling

Developed storm water runoff is routed through six (6) biofiltration basins. The basins were modeled using the bioretention LID module within SWMM. The bioretention module can model the underground gravel storage layer, underdrain with an orifice plate, amended soil layer, and a surface storage pond up to the elevation of the invert of the bottom orifice. A separate diversion and detention basin were used to model the portion of the storage pond between the base orifice invert elevations and the spillway elevation from the biofiltration basin. Once runoff has been routed through the respective basin outlet structures, it is conveyed via a storm drain pipe to each POC.

Basin Discussion:

Flow control in the basin is achieved using multiple orifices on a concrete riser box. The size, number and location of the orifices are presented in the Table 1. Each basin also contains an emergency overflow riser that is only utilized in storm events equal to or larger than the 100-year storm. Sizing and further peak flow discussion is in the "Drainage Report for The Farms"

Typical Biofiltration Details



TYPICAL BIO-FILTRATION BASIN DETAIL (PVT) (BF-1, 2, 3, 4, 5, 6)

NOT TO SCALE

Basin Discussion

Flow control in the basin is achieved using multiple orifices on a concrete riser box. The size, number and location of the orifices are presented in the Basin Table below. Each basin also contains an emergency overflow riser that is only utilized in storm events equal to or larger than the 100 year storm. Sizing and further peak flow discussion is included in the "Drainage Report for The Farm".

Basin Table POC 1

	Combo BF-1	BF-2
Weir Height (ft)	3.5	4
Weir Length (Ft)	10	10
Amended Soil Depth (in)	18	18
Class 2 Perm. Depth (in)	12	12
Top Orifice		
No. of Orifices	12	12
Diameter (in.)	4	4
Invert Height (ft)*	2	2
Middle Orifice		
No. of Orifices	-	-
Diameter (in.)	-	-
Invert Height (ft)*	-	-
Bottom Orifice		
No. of Orifices	2	2
Diameter (in.)	2	2
Invert Height (ft)*	0.5	0.5
Sub-Drain Orifice		
No. of Orifices	1	1
Diameter (in.)	2	2

Basin Table POC 2

	BF-3	BF-4	BF-6
Weir Height (ft)	3.5	3.5	4
Weir Length (Ft)	10	10	10
Amended Soil Depth (in)	18	18	18
Class 2 Perm. Depth (in)	12	12	12
Top Orifice			
No. of Orifices	12	12	12
Diameter (in.)	4	4	4
Invert Height (ft)*	2	2	2
Middle Orifice			
No. of Orifices	-	-	-
Diameter (in.)	-	-	-
Invert Height (ft)*	-	-	-
Bottom Orifice			
No. of Orifices	2	2	2
Diameter (in.)	2	2	2
Invert Height (ft)*	0.5	0.5	0.5
Sub-Drain Orifice			
No. of Orifices	1	1	1
Diameter (in.)	6	6	6

Basin Table POC 3

	BF-5
Weir Height (ft)	4
Weir Length (Ft)	10
Amended Soil Depth (in)	18
Class 2 Perm. Depth (in)	12
Top Orifice	
No. of Orifices	4
Diameter (in.)	12
Invert Height (ft)*	2
Middle Orifice	
No. of Orifices	2
Diameter (in.)	0.5
Invert Height (ft)*	1
Bottom Orifice	
No. of Orifices	0.5
Diameter (in.)	2
Invert Height (ft)*	0.5
Sub-Drain Orifice	
No. of Orifices	1
Diameter (in.)	3.5

Flow Duration Curve Comparison

The Flow Duration Curves (FDC) for the site were compared at POCs 1 -3 by exporting the hourly runoff time series results from SWMM to a spreadsheet. The FDC was compared between 10% of the existing condition Q_2 (based on accepting an assumption of high susceptibility for downstream channel erosion as required if no soils tests are completed) up to the existing condition Q_{10}. The Q_2 and Q_{10} were determined using a partial duration statistical analysis of the runoff time series in an Excel spreadsheet. The SWMM Model is a statistical analysis based on the Weibull Plotting Position Method.

The range between 10% of Q_2 and Q_{10} was divided into 100 equal time intervals; the number of hours that each flow rate was exceeded was counted from the hourly series. Additionally, the intermediate peaks with a return period "i" were obtained (Q_i with i=3 to 9). For the purpose of the plot, the values were presented as percentage of time exceeded for each flow rate.

The FDC comparison for POCs 1 -3 are illustrated in Figure 1, 2 & 3. POC 1 corresponds with the point located downstream of the discharge of Basins 1 & 2. POC 2 corresponds with the point located downstream of the discharge of Basins 3, 4 & 6. POC 3 corresponds with the point downstream of the offsite discharge of Basin 5.

As can be seen in Figures 1 & 2, the FDC for the proposed condition with six (6) separate basins is within 110% of the curve for the existing condition. The additional runoff volume generated from developing the site will be released to the downstream storm drain at a flow rate below the 10% Q_2 lower threshold. Additionally, the project will not increase peak flow rates between the Q_2 and the Q_{10}, as shown in the graphic and also in the attached table.

Elevation vs Area

For the portion of the flow diverted in the LID Control to the receiving detention basin, a pond is used to route the hydrographs, The elevation vs area curve in the model is calculated in excel and imported into the model at a 0.10 interval range

Elevation vs Discharge

The total discharge peak flow is imported from an excel spreadsheet that calculated the elevation vs discharge of the multiple outlet system

The orifice configurations have been selected to maximize their size while restricting flow to conform to the required 10% of the Q2 event flow. While we acknowledge that these orifices are small, to increase the size of these outlets would impact the basins' ability to restrict flow beneath the HMP thresholds, thus preventing the BMP from conforming to HMP requirements.

Summary & Conclusion

A summary/comparison of existing and proposed areas draining to each point of compliance (POC) are shown in the table below. The model includes onsite project areas and offsite drainage areas. Six biofiltration basins are proposed to mitigate increased flow frequencies as a result of development. The tree-wells designed to treat the agricultural DMAs (see Attachment 1) provide no hydromodification storage.

AREA SUMMARY		
	Existing (AC)	Proposed (AC)
POC 1	160	160
POC 2	35.6	35.6
POC 3	5.00	5.00

The study has demonstrated that the proposed biofiltration basins meet current HMP requirements.

Key Assumptions

1. C soils are representative of the entire site.
2. The Tree-wells within Agricultural DMAs are not providing HMP storage.
3. K-Sat Values for sub-catchments in exiting condition were reduced by 25% as recommended by BMP Design Manual to account for existing areas that were impervious due to compacted soils.

BASIN DRAWDOWN CALCULATIONS

COMBO BASIN 1 DRAWDOWN			
Ponding Depth (FT)	Qout Total (CFS)	V in basin (CU FT)	Total Drawdown Time (HR)
5.00	70.43	237726.00	0.0
4.75	55.39	223616.00	0.1
4.50	41.73	209749.00	0.1
4.25	29.62	196125.00	0.2
4.00	19.29	182744.00	0.4
3.75	11.17	169602.47	0.6
3.50	6.46	156696.88	1.0
3.25	5.86	144027.22	1.6
3.00	5.19	131593.50	2.2
2.75	4.41	119392.19	2.9
2.50	3.43	107419.75	3.8
2.25	1.69	95676.19	5.1
2.00	0.43	84161.50	8.1
1.75	0.41	72872.13	15.5
1.50	0.38	61804.50	23.3
1.25	0.35	50958.63	31.4
1.00	0.32	40334.50	40.2
0.75	0.27	29928.66	50.1
0.50	0.18	19737.63	62.8
0.25	0.18	9761.41	78.3
0.00	0.18	0.00	93.4

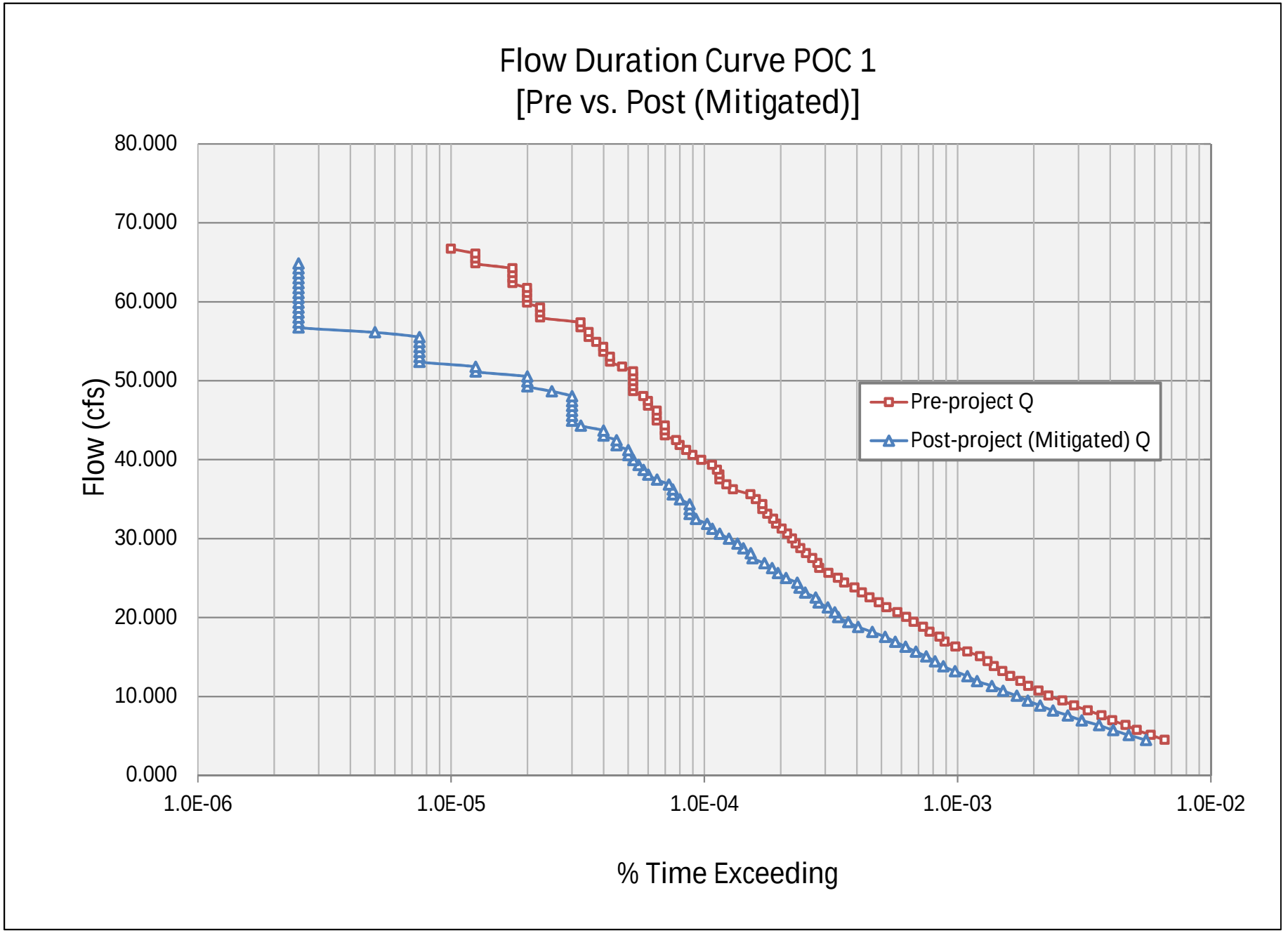
BASIN 2 DRAWDOWN			
Ponding Depth (FT)	Qout Total (CFS)	V in basin (CU FT)	Total Drawdown Time (HR)
5.00	42.56	74120.65	0.0
4.75	30.48	69483.55	0.0
4.50	20.21	64947.91	0.1
4.25	12.15	60513.73	0.2
4.00	7.52	56181.00	0.3
3.75	7.01	51948.26	0.4
3.50	6.46	47814.04	0.6
3.25	5.86	43778.33	0.8
3.00	5.19	39841.15	1.0
2.75	4.41	36001.40	1.2
2.50	3.43	32258.01	1.5
2.25	1.69	28610.98	1.9
2.00	0.43	25060.30	2.8
1.75	0.41	21604.45	5.1
1.50	0.38	18241.89	7.4
1.25	0.35	14972.62	9.9
1.00	0.32	11796.65	12.5
0.75	0.27	8712.37	15.5
0.50	0.18	5718.16	19.2
0.25	0.18	2814.04	23.7
0.00	0.18	0.00	28.0

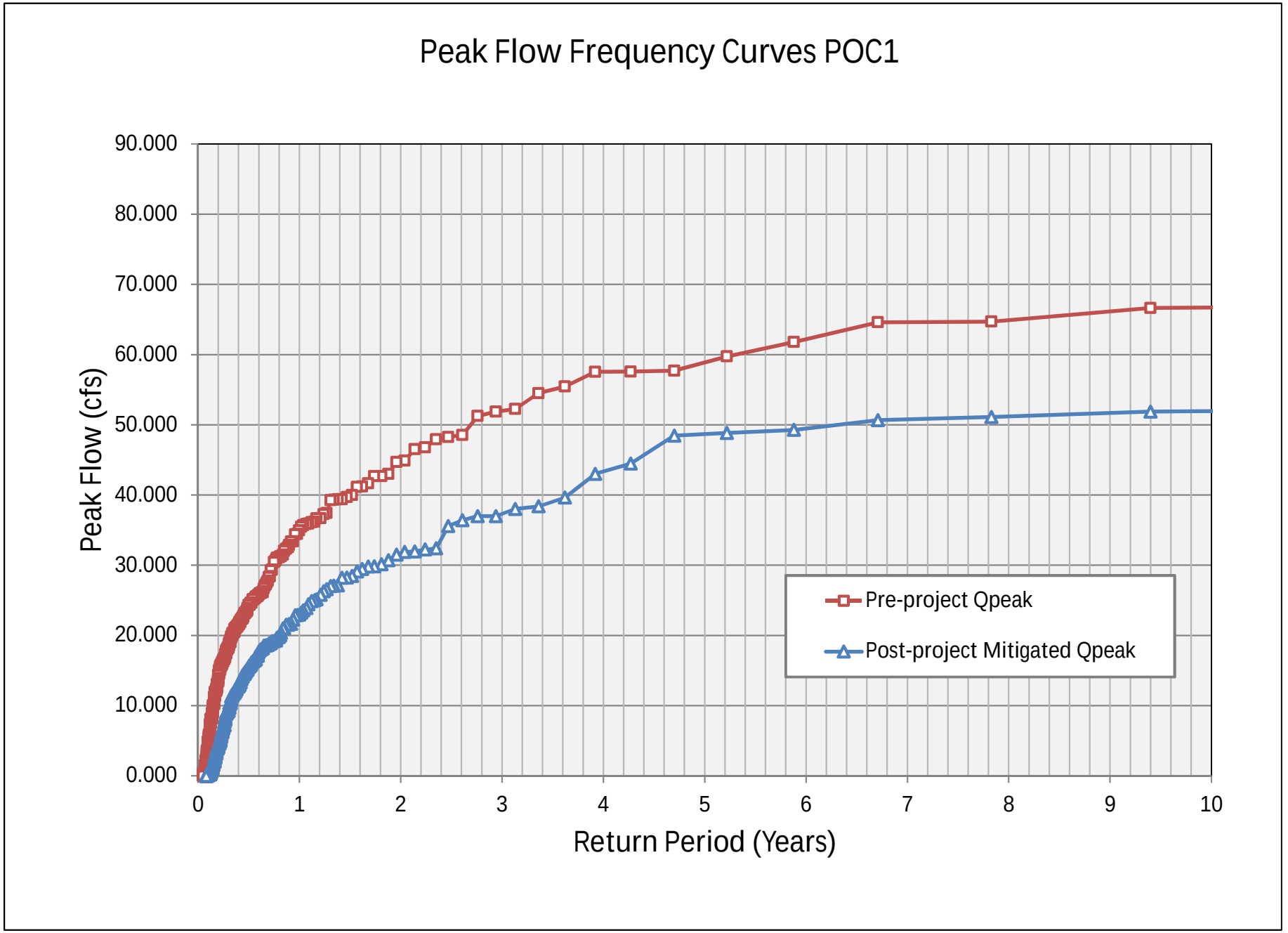
BASIN 3 DRAWDOWN			
Ponding Depth (FT)	Qout Total (CFS)	V in basin (CU FT)	Total Drawdown Time (HR)
5.00	70.43	36028.55	0.0
4.75	55.39	33571.99	0.0
4.50	41.73	31189.12	0.0
4.25	29.62	28879.93	0.0
4.00	19.29	26644.43	0.1
3.75	11.17	24480.73	0.1
3.50	6.46	22386.98	0.2
3.25	5.86	20363.17	0.3
3.00	5.19	18409.30	0.4
2.75	4.41	16523.51	0.5
2.50	3.43	14703.95	0.6
2.25	1.69	12950.61	0.8
2.00	0.43	11263.50	1.2
1.75	0.41	9640.72	2.3
1.50	0.38	8080.38	3.4
1.25	0.35	6582.47	4.5
1.00	0.32	5147.00	5.7
0.75	0.27	3772.13	7.0
0.50	0.18	2456.00	8.7
0.25	0.18	1198.63	10.6
0.00	0.18	0.00	12.5

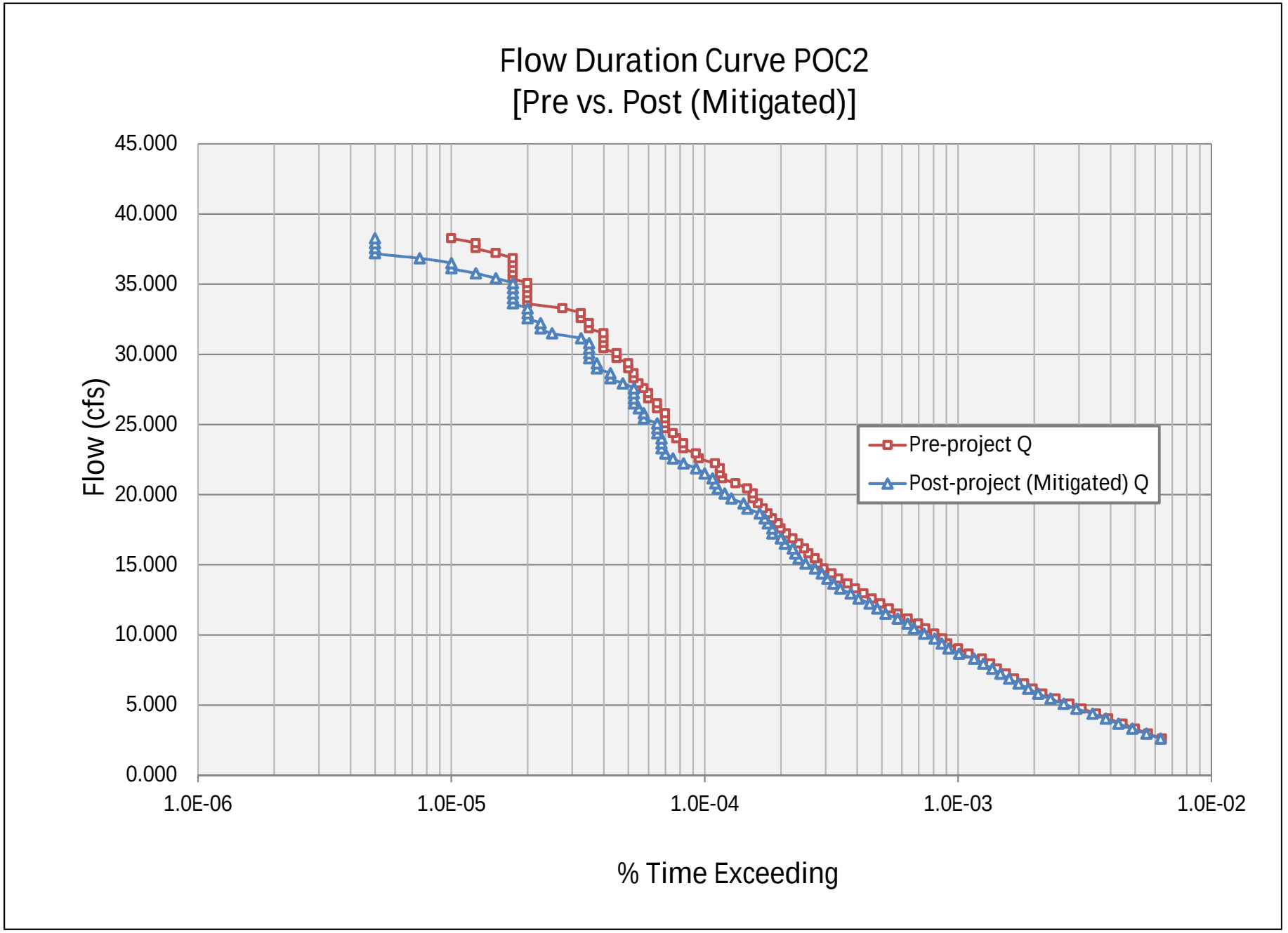
BASIN 4 DRAWDOWN			
Ponding Depth (FT)	Qout Total (CFS)	V in basin (CU FT)	Total Drawdown Time (HR)
6.00	142.34	73799.61	0.0
5.75	122.76	60134.54	0.0
5.50	104.20	49603.09	0.1
5.25	86.73	42205.26	0.1
5.00	70.43	37941.05	0.1
4.75	55.39	35285.81	0.1
4.50	41.73	32714.94	0.1
4.25	29.62	30228.41	0.1
4.00	19.29	27826.24	0.2
3.75	11.17	25506.77	0.2
3.50	6.46	23268.34	0.3
3.25	5.86	21110.96	0.4
3.00	5.19	19034.63	0.5
2.75	4.41	17037.60	0.6
2.50	3.43	15118.16	0.7
2.25	1.69	13276.29	0.9
2.00	0.43	11512.00	1.4
1.75	0.41	9822.84	2.5
1.50	0.38	8206.38	3.6
1.25	0.35	6662.59	4.8
1.00	0.32	5191.50	6.0
0.75	0.27	3790.97	7.3
0.50	0.18	2458.88	9.0
0.25	0.18	1195.22	11.0
0.00	0.18	0.00	12.8

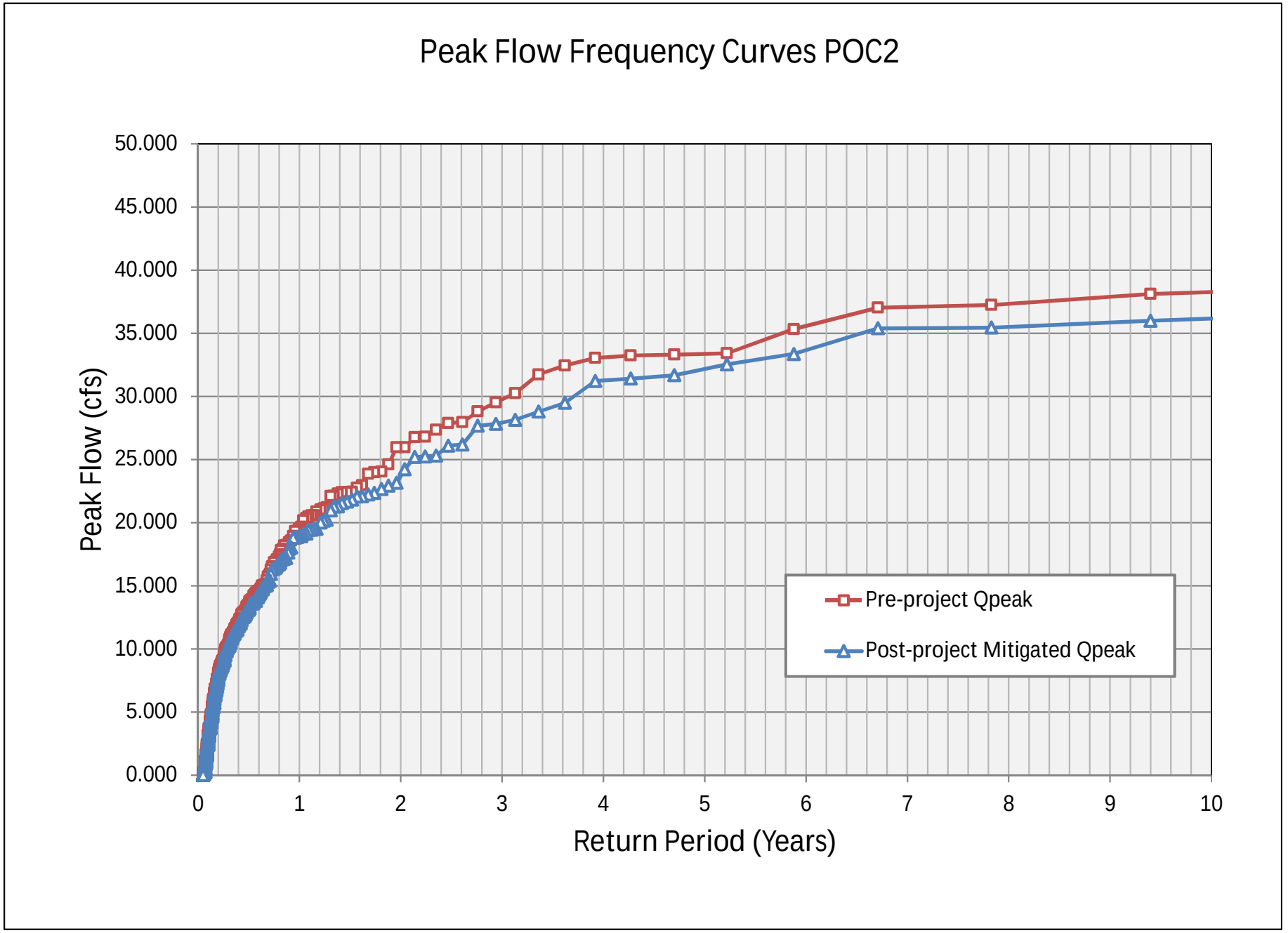
BASIN 5 DRAWDOWN			
Ponding Depth (FT)	Qout Total (CFS)	V in basin (CU FT)	Total Drawdown Time (HR)
5.00	42.16	23159.70	0.0
4.75	30.10	21495.91	0.0
4.50	19.83	19889.85	0.0
4.25	11.79	18341.51	0.1
4.00	7.17	16850.90	0.1
3.75	6.68	15416.23	0.2
3.50	6.14	14035.71	0.2
3.25	5.56	12709.34	0.3
3.00	4.90	11437.13	0.3
2.75	4.13	10217.31	0.4
2.50	3.17	9048.13	0.5
2.25	1.44	7929.58	0.6
2.00	0.21	6861.68	1.0
1.75	0.21	5842.64	2.4
1.50	0.20	4870.71	3.7
1.25	0.20	3945.88	5.0
1.00	0.19	3068.15	6.3
0.75	0.19	2235.76	7.5
0.50	0.18	1446.94	8.7
0.25	0.18	701.68	9.8
0.00	0.18	0.00	10.9

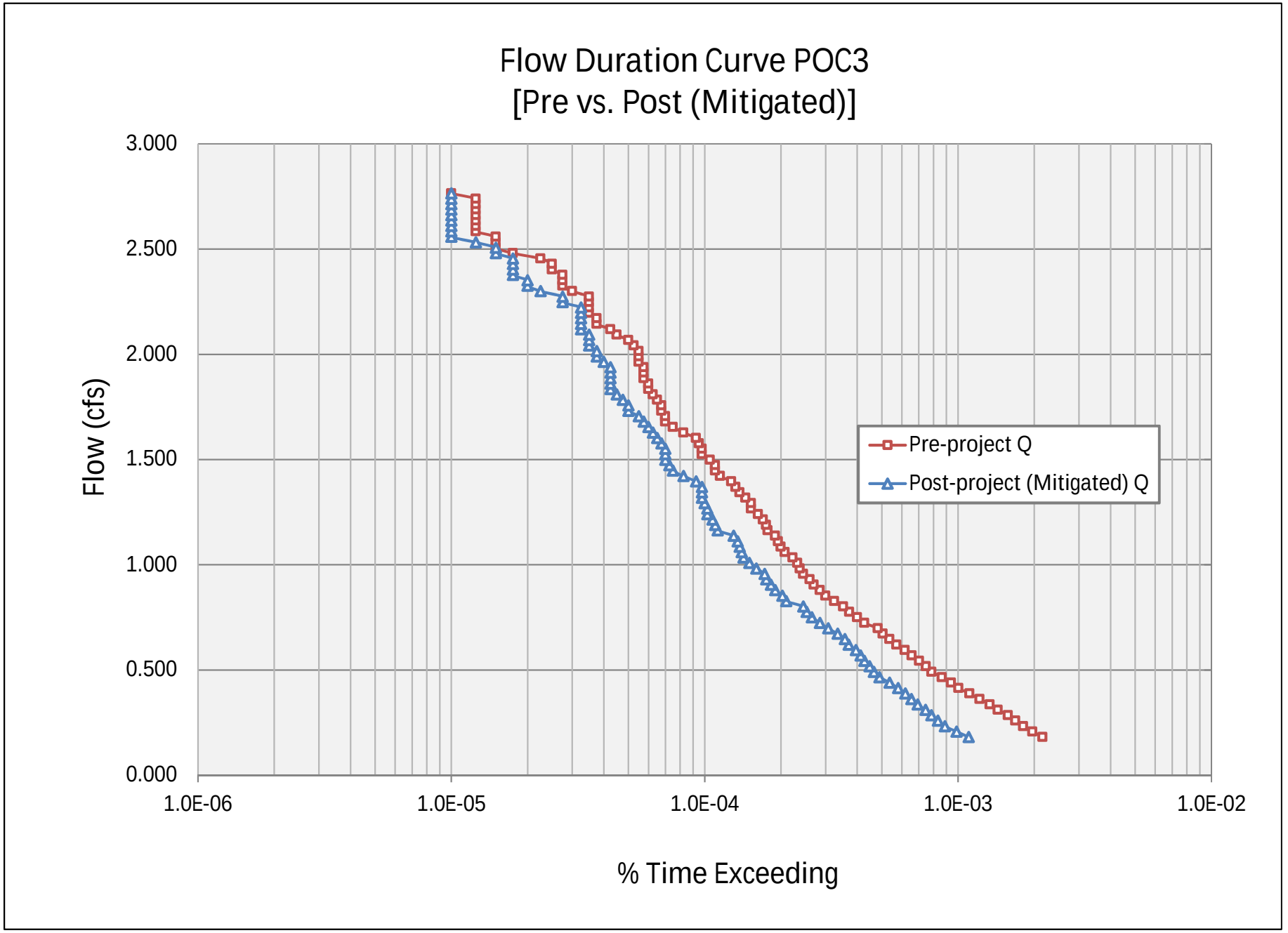
BASIN 6 DRAWDOWN			
Ponding Depth (FT)	Qout Total (CFS)	V in basin (CU FT)	Total Drawdown Time (HR)
5.00	42.56	32256.60	0.0
4.75	30.48	30059.07	0.0
4.50	20.21	27927.98	0.0
4.25	12.15	25863.32	0.1
4.00	7.52	23865.10	0.1
3.75	7.01	21931.38	0.2
3.50	6.46	20060.23	0.3
3.25	5.86	18251.63	0.4
3.00	5.19	16505.60	0.5
2.75	4.41	14820.19	0.5
2.50	3.43	13193.48	0.7
2.25	1.69	11625.44	0.8
2.00	0.43	10116.10	1.2
1.75	0.41	8663.50	2.2
1.50	0.38	7265.71	3.2
1.25	0.35	5922.73	4.2
1.00	0.32	4634.55	5.2
0.75	0.27	3399.31	6.4
0.50	0.18	2215.14	7.9
0.25	0.18	1082.03	9.6
0.00	0.18	0.00	11.3

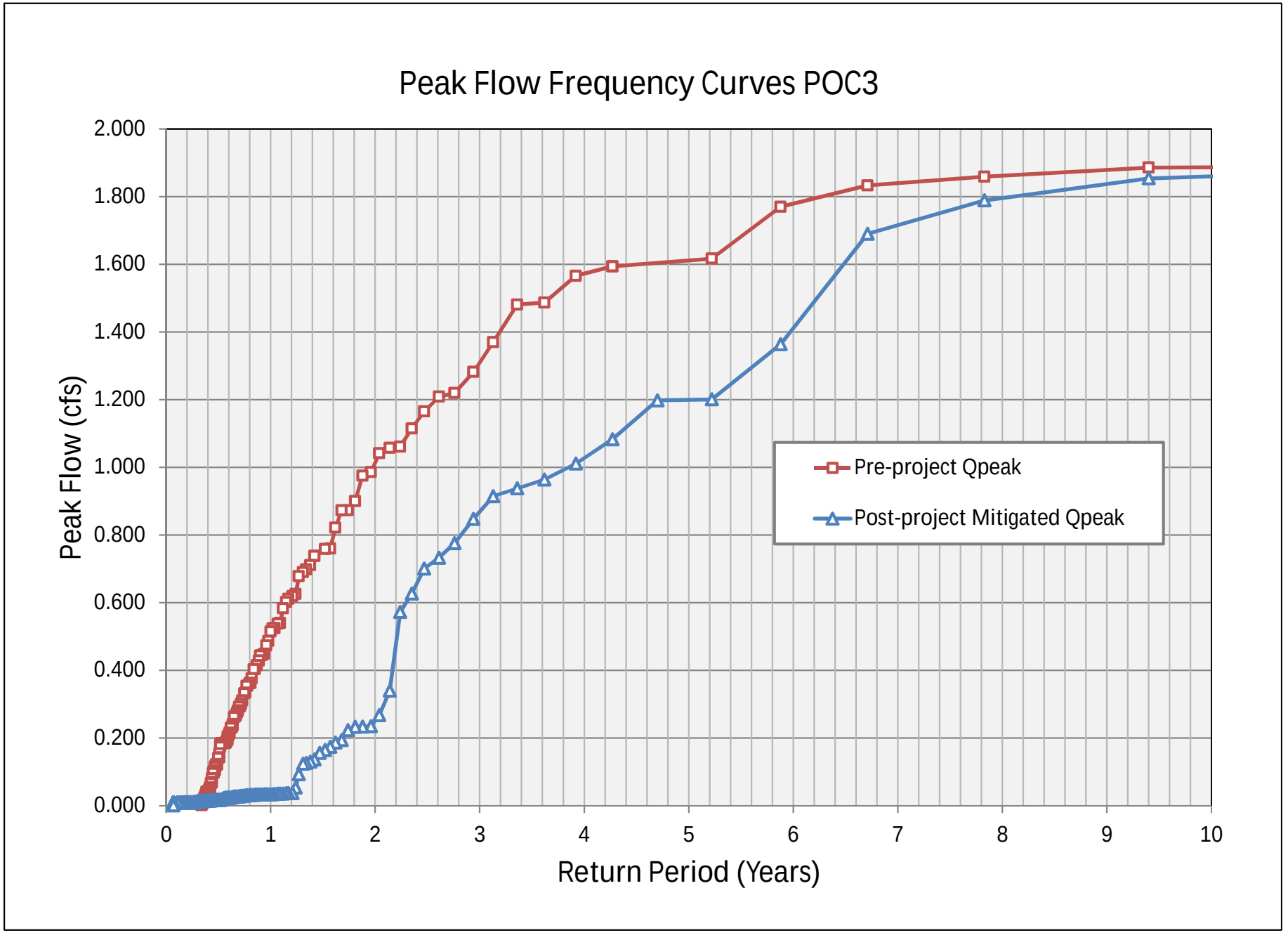

Flow Duration Curve POC 1
[Pre vs. Post (Mitigated)]
80.000
70.000
60.000
50.000
40.000
30.000
20.000
10.000
0.000
Flow (cfs)
1.0E-06
1.0E-05
1.0E-04
1.0E-03
1.0E-02
% Time Exceeding
Pre-project Q
Post-project (Mitigated) Q


Peak Flow Frequency Curves POC1
Peak Flow (cfs)
90.000
80.000
70.000
60.000
50.000
40.000
30.000
20.000
10.000
0.000
0
1
2
3
4
5
6
7
8
9
10
Return Period (Years)
Pre-project Qpeak
Post-project Mitigated Qpeak


Flow Duration Curve POC2
[Pre vs. Post (Mitigated)]
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
Flow (cfs)
1.0E-06
1.0E-05
1.0E-04
1.0E-03
1.0E-02
% Time Exceeding
Pre-project Q
Post-project (Mitigated) Q


Peak Flow Frequency Curves POC2
Peak Flow (cfs)
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0
1
2
3
4
5
6
7
8
9
10
Return Period (Years)
Pre-project Qpeak
Post-project Mitigated Qpeak


Flow Duration Curve POC3
[Pre vs. Post (Mitigated)]
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Flow (cfs)
1.0E-06
1.0E-05
1.0E-04
1.0E-03
1.0E-02
% Time Exceeding
Pre-project Q
Post-project (Mitigated) Q


Peak Flow Frequency Curves POC3
Peak Flow (cfs)
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
1
2
3
4
5
6
7
8
9
10
Return Period (Years)
Pre-project Qpeak
Post-project Mitigated Qpeak

POC 1 INPUT REPORT
EXISTING CONDITIONS

```
[TITLE]
;;Project Title/Notes

[OPTIONS]
;;Option            Value
FLOW_UNITS          CFS
INFILTRATION        GREEN_AMPT
FLOW_ROUTING                KINWAVE
LINK_OFFSETS                DEPTH
MIN_SLOPE           0
ALLOW_PONDING               NO
SKIP_STEADY_STATE           NO

START_DATE          10/04/1962
START_TIME          15:00:00
REPORT_START_DATE           10/04/1962
REPORT_START_TIME           15:00:00
END_DATE            05/23/2008
END_TIME            15:00:00
SWEEP_START                 01/01
SWEEP_END           12/31
DRY_DAYS            0
REPORT_STEP                 01:00:00
WET_STEP            00:15:00
DRY_STEP            04:00:00
ROUTING_STEP                0:01:00
RULE_STEP           00:00:00

INERTIAL_DAMPING            PARTIAL
NORMAL_FLOW_LIMITED         BOTH
FORCE_MAIN_EQUATION         H-W
VARIABLE_STEP               0.75
LENGTHENING_STEP            0
MIN_SURFAREA                12.557
MAX_TRIALS          8
HEAD_TOLERANCE              0.005
SYS_FLOW_TOL                5
LAT_FLOW_TOL                5
MINIMUM_STEP                0.5
THREADS             1

[EVAPORATION]
;;Data Source        Parameters
;;--------------     ----------
MONTHLY             0.07    0.10    0.13    0.17    0.19    0.22    0.24    0.22    0.19    0.13    0.09    0.06
```

```
DRY_ONLY             NO

[RAINGAGES]
;;Name               Format    Interval SCF      Source
;;-------------- --------- ------ ------ ----------
Poway                INTENSITY        1:00     1.0      TIMESERIES     Poway

[SUBCATCHMENTS]
;;Name               Rain Gage         Outlet           Area     %Imperv  Width    %Slope   CurbLen  SnowPack
;;-------------- ---------------- ---------------- -------- -------- -------- -------- -------- ----------------
OFFSITE-RESIDENTIAL  Poway            Out-Exist-POC1   80.6     80       500      5        0
DMA-GOLF-COURSE-ex   Poway            Out-Exist-POC1   78.15    30       300      5        0

[SUBAREAS]
;;Subcatchment       N-Imperv  N-Perv    S-Imperv  S-Perv    PctZero   RouteTo   PctRouted
;;-------------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
OFFSITE-RESIDENTIAL  0.012     0.15      0.05      0.10      25        OUTLET
DMA-GOLF-COURSE-ex   0.01      0.12      0.15      .1        25        OUTLET

[INFILTRATION]
;;Subcatchment       Suction   Ksat      IMD
;;-------------- ---------- ---------- ----------
OFFSITE-RESIDENTIAL  6         0.075     .31
DMA-GOLF-COURSE-ex   6         0.075     0.31

[OUTFALLS]
;;Name               Elevation Type      Stage Data       Gated    Route To
;;-------------- ---------- ---------- ---------------- -------- ----------------
Out-Exist-POC1       0         FREE                NO

[TIMESERIES]
;;Name               Date      Time      Value
;;-------------- ---------- ---------- ----------
Poway                FILE      "R:\1558\Hyd\Calcs\TM\SWMM\poway.dat"

[REPORT]
;;Reporting Options
SUBCATCHMENTS ALL
NODES    ALL
LINKS    ALL

[TAGS]

[MAP]
DIMENSIONS        0.000     0.000     10000.000         10000.000
```

Units None

[COORDINATES]

;;Node	X-Coord	Y-Coord
Out-Exist-POC1	2367.056	6199.741

[VERTICES]

;;Link	X-Coord	Y-Coord

[Polygons]

;;Subcatchment	X-Coord	Y-Coord
OFFSITE-RESIDENTIAL	-79.872	8445.154
DMA-GOLF-COURSE-ex	3148.525	7863.683

[SYMBOLS]

;;Gage	X-Coord	Y-Coord
Poway	3360.778	8997.006

POC 1 OUTPUT REPORT
EXISTING CONDITIONS

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.013)

****
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
****

****
Analysis Options
****
Flow Units ..... CFS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... NO
  Water Quality ..... NO
Infiltration Method ..... GREEN_AMPT
Starting Date 10/04/1962 15:00:00
Ending Date 05/23/2008 15:00:00
Antecedent Dry Days 0.0
Report Time Step 01:00:00
Wet Time Step 00:15:00
Dry Time Step 04:00:00

**********	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
**********	---	---
Total Precipitation	7384.256	558.180
Evaporation Loss	1025.866	77.546
Infiltration Loss	3159.111	238.799
Surface Runoff	3213.519	242.912
Final Storage	0.753	0.057
Continuity Error (%)	-0.203	

**********	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
**********	---	---

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	3213.485	1047.162
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	3213.485	1047.162
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Imperv Runoff in	Perv Runoff in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
OFFSITE-RESIDENTIAL	558.18	0.00	100.43	105.38	348.55	4.97	353.52	773.70	53.04	0.633
DMA-GOLF-COURSE-ex	558.18	0.00	53.95	376.40	119.39	9.45	128.84	273.40	27.86	0.231

Analysis begun on: Fri Jan 17 10:56:35 2020
Analysis ended on: Fri Jan 17 10:56:45 2020
Total elapsed time: 00:00:10

POC 2 INPUT REPORT
EXISTING CONDITIONS

```
The Farm
;;Project Title/Notes

[OPTIONS]
;;Option             Value
FLOW_UNITS           CFS
INFILTRATION         GREEN_AMPT
FLOW_ROUTING         KINWAVE
LINK_OFFSETS         DEPTH
MIN_SLOPE            0
ALLOW_PONDING        NO
SKIP_STEADY_STATE    NO

START_DATE           10/04/1962
START_TIME           15:00:00
REPORT_START_DATE    10/04/1962
REPORT_START_TIME    15:00:00
END_DATE             05/23/2008
END_TIME             15:00:00
SWEEP_START          01/01
SWEEP_END            12/31
DRY_DAYS             0
REPORT_STEP          01:00:00
WET_STEP             00:15:00
DRY_STEP             04:00:00
ROUTING_STEP         0:01:00

INERTIAL_DAMPING     PARTIAL
NORMAL_FLOW_LIMITED  BOTH
FORCE_MAIN_EQUATION  H-W
VARIABLE_STEP        0.75
LENGTHENING_STEP     0
MIN_SURFAREA         12.557
MAX_TRIALS           8
HEAD_TOLERANCE       0.005
SYS_FLOW_TOL         5
LAT_FLOW_TOL         5
MINIMUM_STEP         0.5
THREADS              1

[EVAPORATION]
;;Data Source    Parameters
;;-------------- ----------------
MONTHLY          .07    .1     .13    .17    .19    .22    .24    .22    .19    .13    .090   .060
DRY_ONLY         NO

[RAINGAGES]
;;Name           Format    Interval SCF      Source
;;-------------- --------- ------ ------ ----------
Poway            INTENSITY 1:00     1.0      TIMESERIES Poway

[SUBCATCHMENTS]
;;Name           Rain Gage        Outlet           Area     %Imperv  Width    %Slope   CurbLen  SnowPack

;;-------------- ---------------- ---------------- -------- -------- -------- -------- --------
---------------
OFFSITE_RESIDENTIAL_NAP Poway            Out-Exist-POC2   55.8     80       400      5        0

EX_GOLF_COURSE   Poway            Out-Exist-POC2   34.4     10       300      5        0


[SUBAREAS]
;;Subcatchment   N-Imperv   N-Perv     S-Imperv   S-Perv     PctZero    RouteTo    PctRouted
;;-------------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
OFFSITE_RESIDENTIAL_NAP 0.012      0.15       0.05       0.1        25         OUTLET
EX_GOLF_COURSE   0.012      0.15       0.05       .1         25         OUTLET
```

```
[INFILTRATION]
;;Subcatchment   Suction    Ksat       IMD
;;-------------- ---------- ---------- ----------
OFFSITE_RESIDENTIAL_NAP 6          .075       .31
EX_GOLF_COURSE   6          .075       0.31

[OUTFALLS]
;;Name           Elevation  Type       Stage Data       Gated    Route To
;;-------------- ---------- ---------- ---------------- -------- ----------------
Out-Exist-POC2   0          FREE                        NO

[TIMESERIES]
;;Name           Date       Time       Value
;;-------------- ---------- ---------- ----------
Poway            FILE "R:\1558\Hyd\Calcs\TM\SWMM\poway.dat"

[REPORT]
;;Reporting Options
INPUT      NO
CONTROLS   NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL

[TAGS]

[MAP]
DIMENSIONS 0.000 0.000 10000.000 10000.000
Units      None

[COORDINATES]
;;Node           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
Out-Exist-POC2   2367.056           6199.741

[VERTICES]
;;Link           X-Coord            Y-Coord
;;-------------- ------------------ ------------------

[Polygons]
;;Subcatchment   X-Coord            Y-Coord
;;-------------- ------------------ ------------------
OFFSITE_RESIDENTIAL_NAP 995.740            8051.118
EX_GOLF_COURSE   3189.563           7827.476

[SYMBOLS]
;;Gage           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
Poway            2397.377           8455.922
```

POC 2 OUTPUT REPORT
EXISTING CONDITIONS

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

****
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
****

****
Analysis Options
****
Flow Units ..... CFS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... NO
  Water Quality ..... NO
Infiltration Method ..... GREEN_AMPT
Starting Date 10/04/1962 15:00:00
Ending Date 05/23/2008 15:00:00
Antecedent Dry Days 0.0
Report Time Step 01:00:00
Wet Time Step 00:15:00
Dry Time Step 04:00:00

Runoff Quantity Continuity	Volume acre-feet	Depth inches
Total Precipitation	4195.653	558.180
Evaporation Loss	510.132	67.867
Infiltration Loss	1871.352	248.960
Surface Runoff	1823.405	242.582
Final Storage	0.395	0.053
Continuity Error (%)	-0.230	

Flow Routing Continuity	Volume acre-feet	Volume 10^6 gal
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	1823.380	594.175
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	1823.380	594.175
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

****
Subcatchment Runoff Summary
****

	Total	Total	Total	Total	Total	Total	Peak Runoff

Subcatchment	Precip in	Runon in	Evap in	Infil in	Runoff in	Runoff 10^6 gal	Runoff CFS	Coeff
OFFSITE_RESIDENTIAL_NAP	558.18	0.00	99.06	105.34	355.05	537.95	37.78	0.636
EX_GOLF_COURSE	558.18	0.00	17.27	481.93	60.15	56.19	9.31	0.108

Analysis begun on: Thu Jan 16 16:01:04 2020
Analysis ended on: Thu Jan 16 16:01:17 2020
Total elapsed time: 00:00:13

POC 3 INPUT REPORT
EXISTING CONDITIONS

```
The Farm
;;Project Title/Notes

[OPTIONS]
;;Option             Value
FLOW_UNITS           CFS
INFILTRATION         GREEN_AMPT
FLOW_ROUTING         KINWAVE
LINK_OFFSETS         DEPTH
MIN_SLOPE            0
ALLOW_PONDING        NO
SKIP_STEADY_STATE    NO

START_DATE           10/04/1962
START_TIME           15:00:00
REPORT_START_DATE    10/04/1962
REPORT_START_TIME    15:00:00
END_DATE             05/23/2008
END_TIME             15:00:00
SWEEP_START          01/01
SWEEP_END            12/31
DRY_DAYS             0
REPORT_STEP          01:00:00
WET_STEP             00:15:00
DRY_STEP             04:00:00
ROUTING_STEP         0:01:00

INERTIAL_DAMPING     PARTIAL
NORMAL_FLOW_LIMITED  BOTH
FORCE_MAIN_EQUATION  H-W
VARIABLE_STEP        0.75
LENGTHENING_STEP     0
MIN_SURFAREA         12.557
MAX_TRIALS           8
HEAD_TOLERANCE       0.005
SYS_FLOW_TOL         5
LAT_FLOW_TOL         5
MINIMUM_STEP         0.5
THREADS              1

[EVAPORATION]
;;Data Source    Parameters
;;-------------- ----------------
MONTHLY          .07    .1     .13    .17    .19    .22    .24    .22    .19    .130   .090   .060
DRY_ONLY         NO

[RAINGAGES]
;;Name           Format    Interval SCF      Source
;;-------------- --------- ------ ------ ----------
Poway            INTENSITY 1:00     1.0      TIMESERIES Poway

[SUBCATCHMENTS]
;;Name           Rain Gage        Outlet           Area     %Imperv  Width    %Slope   CurbLen  SnowPack

;;-------------- ---------------- ---------------- -------- -------- -------- -------- --------
---------------
EX_GOLF_COURSE   Poway            Out-Exist-POC3   5.00     0        300      5        0


[SUBAREAS]
;;Subcatchment   N-Imperv   N-Perv     S-Imperv   S-Perv     PctZero    RouteTo    PctRouted
;;-------------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
EX_GOLF_COURSE   .012       0.15       .05        .10        25         OUTLET

[INFILTRATION]
;;Subcatchment   Suction    Ksat       IMD
;;-------------- ---------- ---------- ----------
```

```
EX_GOLF_COURSE   6          0.075      .31

[OUTFALLS]
;;Name           Elevation  Type       Stage Data       Gated    Route To
;;-------------- ---------- ---------- ---------------- -------- ----------------
Out-Exist-POC3   0          FREE                        NO

[TIMESERIES]
;;Name           Date       Time       Value
;;-------------- ---------- ---------- ----------
Poway            FILE "R:\1558\Hyd\Calcs\TM\SWMM\poway.dat"

[REPORT]
;;Reporting Options
INPUT      NO
CONTROLS   NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL

[TAGS]

[MAP]
DIMENSIONS 0.000 0.000 10000.000 10000.000
Units      None

[COORDINATES]
;;Node           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
Out-Exist-POC3   2367.056           6199.741

[VERTICES]
;;Link           X-Coord            Y-Coord
;;-------------- ------------------ ------------------

[Polygons]
;;Subcatchment   X-Coord            Y-Coord
;;-------------- ------------------ ------------------
EX_GOLF_COURSE   3189.563           7827.476

[SYMBOLS]
;;Gage           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
Poway            2397.377           8455.922
```

POC 3 OUTPUT REPORT
EXISTING CONDITIONS

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

****
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
****

****
Analysis Options
****
Flow Units ..... CFS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... NO
  Water Quality ..... NO
Infiltration Method ..... GREEN_AMPT
Starting Date 10/04/1962 15:00:00
Ending Date 05/23/2008 15:00:00
Antecedent Dry Days 0.0
Report Time Step 01:00:00
Wet Time Step 00:15:00
Dry Time Step 04:00:00

Runoff Quantity Continuity	Volume acre-feet	Depth inches
Total Precipitation	232.575	558.180
Evaporation Loss	3.852	9.245
Infiltration Loss	218.395	524.148
Surface Runoff	11.932	28.636
Final Storage	0.000	0.000
Continuity Error (%)	-0.689	

Flow Routing Continuity	Volume acre-feet	Volume 10^6 gal
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	11.932	3.888
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	11.932	3.888
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

****
Subcatchment Runoff Summary
****

	Total	Total	Total	Total	Total	Total	Peak Runoff

1390 Poway POC3

Subcatchment	Precip in	Runon in	Evap in	Infil in	Runoff in	Runoff 10^6 gal	Runoff CFS	Coeff
EX_GOLF_COURSE	558.18	0.00	9.25	524.15	28.64	3.89	2.50	0.051

Analysis begun on: Thu Jan 16 16:23:53 2020
Analysis ended on: Thu Jan 16 16:24:06 2020
Total elapsed time: 00:00:13

POC 1 INPUT REPORT
PROPOSED CONDITIONS

```
[TITLE]
;;Project Title/Notes
The Farm - POC 1 Proposed Mitigated Conditions

[OPTIONS]
;;Option             Value
FLOW_UNITS           CFS
INFILTRATION         GREEN_AMPT
FLOW_ROUTING                KINWAVE
LINK_OFFSETS                DEPTH
MIN_SLOPE            0
ALLOW_PONDING               NO
SKIP_STEADY_STATE           NO

START_DATE           10/04/1962
START_TIME           00:00:00
REPORT_START_DATE           10/04/1962
REPORT_START_TIME           00:00:00
END_DATE             05/23/2008
END_TIME             23:00:00
SWEEP_START                 01/01
SWEEP_END            12/31
DRY_DAYS             0
REPORT_STEP                 01:00:00
WET_STEP             00:15:00
DRY_STEP             04:00:00
ROUTING_STEP                0:01:00
RULE_STEP            00:00:00

INERTIAL_DAMPING            PARTIAL
NORMAL_FLOW_LIMITED         BOTH
FORCE_MAIN_EQUATION         H-W
VARIABLE_STEP               0.75
LENGTHENING_STEP            0
MIN_SURFAREA                12.557
MAX_TRIALS           8
HEAD_TOLERANCE              0.005
SYS_FLOW_TOL                5
LAT_FLOW_TOL                5
MINIMUM_STEP                0.5
THREADS              1

[EVAPORATION]
;;Data Source         Parameters
;;--------------      ----------
```

MONTHLY	0.07	0.10	0.13	0.17	0.19	0.22	0.24	0.22	0.19	0.13	0.09	0.06
DRY_ONLY	NO											

[RAINGAGES]

;;Name	Format	Interval	SCF	Source		
;;----------	---------	------	------	----------		
Poway	INTENSITY		1:00	1	TIMESERIES	Poway

[SUBCATCHMENTS]

;;Name	Rain Gage	Outlet	Area	%Imperv	Width	%Slope	CurbLen	SnowPack
;;----------	----------	----------	--------	--------	--------	--------	--------	----------
DMA1	Poway	BF-1	42.87	70	494	3.5	0	
DMA2	Poway	BF-2	11.2	70	386.75	3.5	0	
BF-1	Poway	DIV-1	.887	0	50	0	0	
BF-2	Poway	DIV-2	0.26	0	50	0	0	
OFFSITE_RESIDENTIAL	Poway	POC1-Proposed	80.6	80	500	5	0	
AGRICULTURAL_DMAs	Poway	POC1-Proposed	25.33	5	594	1.5	0	

[SUBAREAS]

;;Subcatchment	N-Imperv	N-Perv	S-Imperv	S-Perv	PctZero	RouteTo	PctRouted
;;----------	----------	----------	----------	----------	----------	----------	----------
DMA1	0.012	0.15	0.05	0.10	25	OUTLET	
DMA2	0.012	0.15	0.05	0.10	25	OUTLET	
BF-1	0.012	0.15	0.05	0.10	25	OUTLET	
BF-2	0.012	0.15	0.05	0.1	25	OUTLET	
OFFSITE_RESIDENTIAL	.012	.15	0.05	0.10	25	OUTLET	
AGRICULTURAL_DMAs	0.012	0.15	0.05	0.10	25	OUTLET	

[INFILTRATION]

;;Subcatchment	Suction	Ksat	IMD
;;----------	----------	----------	----------
DMA1	6	0.075	.31
DMA2	6	.075	0.31
BF-1	1.5	.3	.3
BF-2	1.5	.3	.3
OFFSITE_RESIDENTIAL	6	.075	.31
AGRICULTURAL_DMAs	6	0.075	.31

[LID_CONTROLS]

;;Name	Type/Layer		Parameters					
;;----------	----------	----------						
BF-1	BC							
BF-1	SURFACE		6.13	0	0	0	5	
BF-1	SOIL	18	0.4	0.2	0.1	5	5	1.5
BF-1	STORAGE		12	0.67	0	0		

BF-1	DRAIN	0.0848	0.5	0	6	0	0					
BF-2	BC											
BF-2	SURFACE		6.20	0	0	0	5					
BF-2	SOIL	18	0.4	0.2	0.1	5	5	1.5				
BF-2	STORAGE		12	.67	0	0						
BF-2	DRAIN	0.2957	0.5	0	6	0	0					

[LID_USAGE]

;;Subcatchment	LID Process	Number	Area	Width	InitSat	FromImp	ToPerv	RptFile	DrainTo	FromPerv
;;---	---	---	---	---	---	---	---	---	---	---
BF-1	BF-1	1	38616	0	0	0	0	*	*	0
BF-2	BF-2	1	11076	0	0	0	0	*	*	0

[OUTFALLS]

;;Name	Elevation	Type	Stage Data	Gated	Route To
;;---	---	---	---	---	---
POC1-Proposed	0	FREE	NO		

[DIVIDERS]

;;Name	Elevation	Diverted Link	Type	Parameters				
;;---	---	---	---	---				
DIV-1	0	Bypass-1	CUTOFF	0.179	0	0	0	0
DIV-2	0	Bypass-2	CUTOFF	0.179	0	0	0	0

[STORAGE]

;;Name	Elev.	MaxDepth		InitDepth	Shape	Curve Name/Params		N/A	Fevap	Psi	Ksat	IMD
;;---	---	---	---	---	---	---	---	---		---	---	
STOR-1	0	5.5	0	TABULAR		Basin1	0	0				
STOR-2	0	5.5	0	TABULAR		basin2	0	0				

[CONDUITS]

;;Name	From Node	To Node	Length	Roughness		InOffset	OutOffset	InitFlow	MaxFlow
;;---	---	---	---	---	---	---	---	---	
UD-2	DIV-2	POC1-Proposed	400	0.013	0	0	0	0	
UD-1	DIV-1	POC1-Proposed	400	0.013	0	0	0	0	
Bypass-2	DIV-2	STOR-2	400	0.01	0	0	0	0	
Bypass-1	DIV-1	STOR-1	400	0.01	0	0	0	0	

[OUTLETS]

;;Name	From Node	To Node	Offset	Type	QTable/Qcoeff	Qexpon	Gated
;;---	---	---	---	---	---	---	---
midflow-2	STOR-2	POC1-Proposed	0	TABULAR/DEPTH	disch-2		NO
MIDFLOW-1	STOR-1	POC1-Proposed	0	TABULAR/DEPTH	Disch-1		NO

[XSECTIONS]

;;Link	Shape	Geom1	Geom2	Geom3	Geom4	Barrels	Culvert
UD-2	CIRCULAR	.5	0	0	0	1	
UD-1	CIRCULAR	.5	0	0	0	1	
Bypass-2	DUMMY	0	0	0	0	1	
Bypass-1	DUMMY	0	0	0	0	1	

[CURVES]

;;Name	Type	X-Value	Y-Value
Disch-1	Rating	0	0.00
Disch-1		0.05	0.01
Disch-1		0.1	0.02
Disch-1		0.15	0.05
Disch-1		0.2	0.07
Disch-1		0.25	0.09
Disch-1		0.3	0.10
Disch-1		0.35	0.11
Disch-1		0.4	0.12
Disch-1		0.45	0.13
Disch-1		0.5	0.14
Disch-1		0.55	0.15
Disch-1		0.6	0.15
Disch-1		0.65	0.16
Disch-1		0.7	0.17
Disch-1		0.75	0.17
Disch-1		0.8	0.18
Disch-1		0.85	0.19
Disch-1		0.9	0.19
Disch-1		0.95	0.20
Disch-1		1	0.20
Disch-1		1.05	0.21
Disch-1		1.1	0.22
Disch-1		1.15	0.22
Disch-1		1.2	0.23
Disch-1		1.25	0.23
Disch-1		1.3	0.24
Disch-1		1.35	0.24
Disch-1		1.4	0.25
Disch-1		1.45	0.25
Disch-1		1.5	0.25
Disch-1		1.55	0.32
Disch-1		1.6	0.49

Disch-1	1.65	0.75
Disch-1	1.7	1.10
Disch-1	1.75	1.51
Disch-1	1.8	1.96
Disch-1	1.85	2.45
Disch-1	1.9	2.76
Disch-1	1.95	3.02
Disch-1	2	3.26
Disch-1	2.05	3.47
Disch-1	2.1	3.68
Disch-1	2.15	3.87
Disch-1	2.2	4.05
Disch-1	2.25	4.23
Disch-1	2.3	4.40
Disch-1	2.35	4.56
Disch-1	2.4	4.71
Disch-1	2.45	4.87
Disch-1	2.5	5.01
Disch-1	2.55	5.15
Disch-1	2.6	5.29
Disch-1	2.65	5.43
Disch-1	2.7	5.56
Disch-1	2.75	5.68
Disch-1	2.8	5.81
Disch-1	2.85	5.93
Disch-1	2.9	6.05
Disch-1	2.95	6.17
Disch-1	3	6.28
Disch-1	3.05	6.77
Disch-1	3.1	7.56
Disch-1	3.15	8.55
Disch-1	3.2	9.70
Disch-1	3.25	10.99
Disch-1	3.3	12.41
Disch-1	3.35	13.93
Disch-1	3.4	15.56
Disch-1	3.45	17.29
Disch-1	3.5	19.11
Disch-1	3.55	21.02
Disch-1	3.6	23.00
Disch-1	3.65	25.07
Disch-1	3.7	27.22
Disch-1	3.75	29.44
Disch-1	3.8	31.73
Disch-1	3.85	34.09

```
Disch-1                 3.9     36.51
Disch-1                 3.95    39.00
Disch-1                 4       41.55
Disch-1                 4.05    44.17
Disch-1                 4.1     46.84
Disch-1                 4.15    49.58
Disch-1                 4.2     52.37
Disch-1                 4.25    55.21
Disch-1                 4.3     58.12
Disch-1                 4.35    61.07
Disch-1                 4.4     64.08
Disch-1                 4.45    67.14
Disch-1                 4.5     70.25
Disch-1                 4.55    73.42
Disch-1                 4.6     76.63
Disch-1                 4.65    79.89
Disch-1                 4.7     83.20
Disch-1                 4.75    86.55
Disch-1                 4.8     89.96
Disch-1                 4.85    93.40
Disch-1                 4.9     96.90
Disch-1                 4.95    100.44
Disch-1                 5       104.02
Disch-1                 5.05    107.65
Disch-1                 5.1     111.32
Disch-1                 5.15    115.03
Disch-1                 5.2     118.78
Disch-1                 5.25    122.58
Disch-1                 5.3     126.41
Disch-1                 5.35    130.29
Disch-1                 5.4     134.21
Disch-1                 5.45    138.17
Disch-1                 5.5     142.16
;
Disc-3          Rating  0.00    0.0000
Disc-3                  0.05    0.0011
Disc-3                  0.10    0.0019
Disc-3                  0.15    0.0024
Disc-3                  0.20    0.0028
Disc-3                  0.25    0.0032
Disc-3                  0.30    0.0035
Disc-3                  0.35    0.0038
Disc-3                  0.40    0.0041
Disc-3                  0.45    0.0044
Disc-3                  0.50    0.0046
```

Disc-3	0.55	0.0049
Disc-3	0.60	0.0051
Disc-3	0.65	0.0053
Disc-3	0.70	0.0055
Disc-3	0.75	0.0057
Disc-3	0.80	0.0059
Disc-3	0.85	0.0061
Disc-3	0.90	0.0063
Disc-3	0.95	0.0064
Disc-3	1.00	0.0066
Disc-3	1.05	0.0134
Disc-3	1.10	0.0313
Disc-3	1.15	0.0566
Disc-3	1.20	0.0802
Disc-3	1.25	0.0946
Disc-3	1.30	0.1070
Disc-3	1.35	0.1180
Disc-3	1.40	0.1280
Disc-3	1.45	0.1373
Disc-3	1.50	0.1460
Disc-3	1.55	0.1542
Disc-3	1.60	0.1619
Disc-3	1.65	0.1693
Disc-3	1.70	0.1764
Disc-3	1.75	0.1832
Disc-3	1.80	0.1897
Disc-3	1.85	0.1960
Disc-3	1.90	0.2022
Disc-3	1.95	0.2081
Disc-3	2.00	0.2139
Disc-3	2.05	0.2195
Disc-3	2.10	0.2250
Disc-3	2.15	0.2303
Disc-3	2.20	0.2356
Disc-3	2.25	0.2407
Disc-3	2.30	0.2578
Disc-3	2.35	0.2975
Disc-3	2.40	0.3583
Disc-3	2.45	0.4383
Disc-3	2.50	0.5357
Disc-3	2.55	0.6484
Disc-3	2.60	0.7740
Disc-3	2.65	0.9103
Disc-3	2.70	1.0548
Disc-3	2.75	1.2051

Disc-3	2.80	1.3439
Disc-3	2.85	1.4324
Disc-3	2.90	1.5150
Disc-3	2.95	1.5928
Disc-3	3.00	1.6665
Disc-3	3.05	1.7368
Disc-3	3.10	1.8041
Disc-3	3.15	1.8687
Disc-3	3.20	1.9310
Disc-3	3.25	1.9912
Disc-3	3.30	2.0495
Disc-3	3.35	2.1061
Disc-3	3.40	2.1611
Disc-3	3.45	2.2146
Disc-3	3.50	2.2668
Disc-3	3.55	2.6901
Disc-3	3.60	3.4207
Disc-3	3.65	4.3510
Disc-3	3.70	5.4426
Disc-3	3.75	6.6734
Disc-3	3.80	8.0286
Disc-3	3.85	9.4971
Disc-3	3.90	11.0705
Disc-3	3.95	12.7419
Disc-3	4.00	14.5058
Disc-3	4.05	16.3574
Disc-3	4.10	18.2925
Disc-3	4.15	20.3077
Disc-3	4.20	22.3997
Disc-3	4.25	24.5658
Disc-3	4.30	26.8035
Disc-3	4.35	29.1105
Disc-3	4.40	31.4848
Disc-3	4.45	33.9244
Disc-3	4.50	36.4276
Disc-3	4.55	38.9927
Disc-3	4.60	41.6185
Disc-3	4.65	44.3033
Disc-3	4.70	47.0459
Disc-3	4.75	49.8452
Disc-3	4.80	52.7000
Disc-3	4.85	55.6091
Disc-3	4.90	58.5716
Disc-3	4.95	61.5866
Disc-3	5.00	64.6531

Disc-3		5.05	67.7703
Disc-3		5.10	70.9373
Disc-3		5.15	74.1533
Disc-3		5.20	77.4177
Disc-3		5.25	80.7297
Disc-3		5.30	84.0886
Disc-3		5.35	87.4938
Disc-3		5.40	90.9446
Disc-3		5.45	94.4404
Disc-3		5.50	97.9807

;

Disc-4	Rating	0	0.279
Disc-4		0.05	0.280
Disc-4		0.1	0.281
Disc-4		0.15	0.282
Disc-4		0.2	0.282
Disc-4		0.25	0.283
Disc-4		0.3	0.283
Disc-4		0.35	0.283
Disc-4		0.4	0.283
Disc-4		0.45	0.284
Disc-4		0.5	0.284
Disc-4		0.55	0.284
Disc-4		0.6	0.284
Disc-4		0.65	0.285
Disc-4		0.7	0.285
Disc-4		0.75	0.285
Disc-4		0.8	0.285
Disc-4		0.85	0.285
Disc-4		0.9	0.286
Disc-4		0.95	0.286
Disc-4		1	0.286
Disc-4		1.05	0.293
Disc-4		1.1	0.311
Disc-4		1.15	0.336
Disc-4		1.2	0.360
Disc-4		1.25	0.374
Disc-4		1.3	0.386
Disc-4		1.35	0.397
Disc-4		1.4	0.407
Disc-4		1.45	0.417
Disc-4		1.5	0.425
Disc-4		1.55	0.433
Disc-4		1.6	0.441
Disc-4		1.65	0.449

Disc-4	1.7	0.456
Disc-4	1.75	0.462
Disc-4	1.8	0.469
Disc-4	1.85	0.475
Disc-4	1.9	0.481
Disc-4	1.95	0.487
Disc-4	2	0.493
Disc-4	2.05	0.499
Disc-4	2.1	0.504
Disc-4	2.15	0.510
Disc-4	2.2	0.515
Disc-4	2.25	0.520
Disc-4	2.3	0.537
Disc-4	2.35	0.577
Disc-4	2.4	0.638
Disc-4	2.45	0.718
Disc-4	2.5	0.815
Disc-4	2.55	0.928
Disc-4	2.6	1.053
Disc-4	2.65	1.190
Disc-4	2.7	1.334
Disc-4	2.75	1.484
Disc-4	2.8	1.623
Disc-4	2.85	1.712
Disc-4	2.9	1.794
Disc-4	2.95	1.872
Disc-4	3	1.946
Disc-4	3.05	2.016
Disc-4	3.1	2.083
Disc-4	3.15	2.148
Disc-4	3.2	2.210
Disc-4	3.25	2.271
Disc-4	3.3	2.329
Disc-4	3.35	2.385
Disc-4	3.4	2.440
Disc-4	3.45	2.494
Disc-4	3.5	2.546
Disc-4	3.55	2.969
Disc-4	3.6	3.700
Disc-4	3.65	4.630
Disc-4	3.7	5.722
Disc-4	3.75	6.953
Disc-4	3.8	8.308
Disc-4	3.85	9.776
Disc-4	3.9	11.350

```
Disc-4                  3.95    13.021
Disc-4                  4       14.785
Disc-4                  4.05    16.637
Disc-4                  4.1     18.572
Disc-4                  4.15    20.587
Disc-4                  4.2     22.679
Disc-4                  4.25    24.845
Disc-4                  4.3     27.083
Disc-4                  4.35    29.390
Disc-4                  4.4     31.764
Disc-4                  4.45    34.204
Disc-4                  4.5     36.707
Disc-4                  4.55    39.272
Disc-4                  4.6     41.898
Disc-4                  4.65    44.583
Disc-4                  4.7     47.325
Disc-4                  4.75    50.125
Disc-4                  4.8     52.979
Disc-4                  4.85    55.888
Disc-4                  4.9     58.851
Disc-4                  4.95    61.866
Disc-4                  5       64.932
Disc-4                  5.05    68.050
Disc-4                  5.1     71.217
Disc-4                  5.15    74.433
Disc-4                  5.2     77.697
Disc-4                  5.25    81.009
Disc-4                  5.3     84.368
Disc-4                  5.35    87.773
Disc-4                  5.4     91.224
Disc-4                  5.45    94.720
Disc-4                  5.5     98.260
;
Disch-5         Rating  0.00    0.401
Disch-5                 0.05    0.403
Disch-5                 0.10    0.407
Disch-5                 0.15    0.410
Disch-5                 0.20    0.411
Disch-5                 0.25    0.413
Disch-5                 0.30    0.414
Disch-5                 0.35    0.416
Disch-5                 0.40    0.417
Disch-5                 0.45    0.418
Disch-5                 0.50    0.419
Disch-5                 0.55    0.420
```

Disch-5	0.60	0.421
Disch-5	0.65	0.422
Disch-5	0.70	0.422
Disch-5	0.75	0.423
Disch-5	0.80	0.424
Disch-5	0.85	0.425
Disch-5	0.90	0.425
Disch-5	0.95	0.426
Disch-5	1.00	0.427
Disch-5	1.05	0.434
Disch-5	1.10	0.453
Disch-5	1.15	0.478
Disch-5	1.20	0.502
Disch-5	1.25	0.517
Disch-5	1.30	0.530
Disch-5	1.35	0.542
Disch-5	1.40	0.552
Disch-5	1.45	0.562
Disch-5	1.50	0.571
Disch-5	1.55	0.579
Disch-5	1.60	0.588
Disch-5	1.65	0.595
Disch-5	1.70	0.603
Disch-5	1.75	0.610
Disch-5	1.80	0.666
Disch-5	1.85	0.811
Disch-5	1.90	1.042
Disch-5	1.95	1.349
Disch-5	2.00	1.727
Disch-5	2.05	2.165
Disch-5	2.10	2.655
Disch-5	2.15	3.189
Disch-5	2.20	3.755
Disch-5	2.25	4.344
Disch-5	2.30	4.888
Disch-5	2.35	5.231
Disch-5	2.40	5.550
Disch-5	2.45	5.850
Disch-5	2.50	6.134
Disch-5	2.55	6.404
Disch-5	2.60	6.663
Disch-5	2.65	6.911
Disch-5	2.70	7.149
Disch-5	2.75	7.380
Disch-5	2.80	7.603

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Disch-5          2.85      7.819
Disch-5          2.90      8.029
Disch-5          2.95      8.233
Disch-5          3.00      8.432
Disch-5          3.05      8.998
Disch-5          3.10      9.869
Disch-5          3.15      10.935
Disch-5          3.20      12.161
Disch-5          3.25      13.522
Disch-5          3.30      15.006
Disch-5          3.35      16.600
Disch-5          3.40      18.297
Disch-5          3.45      20.090
Disch-5          3.50      21.973
Disch-5          3.55      23.942
Disch-5          3.60      25.993
Disch-5          3.65      28.122
Disch-5          3.70      30.326
Disch-5          3.75      32.602
Disch-5          3.80      34.949
Disch-5          3.85      37.363
Disch-5          3.90      39.843
Disch-5          3.95      42.387
Disch-5          4.00      44.993
Disch-5          4.05      47.660
Disch-5          4.10      50.386
Disch-5          4.15      53.171
Disch-5          4.20      56.012
Disch-5          4.25      58.908
Disch-5          4.30      61.859
Disch-5          4.35      64.863
Disch-5          4.40      67.919
Disch-5          4.45      71.027
Disch-5          4.50      74.186
Disch-5          4.55      77.394
Disch-5          4.60      80.652
Disch-5          4.65      83.957
Disch-5          4.70      87.310
Disch-5          4.75      90.710
Disch-5          4.80      94.156
Disch-5          4.85      97.647
Disch-5          4.90      101.183
Disch-5          4.95      104.764
Disch-5          5.00      108.388
;
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Disch-6	Rating	0.00	0.401
Disch-6		0.05	0.403
Disch-6		0.10	0.407
Disch-6		0.15	0.410
Disch-6		0.20	0.411
Disch-6		0.25	0.413
Disch-6		0.30	0.414
Disch-6		0.35	0.416
Disch-6		0.40	0.417
Disch-6		0.45	0.418
Disch-6		0.50	0.419
Disch-6		0.55	0.420
Disch-6		0.60	0.421
Disch-6		0.65	0.422
Disch-6		0.70	0.422
Disch-6		0.75	0.423
Disch-6		0.80	0.424
Disch-6		0.85	0.425
Disch-6		0.90	0.425
Disch-6		0.95	0.426
Disch-6		1.00	0.427
Disch-6		1.05	0.434
Disch-6		1.10	0.453
Disch-6		1.15	0.478
Disch-6		1.20	0.502
Disch-6		1.25	0.517
Disch-6		1.30	0.530
Disch-6		1.35	0.542
Disch-6		1.40	0.552
Disch-6		1.45	0.562
Disch-6		1.50	0.571
Disch-6		1.55	0.579
Disch-6		1.60	0.588
Disch-6		1.65	0.595
Disch-6		1.70	0.603
Disch-6		1.75	0.610
Disch-6		1.80	0.666
Disch-6		1.85	0.811
Disch-6		1.90	1.042
Disch-6		1.95	1.349
Disch-6		2.00	1.727
Disch-6		2.05	2.165
Disch-6		2.10	2.655
Disch-6		2.15	3.189
Disch-6		2.20	3.755

Disch-6	2.25	4.344
Disch-6	2.30	4.888
Disch-6	2.35	5.231
Disch-6	2.40	5.550
Disch-6	2.45	5.850
Disch-6	2.50	6.134
Disch-6	2.55	6.777
Disch-6	2.60	7.716
Disch-6	2.65	8.845
Disch-6	2.70	10.128
Disch-6	2.75	11.542
Disch-6	2.80	13.074
Disch-6	2.85	14.714
Disch-6	2.90	16.453
Disch-6	2.95	18.285
Disch-6	3.00	20.205
Disch-6	3.05	22.209
Disch-6	3.10	24.292
Disch-6	3.15	26.452
Disch-6	3.20	28.685
Disch-6	3.25	30.989
Disch-6	3.30	33.362
Disch-6	3.35	35.801
Disch-6	3.40	38.305
Disch-6	3.45	40.872
Disch-6	3.50	43.500
Disch-6	3.55	46.188
Disch-6	3.60	48.934
Disch-6	3.65	51.738
Disch-6	3.70	54.597
Disch-6	3.75	57.511
Disch-6	3.80	60.479
Disch-6	3.85	63.500
Disch-6	3.90	66.572
Disch-6	3.95	69.696
Disch-6	4.00	72.869
Disch-6	4.05	76.092
Disch-6	4.10	79.363
Disch-6	4.15	82.682
Disch-6	4.20	86.048
Disch-6	4.25	89.460
Disch-6	4.30	92.918
Disch-6	4.35	96.422
Disch-6	4.40	99.970
Disch-6	4.45	103.561

Disch-6		4.50	107.197
Disch-6		4.55	110.875
Disch-6		4.60	114.595
Disch-6		4.65	118.358
Disch-6		4.70	122.162
Disch-6		4.75	126.007
Disch-6		4.80	129.892
Disch-6		4.85	133.818
Disch-6		4.90	137.783
Disch-6		4.95	141.788
Disch-6		5.00	145.831
;			
disch-2	Rating	0	0.00
disch-2		0.05	0.01
disch-2		0.1	0.02
disch-2		0.15	0.05
disch-2		0.2	0.07
disch-2		0.25	0.09
disch-2		0.3	0.10
disch-2		0.35	0.11
disch-2		0.4	0.12
disch-2		0.45	0.13
disch-2		0.5	0.14
disch-2		0.55	0.15
disch-2		0.6	0.15
disch-2		0.65	0.16
disch-2		0.7	0.17
disch-2		0.75	0.17
disch-2		0.8	0.18
disch-2		0.85	0.19
disch-2		0.9	0.19
disch-2		0.95	0.20
disch-2		1	0.20
disch-2		1.05	0.21
disch-2		1.1	0.22
disch-2		1.15	0.22
disch-2		1.2	0.23
disch-2		1.25	0.23
disch-2		1.3	0.24
disch-2		1.35	0.24
disch-2		1.4	0.25
disch-2		1.45	0.25
disch-2		1.5	0.25
disch-2		1.55	0.32
disch-2		1.6	0.49

disch-2	1.65	0.75
disch-2	1.7	1.10
disch-2	1.75	1.51
disch-2	1.8	1.96
disch-2	1.85	2.45
disch-2	1.9	2.76
disch-2	1.95	3.02
disch-2	2	3.26
disch-2	2.05	3.47
disch-2	2.1	3.68
disch-2	2.15	3.87
disch-2	2.2	4.05
disch-2	2.25	4.23
disch-2	2.3	4.40
disch-2	2.35	4.56
disch-2	2.4	4.71
disch-2	2.45	4.87
disch-2	2.5	5.01
disch-2	2.55	5.15
disch-2	2.6	5.29
disch-2	2.65	5.43
disch-2	2.7	5.56
disch-2	2.75	5.68
disch-2	2.8	5.81
disch-2	2.85	5.93
disch-2	2.9	6.05
disch-2	2.95	6.17
disch-2	3	6.28
disch-2	3.05	6.40
disch-2	3.1	6.51
disch-2	3.15	6.62
disch-2	3.2	6.72
disch-2	3.25	6.83
disch-2	3.3	6.93
disch-2	3.35	7.04
disch-2	3.4	7.14
disch-2	3.45	7.24
disch-2	3.5	7.34
disch-2	3.55	7.81
disch-2	3.6	8.58
disch-2	3.65	9.56
disch-2	3.7	10.69
disch-2	3.75	11.97
disch-2	3.8	13.37
disch-2	3.85	14.88

disch-2		3.9	16.50
disch-2		3.95	18.22
disch-2		4	20.03
disch-2		4.05	21.92
disch-2		4.1	23.90
disch-2		4.15	25.96
disch-2		4.2	28.10
disch-2		4.25	30.30
disch-2		4.3	32.58
disch-2		4.35	34.93
disch-2		4.4	37.35
disch-2		4.45	39.83
disch-2		4.5	42.38
disch-2		4.55	44.98
disch-2		4.6	47.65
disch-2		4.65	50.38
disch-2		4.7	53.16
disch-2		4.75	56.00
disch-2		4.8	58.90
disch-2		4.85	61.85
disch-2		4.9	64.85
disch-2		4.95	67.90
disch-2		5	71.01
disch-2		5.05	74.17
disch-2		5.1	77.37
disch-2		5.15	80.63
disch-2		5.2	83.93
disch-2		5.25	87.28
disch-2		5.3	90.68
disch-2		5.35	94.12
disch-2		5.4	97.61
disch-2		5.45	101.14
disch-2		5.5	104.72
;			
Vault-1	Storage	0	1500
Vault-1		1	1500
Vault-1		2	1500
Vault-1		3	1500
Vault-1		4	1500
Vault-1		5	1500
Vault-1		6	1500
;			
Basin3	Storage	0.00	1005
Basin3		0.05	1023
Basin3		0.10	1040

Basin3	0.15	1058
Basin3	0.20	1075
Basin3	0.25	1093
Basin3	0.30	1110
Basin3	0.35	1128
Basin3	0.40	1145
Basin3	0.45	1163
Basin3	0.50	1180
Basin3	0.55	1201
Basin3	0.60	1221
Basin3	0.65	1242
Basin3	0.70	1262
Basin3	0.75	1283
Basin3	0.80	1303
Basin3	0.85	1324
Basin3	0.90	1344
Basin3	0.95	1365
Basin3	1.00	1385
Basin3	1.05	1406
Basin3	1.10	1426
Basin3	1.15	1447
Basin3	1.20	1467
Basin3	1.25	1488
Basin3	1.30	1508
Basin3	1.35	1529
Basin3	1.40	1549
Basin3	1.45	1570
Basin3	1.50	1590
Basin3	1.55	1613
Basin3	1.60	1636
Basin3	1.65	1659
Basin3	1.70	1682
Basin3	1.75	1705
Basin3	1.80	1728
Basin3	1.85	1751
Basin3	1.90	1774
Basin3	1.95	1797
Basin3	2.00	1820
Basin3	2.05	1843
Basin3	2.10	1866
Basin3	2.15	1889
Basin3	2.20	1912
Basin3	2.25	1935
Basin3	2.30	1958
Basin3	2.35	1981

Basin3	2.40	2004
Basin3	2.45	2027
Basin3	2.50	2050
Basin3	2.55	2076
Basin3	2.60	2102
Basin3	2.65	2128
Basin3	2.70	2154
Basin3	2.75	2180
Basin3	2.80	2206
Basin3	2.85	2232
Basin3	2.90	2258
Basin3	2.95	2284
Basin3	3.00	2310
Basin3	3.05	2336
Basin3	3.10	2362
Basin3	3.15	2388
Basin3	3.20	2414
Basin3	3.25	2440
Basin3	3.30	2466
Basin3	3.35	2492
Basin3	3.40	2518
Basin3	3.45	2544
Basin3	3.50	2570
Basin3	3.55	2599
Basin3	3.60	2628
Basin3	3.65	2657
Basin3	3.70	2686
Basin3	3.75	2715
Basin3	3.80	2744
Basin3	3.85	2773
Basin3	3.90	2802
Basin3	3.95	2831
Basin3	4.00	2860
Basin3	4.05	2889
Basin3	4.10	2918
Basin3	4.15	2947
Basin3	4.20	2976
Basin3	4.25	3005
Basin3	4.30	3034
Basin3	4.35	3063
Basin3	4.40	3092
Basin3	4.45	3121
Basin3	4.50	3150
Basin3	4.55	3180
Basin3	4.60	3210

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Basin3                  4.65    3240
Basin3                  4.70    3270
Basin3                  4.75    3300
Basin3                  4.80    3330
Basin3                  4.85    3360
Basin3                  4.90    3390
Basin3                  4.95    3420
Basin3                  5.00    3450
Basin3                  5.05    3480
Basin3                  5.10    3510
Basin3                  5.15    3540
Basin3                  5.20    3570
Basin3                  5.25    3600
Basin3                  5.30    3630
Basin3                  5.35    3660
Basin3                  5.40    3690
Basin3                  5.45    3720
Basin3                  5.50    3750
;
Basin4          Storage 0.00    2280
Basin4                  0.05    2309
Basin4                  0.10    2338
Basin4                  0.15    2367
Basin4                  0.20    2396
Basin4                  0.25    2425
Basin4                  0.30    2454
Basin4                  0.35    2483
Basin4                  0.40    2512
Basin4                  0.45    2541
Basin4                  0.50    2570
Basin4                  0.55    2602
Basin4                  0.60    2633
Basin4                  0.65    2665
Basin4                  0.70    2696
Basin4                  0.75    2728
Basin4                  0.80    2759
;
Basin5          Storage 0.00    3100
Basin5                  0.05    3100
Basin5                  0.10    3100
Basin5                  0.15    3100
Basin5                  0.20    3100
Basin5                  0.25    3100
Basin5                  0.30    3100
Basin5                  0.35    3100
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Basin5	0.40	3100
Basin5	0.45	3100
Basin5	0.50	3100
Basin5	0.55	3100
Basin5	0.60	3100
Basin5	0.65	3100
Basin5	0.70	3100
Basin5	0.75	3100
Basin5	0.80	3100
Basin5	0.85	3100
Basin5	0.90	3100
Basin5	0.95	3100
Basin5	1.00	3100
Basin5	1.05	3100
Basin5	1.10	3100
Basin5	1.15	3100
Basin5	1.20	3100
Basin5	1.25	3100
Basin5	1.30	3100
Basin5	1.35	3100
Basin5	1.40	3100
Basin5	1.45	3100
Basin5	1.50	3100
Basin5	1.55	3100
Basin5	1.60	3100
Basin5	1.65	3100
Basin5	1.70	3100
Basin5	1.75	3100
Basin5	1.80	3100
Basin5	1.85	3100
Basin5	1.90	3100
Basin5	1.95	3100
Basin5	2.00	3100
Basin5	2.05	3100
Basin5	2.10	3100
Basin5	2.15	3100
Basin5	2.20	3100
Basin5	2.25	3100
Basin5	2.30	3100
Basin5	2.35	3100
Basin5	2.40	3100
Basin5	2.45	3100
Basin5	2.50	3100
Basin5	2.55	3100
Basin5	2.60	3100

Basin5	2.65	3100
Basin5	2.70	3100
Basin5	2.75	3100
Basin5	2.80	3100
Basin5	2.85	3100
Basin5	2.90	3100
Basin5	2.95	3100
Basin5	3.00	3100
Basin5	3.05	3100
Basin5	3.10	3100
Basin5	3.15	3100
Basin5	3.20	3100
Basin5	3.25	3100
Basin5	3.30	3100
Basin5	3.35	3100
Basin5	3.40	3100
Basin5	3.45	3100
Basin5	3.50	3100
Basin5	3.55	3100
Basin5	3.60	3100
Basin5	3.65	3100
Basin5	3.70	3100
Basin5	3.75	3100
Basin5	3.80	3100
Basin5	3.85	3100
Basin5	3.90	3100
Basin5	3.95	3100
Basin5	4.00	3100
Basin5	4.05	3100
Basin5	4.10	3100
Basin5	4.15	3100
Basin5	4.20	3100
Basin5	4.25	3100
Basin5	4.30	3100
Basin5	4.35	3100
Basin5	4.40	3100
Basin5	4.45	3100
Basin5	4.50	3100
Basin5	4.55	3100
Basin5	4.60	3100
Basin5	4.65	3100
Basin5	4.70	3100
Basin5	4.75	3100
Basin5	4.80	3100
Basin5	4.85	3100

Basin5		4.90	3100
Basin5		4.95	3100
Basin5		5.00	3100
;			
Basin6	Storage	0.00	2900
Basin6		0.05	2900
Basin6		0.10	2900
Basin6		0.15	2900
Basin6		0.20	2900
Basin6		0.25	2900
Basin6		0.30	2900
Basin6		0.35	2900
Basin6		0.40	2900
Basin6		0.45	2900
Basin6		0.50	2900
Basin6		0.55	2900
Basin6		0.60	2900
Basin6		0.65	2900
Basin6		0.70	2900
Basin6		0.75	2900
Basin6		0.80	2900
Basin6		0.85	2900
Basin6		0.90	2900
Basin6		0.95	2900
Basin6		1.00	2900
Basin6		1.05	2900
Basin6		1.10	2900
Basin6		1.15	2900
Basin6		1.20	2900
Basin6		1.25	2900
Basin6		1.30	2900
Basin6		1.35	2900
Basin6		1.40	2900
Basin6		1.45	2900
Basin6		1.50	2900
Basin6		1.55	2900
Basin6		1.60	2900
Basin6		1.65	2900
Basin6		1.70	2900
Basin6		1.75	2900
Basin6		1.80	2900
Basin6		1.85	2900
Basin6		1.90	2900
Basin6		1.95	2900
Basin6		2.00	2900

Basin6	2.05	2900
Basin6	2.10	2900
Basin6	2.15	2900
Basin6	2.20	2900
Basin6	2.25	2900
Basin6	2.30	2900
Basin6	2.35	2900
Basin6	2.40	2900
Basin6	2.45	2900
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Basin6	2.85	2900
Basin6	2.90	2900
Basin6	2.95	2900
Basin6	3.00	2900
Basin6	3.05	2900
Basin6	3.10	2900
Basin6	3.15	2900
Basin6	3.20	2900
Basin6	3.25	2900
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Basin6	3.40	2900
Basin6	3.45	2900
Basin6	3.50	2900
Basin6	3.55	2900
Basin6	3.60	2900
Basin6	3.65	2900
Basin6	3.70	2900
Basin6	3.75	2900
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Basin6	3.85	2900
Basin6	3.90	2900
Basin6	3.95	2900
Basin6	4.00	2900
Basin6	4.05	2900
Basin6	4.10	2900
Basin6	4.15	2900
Basin6	4.20	2900
Basin6	4.25	2900

Basin6		4.30	2900
Basin6		4.35	2900
Basin6		4.40	2900
Basin6		4.45	2900
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Basin6		4.55	2900
Basin6		4.60	2900
Basin6		4.65	2900
Basin6		4.70	2900
Basin6		4.75	2900
Basin6		4.80	2900
Basin6		4.85	2900
Basin6		4.90	2900
Basin6		4.95	2900
Basin6		5.00	2900
;			
Basin1	Storage	0	40335
Basin1		0.05	40506
Basin1		0.1	40678
Basin1		0.15	40850
Basin1		0.2	41022
Basin1		0.25	41194
Basin1		0.3	41366
Basin1		0.35	41537
Basin1		0.4	41709
Basin1		0.45	41881
Basin1		0.5	42053
Basin1		0.55	42230
Basin1		0.6	42408
Basin1		0.65	42585
Basin1		0.7	42763
Basin1		0.75	42940
Basin1		0.8	43117
Basin1		0.85	43295
Basin1		0.9	43472
Basin1		0.95	43650
Basin1		1	43827
Basin1		1.05	44004
Basin1		1.1	44182
Basin1		1.15	44359
Basin1		1.2	44537
Basin1		1.25	44714
Basin1		1.3	44891
Basin1		1.35	45069
Basin1		1.4	45246

Basin1	1.45	45424
Basin1	1.5	45601
Basin1	1.55	45784
Basin1	1.6	45967
Basin1	1.65	46150
Basin1	1.7	46333
Basin1	1.75	46517
Basin1	1.8	46700
Basin1	1.85	46883
Basin1	1.9	47066
Basin1	1.95	47249
Basin1	2	47432
Basin1	2.05	47615
Basin1	2.1	47798
Basin1	2.15	47981
Basin1	2.2	48164
Basin1	2.25	48348
Basin1	2.3	48531
Basin1	2.35	48714
Basin1	2.4	48897
Basin1	2.45	49080
Basin1	2.5	49263
Basin1	2.55	49452
Basin1	2.6	49641
Basin1	2.65	49829
Basin1	2.7	50018
Basin1	2.75	50207
Basin1	2.8	50396
Basin1	2.85	50584
Basin1	2.9	50773
Basin1	2.95	50962
Basin1	3	51151
Basin1	3.05	51339
Basin1	3.1	51528
Basin1	3.15	51717
Basin1	3.2	51906
Basin1	3.25	52094
Basin1	3.3	52283
Basin1	3.35	52472
Basin1	3.4	52661
Basin1	3.45	52849
Basin1	3.5	53038
Basin1	3.55	53232
Basin1	3.6	53427
Basin1	3.65	53621

Basin1		3.7	53816
Basin1		3.75	54010
Basin1		3.8	54204
Basin1		3.85	54399
Basin1		3.9	54593
Basin1		3.95	54788
Basin1		4	54982
Basin1		4.05	55176
Basin1		4.1	55371
Basin1		4.15	55565
Basin1		4.2	55760
Basin1		4.25	55954
Basin1		4.3	56148
Basin1		4.35	56343
Basin1		4.4	56537
Basin1		4.45	56732
Basin1		4.5	56926
Basin1		4.55	57126
Basin1		4.6	57326
Basin1		4.65	57526
Basin1		4.7	57726
Basin1		4.75	57926
Basin1		4.8	58126
Basin1		4.85	58327
Basin1		4.9	58527
Basin1		4.95	58727
Basin1		5	58927
Basin1		5.05	59127
Basin1		5.1	59327
Basin1		5.15	59527
Basin1		5.2	59727
Basin1		5.25	59927
Basin1		5.3	60127
Basin1		5.35	60327
Basin1		5.4	60527
Basin1		5.45	60727
Basin1		5.5	60928
;			
basin2	Storage	0	11797
basin2		0.05	11869
basin2		0.1	11941
basin2		0.15	12013
basin2		0.2	12085
basin2		0.25	12157
basin2		0.3	12229

basin2	0.35	12301
basin2	0.4	12373
basin2	0.45	12445
basin2	0.5	12517
basin2	0.55	12592
basin2	0.6	12667
basin2	0.65	12741
basin2	0.7	12816
basin2	0.75	12890
basin2	0.8	12965
basin2	0.85	13040
basin2	0.9	13114
basin2	0.95	13189
basin2	1	13264
basin2	1.05	13338
basin2	1.1	13413
basin2	1.15	13488
basin2	1.2	13562
basin2	1.25	13637
basin2	1.3	13711
basin2	1.35	13786
basin2	1.4	13861
basin2	1.45	13935
basin2	1.5	14010
basin2	1.55	14087
basin2	1.6	14164
basin2	1.65	14241
basin2	1.7	14318
basin2	1.75	14395
basin2	1.8	14473
basin2	1.85	14550
basin2	1.9	14627
basin2	1.95	14704
basin2	2	14781
basin2	2.05	14858
basin2	2.1	14935
basin2	2.15	15012
basin2	2.2	15089
basin2	2.25	15166
basin2	2.3	15243
basin2	2.35	15320
basin2	2.4	15398
basin2	2.45	15475
basin2	2.5	15552
basin2	2.55	15631

basin2	2.6	15709
basin2	2.65	15788
basin2	2.7	15867
basin2	2.75	15946
basin2	2.8	16025
basin2	2.85	16103
basin2	2.9	16182
basin2	2.95	16261
basin2	3	16340
basin2	3.05	16419
basin2	3.1	16497
basin2	3.15	16576
basin2	3.2	16655
basin2	3.25	16734
basin2	3.3	16813
basin2	3.35	16892
basin2	3.4	16970
basin2	3.45	17049
basin2	3.5	17128
basin2	3.55	17209
basin2	3.6	17290
basin2	3.65	17371
basin2	3.7	17453
basin2	3.75	17534
basin2	3.8	17615
basin2	3.85	17696
basin2	3.9	17777
basin2	3.95	17858
basin2	4	17940
basin2	4.05	18021
basin2	4.1	18102
basin2	4.15	18183
basin2	4.2	18264
basin2	4.25	18345
basin2	4.3	18427
basin2	4.35	18508
basin2	4.4	18589
basin2	4.45	18670
basin2	4.5	18751
basin2	4.55	20860
basin2	4.6	22969
basin2	4.65	25078
basin2	4.7	27187
basin2	4.75	29295
basin2	4.8	31404

```
basin2                  4.85        33513
basin2                  4.9         35622
basin2                  4.95        37731
basin2                  5           39839
basin2                  5.05        41948
basin2                  5.1         44057
basin2                  5.15        46166
basin2                  5.2         48275
basin2                  5.25        50383
basin2                  5.3         52492
basin2                  5.35        54601
basin2                  5.4         56710
basin2                  5.45        58819
basin2                  5.5         60928

[TIMESERIES]
;;Name                 Date        Time        Value
;;---------------      ----------  ----------  ----------
Poway                   FILE        "R:\1558\Hyd\Calcs\TM\SWMM\poway.dat"

[REPORT]
;;Reporting Options
SUBCATCHMENTS ALL
NODES   ALL
LINKS   ALL

[TAGS]

[MAP]
DIMENSIONS          878.780   4235.932  1847.529  5435.872
Units       None

[COORDINATES]
;;Node                 X-Coord             Y-Coord
;;---------------      ------------------  ------------------
POC1-Proposed           1255.448            4336.053
DIV-1                   789.381             4684.472
DIV-2                   1126.266            4855.827
STOR-1                  790.659             4532.403
STOR-2                  1004.501            4687.570

[VERTICES]
;;Link                 X-Coord             Y-Coord
;;---------------      ------------------  ------------------
```

[Polygons]

;;Subcatchment	X-Coord	Y-Coord
DMA1	777.880	5158.570
DMA2	1137.327	5212.485
BF-1	782.992	4973.275
BF-2	1137.327	5013.513
OFFSITE_RESIDENTIAL	1678.794	5069.117
AGRICULTURAL_DMAs	1953.540	4848.042

[SYMBOLS]

;;Gage	X-Coord	Y-Coord
Poway	1472.076	5381.329

POC 1 OUTPUT REPORT
PROPOSED CONDITIONS

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.013)

The Farm - POC 1 Proposed Mitigated Conditions

WARNING 04: minimum elevation drop used for Conduit UD-2
WARNING 04: minimum elevation drop used for Conduit UD-1
WARNING 04: minimum elevation drop used for Conduit Bypass-2
WARNING 04: minimum elevation drop used for Conduit Bypass-1

****
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
****

****
Analysis Options
****
Flow Units ..... CFS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... YES
  Ponding Allowed ..... NO
  Water Quality ..... NO
Infiltration Method ..... GREEN_AMPT
Flow Routing Method ..... KINWAVE
Starting Date 10/04/1962 00:00:00
Ending Date 05/23/2008 23:00:00
Antecedent Dry Days 0.0
Report Time Step 01:00:00
Wet Time Step 00:15:00
Dry Time Step 04:00:00
Routing Time Step ..... 60.00 sec

**********	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
**********	---------	-------
Initial LID Storage	0.171	0.013
Total Precipitation	7496.290	558.220

Evaporation Loss	1040.931	77.514
Infiltration Loss	2588.385	192.747
Surface Runoff	2908.159	216.559
LID Drainage	761.638	56.716
Final Storage	215.412	16.041
Continuity Error (%)	-0.241	

Flow Routing Continuity	Volume acre-feet	Volume 10^6 gal
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	3669.796	1195.858
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	3244.262	1057.191
Flooding Loss	426.467	138.971
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.002	0.001
Continuity Error (%)	-0.025	

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step	:	60.00 sec
Average Time Step	:	60.00 sec
Maximum Time Step	:	60.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	1.01
Percent Not Converging	:	0.00

Subcatchment Runoff Summary

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Imperv Runoff in	Perv Runoff in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
DMA1	558.22	0.00	77.10	158.48	316.83	7.42	324.25	377.44	28.48	0.581
DMA2	558.22	0.00	71.64	156.58	323.64	9.50	333.14	101.31	8.30	0.597
BF-1	558.22	15671.31	693.39	0.00	0.00	0.00	15524.60	373.91	28.55	0.957
BF-2	558.22	14350.58	434.08	4391.07	0.00	0.00	163.59	1.15	0.09	0.011
OFFSITE_RESIDENTIAL	558.22	0.00	91.71	105.70	357.09	4.89	361.99	792.23	53.20	0.648
AGRICULTURAL_DMAs	558.22	0.00	10.42	507.36	23.70	17.70	41.40	28.47	7.18	0.074

****
LID Performance Summary
****

Subcatchment	LID Control	Total Inflow in	Evap Loss in	Infil Loss in	Surface Outflow in	Drain Outflow in	Initial Storage in	Final Storage in	Continuity Error %
BF-1	BF-1	16229.53	693.80	0.00	5271.70	10262.20	1.80	4.09	-0.00
BF-2	BF-2	558.22	390.83	0.00	0.00	167.29	1.80	1.91	-0.00

****

Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days	Time of Max Occurrence hr:min	Reported Max Depth Feet
POC1-Proposed	OUTFALL	0.05	0.50	0.50	75	09:40	0.50
DIV-1	DIVIDER	0.05	0.50	0.50	75	09:08	0.50
DIV-2	DIVIDER	0.00	0.50	0.50	129	21:33	0.50
STOR-1	STORAGE	0.07	3.36	3.36	6326	05:28	3.28
STOR-2	STORAGE	0.00	0.00	0.00	0	00:00	0.00

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	Time of Max Occurrence hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
POC1-Proposed	OUTFALL	60.38	66.00	6349	00:01	821	1.06e+03	0.000
DIV-1	DIVIDER	28.55	28.55	6349	00:16	374	374	0.000
DIV-2	DIVIDER	0.09	0.09	6349	00:31	1.15	1.15	0.001
STOR-1	STORAGE	0.00	28.38	6349	00:16	0	226	0.016
STOR-2	STORAGE	0.00	0.00	0	00:00	0	0	0.000

gal

****
Node Flooding Summary
****

Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CFS	Time of Max Occurrence days	Time of Max Occurrence hr:min	Total Flood Volume 10^6 gal	Maximum Ponded Volume 1000 ft3
DIV-1	38395.17	0.17	128	19:07	138.265	0.000
DIV-2	1526.15	0.08	6349	00:32	0.695	0.000

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
STOR-1	2.866	1	0	0	155.728	56	6326 05:27	14.31
STOR-2	0.000	0	0	0	0.000	0	0 00:00	0.00

****
Outfall Loading Summary
****

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
POC1-Proposed	26.12	0.38	66.00	1057.113
System	26.12	0.38	66.00	1057.113

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
UD-2	CONDUIT	0.01	2305 18:47	0.12	1.08	1.00
UD-1	CONDUIT	0.01	16273 07:08	0.12	1.08	1.00
Bypass-2	DUMMY	0.00	0 00:00			
Bypass-1	DUMMY	28.38	6349 00:16			
midflow-2	DUMMY	0.00	0 00:00			
MIDFLOW-1	DUMMY	14.31	6326 05:28			

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
UD-2	1523.97	1523.97	1523.97	232.00	1523.97
UD-1	38398.73	38398.73	38398.73	224.48	38398.73

Analysis begun on: Thu Jan 16 17:01:33 2020
Analysis ended on: Thu Jan 16 17:02:22 2020
Total elapsed time: 00:00:49

Low-flow Threshold:	10%	
0.1xQ2 (Pre):	4.479	cfs
Q10 (Pre):	66.698	cfs
Ordinate #:	100	
Incremental Q (Pre):	0.62218	cfs
Total Hourly Data:	400055	hours

The proposed BMP: PASSED

POC1							
Interval	Pre-project Flow (cfs)	Pre-project Hours	Pre-project % Time Exceeding	Post-project Hours	Post-project % Time Exceeding	Percentage	Pass/Fail
0	4.479	2635	6.59E-03	2220	5.55E-03	84%	Pass
1	5.102	2321	5.80E-03	1896	4.74E-03	82%	Pass
2	5.724	2045	5.11E-03	1647	4.12E-03	81%	Pass
3	6.346	1847	4.62E-03	1448	3.62E-03	78%	Pass
4	6.968	1635	4.09E-03	1237	3.09E-03	76%	Pass
5	7.590	1483	3.71E-03	1090	2.72E-03	73%	Pass
6	8.212	1310	3.27E-03	953	2.38E-03	73%	Pass
7	8.835	1156	2.89E-03	847	2.12E-03	73%	Pass
8	9.457	1039	2.60E-03	758	1.89E-03	73%	Pass
9	10.079	915	2.29E-03	685	1.71E-03	75%	Pass
10	10.701	837	2.09E-03	605	1.51E-03	72%	Pass
11	11.323	762	1.90E-03	546	1.36E-03	72%	Pass
12	11.946	709	1.77E-03	477	1.19E-03	67%	Pass
13	12.568	647	1.62E-03	437	1.09E-03	68%	Pass
14	13.190	603	1.51E-03	391	9.77E-04	65%	Pass
15	13.812	557	1.39E-03	351	8.77E-04	63%	Pass
16	14.434	526	1.31E-03	326	8.15E-04	62%	Pass
17	15.056	491	1.23E-03	301	7.52E-04	61%	Pass
18	15.679	438	1.09E-03	274	6.85E-04	63%	Pass
19	16.301	393	9.82E-04	249	6.22E-04	63%	Pass
20	16.923	356	8.90E-04	227	5.67E-04	64%	Pass
21	17.545	340	8.50E-04	207	5.17E-04	61%	Pass
22	18.167	311	7.77E-04	184	4.60E-04	59%	Pass
23	18.790	293	7.32E-04	162	4.05E-04	55%	Pass
24	19.412	269	6.72E-04	148	3.70E-04	55%	Pass
25	20.034	251	6.27E-04	135	3.37E-04	54%	Pass
26	20.656	232	5.80E-04	131	3.27E-04	56%	Pass
27	21.278	210	5.25E-04	123	3.07E-04	59%	Pass
28	21.900	196	4.90E-04	113	2.82E-04	58%	Pass
29	22.523	180	4.50E-04	110	2.75E-04	61%	Pass
30	23.145	168	4.20E-04	100	2.50E-04	60%	Pass
31	23.767	157	3.92E-04	95	2.37E-04	61%	Pass
32	24.389	143	3.57E-04	93	2.32E-04	65%	Pass
33	25.011	135	3.37E-04	84	2.10E-04	62%	Pass
34	25.634	124	3.10E-04	78	1.95E-04	63%	Pass
35	26.256	114	2.85E-04	74	1.85E-04	65%	Pass
36	26.878	112	2.80E-04	69	1.72E-04	62%	Pass
37	27.500	107	2.67E-04	62	1.55E-04	58%	Pass
38	28.122	101	2.52E-04	61	1.52E-04	60%	Pass
39	28.744	96	2.40E-04	57	1.42E-04	59%	Pass
40	29.367	92	2.30E-04	54	1.35E-04	59%	Pass
41	29.989	89	2.22E-04	50	1.25E-04	56%	Pass
42	30.611	85	2.12E-04	46	1.15E-04	54%	Pass
43	31.233	81	2.02E-04	43	1.07E-04	53%	Pass
44	31.855	77	1.92E-04	41	1.02E-04	53%	Pass
45	32.478	75	1.87E-04	37	9.25E-05	49%	Pass
46	33.100	71	1.77E-04	35	8.75E-05	49%	Pass
47	33.722	68	1.70E-04	35	8.75E-05	51%	Pass
48	34.344	68	1.70E-04	35	8.75E-05	51%	Pass
49	34.966	64	1.60E-04	32	8.00E-05	50%	Pass
50	35.589	61	1.52E-04	30	7.50E-05	49%	Pass
51	36.211	52	1.30E-04	30	7.50E-05	58%	Pass
52	36.833	49	1.22E-04	29	7.25E-05	59%	Pass
53	37.455	46	1.15E-04	26	6.50E-05	57%	Pass
54	38.077	46	1.15E-04	24	6.00E-05	52%	Pass

Low-flow Threshold:	10%	
0.1xQ2 (Pre):	4.479	cfs
Q10 (Pre):	66.698	cfs
Ordinate #:	100	
Incremental Q (Pre):	0.62218	cfs
Total Hourly Data:	400055	hours

The proposed BMP: PASSED

POC1							
55	38.699	45	1.12E-04	23	5.75E-05	51%	Pass
56	39.322	43	1.07E-04	22	5.50E-05	51%	Pass
57	39.944	39	9.75E-05	21	5.25E-05	54%	Pass
58	40.566	36	9.00E-05	20	5.00E-05	56%	Pass
59	41.188	34	8.50E-05	20	5.00E-05	59%	Pass
60	41.810	32	8.00E-05	18	4.50E-05	56%	Pass
61	42.433	31	7.75E-05	18	4.50E-05	58%	Pass
62	43.055	28	7.00E-05	16	4.00E-05	57%	Pass
63	43.677	28	7.00E-05	16	4.00E-05	57%	Pass
64	44.299	28	7.00E-05	13	3.25E-05	46%	Pass
65	44.921	26	6.50E-05	12	3.00E-05	46%	Pass
66	45.543	26	6.50E-05	12	3.00E-05	46%	Pass
67	46.166	26	6.50E-05	12	3.00E-05	46%	Pass
68	46.788	24	6.00E-05	12	3.00E-05	50%	Pass
69	47.410	24	6.00E-05	12	3.00E-05	50%	Pass
70	48.032	23	5.75E-05	12	3.00E-05	52%	Pass
71	48.654	21	5.25E-05	10	2.50E-05	48%	Pass
72	49.277	21	5.25E-05	8	2.00E-05	38%	Pass
73	49.899	21	5.25E-05	8	2.00E-05	38%	Pass
74	50.521	21	5.25E-05	8	2.00E-05	38%	Pass
75	51.143	21	5.25E-05	5	1.25E-05	24%	Pass
76	51.765	19	4.75E-05	5	1.25E-05	26%	Pass
77	52.387	17	4.25E-05	3	7.50E-06	18%	Pass
78	53.010	17	4.25E-05	3	7.50E-06	18%	Pass
79	53.632	16	4.00E-05	3	7.50E-06	19%	Pass
80	54.254	16	4.00E-05	3	7.50E-06	19%	Pass
81	54.876	15	3.75E-05	3	7.50E-06	20%	Pass
82	55.498	14	3.50E-05	3	7.50E-06	21%	Pass
83	56.121	14	3.50E-05	2	5.00E-06	14%	Pass
84	56.743	13	3.25E-05	1	2.50E-06	8%	Pass
85	57.365	13	3.25E-05	1	2.50E-06	8%	Pass
86	57.987	9	2.25E-05	1	2.50E-06	11%	Pass
87	58.609	9	2.25E-05	1	2.50E-06	11%	Pass
88	59.231	9	2.25E-05	1	2.50E-06	11%	Pass
89	59.854	8	2.00E-05	1	2.50E-06	13%	Pass
90	60.476	8	2.00E-05	1	2.50E-06	13%	Pass
91	61.098	8	2.00E-05	1	2.50E-06	13%	Pass
92	61.720	8	2.00E-05	1	2.50E-06	13%	Pass
93	62.342	7	1.75E-05	1	2.50E-06	14%	Pass
94	62.965	7	1.75E-05	1	2.50E-06	14%	Pass
95	63.587	7	1.75E-05	1	2.50E-06	14%	Pass
96	64.209	7	1.75E-05	1	2.50E-06	14%	Pass
97	64.831	5	1.25E-05	1	2.50E-06	20%	Pass
98	65.453	5	1.25E-05	0	0.00E+00	0%	Pass
99	66.075	5	1.25E-05	0	0.00E+00	0%	Pass
100	66.698	4	1.00E-05	0	0.00E+00	0%	Pass

POC 2 INPUT REPORT
PROPOSED CONDITIONS

```
The Farm
;;Project Title/Notes
The Farm - POC 2 Proposed Mitigated Condition

[OPTIONS]
;;Option             Value
FLOW_UNITS           CFS
INFILTRATION         GREEN_AMPT
FLOW_ROUTING         KINWAVE
LINK_OFFSETS         DEPTH
MIN_SLOPE            0
ALLOW_PONDING        NO
SKIP_STEADY_STATE    NO

START_DATE           10/04/1962
START_TIME           00:00:00
REPORT_START_DATE    10/04/1962
REPORT_START_TIME    00:00:00
END_DATE             05/23/2008
END_TIME             23:00:00
SWEEP_START          01/01
SWEEP_END            12/31
DRY_DAYS             0
REPORT_STEP          01:00:00
WET_STEP             00:15:00
DRY_STEP             04:00:00
ROUTING_STEP         0:01:00

INERTIAL_DAMPING     PARTIAL
NORMAL_FLOW_LIMITED  BOTH
FORCE_MAIN_EQUATION  H-W
VARIABLE_STEP        0.75
LENGTHENING_STEP     0
MIN_SURFAREA         12.557
MAX_TRIALS           8
HEAD_TOLERANCE       0.005
SYS_FLOW_TOL         5
LAT_FLOW_TOL         5
MINIMUM_STEP         0.5
THREADS              1

[EVAPORATION]
;;Data Source    Parameters
;;-------------- ----------------
MONTHLY          .07    .1     .13    .17    .19    .22    .24    .22    .19    .13    .090   .060
DRY_ONLY         NO

[RAINGAGES]
;;Name           Format    Interval SCF      Source
;;-------------- --------- ------ ------ ----------
Poway            INTENSITY 1:00     1        TIMESERIES Poway

[SUBCATCHMENTS]
;;Name           Rain Gage        Outlet           Area     %Imperv  Width    %Slope   CurbLen  SnowPack
;;-------------- ---------------- ---------------- -------- -------- -------- -------- --------
----------------
DMA3             Poway            BF-3             6.65     68       120      3        0

DMA4             Poway            BF-4             5.77     68       350      3        0

DMA6             Poway            BF-6             3.73     68       400      0.8      0

BF-6             Poway            DIV-6            0.0965   0        80       0        0

BF-3             Poway            DIV-3            0.134    0        50       0.10     0
```

```
BF-4             Poway            DIV-4            .115     0        50       0.10     0

OFFSITE_RESIDENTIAL Poway            POC2-Proposed    55.58    80       400      5        0

AGRICULTURAL_DMAs Poway            POC2-Proposed    19.47    10       350      0.5      0


[SUBAREAS]
;;Subcatchment   N-Imperv   N-Perv     S-Imperv   S-Perv     PctZero    RouteTo    PctRouted
;;-------------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
DMA3             0.012      0.15       0.05       0.1        25         OUTLET
DMA4             0.012      0.15       0.05       0.1        25         OUTLET
DMA6             0.012      0.15       0.05       0.1        25         OUTLET
BF-6             0.012      0.15       0.05       0.1        25         OUTLET
BF-3             0.012      0.15       0.05       0.10       25         OUTLET
BF-4             0.012      0.15       0.05       0.1        25         OUTLET
OFFSITE_RESIDENTIAL .012       .15        0.05       .1         25         OUTLET
AGRICULTURAL_DMAs .012       .15        0.05       .1         25         OUTLET

[INFILTRATION]
;;Subcatchment   Suction    Ksat       IMD
;;-------------- ---------- ---------- ----------
DMA3             6          .075       0.31
DMA4             6          .075       0.31
DMA6             6          .075       0.31
BF-6             1.5        .3         .3
BF-3             1.5        .3         .3
BF-4             1.5        .3         .3
OFFSITE_RESIDENTIAL 6          .075       0.31
AGRICULTURAL_DMAs 6          0.075      0.31

[LID_CONTROLS]
;;Name           Type/Layer Parameters
;;-------------- ---------- ----------
BF-6             BC
BF-6             SURFACE    6.29       0          0          0          5
BF-6             SOIL       18         0.4        0.2        0.1        5          5          1.5
BF-6             STORAGE    12         .67        0          0
BF-6             DRAIN      6.9747     0.5        3          6

BF-3             BC
BF-3             SURFACE    6.3        0.0        0          0          5
BF-3             SOIL       18         0.4        0.2        0.1        5          5          1.5
BF-3             STORAGE    12         0.67       0          0
BF-3             DRAIN      6.3022     0.5        3          6

BF-4             BC
BF-4             SURFACE    6.26       0.0        0          0          5
BF-4             SOIL       18         0.4        0.2        0.1        5          5          1.5
BF-4             STORAGE    12         0.67       0          0
BF-4             DRAIN      5.8950     0.5        6          6

[LID_USAGE]
;;Subcatchment   LID Process      Number  Area       Width      InitSat    FromImp    ToPerv     RptFile
                DrainTo
;;-------------- --------------- ------- ---------- ---------- ---------- ---------- ----------
----------------------- ---------------
BF-6             BF-6             1       4203.54    0          0          100        0
BF-3             BF-3             1       5800       0          0          100        0
BF-4             BF-4             1       5009.40    0          0          100        0

[OUTFALLS]
;;Name           Elevation  Type       Stage Data       Gated    Route To
;;-------------- ---------- ---------- ---------------- -------- ----------------
POC2-Proposed    0          FREE                        NO

[DIVIDERS]
```

;;Name	Elevation	Diverted Link	Type	Parameters				
DIV-6	0	Bypass-6	CUTOFF	1.568	0	0	0	0
DIV-3	0	bypass-3	CUTOFF	1.568	0	0	0	0
DIV-4	0	bypass-4	CUTOFF	1.568	0	0	0	0

[STORAGE]

;;Name	Elev.	MaxDepth	InitDepth	Shape	Curve Name/Params	N/A	Fevap	Psi	Ksat	IMD
STOR-3	0	4.5	0	TABULAR	Basin3	0	0			
STOR-4	0	4.5	0	TABULAR	Basin4	0	0			
Stor-6	0	4.5	0	TABULAR	Basin6	0	0			

[CONDUITS]

;;Name	From Node	To Node	Length	Roughness	InOffset	OutOffset	InitFlow	MaxFlow
UD-6	DIV-6	POC2-Proposed	400	0.013	0	0	0	0
Bypass-6	DIV-6	Stor-6	400	0.01	0	0	0	0
UD-4	DIV-4	POC2-Proposed	400	0.013	0	0	0	0
UD-3	DIV-3	POC2-Proposed	400	0.013	0	0	0	0
Bypass-4	DIV-4	STOR-4	400	0.01	0	0	0	0
Bypass-3	DIV-3	STOR-3	400	0.01	0	0	0	0

[OUTLETS]

;;Name	From Node	To Node	Offset	Type	QTable/Qcoeff	Qexpon	Gated
midflow-6	Stor-6	POC2-Proposed	0	TABULAR/DEPTH	Disch-6		NO
midflow-4	STOR-4	POC2-Proposed	0	TABULAR/DEPTH	Disc-4		NO
MIDFLOW-3	STOR-3	POC2-Proposed	0	TABULAR/DEPTH	Disc-3		NO

[XSECTIONS]

;;Link	Shape	Geom1	Geom2	Geom3	Geom4	Barrels	Culvert
UD-6	CIRCULAR	.5	0	0	0	1	
Bypass-6	DUMMY	0	0	0	0	1	
UD-4	CIRCULAR	.5	0	0	0	1	
UD-3	CIRCULAR	.5	0	0	0	1	
Bypass-4	DUMMY	0	0	0	0	1	
Bypass-3	DUMMY	0	0	0	0	1	

[CURVES]

;;Name	Type	X-Value	Y-Value
Disc-3	Rating	0	0.0000
Disc-3		0.05	0.0066
Disc-3		0.1	0.0243
Disc-3		0.15	0.0495
Disc-3		0.2	0.0730
Disc-3		0.25	0.0872

Disc-3	0.3	0.0994
Disc-3	0.35	0.1103
Disc-3	0.4	0.1202
Disc-3	0.45	0.1293
Disc-3	0.5	0.1379
Disc-3	0.55	0.1459
Disc-3	0.6	0.1535
Disc-3	0.65	0.1608
Disc-3	0.7	0.1677
Disc-3	0.75	0.1744
Disc-3	0.8	0.1808
Disc-3	0.85	0.1870
Disc-3	0.9	0.1930
Disc-3	0.95	0.1988
Disc-3	1	0.2045
Disc-3	1.05	0.2100
Disc-3	1.1	0.2154
Disc-3	1.15	0.2206
Disc-3	1.2	0.2257
Disc-3	1.25	0.2307
Disc-3	1.3	0.2356
Disc-3	1.35	0.2404
Disc-3	1.4	0.2451
Disc-3	1.45	0.2497
Disc-3	1.5	0.2542
Disc-3	1.55	0.3170
Disc-3	1.6	0.4871
Disc-3	1.65	0.7519
Disc-3	1.7	1.0970
Disc-3	1.75	1.5059
Disc-3	1.8	1.9614
Disc-3	1.85	2.4455
Disc-3	1.9	2.7641
Disc-3	1.95	3.0205
Disc-3	2	3.2554
Disc-3	2.05	3.4734
Disc-3	2.1	3.6778
Disc-3	2.15	3.8710
Disc-3	2.2	4.0545
Disc-3	2.25	4.2297
Disc-3	2.3	4.3976
Disc-3	2.35	4.5592
Disc-3	2.4	4.7150
Disc-3	2.45	4.8657
Disc-3	2.5	5.0117
Disc-3	2.55	5.1534
Disc-3	2.6	5.2913
Disc-3	2.65	5.4256
Disc-3	2.7	5.5565
Disc-3	2.75	5.6844
Disc-3	2.8	5.8094
Disc-3	2.85	5.9317
Disc-3	2.9	6.0515
Disc-3	2.95	6.1689
Disc-3	3	6.2841
Disc-3	3.05	6.7695
Disc-3	3.1	7.5613
Disc-3	3.15	8.5520
Disc-3	3.2	9.7033
Disc-3	3.25	10.9930
Disc-3	3.3	12.4063
Disc-3	3.35	13.9322
Disc-3	3.4	15.5623
Disc-3	3.45	17.2899
Disc-3	3.5	19.1091
Disc-3	3.55	21.0155
Disc-3	3.6	23.0048

```
Disc-3                    3.65       25.0735
Disc-3                    3.7        27.2186
Disc-3                    3.75       29.4371
Disc-3                    3.8        31.7267
Disc-3                    3.85       34.0851
Disc-3                    3.9        36.5102
Disc-3                    3.95       39.0001
Disc-3                    4          41.5532
Disc-3                    4.05       44.1678
Disc-3                    4.1        46.8425
Disc-3                    4.15       49.5758
Disc-3                    4.2        52.3666
Disc-3                    4.25       55.2135
Disc-3                    4.3        58.1155
Disc-3                    4.35       61.0715
Disc-3                    4.4        64.0805
Disc-3                    4.45       67.1415
Disc-3                    4.5        70.2537
;
Disc-4          Rating    0          0.000
Disc-4                    0.05       0.007
Disc-4                    0.1        0.024
Disc-4                    0.15       0.050
Disc-4                    0.2        0.073
Disc-4                    0.25       0.087
Disc-4                    0.3        0.099
Disc-4                    0.35       0.110
Disc-4                    0.4        0.120
Disc-4                    0.45       0.129
Disc-4                    0.5        0.138
Disc-4                    0.55       0.146
Disc-4                    0.6        0.154
Disc-4                    0.65       0.161
Disc-4                    0.7        0.168
Disc-4                    0.75       0.174
Disc-4                    0.8        0.181
Disc-4                    0.85       0.187
Disc-4                    0.9        0.193
Disc-4                    0.95       0.199
Disc-4                    1          0.205
Disc-4                    1.05       0.210
Disc-4                    1.1        0.215
Disc-4                    1.15       0.221
Disc-4                    1.2        0.226
Disc-4                    1.25       0.231
Disc-4                    1.3        0.236
Disc-4                    1.35       0.240
Disc-4                    1.4        0.245
Disc-4                    1.45       0.250
Disc-4                    1.5        0.254
Disc-4                    1.55       0.317
Disc-4                    1.6        0.487
Disc-4                    1.65       0.752
Disc-4                    1.7        1.097
Disc-4                    1.75       1.506
Disc-4                    1.8        1.961
Disc-4                    1.85       2.445
Disc-4                    1.9        2.764
Disc-4                    1.95       3.020
Disc-4                    2          3.255
Disc-4                    2.05       3.473
Disc-4                    2.1        3.678
Disc-4                    2.15       3.871
Disc-4                    2.2        4.054
Disc-4                    2.25       4.230
Disc-4                    2.3        4.398
Disc-4                    2.35       4.559
```

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Disc-4                  2.4         4.715
Disc-4                  2.45        4.866
Disc-4                  2.5         5.012
Disc-4                  2.55        5.153
Disc-4                  2.6         5.291
Disc-4                  2.65        5.426
Disc-4                  2.7         5.557
Disc-4                  2.75        5.684
Disc-4                  2.8         5.809
Disc-4                  2.85        5.932
Disc-4                  2.9         6.051
Disc-4                  2.95        6.169
Disc-4                  3           6.284
Disc-4                  3.05        6.769
Disc-4                  3.1         7.561
Disc-4                  3.15        8.552
Disc-4                  3.2         9.703
Disc-4                  3.25        10.993
Disc-4                  3.3         12.406
Disc-4                  3.35        13.932
Disc-4                  3.4         15.562
Disc-4                  3.45        17.290
Disc-4                  3.5         19.109
Disc-4                  3.55        21.015
Disc-4                  3.6         23.005
Disc-4                  3.65        25.074
Disc-4                  3.7         27.219
Disc-4                  3.75        29.437
Disc-4                  3.8         31.727
Disc-4                  3.85        34.085
Disc-4                  3.9         36.510
Disc-4                  3.95        39.000
Disc-4                  4           41.553
Disc-4                  4.05        44.168
Disc-4                  4.1         46.842
Disc-4                  4.15        49.576
Disc-4                  4.2         52.367
Disc-4                  4.25        55.213
Disc-4                  4.3         58.115
Disc-4                  4.35        61.071
Disc-4                  4.4         64.080
Disc-4                  4.45        67.141
Disc-4                  4.5         70.254
;
Disch-6         Rating  0           0.179
Disch-6                 0.05        0.186
Disch-6                 0.1         0.204
Disch-6                 0.15        0.229
Disch-6                 0.2         0.252
Disch-6                 0.25        0.267
Disch-6                 0.3         0.279
Disch-6                 0.35        0.290
Disch-6                 0.4         0.300
Disch-6                 0.45        0.309
Disch-6                 0.5         0.317
Disch-6                 0.55        0.325
Disch-6                 0.6         0.333
Disch-6                 0.65        0.340
Disch-6                 0.7         0.347
Disch-6                 0.75        0.354
Disch-6                 0.8         0.360
Disch-6                 0.85        0.366
Disch-6                 0.9         0.372
Disch-6                 0.95        0.378
Disch-6                 1           0.384
Disch-6                 1.05        0.389
Disch-6                 1.1         0.395
```

Disch-6	1.15	0.400
Disch-6	1.2	0.405
Disch-6	1.25	0.410
Disch-6	1.3	0.415
Disch-6	1.35	0.420
Disch-6	1.4	0.424
Disch-6	1.45	0.429
Disch-6	1.5	0.434
Disch-6	1.55	0.496
Disch-6	1.6	0.666
Disch-6	1.65	0.931
Disch-6	1.7	1.276
Disch-6	1.75	1.685
Disch-6	1.8	2.141
Disch-6	1.85	2.625
Disch-6	1.9	2.944
Disch-6	1.95	3.200
Disch-6	2	3.435
Disch-6	2.05	3.653
Disch-6	2.1	3.857
Disch-6	2.15	4.050
Disch-6	2.2	4.234
Disch-6	2.25	4.409
Disch-6	2.3	4.577
Disch-6	2.35	4.739
Disch-6	2.4	4.894
Disch-6	2.45	5.045
Disch-6	2.5	5.191
Disch-6	2.55	5.333
Disch-6	2.6	5.471
Disch-6	2.65	5.605
Disch-6	2.7	5.736
Disch-6	2.75	5.864
Disch-6	2.8	5.989
Disch-6	2.85	6.111
Disch-6	2.9	6.231
Disch-6	2.95	6.348
Disch-6	3	6.463
Disch-6	3.05	6.577
Disch-6	3.1	6.688
Disch-6	3.15	6.797
Disch-6	3.2	6.904
Disch-6	3.25	7.010
Disch-6	3.3	7.114
Disch-6	3.35	7.216
Disch-6	3.4	7.317
Disch-6	3.45	7.417
Disch-6	3.5	7.515
Disch-6	3.55	7.984
Disch-6	3.6	8.761
Disch-6	3.65	9.737
Disch-6	3.7	10.874
Disch-6	3.75	12.150
Disch-6	3.8	13.550
Disch-6	3.85	15.064
Disch-6	3.9	16.682
Disch-6	3.95	18.398
Disch-6	4	20.206
Disch-6	4.05	22.102
Disch-6	4.1	24.080
Disch-6	4.15	26.139
Disch-6	4.2	28.275
Disch-6	4.25	30.484
Disch-6	4.3	32.764
Disch-6	4.35	35.114
Disch-6	4.4	37.530
Disch-6	4.45	40.012

```
Disch-6                    4.5        42.557
;
Basin3           Storage   0          5147
Basin3                     0.05       5194
Basin3                     0.1        5241
Basin3                     0.15       5288
Basin3                     0.2        5335
Basin3                     0.25       5382
Basin3                     0.3        5429
Basin3                     0.35       5476
Basin3                     0.4        5523
Basin3                     0.45       5570
Basin3                     0.5        5617
Basin3                     0.55       5667
Basin3                     0.6        5717
Basin3                     0.65       5767
Basin3                     0.7        5817
Basin3                     0.75       5867
Basin3                     0.8        5917
Basin3                     0.85       5967
Basin3                     0.9        6017
Basin3                     0.95       6067
Basin3                     1          6117
Basin3                     1.05       6166
Basin3                     1.1        6216
Basin3                     1.15       6266
Basin3                     1.2        6316
Basin3                     1.25       6366
Basin3                     1.3        6416
Basin3                     1.35       6466
Basin3                     1.4        6516
Basin3                     1.45       6566
Basin3                     1.5        6616
Basin3                     1.55       6669
Basin3                     1.6        6722
Basin3                     1.65       6775
Basin3                     1.7        6828
Basin3                     1.75       6881
Basin3                     1.8        6934
Basin3                     1.85       6987
Basin3                     1.9        7040
Basin3                     1.95       7093
Basin3                     2          7146
Basin3                     2.05       7199
Basin3                     2.1        7252
Basin3                     2.15       7305
Basin3                     2.2        7358
Basin3                     2.25       7411
Basin3                     2.3        7464
Basin3                     2.35       7517
Basin3                     2.4        7570
Basin3                     2.45       7623
Basin3                     2.5        7676
Basin3                     2.55       7732
Basin3                     2.6        7788
Basin3                     2.65       7843
Basin3                     2.7        7899
Basin3                     2.75       7955
Basin3                     2.8        8011
Basin3                     2.85       8067
Basin3                     2.9        8123
Basin3                     2.95       8179
Basin3                     3          8235
;
Basin4           Storage   0          5428
Basin4                     0.05       5470
Basin4                     0.1        5513
```

Basin4	0.15	5556
Basin4	0.2	5599
Basin4	0.25	5641
Basin4	0.3	5684
Basin4	0.35	5727
Basin4	0.4	5770
Basin4	0.45	5812
Basin4	0.5	5855
Basin4	0.55	5904
Basin4	0.6	5954
Basin4	0.65	6003
Basin4	0.7	6052
Basin4	0.75	6102
Basin4	0.8	6151
Basin4	0.85	6200
Basin4	0.9	6249
Basin4	0.95	6299
Basin4	1	6348
Basin4	1.05	6397
Basin4	1.1	6447
Basin4	1.15	6496
Basin4	1.2	6545
Basin4	1.25	6595
Basin4	1.3	6644
Basin4	1.35	6693
Basin4	1.4	6742
Basin4	1.45	6792
Basin4	1.5	6841
Basin4	1.55	6866
Basin4	1.6	6892
Basin4	1.65	6917
Basin4	1.7	6942
Basin4	1.75	6967
Basin4	1.8	6993
Basin4	1.85	7018
Basin4	1.9	7043
Basin4	1.95	7068
Basin4	2	7094
Basin4	2.05	7119
Basin4	2.1	7144
Basin4	2.15	7169
Basin4	2.2	7195
Basin4	2.25	7220
Basin4	2.3	7245
Basin4	2.35	7270
Basin4	2.4	7296
Basin4	2.45	7321
Basin4	2.5	7346
Basin4	2.55	7427
Basin4	2.6	7508
Basin4	2.65	7590
Basin4	2.7	7671
Basin4	2.75	7752
Basin4	2.8	7833
Basin4	2.85	7914
Basin4	2.9	7996
Basin4	2.95	8077
Basin4	3	8158
Basin4	3.05	8239
Basin4	3.1	8320
Basin4	3.15	8402
Basin4	3.2	8483
Basin4	3.25	8564
Basin4	3.3	8645
Basin4	3.35	8726
Basin4	3.4	8808
Basin4	3.45	8889

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Basin4                  3.5       8970
Basin4                  3.55      9029
Basin4                  3.6       9087
Basin4                  3.65      9146
Basin4                  3.7       9205
Basin4                  3.75      9263
Basin4                  3.8       9322
Basin4                  3.85      9381
Basin4                  3.9       9439
Basin4                  3.95      9498
Basin4                  4         9557
Basin4                  4.05      9615
Basin4                  4.1       9674
Basin4                  4.15      9732
Basin4                  4.2       9791
Basin4                  4.25      9850
Basin4                  4.3       9908
Basin4                  4.35      9967
Basin4                  4.4       10026
Basin4                  4.45      10084
Basin4                  4.5       10143
;
Basin6          Storage 0         4635
Basin6                  0.05      4675
Basin6                  0.1       4716
Basin6                  0.15      4757
Basin6                  0.2       4798
Basin6                  0.25      4839
Basin6                  0.3       4880
Basin6                  0.35      4921
Basin6                  0.4       4961
Basin6                  0.45      5002
Basin6                  0.5       5043
Basin6                  0.55      5087
Basin6                  0.6       5131
Basin6                  0.65      5175
Basin6                  0.7       5218
Basin6                  0.75      5262
Basin6                  0.8       5306
Basin6                  0.85      5350
Basin6                  0.9       5394
Basin6                  0.95      5438
Basin6                  1         5482
Basin6                  1.05      5525
Basin6                  1.1       5569
Basin6                  1.15      5613
Basin6                  1.2       5657
Basin6                  1.25      5701
Basin6                  1.3       5745
Basin6                  1.35      5788
Basin6                  1.4       5832
Basin6                  1.45      5876
Basin6                  1.5       5920
Basin6                  1.55      5967
Basin6                  1.6       6014
Basin6                  1.65      6061
Basin6                  1.7       6108
Basin6                  1.75      6155
Basin6                  1.8       6202
Basin6                  1.85      6249
Basin6                  1.9       6296
Basin6                  1.95      6343
Basin6                  2         6390
Basin6                  2.05      6436
Basin6                  2.1       6483
Basin6                  2.15      6530
Basin6                  2.2       6577
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Basin6                  2.25       6624
Basin6                  2.3        6671
Basin6                  2.35       6718
Basin6                  2.4        6765
Basin6                  2.45       6812
Basin6                  2.5        6859
Basin6                  2.55       6909
Basin6                  2.6        6959
Basin6                  2.65       7009
Basin6                  2.7        7059
Basin6                  2.75       7109
Basin6                  2.8        7159
Basin6                  2.85       7209
Basin6                  2.9        7259
Basin6                  2.95       7309
Basin6                  3          7360
Basin6                  3.05       7410
Basin6                  3.1        7460
Basin6                  3.15       7510
Basin6                  3.2        7560
Basin6                  3.25       7610
Basin6                  3.3        7660
Basin6                  3.35       7710
Basin6                  3.4        7760
Basin6                  3.45       7810
Basin6                  3.5        7860
Basin6                  3.55       7913
Basin6                  3.6        7966
Basin6                  3.65       8019
Basin6                  3.7        8073
Basin6                  3.75       8126
Basin6                  3.8        8179
Basin6                  3.85       8232
Basin6                  3.9        8285
Basin6                  3.95       8338
Basin6                  4          8392
Basin6                  4.05       8445
Basin6                  4.1        8498
Basin6                  4.15       8551
Basin6                  4.2        8604
Basin6                  4.25       8657
Basin6                  4.3        8710
Basin6                  4.35       8764
Basin6                  4.4        8817
Basin6                  4.45       8870
Basin6                  4.5        8923

[TIMESERIES]
;;Name           Date       Time       Value
;;-------------- ---------- ---------- ----------
Poway           FILE "R:\1558\Hyd\Calcs\TM\SWMM\poway.dat"

[REPORT]
;;Reporting Options
INPUT      NO
CONTROLS   NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL

[TAGS]

[MAP]
DIMENSIONS 878.780 4235.932 1847.529 5435.872
Units      None

[COORDINATES]
```

```
;;Node           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
POC2-Proposed    1255.448           4336.053
DIV-6            1616.177           4527.291
DIV-3            789.381            4684.472
DIV-4            1140.801           4708.752
STOR-3           790.659            4532.403
STOR-4           977.231            4708.752
Stor-6           1617.455           4395.668

[VERTICES]
;;Link           X-Coord            Y-Coord
;;-------------- ------------------ ------------------

[Polygons]
;;Subcatchment   X-Coord            Y-Coord
;;-------------- ------------------ ------------------
DMA3             777.880            5158.570
DMA4             1137.327           5212.485
DMA6             1608.514           5197.837
BF-6             1607.293           5011.071
BF-3             782.992            4973.275
BF-4             1137.327           5013.513
OFFSITE_RESIDENTIAL 1294.148           5136.845
AGRICULTURAL_DMAs 1412.992           5024.391

[SYMBOLS]
;;Gage           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
Poway            1472.076           5381.329
```

POC 2 SWMM OUTPUT REPORT

POC 2 OUTPUT REPORT
PROPOSED CONDITIONS

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

The Farm - POC 2 Proposed Mitigated Condition

WARNING 04: minimum elevation drop used for Conduit UD-6
WARNING 04: minimum elevation drop used for Conduit Bypass-6
WARNING 04: minimum elevation drop used for Conduit UD-4
WARNING 04: minimum elevation drop used for Conduit UD-3
WARNING 04: minimum elevation drop used for Conduit Bypass-4
WARNING 04: minimum elevation drop used for Conduit Bypass-3

****
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
****

****
Analysis Options
****
Flow Units ..... CFS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... YES
  Ponding Allowed ..... NO
  Water Quality ..... NO
Infiltration Method ..... GREEN_AMPT
Flow Routing Method ..... KINWAVE
Starting Date 10/04/1962 00:00:00
Ending Date 05/23/2008 23:00:00
Antecedent Dry Days 0.0
Report Time Step 01:00:00
Wet Time Step 00:15:00
Dry Time Step 04:00:00
Routing Time Step ..... 60.00 sec

Runoff Quantity Continuity	Volume acre-feet	Depth inches
Initial LID Storage	0.052	0.007
Total Precipitation	4258.544	558.220
Evaporation Loss	613.404	80.406
Infiltration Loss	1499.143	196.511
Surface Runoff	1924.643	252.287
LID Drainage	233.460	30.603
Final Storage	0.179	0.024
Continuity Error (%)	-0.287	

Flow Routing Continuity	Volume acre-feet	Volume 10^6 gal
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	2158.103	703.250
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	1772.008	577.435
Flooding Loss	390.818	127.354
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000

Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	-0.219	

****
Highest Flow Instability Indexes
****
All links are stable.

****
Routing Time Step Summary
****

Minimum Time Step	:	60.00 sec
Average Time Step	:	60.00 sec
Maximum Time Step	:	60.00 sec
Percent in Steady State	:	0.00
Average Iterations per Step	:	1.02
Percent Not Converging	:	0.00

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
DMA3	558.22	0.00	79.90	168.21	312.18	56.37	4.54	0.559
DMA4	558.22	0.00	74.54	166.14	321.60	50.39	4.37	0.576
DMA6	558.22	0.00	74.84	166.29	320.97	32.51	2.81	0.575
BF-6	558.22	12406.36	921.51	0.00	12040.20	31.55	2.62	0.929
BF-3	558.22	15492.41	454.57	38.69	15558.44	56.61	4.65	0.969
BF-4	558.22	16135.84	1057.89	0.00	15632.55	48.81	4.14	0.936
OFFSITE_RESIDENTIAL	558.22	0.00	99.07	105.34	355.14	535.97	37.66	0.636
AGRICULTURAL_DMAs	558.22	0.00	17.59	484.44	57.22	30.25	4.43	0.103

****
LID Performance Summary
****

Subcatchment	LID Control	Total Inflow in	Evap Loss in	Infil Loss in	Surface Outflow in	Drain Outflow in	Initial Storage in	Final Storage in	Continuity Error %

BF-6	BF-6	12964.58	921.55	0.00	466.74	11573.90	1.80	4.60 -0.00
BF-3	BF-3	558.22	457.03	0.00	0.00	101.09	1.80	1.91 -0.00
BF-4	BF-4	16694.06	1057.93	0.00	1100.23	14532.90	1.80	5.42 -0.00

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min	Reported Max Depth Feet
POC2-Proposed	OUTFALL	0.02	0.50	0.50	74 11:12	0.50
DIV-6	DIVIDER	0.01	0.50	0.50	75 11:02	0.50
DIV-3	DIVIDER	0.02	0.50	0.50	74 09:42	0.50
DIV-4	DIVIDER	0.01	0.50	0.50	97 05:54	0.50
STOR-3	STORAGE	0.00	1.60	1.60	5153 04:27	1.51
STOR-4	STORAGE	0.00	1.12	1.12	5153 04:25	1.06
Stor-6	STORAGE	0.00	0.22	0.22	6349 00:23	0.13

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
POC2-Proposed	OUTFALL	42.09	42.60	6349 00:01	566	577	0.000
DIV-6	DIVIDER	2.62	2.62	6349 00:16	31.5	31.5	0.000
DIV-3	DIVIDER	4.65	4.65	6349 00:16	56.6	56.6	0.000
DIV-4	DIVIDER	4.14	4.14	6349 00:16	48.8	48.8	0.000
STOR-3	STORAGE	0.00	3.08	6349 00:16	0	1.37	0.064
STOR-4	STORAGE	0.00	2.58	6349 00:16	0	0.792	0.072
Stor-6	STORAGE	0.00	1.05	6349 00:16	0	0.0965	-1.281

****
Node Flooding Summary
****

Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CFS	Time of Max Occurrence days hr:min	Total Flood Volume 10^6 gal	Maximum Ponded Volume 1000 ft3
DIV-6	7836.68	1.56	164 02:07	29.359	0.000
DIV-3	11199.93	1.56	164 01:25	52.167	0.000
DIV-4	8436.65	1.56	164 01:42	45.818	0.000

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
STOR-3	0.003	0	0	0	9.502	28	5153 04:26	0.50
STOR-4	0.002	0	0	0	6.674	20	5153 04:25	0.22
Stor-6	0.000	0	0	0	1.042	3	6349 00:22	0.26

****
Outfall Loading Summary
****

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
POC2-Proposed	5.80	0.92	42.60	577.392
System	5.80	0.92	42.60	577.392

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth
UD-6	CONDUIT	0.01	15406 10:17	0.12	1.08	1.00
Bypass-6	DUMMY	1.05	6349 00:16			
UD-4	CONDUIT	0.01	4942 21:07	0.12	1.08	1.00
UD-3	CONDUIT	0.01	6342 12:30	0.12	1.08	1.00
Bypass-4	DUMMY	2.58	6349 00:16			
Bypass-3	DUMMY	3.08	6349 00:16			
midflow-6	DUMMY	0.26	6349 00:23			
midflow-4	DUMMY	0.22	5153 04:25			
MIDFLOW-3	DUMMY	0.50	5153 04:27			

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
UD-6	7828.12	7828.12	7828.12	755.62	7828.12
UD-4	8421.95	8421.95	8421.95	670.90	8421.95
UD-3	11208.35	11208.35	11208.35	1138.80	11208.35

Analysis begun on: Thu Jan 16 15:45:40 2020
Analysis ended on: Thu Jan 16 15:46:57 2020
Total elapsed time: 00:01:17

Low-flow Threshold:	10%	
0.1xQ2 (Pre):	2.597	cfs
Q10 (Pre):	38.270	cfs
Ordinate #:	100	
Incremental Q (Pre):	0.35673	cfs
Total Hourly Data:	400055	hours

The proposed BMP: PASSED

POC 2							
Interval	Pre-project Flow (cfs)	Pre-project Hours	Pre-project % Time Exceeding	Post-project Hours	Post-project % Time Exceeding	Percentage	Pass/Fail
0	2.597	2557	6.39E-03	2521	6.30E-03	99%	Pass
1	2.954	2254	5.63E-03	2220	5.55E-03	98%	Pass
2	3.310	2002	5.00E-03	1949	4.87E-03	97%	Pass
3	3.667	1788	4.47E-03	1718	4.29E-03	96%	Pass
4	4.024	1572	3.93E-03	1532	3.83E-03	97%	Pass
5	4.381	1405	3.51E-03	1358	3.39E-03	97%	Pass
6	4.737	1235	3.09E-03	1173	2.93E-03	95%	Pass
7	5.094	1105	2.76E-03	1046	2.61E-03	95%	Pass
8	5.451	973	2.43E-03	928	2.32E-03	95%	Pass
9	5.808	863	2.16E-03	828	2.07E-03	96%	Pass
10	6.164	791	1.98E-03	758	1.89E-03	96%	Pass
11	6.521	731	1.83E-03	694	1.73E-03	95%	Pass
12	6.878	668	1.67E-03	637	1.59E-03	95%	Pass
13	7.234	620	1.55E-03	588	1.47E-03	95%	Pass
14	7.591	571	1.43E-03	546	1.36E-03	96%	Pass
15	7.948	537	1.34E-03	503	1.26E-03	94%	Pass
16	8.305	498	1.24E-03	463	1.16E-03	93%	Pass
17	8.661	442	1.10E-03	404	1.01E-03	91%	Pass
18	9.018	401	1.00E-03	367	9.17E-04	92%	Pass
19	9.375	364	9.10E-04	345	8.62E-04	95%	Pass
20	9.732	348	8.70E-04	323	8.07E-04	93%	Pass
21	10.088	323	8.07E-04	294	7.35E-04	91%	Pass
22	10.445	298	7.45E-04	268	6.70E-04	90%	Pass
23	10.802	279	6.97E-04	253	6.32E-04	91%	Pass
24	11.158	254	6.35E-04	231	5.77E-04	91%	Pass
25	11.515	232	5.80E-04	207	5.17E-04	89%	Pass
26	11.872	214	5.35E-04	192	4.80E-04	90%	Pass
27	12.229	198	4.95E-04	179	4.47E-04	90%	Pass
28	12.585	183	4.57E-04	162	4.05E-04	89%	Pass
29	12.942	170	4.25E-04	151	3.77E-04	89%	Pass
30	13.299	157	3.92E-04	137	3.42E-04	87%	Pass
31	13.656	147	3.67E-04	129	3.22E-04	88%	Pass
32	14.012	135	3.37E-04	122	3.05E-04	90%	Pass
33	14.369	127	3.17E-04	116	2.90E-04	91%	Pass
34	14.726	118	2.95E-04	109	2.72E-04	92%	Pass
35	15.082	112	2.80E-04	100	2.50E-04	89%	Pass
36	15.439	109	2.72E-04	94	2.35E-04	86%	Pass
37	15.796	103	2.57E-04	91	2.27E-04	88%	Pass
38	16.153	99	2.47E-04	89	2.22E-04	90%	Pass
39	16.509	94	2.35E-04	83	2.07E-04	88%	Pass
40	16.866	89	2.22E-04	80	2.00E-04	90%	Pass
41	17.223	84	2.10E-04	74	1.85E-04	88%	Pass
42	17.580	80	2.00E-04	74	1.85E-04	93%	Pass
43	17.936	78	1.95E-04	71	1.77E-04	91%	Pass
44	18.293	74	1.85E-04	69	1.72E-04	93%	Pass
45	18.650	71	1.77E-04	66	1.65E-04	93%	Pass
46	19.006	68	1.70E-04	59	1.47E-04	87%	Pass
47	19.363	65	1.62E-04	57	1.42E-04	88%	Pass
48	19.720	62	1.55E-04	51	1.27E-04	82%	Pass
49	20.077	62	1.55E-04	48	1.20E-04	77%	Pass
50	20.433	59	1.47E-04	45	1.12E-04	76%	Pass
51	20.790	53	1.32E-04	44	1.10E-04	83%	Pass
52	21.147	47	1.17E-04	43	1.07E-04	91%	Pass
53	21.503	46	1.15E-04	40	1.00E-04	87%	Pass
54	21.860	46	1.15E-04	37	9.25E-05	80%	Pass

Low-flow Threshold:	10%		
0.1xQ2 (Pre):	2.597	cfs	
Q10 (Pre):	38.270	cfs	
Ordinate #:	100		
Incremental Q (Pre):	0.35673	cfs	
Total Hourly Data:	400055	hours	The proposed BMP: PASSED

POC 2							
Interval	Pre-project Flow (cfs)	Pre-project Hours	Pre-project % Time Exceeding	Post-project Hours	Post-project % Time Exceeding	Percentage	Pass/Fail
55	22.217	44	1.10E-04	33	8.25E-05	75%	Pass
56	22.574	38	9.50E-05	30	7.50E-05	79%	Pass
57	22.930	37	9.25E-05	28	7.00E-05	76%	Pass
58	23.287	33	8.25E-05	27	6.75E-05	82%	Pass
59	23.644	33	8.25E-05	27	6.75E-05	82%	Pass
60	24.001	31	7.75E-05	27	6.75E-05	87%	Pass
61	24.357	30	7.50E-05	26	6.50E-05	87%	Pass
62	24.714	28	7.00E-05	26	6.50E-05	93%	Pass
63	25.071	28	7.00E-05	26	6.50E-05	93%	Pass
64	25.427	28	7.00E-05	23	5.75E-05	82%	Pass
65	25.784	28	7.00E-05	23	5.75E-05	82%	Pass
66	26.141	26	6.50E-05	22	5.50E-05	85%	Pass
67	26.498	26	6.50E-05	21	5.25E-05	81%	Pass
68	26.854	24	6.00E-05	21	5.25E-05	88%	Pass
69	27.211	24	6.00E-05	21	5.25E-05	88%	Pass
70	27.568	23	5.75E-05	21	5.25E-05	91%	Pass
71	27.925	22	5.50E-05	19	4.75E-05	86%	Pass
72	28.281	21	5.25E-05	17	4.25E-05	81%	Pass
73	28.638	21	5.25E-05	17	4.25E-05	81%	Pass
74	28.995	20	5.00E-05	15	3.75E-05	75%	Pass
75	29.351	20	5.00E-05	15	3.75E-05	75%	Pass
76	29.708	18	4.50E-05	14	3.50E-05	78%	Pass
77	30.065	18	4.50E-05	14	3.50E-05	78%	Pass
78	30.422	16	4.00E-05	14	3.50E-05	88%	Pass
79	30.778	16	4.00E-05	14	3.50E-05	88%	Pass
80	31.135	16	4.00E-05	13	3.25E-05	81%	Pass
81	31.492	16	4.00E-05	10	2.50E-05	63%	Pass
82	31.849	14	3.50E-05	9	2.25E-05	64%	Pass
83	32.205	14	3.50E-05	9	2.25E-05	64%	Pass
84	32.562	13	3.25E-05	8	2.00E-05	62%	Pass
85	32.919	13	3.25E-05	8	2.00E-05	62%	Pass
86	33.275	11	2.75E-05	8	2.00E-05	73%	Pass
87	33.632	8	2.00E-05	7	1.75E-05	88%	Pass
88	33.989	8	2.00E-05	7	1.75E-05	88%	Pass
89	34.346	8	2.00E-05	7	1.75E-05	88%	Pass
90	34.702	8	2.00E-05	7	1.75E-05	88%	Pass
91	35.059	8	2.00E-05	7	1.75E-05	88%	Pass
92	35.416	7	1.75E-05	6	1.50E-05	86%	Pass
93	35.773	7	1.75E-05	5	1.25E-05	71%	Pass
94	36.129	7	1.75E-05	4	1.00E-05	57%	Pass
95	36.486	7	1.75E-05	4	1.00E-05	57%	Pass
96	36.843	7	1.75E-05	3	7.50E-06	43%	Pass
97	37.199	6	1.50E-05	2	5.00E-06	33%	Pass
98	37.556	5	1.25E-05	2	5.00E-06	40%	Pass
99	37.913	5	1.25E-05	2	5.00E-06	40%	Pass
100	38.270	4	1.00E-05	2	5.00E-06	50%	Pass

POC 3 INPUT REPORT
PROPOSED CONDITIONS

```
[TITLE]
;;Project Title/Notes
The Farm - POC 3 Proposed Mitigated Conditions

[OPTIONS]
;;Option             Value
FLOW_UNITS           CFS
INFILTRATION         GREEN_AMPT
FLOW_ROUTING         KINWAVE
LINK_OFFSETS         DEPTH
MIN_SLOPE            0
ALLOW_PONDING        NO
SKIP_STEADY_STATE    NO

START_DATE           10/04/1962
START_TIME           00:00:00
REPORT_START_DATE    10/04/1962
REPORT_START_TIME    00:00:00
END_DATE             05/23/2008
END_TIME             23:00:00
SWEEP_START          01/01
SWEEP_END            12/31
DRY_DAYS             0
REPORT_STEP          01:00:00
WET_STEP             00:15:00
DRY_STEP             04:00:00
ROUTING_STEP         0:01:00

INERTIAL_DAMPING     PARTIAL
NORMAL_FLOW_LIMITED  BOTH
FORCE_MAIN_EQUATION  H-W
VARIABLE_STEP        0.75
LENGTHENING_STEP     0
MIN_SURFAREA         12.557
MAX_TRIALS           8
HEAD_TOLERANCE       0.005
SYS_FLOW_TOL         5
LAT_FLOW_TOL         5
MINIMUM_STEP         0.5
THREADS              1

[EVAPORATION]
;;Data Source       Parameters
;;-----------       ----------
MONTHLY              0.06  0.08  0.11  0.160  0.18  0.21  .21  .20  .13  0.12  0.08  .06
```

DRY_ONLY NO

[RAINGAGES]

;;Name	Format	Interval	SCF	Source		
;;----------	---------	------	------	----------		
Poway	INTENSITY		1:00	1	TIMESERIES	Poway

[SUBCATCHMENTS]

;;Name	Rain Gage	Outlet	Area	%Imperv	Width	%Slope	CurbLen	SnowPack
;;----------	----------	----------	----------	----------	----------	----------	----------	----------
DMA5	Poway	BF-5	5.0	85	175	2	0	
BF-5	Poway	DIV-5	.0624	0	50	0	0	

[SUBAREAS]

;;Subcatchment	N-Imperv	N-Perv	S-Imperv	S-Perv	PctZero	RouteTo	PctRouted
;;----------	----------	----------	----------	----------	----------	----------	----------
DMA5	0.012	0.15	0.05	0.1	25	OUTLET	
BF-5	0.012	0.15	0.05	0.10	25	OUTLET	

[INFILTRATION]

;;Subcatchment	Suction	Ksat	IMD
;;----------	----------	----------	----------
DMA5	6	.075	0.31
BF-5	1.5	.3	.33

[LID_CONTROLS]

;;Name	Type/Layer		Parameters						
;;----------	----------	----------							
BF-5	BC								
BF-5	SURFACE		6.38	0.0	0	0	5		
BF-5	SOIL	18	0.4	0.2	0.1	5	5	1.5	
BF-5	STORAGE		12	0.67	0	0			
BF-5	DRAIN	3.6880	0.5	3	6				

[LID_USAGE]

;;Subcatchment	LID Process	Number	Area	Width	InitSat	FromImp	ToPerv	RptFile	DrainTo
;;----------	----------	-------	----------	----------	----------	----------	----------	----------	----------
BF-5	BF-5	1	2718.14	0	0	0	0		

[OUTFALLS]

;;Name	Elevation	Type	Stage Data	Gated	Route To
;;----------	----------	----------	----------	--------	----------
POC3-Proposed	0	FREE	NO		

[DIVIDERS]

;;Name	Elevation	Diverted Link	Type	Parameters				
;;----------	----------	----------	----------	----------				
DIV-5	0	Bypass-1	CUTOFF	0.543	0	0	0	0

[STORAGE]

;;Name	Elev.	MaxDepth		InitDepth	Shape	Curve Name/Params		N/A	Fevap	Psi	Ksat	IMD
;;----------	--------	----------	----------	----------	----------	----------	--------	--------		--------	--------	
STOR-5	0	4.5	0	TABULAR		Basin5	0	0				

[CONDUITS]

;;Name	From Node	To Node	Length	Roughness		InOffset	OutOffset	InitFlow	MaxFlow
;;----------	----------	----------	----------	----------	----------	----------	----------	----------	
UD-5	DIV-5	POC3-Proposed	400	0.013	0	0	0	0	
Bypass-1	DIV-5	STOR-5	400	0.01	0	0	0	0	

[OUTLETS]

;;Name	From Node	To Node	Offset	Type	QTable/Qcoeff	Qexpon	Gated
;;----------	----------	----------	----------	----------	----------	----------	--------
MIDFLOW-5	STOR-5	POC3-Proposed	0	TABULAR/DEPTH	Disch-5		NO

[XSECTIONS]

;;Link	Shape	Geom1	Geom2	Geom3	Geom4	Barrels	Culvert
;;----------	----------	----------	----------	----------	----------	----------	
UD-5	CIRCULAR	.5	0	0	1		
Bypass-1	DUMMY	0	0	0	1		

[CURVES]

;;Name	Type	X-Value	Y-Value
;;----------	----------	----------	----------
Disch-5	Rating	0	0.0000
Disch-5		0.05	0.0023
Disch-5		0.1	0.0038
Disch-5		0.15	0.0048
Disch-5		0.2	0.0057
Disch-5		0.25	0.0064
Disch-5		0.3	0.0071
Disch-5		0.35	0.0077
Disch-5		0.4	0.0082
Disch-5		0.45	0.0087
Disch-5		0.5	0.0092
Disch-5		0.55	0.0120
Disch-5		0.6	0.0139
Disch-5		0.65	0.0154
Disch-5		0.7	0.0167
Disch-5		0.75	0.0178

Disch-5	0.8	0.0188
Disch-5	0.85	0.0198
Disch-5	0.9	0.0207
Disch-5	0.95	0.0216
Disch-5	1	0.0225
Disch-5	1.05	0.0233
Disch-5	1.1	0.0240
Disch-5	1.15	0.0248
Disch-5	1.2	0.0255
Disch-5	1.25	0.0262
Disch-5	1.3	0.0269
Disch-5	1.35	0.0275
Disch-5	1.4	0.0282
Disch-5	1.45	0.0288
Disch-5	1.5	0.0294
Disch-5	1.55	0.0884
Disch-5	1.6	0.2547
Disch-5	1.65	0.5158
Disch-5	1.7	0.8572
Disch-5	1.75	1.2625
Disch-5	1.8	1.7144
Disch-5	1.85	2.1950
Disch-5	1.9	2.5102
Disch-5	1.95	2.7632
Disch-5	2	2.9947
Disch-5	2.05	3.2094
Disch-5	2.1	3.4105
Disch-5	2.15	3.6004
Disch-5	2.2	3.7807
Disch-5	2.25	3.9527
Disch-5	2.3	4.1176
Disch-5	2.35	4.2760
Disch-5	2.4	4.4288
Disch-5	2.45	4.5764
Disch-5	2.5	4.7194
Disch-5	2.55	4.8582
Disch-5	2.6	4.9931
Disch-5	2.65	5.1245
Disch-5	2.7	5.2526
Disch-5	2.75	5.3776
Disch-5	2.8	5.4997
Disch-5	2.85	5.6192
Disch-5	2.9	5.7362
Disch-5	2.95	5.8509
Disch-5	3	5.9634

Disch-5		3.05	6.0737
Disch-5		3.1	6.1821
Disch-5		3.15	6.2887
Disch-5		3.2	6.3934
Disch-5		3.25	6.4965
Disch-5		3.3	6.5979
Disch-5		3.35	6.6978
Disch-5		3.4	6.7962
Disch-5		3.45	6.8933
Disch-5		3.5	6.9889
Disch-5		3.55	7.4556
Disch-5		3.6	8.2295
Disch-5		3.65	9.2030
Disch-5		3.7	10.3377
Disch-5		3.75	11.6114
Disch-5		3.8	13.0093
Disch-5		3.85	14.5203
Disch-5		3.9	16.1360
Disch-5		3.95	17.8496
Disch-5		4	19.6554
Disch-5		4.05	21.5486
Disch-5		4.1	23.5252
Disch-5		4.15	25.5816
Disch-5		4.2	27.7146
Disch-5		4.25	29.9215
Disch-5		4.3	32.1998
Disch-5		4.35	34.5471
Disch-5		4.4	36.9614
Disch-5		4.45	39.4409
Disch-5		4.5	41.9837
;			
Basin5	Storage	0	3068
Basin5		0.05	3103
Basin5		0.1	3138
Basin5		0.15	3173
Basin5		0.2	3208
Basin5		0.25	3242
Basin5		0.3	3277
Basin5		0.35	3312
Basin5		0.4	3347
Basin5		0.45	3382
Basin5		0.5	3417
Basin5		0.55	3454
Basin5		0.6	3492
Basin5		0.65	3530

Basin5	0.7	3567
Basin5	0.75	3605
Basin5	0.8	3643
Basin5	0.85	3680
Basin5	0.9	3718
Basin5	0.95	3756
Basin5	1	3794
Basin5	1.05	3831
Basin5	1.1	3869
Basin5	1.15	3907
Basin5	1.2	3944
Basin5	1.25	3982
Basin5	1.3	4020
Basin5	1.35	4057
Basin5	1.4	4095
Basin5	1.45	4133
Basin5	1.5	4170
Basin5	1.55	4211
Basin5	1.6	4251
Basin5	1.65	4292
Basin5	1.7	4332
Basin5	1.75	4373
Basin5	1.8	4413
Basin5	1.85	4454
Basin5	1.9	4494
Basin5	1.95	4535
Basin5	2	4575
Basin5	2.05	4616
Basin5	2.1	4656
Basin5	2.15	4697
Basin5	2.2	4737
Basin5	2.25	4778
Basin5	2.3	4819
Basin5	2.35	4859
Basin5	2.4	4900
Basin5	2.45	4940
Basin5	2.5	4981
Basin5	2.55	5024
Basin5	2.6	5067
Basin5	2.65	5111
Basin5	2.7	5154
Basin5	2.75	5197
Basin5	2.8	5240
Basin5	2.85	5284
Basin5	2.9	5327

```
Basin5                  2.95    5370
Basin5                  3       5414
Basin5                  3.05    5457
Basin5                  3.1     5500
Basin5                  3.15    5544
Basin5                  3.2     5587
Basin5                  3.25    5630
Basin5                  3.3     5674
Basin5                  3.35    5717
Basin5                  3.4     5760
Basin5                  3.45    5804
Basin5                  3.5     5847
Basin5                  3.55    5893
Basin5                  3.6     5939
Basin5                  3.65    5986
Basin5                  3.7     6032
Basin5                  3.75    6078
Basin5                  3.8     6124
Basin5                  3.85    6170
Basin5                  3.9     6216
Basin5                  3.95    6263
Basin5                  4       6309
Basin5                  4.05    6355
Basin5                  4.1     6401
Basin5                  4.15    6447
Basin5                  4.2     6494
Basin5                  4.25    6540
Basin5                  4.3     6586
Basin5                  4.35    6632
Basin5                  4.4     6678
Basin5                  4.45    6724
Basin5                  4.5     6771

[TIMESERIES]
;;Name                 Date       Time       Value
;;--------------       ---------- ---------- ----------
Poway                  FILE       "R:\1558\Hyd\Calcs\TM\SWMM\poway.dat"

[REPORT]
;;Reporting Options
INPUT      NO
CONTROLS           NO
SUBCATCHMENTS ALL
NODES    ALL
LINKS    ALL
```

[TAGS]

[MAP]
DIMENSIONS 878.780 4235.932 1847.529 5435.872
Units None

[COORDINATES]
;;Node X-Coord Y-Coord
;;---------- ---------- ----------
POC3-Proposed 1255.448 4336.053
DIV-5 789.381 4684.472
STOR-5 790.659 4532.403

[VERTICES]
;;Link X-Coord Y-Coord
;;---------- ---------- ----------

[Polygons]
;;Subcatchment X-Coord Y-Coord
;;---------- ---------- ----------
DMA5 777.880 5158.570
BF-5 782.992 4973.275

[SYMBOLS]
;;Gage X-Coord Y-Coord
;;---------- ---------- ----------
Poway 1472.076 5381.329

POC 3 OUTPUT REPORT

PROPOSED CONDITIONS

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)
--------------------------------------------------------------

The Farm - POC 3 Proposed Mitigated Conditions

WARNING 04: minimum elevation drop used for Conduit UD-5
WARNING 04: minimum elevation drop used for Conduit Bypass-1

***********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
***********************************************************

****************
Analysis Options
****************
Flow Units ............... CFS
Process Models:
  Rainfall/Runoff ........ YES
  RDII ................... NO
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... GREEN_AMPT
Flow Routing Method ...... KINWAVE
Starting Date ............ 10/04/1962 00:00:00
Ending Date .............. 05/23/2008 23:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 01:00:00
Wet Time Step ............ 00:15:00
Dry Time Step ............ 04:00:00
Routing Time Step ........ 60.00 sec


**************************        Volume         Depth
Runoff Quantity Continuity     acre-feet        inches
**************************     ---------       -------
Initial LID Storage ......         0.009         0.022
Total Precipitation ......       235.494       558.220
Evaporation Loss .........        39.583        93.827
Infiltration Loss ........        54.069       128.166
Surface Runoff ...........        25.322        60.025
LID Drainage .............       118.068       279.872
Final Storage ............         0.026         0.061
Continuity Error (%) .....        -0.664


**************************        Volume        Volume
Flow Routing Continuity        acre-feet      10^6 gal
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......       143.391        46.726
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........        23.731         7.733
Flooding Loss ............       121.210        39.498
Evaporation Loss .........         0.000         0.000
Exfiltration Loss ........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.000         0.000
Continuity Error (%) .....        -1.081
```

****
Highest Flow Instability Indexes
****
All links are stable.

****
Routing Time Step Summary
****
Minimum Time Step : 60.00 sec
Average Time Step : 60.00 sec
Maximum Time Step : 60.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 1.02
Percent Not Converging : 0.00

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip in	Total Runon in	Total Evap in	Total Infil in	Total Runoff in	Total Runoff 10^6 gal	Peak Runoff CFS	Runoff Coeff
DMA5	558.22	0.00	82.76	129.77	349.45	47.44	3.84	0.626
BF-5	558.22	28000.82	980.93	0.00	27575.19	46.72	3.72	0.966

****
LID Performance Summary
****

Subcatchment	LID Control	Total Inflow in	Evap Loss in	Infil Loss in	Surface Outflow in	Drain Outflow in	Initial Storage in	Final Storage in	Continuity Error %
BF-5	BF-5	28559.04	980.96	0.00	4869.89	22706.34	1.80	4.76	-0.00

****
Node Depth Summary
****

Node	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min	Reported Max Depth Feet
POC3-Proposed	OUTFALL	0.02	0.50	0.50	75 08:47	0.50
DIV-5	DIVIDER	0.01	0.50	0.50	75 08:21	0.50

STOR-5	STORAGE	0.01	1.98	1.98	6349	00:18	1.90

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CFS	Maximum Total Inflow CFS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 gal	Total Inflow Volume 10^6 gal	Flow Balance Error Percent
POC3-Proposed	OUTFALL	0.00	2.93	6349	00:18	0	7.73	0.000
DIV-5	DIVIDER	3.72	3.72	6349	00:16	46.7	46.7	0.000
STOR-5	STORAGE	0.00	3.17	6349	00:16	0	4.8	0.069

****
Node Flooding Summary
****

Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CFS	Time of Max Occurrence days	hr:min	Total Flood Volume 10^6 gal	Maximum Ponded Volume 1000 ft3
DIV-5	9289.75	0.53	128	17:59	39.495	0.000

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 ft3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days	hr:min	Maximum Outflow CFS
STOR-5	0.047	0	0	0	7.535	35	6349	00:17	2.92

****
Outfall Loading Summary
****

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
POC3-Proposed	6.56	0.01	2.93	7.732
System	6.56	0.01	2.93	7.732

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CFS	Time of Max Occurrence days	hr:min	Maximum |Veloc| ft/sec	Max/ Full Flow	Max/ Full Depth

UD-5	CONDUIT	0.01	8121	19:14	0.12	1.08	1.00
Bypass-1	DUMMY	3.17	6349	00:16			
MIDFLOW-5	DUMMY	2.92	6349	00:18			

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
UD-5	9277.65	9277.65	9277.65	731.20	9277.65

Analysis begun on: Thu Jan 16 16:38:03 2020
Analysis ended on: Thu Jan 16 16:38:38 2020
Total elapsed time: 00:00:35

Low-flow Threshold:	10%	
0.1xQ2 (Pre):	0.120	cfs
Q10 (Pre):	1.937	cfs
Ordinate #:	100	
Incremental Q (Pre):	0.01817	cfs
Total Hourly Data:	400055	hours

The proposed BMP: PASSED

POC 3							
Interval	Pre-project Flow (cfs)	Pre-project Hours	Pre-project % Time Exceeding	Post-project Hours	Post-project % Time Exceeding	Percentage	Pass/Fail
0	0.120	311	7.77E-04	70	1.75E-04	23%	Pass
1	0.138	295	7.37E-04	67	1.67E-04	23%	Pass
2	0.156	285	7.12E-04	60	1.50E-04	21%	Pass
3	0.174	267	6.67E-04	57	1.42E-04	21%	Pass
4	0.193	246	6.15E-04	53	1.32E-04	22%	Pass
5	0.211	229	5.72E-04	52	1.30E-04	23%	Pass
6	0.229	218	5.45E-04	47	1.17E-04	22%	Pass
7	0.247	207	5.17E-04	44	1.10E-04	21%	Pass
8	0.265	198	4.95E-04	40	1.00E-04	20%	Pass
9	0.283	183	4.57E-04	40	1.00E-04	22%	Pass
10	0.302	171	4.27E-04	40	1.00E-04	23%	Pass
11	0.320	164	4.10E-04	39	9.75E-05	24%	Pass
12	0.338	155	3.87E-04	36	9.00E-05	23%	Pass
13	0.356	149	3.72E-04	33	8.25E-05	22%	Pass
14	0.374	138	3.45E-04	32	8.00E-05	23%	Pass
15	0.392	134	3.35E-04	31	7.75E-05	23%	Pass
16	0.411	127	3.17E-04	30	7.50E-05	24%	Pass
17	0.429	120	3.00E-04	29	7.25E-05	24%	Pass
18	0.447	115	2.87E-04	29	7.25E-05	25%	Pass
19	0.465	108	2.70E-04	29	7.25E-05	27%	Pass
20	0.483	101	2.52E-04	27	6.75E-05	27%	Pass
21	0.501	96	2.40E-04	24	6.00E-05	25%	Pass
22	0.520	91	2.27E-04	22	5.50E-05	24%	Pass
23	0.538	86	2.15E-04	22	5.50E-05	26%	Pass
24	0.556	83	2.07E-04	21	5.25E-05	25%	Pass
25	0.574	80	2.00E-04	21	5.25E-05	26%	Pass
26	0.592	76	1.90E-04	21	5.25E-05	28%	Pass
27	0.610	71	1.77E-04	21	5.25E-05	30%	Pass
28	0.629	70	1.75E-04	19	4.75E-05	27%	Pass
29	0.647	69	1.72E-04	18	4.50E-05	26%	Pass
30	0.665	64	1.60E-04	17	4.25E-05	27%	Pass
31	0.683	61	1.52E-04	17	4.25E-05	28%	Pass
32	0.701	60	1.50E-04	17	4.25E-05	28%	Pass
33	0.720	57	1.42E-04	17	4.25E-05	30%	Pass
34	0.738	55	1.37E-04	15	3.75E-05	27%	Pass
35	0.756	54	1.35E-04	15	3.75E-05	28%	Pass
36	0.774	53	1.32E-04	15	3.75E-05	28%	Pass
37	0.792	50	1.25E-04	15	3.75E-05	30%	Pass
38	0.810	48	1.20E-04	15	3.75E-05	31%	Pass
39	0.829	46	1.15E-04	14	3.50E-05	30%	Pass
40	0.847	44	1.10E-04	14	3.50E-05	32%	Pass
41	0.865	44	1.10E-04	13	3.25E-05	30%	Pass
42	0.883	44	1.10E-04	13	3.25E-05	30%	Pass
43	0.901	43	1.07E-04	13	3.25E-05	30%	Pass
44	0.919	41	1.02E-04	12	3.00E-05	29%	Pass
45	0.938	40	1.00E-04	12	3.00E-05	30%	Pass
46	0.956	36	9.00E-05	12	3.00E-05	33%	Pass
47	0.974	34	8.50E-05	12	3.00E-05	35%	Pass
48	0.992	34	8.50E-05	11	2.75E-05	32%	Pass
49	1.010	34	8.50E-05	11	2.75E-05	32%	Pass
50	1.028	33	8.25E-05	11	2.75E-05	33%	Pass
51	1.047	33	8.25E-05	11	2.75E-05	33%	Pass
52	1.065	33	8.25E-05	11	2.75E-05	33%	Pass
53	1.083	30	7.50E-05	11	2.75E-05	37%	Pass
54	1.101	29	7.25E-05	11	2.75E-05	38%	Pass

Low-flow Threshold:	10%	
0.1xQ2 (Pre):	0.120	cfs
Q10 (Pre):	1.937	cfs
Ordinate #:	100	
Incremental Q (Pre):	0.01817	cfs
Total Hourly Data:	400055	hours

The proposed BMP: PASSED

POC 3							
Interval	Pre-project Flow (cfs)	Pre-project Hours	Pre-project % Time Exceeding	Post-project Hours	Post-project % Time Exceeding	Percentage	Pass/Fail
55	1.119	28	7.00E-05	11	2.75E-05	39%	Pass
56	1.137	27	6.75E-05	10	2.50E-05	37%	Pass
57	1.156	27	6.75E-05	10	2.50E-05	37%	Pass
58	1.174	27	6.75E-05	10	2.50E-05	37%	Pass
59	1.192	26	6.50E-05	9	2.25E-05	35%	Pass
60	1.210	24	6.00E-05	8	2.00E-05	33%	Pass
61	1.228	24	6.00E-05	8	2.00E-05	33%	Pass
62	1.247	24	6.00E-05	8	2.00E-05	33%	Pass
63	1.265	23	5.75E-05	7	1.75E-05	30%	Pass
64	1.283	22	5.50E-05	7	1.75E-05	32%	Pass
65	1.301	22	5.50E-05	7	1.75E-05	32%	Pass
66	1.319	19	4.75E-05	7	1.75E-05	37%	Pass
67	1.337	18	4.50E-05	7	1.75E-05	39%	Pass
68	1.356	18	4.50E-05	7	1.75E-05	39%	Pass
69	1.374	17	4.25E-05	7	1.75E-05	41%	Pass
70	1.392	17	4.25E-05	7	1.75E-05	41%	Pass
71	1.410	16	4.00E-05	7	1.75E-05	44%	Pass
72	1.428	16	4.00E-05	6	1.50E-05	38%	Pass
73	1.446	16	4.00E-05	6	1.50E-05	38%	Pass
74	1.465	16	4.00E-05	6	1.50E-05	38%	Pass
75	1.483	16	4.00E-05	6	1.50E-05	38%	Pass
76	1.501	16	4.00E-05	5	1.25E-05	31%	Pass
77	1.519	16	4.00E-05	5	1.25E-05	31%	Pass
78	1.537	15	3.75E-05	5	1.25E-05	33%	Pass
79	1.555	15	3.75E-05	5	1.25E-05	33%	Pass
80	1.574	12	3.00E-05	5	1.25E-05	42%	Pass
81	1.592	12	3.00E-05	5	1.25E-05	42%	Pass
82	1.610	9	2.25E-05	5	1.25E-05	56%	Pass
83	1.628	8	2.00E-05	5	1.25E-05	63%	Pass
84	1.646	8	2.00E-05	5	1.25E-05	63%	Pass
85	1.664	8	2.00E-05	5	1.25E-05	63%	Pass
86	1.683	8	2.00E-05	5	1.25E-05	63%	Pass
87	1.701	8	2.00E-05	5	1.25E-05	63%	Pass
88	1.719	8	2.00E-05	5	1.25E-05	63%	Pass
89	1.737	8	2.00E-05	4	1.00E-05	50%	Pass
90	1.755	8	2.00E-05	4	1.00E-05	50%	Pass
91	1.774	8	2.00E-05	4	1.00E-05	50%	Pass
92	1.792	7	1.75E-05	3	7.50E-06	43%	Pass
93	1.810	7	1.75E-05	3	7.50E-06	43%	Pass
94	1.828	6	1.50E-05	3	7.50E-06	50%	Pass
95	1.846	4	1.00E-05	3	7.50E-06	75%	Pass
96	1.864	4	1.00E-05	3	7.50E-06	75%	Pass
97	1.883	4	1.00E-05	3	7.50E-06	75%	Pass
98	1.901	4	1.00E-05	3	7.50E-06	75%	Pass
99	1.919	4	1.00E-05	3	7.50E-06	75%	Pass
100	1.937	4	1.00E-05	3	7.50E-06	75%	Pass

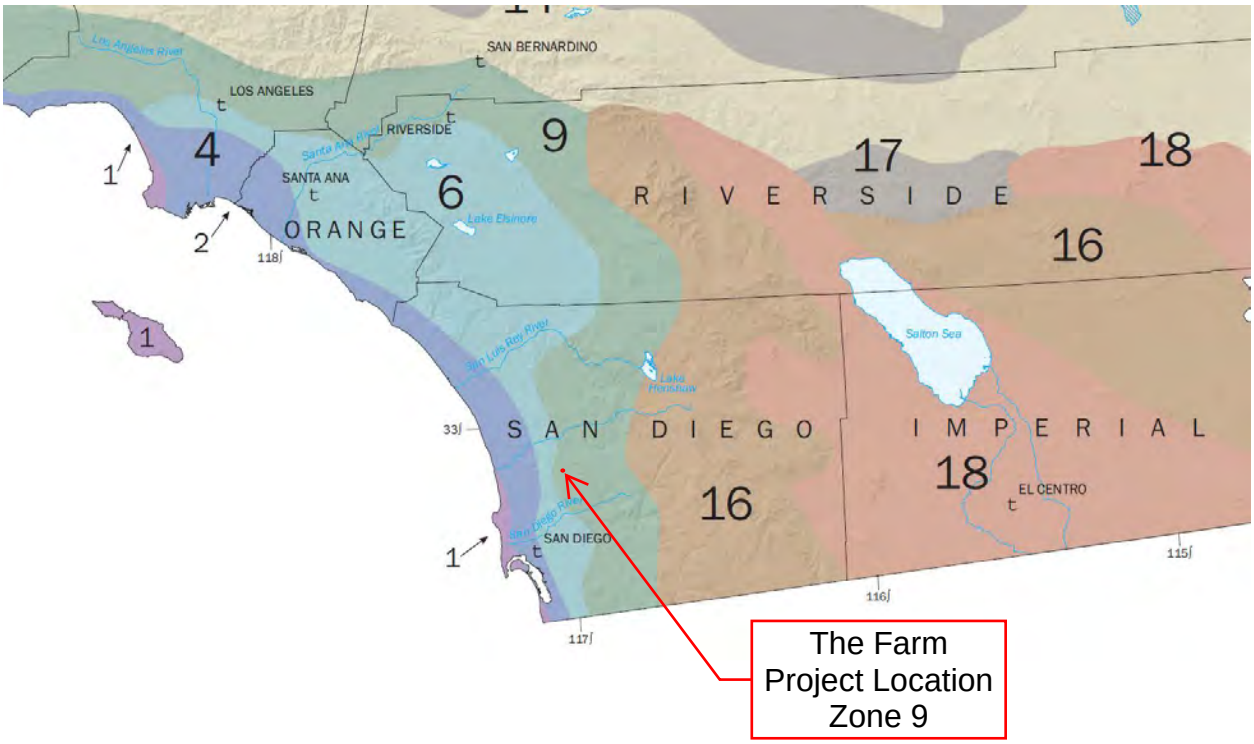


Figure G.1-2: California Irrigation Management Information System "Reference Evapotranspiration Zones"

Table G.1-1: Monthly Average Reference Evapotranspiration by ETo Zone (inches/month and inches/day) for use in SWMM Models for Hydromodification Management Studies in San Diego County CIMIS Zones 1, 4, 6, 9, and 16 (See CIMIS ETo Zone Map)

	January	February	March	April	May	June	July	August	September	October	November	December
Zone	in/month	in/month	in/month	in/month	in/month	in/month	in/month	in/month	in/month	in/month	in/month	in/month
1	0.93	1.4	2.48	3.3	4.03	4.5	4.65	4.03	3.3	2.48	1.2	0.62
4	1.86	2.24	3.41	4.5	5.27	5.7	5.89	5.58	4.5	3.41	2.4	1.86
6	1.86	2.24	3.41	4.8	5.58	6.3	6.51	6.2	4.8	3.72	2.4	1.86
9	2.17	2.8	4.03	5.1	5.89	6.6	7.44	6.82	5.7	4.03	2.7	1.86
16	1.55	2.52	4.03	5.7	7.75	8.7	9.3	8.37	6.3	4.34	2.4	1.55
	January	February	March	April	May	June	July	August	September	October	November	December
Days	31	28	31	30	31	30	31	31	30	31	30	31
Zone	in/day	in/day	in/day	in/day	in/day	in/day	in/day	in/day	in/day	in/day	in/day	in/day
1	0.030	0.050	0.080	0.110	0.130	0.150	0.150	0.130	0.110	0.080	0.040	0.020
4	0.060	0.080	0.110	0.150	0.170	0.190	0.190	0.180	0.150	0.110	0.080	0.060
6	0.060	0.080	0.110	0.160	0.180	0.210	0.210	0.200	0.160	0.120	0.080	0.060
9	0.070	0.100	0.130	0.170	0.190	0.220	0.240	0.220	0.190	0.130	0.090	0.060
16	0.050	0.090	0.130	0.190	0.250	0.290	0.300	0.270	0.210	0.140	0.080	0.050

Use this checklist to ensure the required information has been included on the Hydromodification Management Exhibit. Include checklist in submittal and check all boxes that are applicable. Provide justification for items not included.

The Hydromodification Management Exhibit must identify:

☒ Underlying hydrologic soil group
☒ Approximate depth to groundwater
☒ Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
☒ Critical coarse sediment yield areas to be protected
☒ Existing topography
☒ Existing and proposed site drainage network and connections to drainage offsite
☒ Proposed grading
☒ Proposed impervious features
☒ Proposed design features and surface treatments used to minimize imperviousness
☒ Point(s) of Compliance (POC) for Hydromodification Management
☒ Existing and proposed drainage boundary and drainage area to each POC (when necessary, create separate exhibits for pre-development and post-project conditions)
☒ Structural BMPs for hydromodification management (identify location, type of BMP, and size/detail)

Justification for items not included in Hydromodification Management Exhibit:

LEGEND

DMA BOUNDARY

HYDROLOGIC SOIL TYPE PER NRCS WEB SOIL SURVEY DATA: C & B

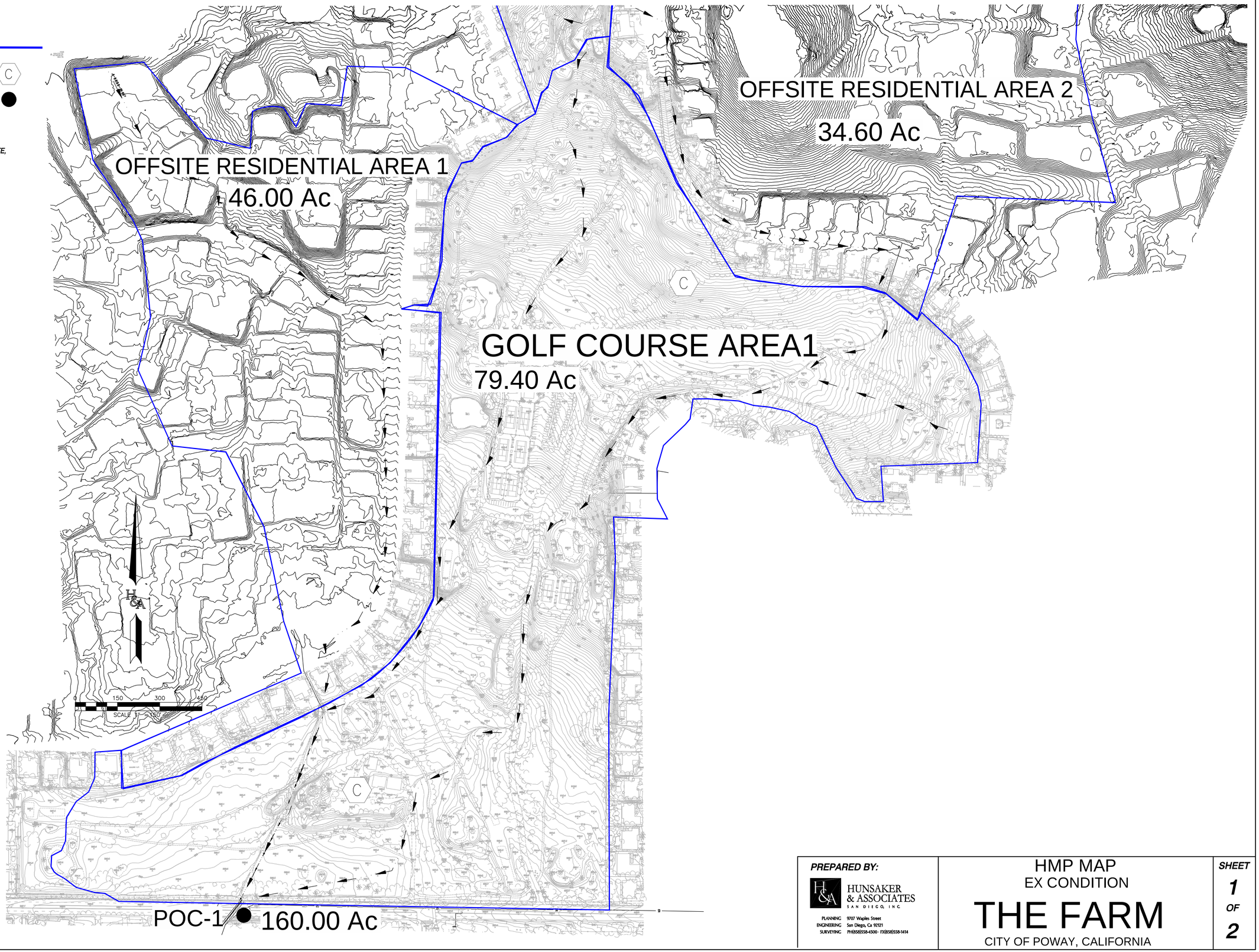
POINT OF COMPLIANCE (POC)

NOTES:

NO EXISTING NATURAL HYDROLOGIC FEATURES FOUND ON-SITE,

GROUNDWATER DEPTH APPROXIMATELY 15' - 20' FEET BELOW SURFACE.

NO CCSYAS FOUND ONSITE.



PREPARED BY: HUNSAKER & ASSOCIATES SAN DIEGO, INC PLANNING 9707 Waples Street ENGINEERING San Diego, Ca 92121 SURVEYING PH(858)558-4500 - FX(858)558-1414	HMP MAP EX CONDITION **THE FARM** CITY OF POWAY, CALIFORNIA	***SHEET*** *1 OF 2*

W.O. 3355-01

LEGEND

DMA BOUNDARY

HYDROLOGIC SOIL TYPE PER NRCS WEB SOIL SURVEY DATA: C & B

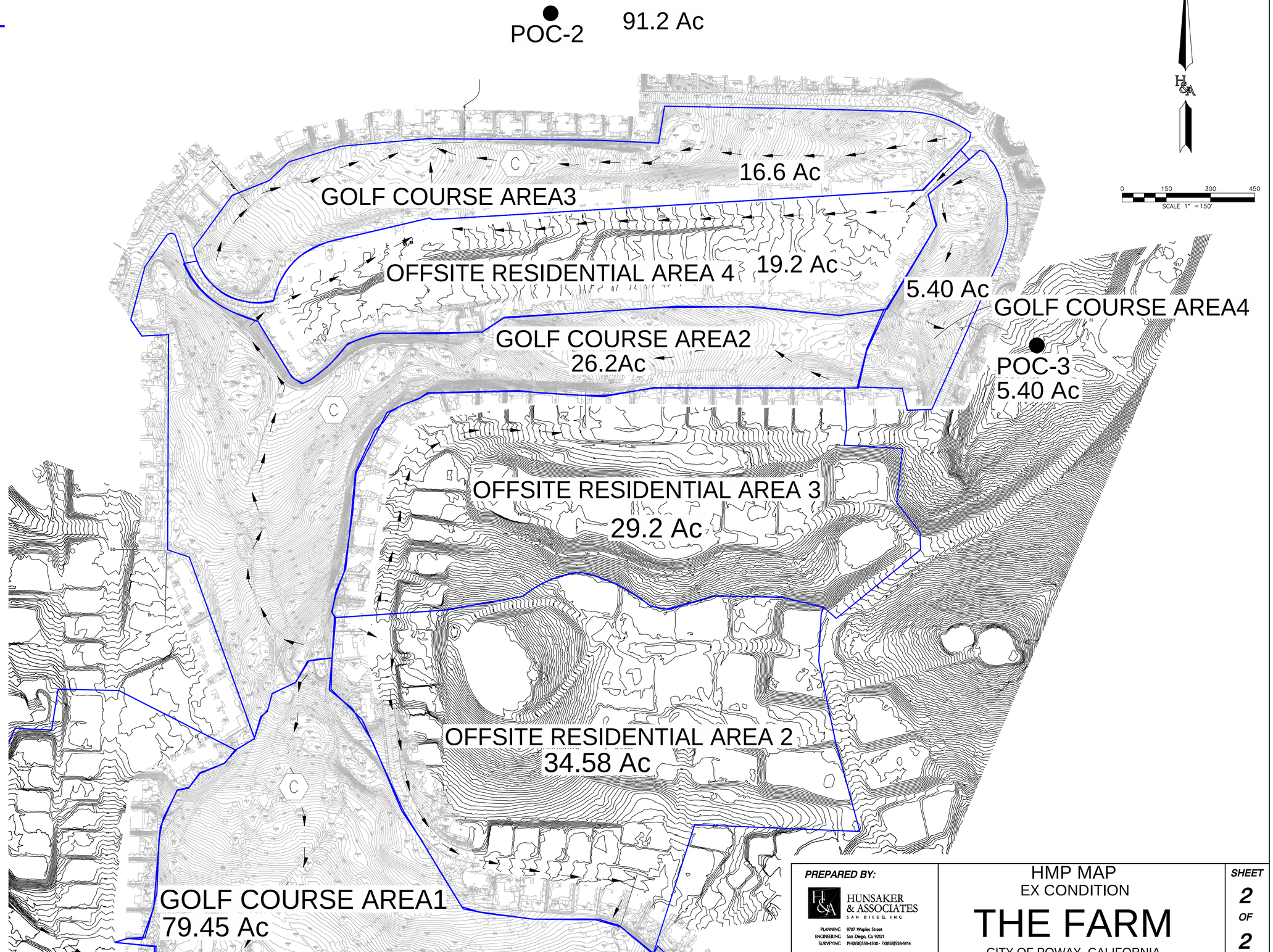
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HMP MAP
EX CONDITION

THE FARM

CITY OF POWAY, CALIFORNIA

SHEET 2 *OF* 2

W.O. 3355-01

LEGEND

- PROJECT BOUNDARY
- DMA BOUNDARY
- AGRICULTURAL DMA's
- DMA 1 - TRIBUTARY TO COMBO BASIN 1
- DMA 2-- TRIBUTARY TO BASIN 2
- DMA 3- TRIBUTARY TO BASIN 3
- DMA 4 - TRIBUTARY TO BASIN 4
- DMA 5 - TRIBUTARY TO BASIN 5
- DMA 6- TRIBUTARY TO BASIN 6
- HYDROLOGIC SOIL TYPE PER NRCS WEB SOIL SURVEY DATA: C & B
- POINT OF COMPLIANCE (POC)

TREATMENT CONTROL(STRUCTURAL) BMP's

- BIOFILTRATION BASIN
- WATER QUALITY TREE-WELLS

SOURCE CONTROL BMP's (FORM I-4 IN SWQMP)

SC-1 PREVENTION OF ILLICIT DISCHARGE TO THE MS4

SC-2 STORM DRAIN STENCILING AND SINAGE - MARK ALL INLETS WITH "NO DUMPING! FLOWS TO BAY" OR SIMILAR

SC-5 PROTECT TRASH STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL

SC-6 ONSITE STORM DRAIN INLETS - MARK ALL INLETS WITH "NO DUMPING! FLOWS TO BAY" OR SIMILAR

SC-6 LANDSCAPE/OUTDOOR PESTICIDE USE - SPECIFIC LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING

SC-6 POOLS, SPAS, PONDS, DECORATIVE FOUNTAINS, AND OTHER WATER FEATURES - SPECIFIC LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING

SC-6 FOOD SERVICE - SPECIFIC LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING

SC-6 REFUSE AREAS- SPECIFIC LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING.

SC-6 MISCELLANEOUS DRAIN OR WASH WATER - SPECIFIC LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING

SC-6 PLAZAS, SIDEWALKS, AND PARKING LOTS - PLAZAS, SIDEWALKS AND PARKING LOTS WILL BE SWEPT REGULARLY TO PREVENT THE ACCUMULATION OF DEBRIS AND LITTER

SITE DESIGN BMPS (FORM I-5 IN SWQMP)

SD-1 MAINTAIN NATURAL DRAINAGE PATHWAYS AND HYDROLOGIC FEATURES

SD-2 CONSERVE NATURAL AREAS, SOILS, AND VEGETATION

SD-3 MINIMIZE IMPERVIOUS AREA

SD-4 MINIMIZE SOIL COMPACTION

SD-5 IMPERVIOUS AREA DISPERSION

SD-6 RUNOFF COLLECTION

SD-7 LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES

SD-8 HARVESTING AND USING PRECIPITATION

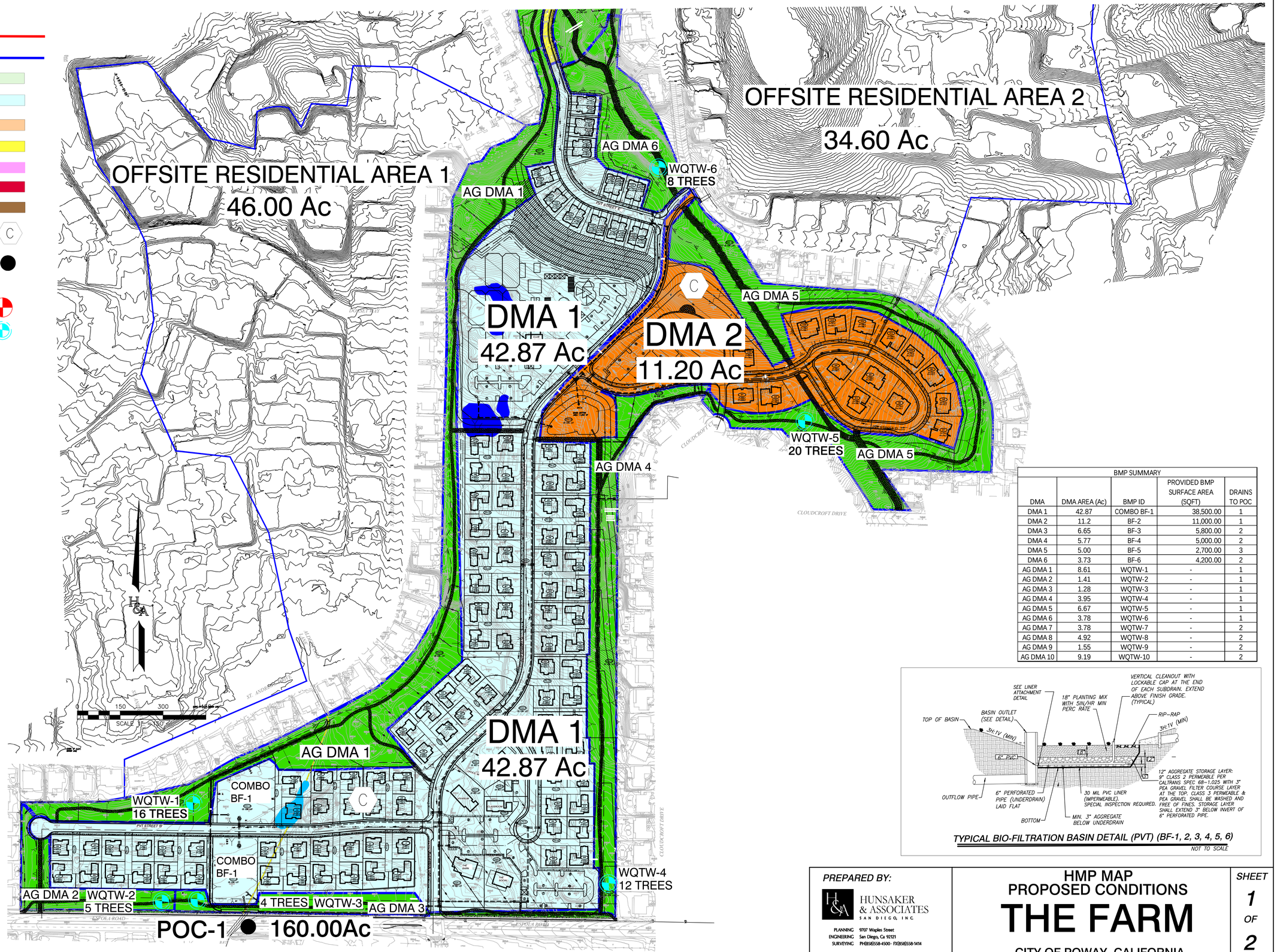
NOTES:

NO EXISTING NATURAL HYDROLOGIC FEATURES FOUND ON-SITE,

GROUNDWATER DEPTH APPROXIMATELY 15' - 20' FEET BELOW SURFACE.

NO CCSYAS FOUND ONSITE.

TREEWELL DESIGN DETAILS AND LOCATIONS WILL BE PROVIDED DURING FINAL ENGINEERING



BMP SUMMARY

DMA	DMA AREA (Ac)	BMP ID	PROVIDED BMP SURFACE AREA (SQFT)	DRAINS TO POC
DMA 1	42.87	COMBO BF-1	38,500.00	1
DMA 2	11.2	BF-2	11,000.00	1
DMA 3	6.65	BF-3	5,800.00	2
DMA 4	5.77	BF-4	5,000.00	2
DMA 5	5.00	BF-5	2,700.00	3
DMA 6	3.73	BF-6	4,200.00	2
AG DMA 1	8.61	WQTW-1	-	1
AG DMA 2	1.41	WQTW-2	-	1
AG DMA 3	1.28	WQTW-3	-	1
AG DMA 4	3.95	WQTW-4	-	1
AG DMA 5	6.67	WQTW-5	-	1
AG DMA 6	3.78	WQTW-6	-	1
AG DMA 7	3.78	WQTW-7	-	2
AG DMA 8	4.92	WQTW-8	-	2
AG DMA 9	1.55	WQTW-9	-	2
AG DMA 10	9.19	WQTW-10	-	2

TYPICAL BIO-FILTRATION BASIN DETAIL (PVT) (BF-1, 2, 3, 4, 5, 6)

NOT TO SCALE

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HMP MAP
PROPOSED CONDITIONS

THE FARM

CITY OF POWAY, CALIFORNIA

SHEET 1 OF 2

W.O. 3355-01

LEGEND

- PROJECT BOUNDARY
- DMA BOUNDARY
- AGRICULTURAL DMA's
- DMA 1 - TRIBUTARY TO COMBO BASIN 1
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- HYDROLOGIC SOIL TYPE PER NRCS WEB SOIL SURVEY DATA: C & B — C
- POINT OF COMPLIANCE (POC)

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SD-8 HARVESTING AND USING PRECIPITATION

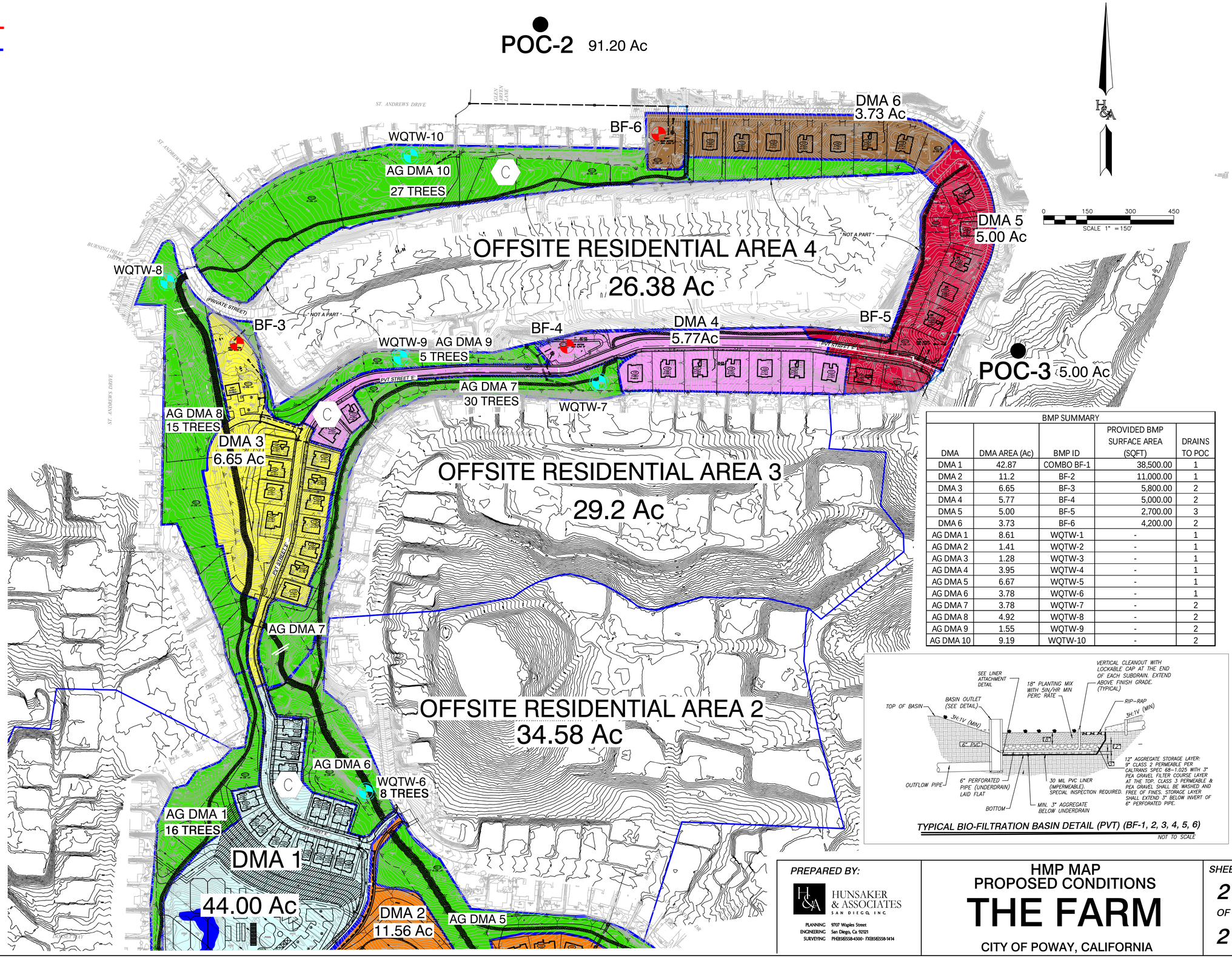
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DMA 5	5.00	BF-5	2,700.00	3
DMA 6	3.73	BF-6	4,200.00	2
AG DMA 1	8.61	WQTW-1	-	1
AG DMA 2	1.41	WQTW-2	-	1
AG DMA 3	1.28	WQTW-3	-	1
AG DMA 4	3.95	WQTW-4	-	1
AG DMA 5	6.67	WQTW-5	-	1
AG DMA 6	3.78	WQTW-6	-	1
AG DMA 7	3.78	WQTW-7	-	2
AG DMA 8	4.92	WQTW-8	-	2
AG DMA 9	1.55	WQTW-9	-	2
AG DMA 10	9.19	WQTW-10	-	2

TYPICAL BIO-FILTRATION BASIN DETAIL (PVT) (BF-1, 2, 3, 4, 5, 6)

NOT TO SCALE

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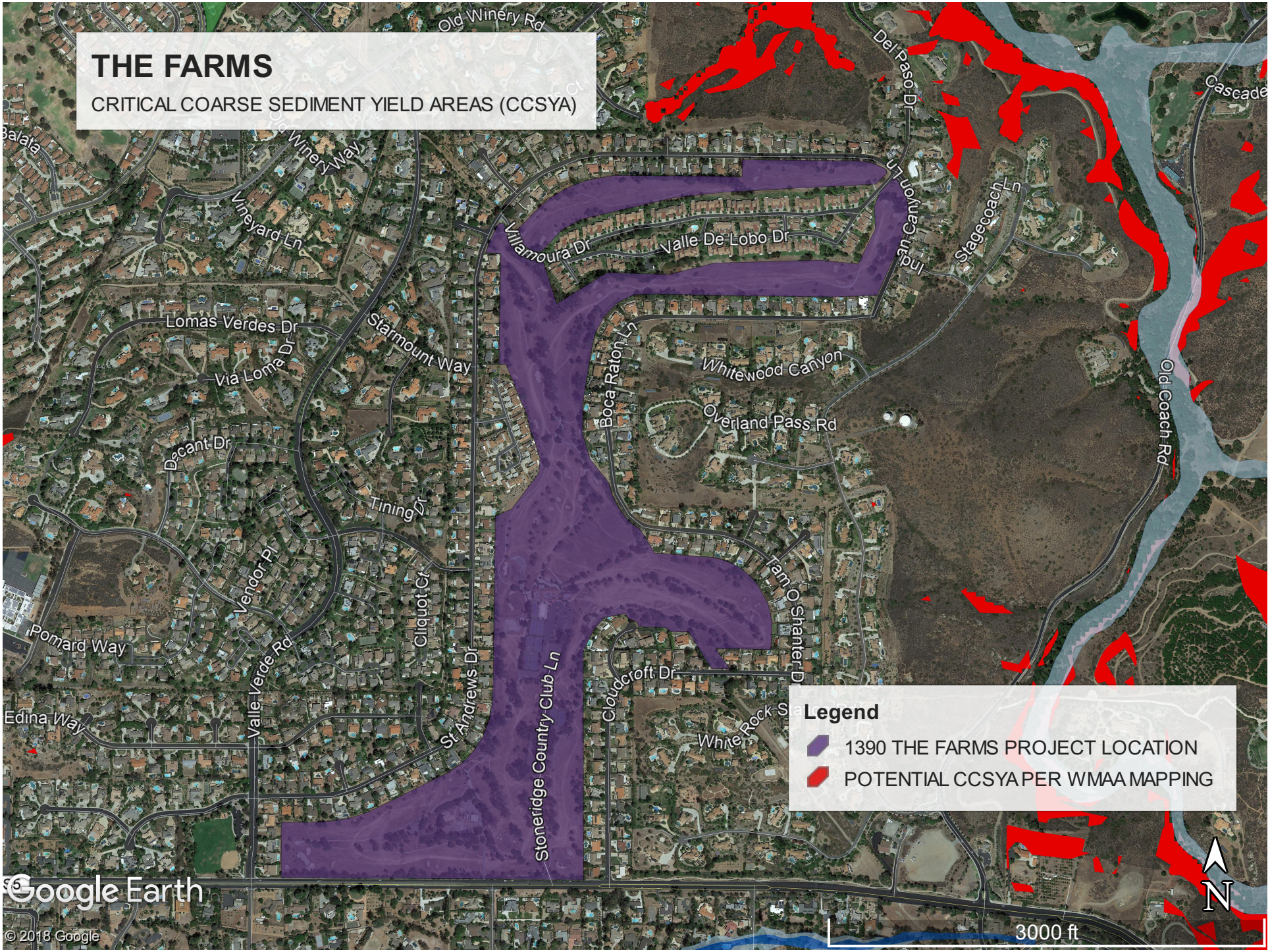
HMP MAP PROPOSED CONDITIONS

THE FARM

CITY OF POWAY, CALIFORNIA

SHEET 2 OF 2

W.O. 3355-01


THE FARMS
CRITICAL COARSE SEDIMENT YIELD AREAS (CCSYA)
Old Winery Rd
Del Paso Dr
Cascade
Winery Way
Vineyard Ln
Villamoura Dr
Valle De Lobo Dr
Indian Canyon Ln
Stagecoach Ln
Lomas Verdes Dr
Via Loma Dr
Starmount Way
Boca Raton Ln
Whitewood Canyon
Overland Pass Rd
Old Coach Rd
Decant Dr
Tining Dr
Vendor Pl
Cliquot Ct
Tam O Shanter Dr
Pomard Way
Valle Verde Rd
St Andrews Dr
Stoneridge Country Club Ln
Cloudcroft Dr
Edina Way
Legend
1390 THE FARMS PROJECT LOCATION
POTENTIAL CCSYA PER WMAA MAPPING
Google Earth
© 2018 Google
N
3000 ft

ATTACHMENT 3 – STRUCTURAL BMP MAINTENANCE INFORMATION

This is the cover sheet for Attachment 3.

Indicate which Items are Included behind this cover sheet:

Attachment Sequence	**Contents**	**Checklist**
Attachment 3a	Operations and Maintenance Project Summary	☒ Included
Attachment 3b	Structural BMP Maintenance Plan (Required)	☒ Included See Structural BMP Maintenance Information Checklist on the back of this Attachment cover sheet.

ATTACHMENT 3a

Operations and Maintenance – Project Summary	
Project Name	The Farm
Project/Permit Number(s)	TBD
Project Address	17166 Stone Ridge Country Club Ln, Poway, CA 92064
Assessor's Parcel Number(s) (APN(s))	APN: 213-110-07-00, 08, & 18
Project Watershed (Complete Hydrologic Unit, Area, and Subarea Name with Numeric Identifier)	Penasquitos 906
Responsible Party for Construction Phase	
Developer's Name	SMA VENTURES
Address	12919 Corte Juanna Poway, California 92064
Email Address	-
Phone Number	-
Engineer of Work	Raymond L. Martin
Engineer's Phone Number	(858) 558-4500
Responsible Party for Ongoing Maintenance	
Owner's Name(s)*	SMA VENTURES
Address	12919 Corte Juanna Poway, California 92064
Email Address	-
Phone Number	

ATTACHMENT 3b

Use this checklist to ensure the required information has been included in the Structural BMP Maintenance Information Attachment. Include checklist in submittal and check all boxes that are applicable. Provide justification for items not included.

Attachment 3b must identify:

- ☐ Specific maintenance indicators and actions for proposed structural BMP(s). This must be based on Section 7.7 of the BMP Design Manual and enhanced to reflect actual proposed components of the structural BMP(s)
- ☐ How to access the structural BMP(s) to inspect and perform maintenance
- ☐ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
- ☐ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
- ☐ Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
- ☐ Recommended equipment to perform maintenance
- ☐ When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management
- ☐ 8.5” x 11” Site plan showing BMP locations
- ☐ 8.5” x 11” Detail Sheets for BMPs – must match details provided on project/permit plans

Justification for items not included in Attachment 3b:

ATTACHMENT 4 – COPY OF PLAN SHEETS

Showing Permanent Storm Water BMPs, Source Control, and Site Design

This is the cover sheet for Attachment 4.

Use this checklist to ensure the required information has been included on the plans. Include checklist in submittal and check all boxes that are applicable. Provide justification for items not included.

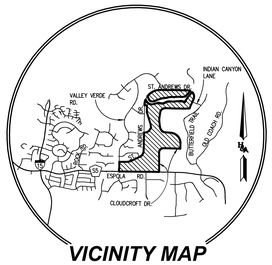
The plans must identify:

☒ Structural BMP(s) with ID numbers matching Step 5 Summary of PDP Structural BMPs
☒ The grading and drainage design shown on the plans must be consistent with the delineation of DMAs shown on the DMA exhibit
☒ Details and specifications for construction of structural BMP(s)
☒ Signage indicating the location and boundary of structural BMP(s) as required by City staff
☒ How to access the structural BMP(s) to inspect and perform maintenance
☒ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
☒ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
☒ Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
☒ Recommended equipment to perform maintenance
☒ When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management
☒ Include landscaping plan sheets showing vegetation requirements for vegetated structural BMP(s)
☒ All BMPs must be fully dimensioned on the plans
☒ When proprietary BMPs are used, site-specific cross section with outflow, inflow, and model number must be provided. Photocopies of general brochures are not acceptable.
☒ Include all source control and site design measures described in Steps 3 and 4 of the SWQMP. Can be included as a separate exhibit as necessary.

TENTATIVE MAP 19-002/GPA 19-001/ZC 19-001/ SPP18-001

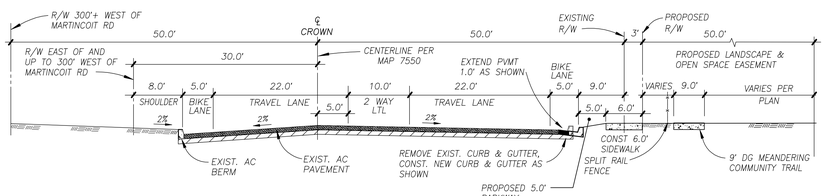
THE FARM IN POWAY

CITY OF POWAY, CALIFORNIA



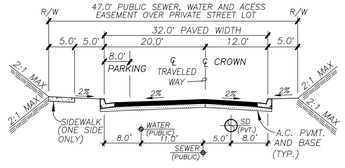
VICINITY MAP

NOT TO SCALE



ESPOLA ROAD (EXIST.)

PUBLIC ROAD NTS

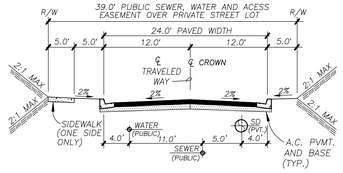


32' PAVED PRIVATE STREET

PARKING PERMITTED ON ONE SIDE OF ROAD
20 MPH DESIGN SPEED

PRIVATE ROAD NTS

STREETS A, B & C – STREETS D & E (WHERE SHOWN ON PLAN)

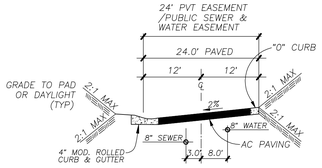


24' PAVED PRIVATE STREET

PARKING PERMITTED ON ONE SIDE OF ROAD
20 MPH DESIGN SPEED

PRIVATE ROAD NTS

STREETS D & E (WHERE SHOWN ON PLAN)



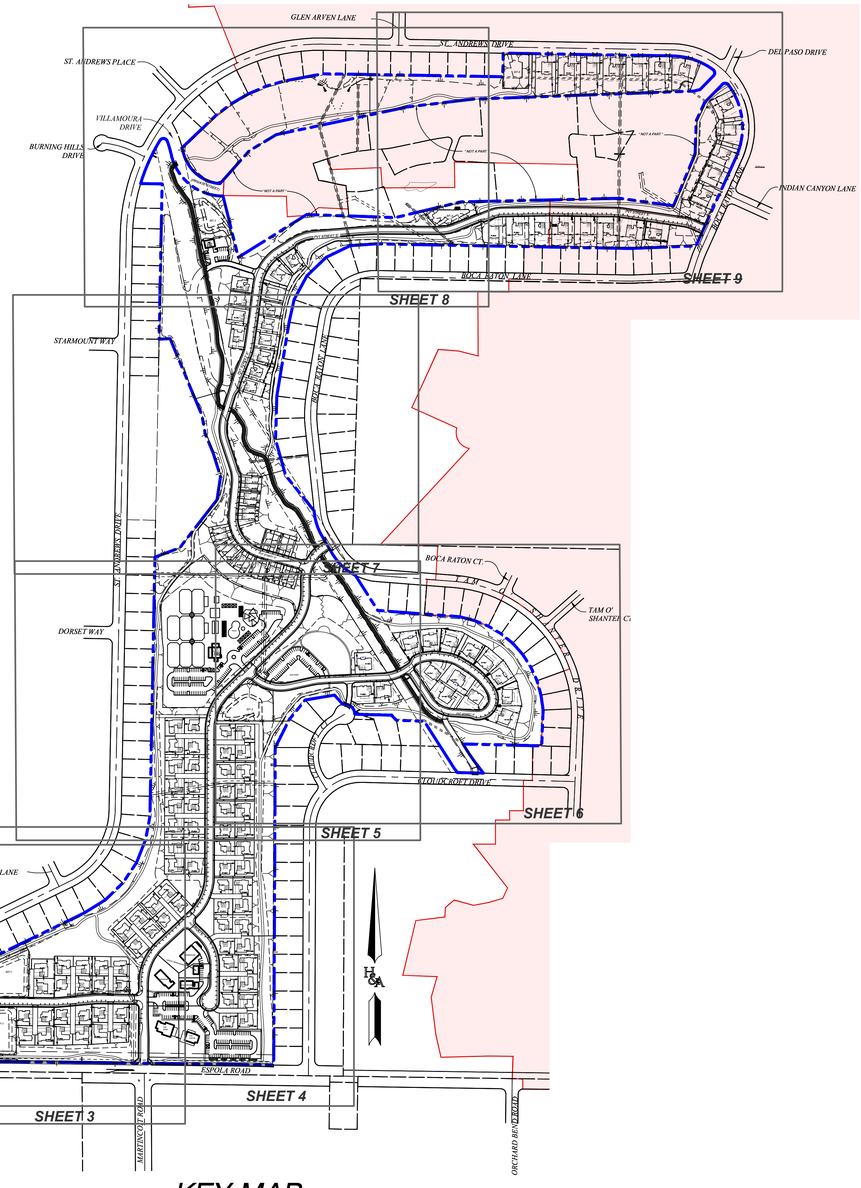
COMMON ACCESS ROAD

APPLIES TO PS-9 THROUGH PS-31

PRIVATE ROAD NTS

LEGEND

- SUBDIVISION BOUNDARY (SHOWN IN BLUE COLOR ON THIS SHEET FOR CLARITY)
- EASEMENT LINE
- EASEMENT NUMBER
- SLOPE (2:1 MAX)
- % OF GRADE
- LOT NUMBER
- PRIVATE STREET LOT
- OPEN SPACE LOT
- PAD ELEVATION
- SEWER (*8" PVC)
- SEWER PUMP
- SEWER FORCE MAIN
- WATER (*8" PVC)
- STORM DRAIN (*18") *UNLESS SHOWN OTHERWISE
- EXISTING SEWER
- EXISTING WATER
- EXISTING STORM DRAIN
- BROW DITCH
- FIRE HYDRANT
- STREET LIGHT
- RETAINING WALL RSD C-4 (UNLESS OTHERWISE SHOWN)
- TOP OF WALL ELEVATION
- FINISHED SURFACE ELEVATION
- VERY HIGH FIRE ZONE (PER CITY OF POWAY EXHIBIT DATED 5-27-2010)
- DIRECTION OF FLOW
- DRIVEWAY CUT PER SDRSD G-14b
- 10' CROSSWALK-COLOR STAMPED CONC.
- CONCRETE SIDEWALK OR TRAIL
- DG TRAIL
- SPLIT RAIL FENCE
- 5' TUBULAR STEEL FENCE
- EXIST. POTENTIAL JURISDICTIONAL WATER
- EXIST. FRESHWATER MARSH (POND)
- EXIST. OPEN WATER (POND)
- LOTS WITH INDIV. SEWER PUMPS



KEY MAP

SCALE 1"=300'

GENERAL NOTES

1. TOTAL SITE AREA: 117.187 AC
2. TOTAL NO. RES UNITS 160
3. TOTAL NO. LOTS: 226 LOTS (160 RES., 35 OPEN SPACE LOTS, 31 PRIVATE SPACE LOTS)
4. ASSESSOR'S PARCEL NUMBER: 273-110-07, 08, & 18
5. EXIST. GENERAL PLAN DESIGNATION: OS-R
6. PROPOSED GENERAL PLAN DESIGNATION: PC-9
7. EXISTING ZONING: OS-R
   PROPOSED ZONING: PC-9
8. OSC-21 IS SUBJECT TO RULES AND REGULATIONS OF FIRE ZONE A
9. ALL TRAILS, STREETS, PARKING, NON-RESIDENTIAL BUILDINGS AND RECREATIONAL FACILITIES SHALL BE PUBLICLY ACCESSIBLE.

GENERAL DESIGN NOTES

1. ALL STREET DESIGNS, STREET LIGHTS, AND FIRE HYDRANTS TO CONFORM TO CITY OF POWAY DESIGN STANDARDS AND AS REQUIRED BY THE CITY ENGINEER.
2. EASEMENTS AS REQUIRED BY THE CITY ENGINEER, PUBLIC UTILITIES AND DISTRICTS.
3. ALL PROPOSED UTILITIES TO BE UNDERGROUND. EXISTING UTILITY POLES LESS THAN 69kv TO BE UNDERGROUNDED WITHIN THE PROJECT BOUNDARY.
4. CONTOUR INTERVAL: 2 FEET
5. FINISHED GRADES ARE APPROXIMATE ONLY AND SUBJECT TO CHANGE IN FINAL DESIGN.
6. SOILS INFORMATION WAS OBTAINED FROM SOILS REPORTS BY: SEE PROPOSAL LETTER FROM GEOCON, INC. DATED OCT. 23, 2018
7. CUT AND FILL SLOPES NOT TO EXCEED 2:1.
8. THIS PROJECT IS A MULTIPLE "UNIT" SUBDIVISION. IT IS THE INTENT THAT MULTIPLE FINAL MAPS BE FILED PURSUANT TO SECTION 66456.1 OF THE SUBDIVISION MAP ACT. THE FINAL MAP MAY CONSIST OF ONE OR MORE MULTIPLE LOTS AS SHOWN ON THIS TENTATIVE MAP.
9. GRADED SLOPES AND TERRACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH POWAY MUNICIPAL CODE 16.50.010 AND 16.50.020. UNLESS OTHERWISE APPROVED BY THE GEOTECHNICAL ENGINEER AND BY CITY OF POWAY.
10. ALL STREETS SHALL BE CONSTRUCTED IN CONFORMANCE WITH POWAY MUNICIPAL CODE 12.20.070. STREETS WITH GRADES OVER 10 PERCENT MAY BE REQUIRED TO BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE TO THE SATISFACTION OF THE DIRECTOR OF DEVELOPMENT SERVICES (MIN. THICKNESS SHALL BE SIX INCHES) WHEN NECESSITATED BY SPECIFIC FIELD CONDITIONS.
11. SEE SHEETS 10-13 FOR EXISTING EASEMENTS. ANY EASEMENT NOT SHOWN ON SITE PLAN SHEETS TO BE VACATED AND/OR RELOCATED AS SHOWN.
12. RETAINING WALLS SHALL COMPLY WITH POWAY MUNICIPAL CODE. 17.08.240
13. FIRE NOTES SHOWN ON SHEET 2
14. RESIDENTIAL DRIVEWAYS SHALL BE 20' WIDE MINIMUM.

EARTHWORK/GRADING QUANTITIES

CUT: 508,900 C.Y.
FILL: 508,900 C.Y.

GRADING QUANTITIES SHOWN ARE RAW QUANTITIES ONLY AND DO NOT INCLUDE THE EFFECT OF REMEDIAL GRADING SHOWN IN THE PRELIMINARY SOILS REPORT.

EXISTING EASEMENTS & ENCUMBRANCES

SEE SHEETS 11-14.

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF POWAY, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL ONE:

LOT 1 OF STONERIDGE UNIT NO. 1, IN THE CITY OF POWAY, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 7550, RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, FEBRUARY 14, 1973.

ASSESSOR'S PARCEL NUMBER: 273-110-07-00 AND 273-110-08-00

PARCEL TWO:

PARCEL 1 OF PARCEL MAP NO. 9852, IN THE CITY OF POWAY, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, MARCH 27, 1980

ASSESSOR'S PARCEL NUMBER: 273-110-18-00

TOPOGRAPHIC DATA

THE TOPOGRAPHIC MAPPING USED FOR THIS SURVEY IS BASED ON A FIELD SURVEY PERFORMED BY HUNSAKER & ASSOCIATES, SAN DIEGO INC. TOGETHER WITH AERIAL PHOTOGRAPHY PRODUCED BY R.J. LUNG AND ASSOCIATES PER FLIGHT OF AUGUST 15, 2016. BENCHMARK: CITY OF POWAY BENCHMARK, BEING A 2" BRASS DISC STAMPED POWAY A-73 IN TOP OF CURB, APPROXIMATELY 8.0 FEET WESTERLY OF THE WEST POINT OF CURVE OF THE NORTHWEST CURB RETURN OF TAM O'SHANTER DRIVE AND BOCA RATON LANE EL: 719.289' NGVD 29.

PUBLIC UTILITIES AND DISTRICTS

GAS AND ELECTRIC	SAN DIEGO GAS AND ELECTRIC	STORM DRAIN	CITY OF POWAY
TELEPHONE	PACIFIC BELL TELEPHONE	FIRE	CITY OF POWAY
WATER	POWAY MUNICIPAL WATER DIST.	POLICE	SAN DIEGO COUNTY SHERIFF
WATER TRANSMISSION	SAN DIEGO COUNTY WATER AUTHORITY	SCHOOLS	POWAY UNIFIED SCHOOL DIST.
SEWER	POWAY MUNICIPAL WATER DIST.		

OWNERS

NO STONE LEFT UNTURNED, LLC

1/16/2020
MICHAEL SCHLESINGER DATE

SUBDIVIDER/APPLICANT

SMA VENTURES, LLC
12919 CORTE JUANNA
POWAY, CA 92064
(760) 634-6700

1/16/20
KEVIN MCNAMARA DATE

ENGINEER OF WORK

REGISTERED PROFESSIONAL ENGINEER ALISA S. VIALPANDO C 47945 Exp. 12/31/21 CIVIL STATE OF CALIFORNIA

1/16/20
ALISA S. VIALPANDO R.C.E. 47945 DATE
MY REGISTRATION EXPIRES ON 12/31/21

DWELLING UNITS

PRODUCT	DU YIELD
80'x110' SF LOTS	20
70'x100' SF LOTS	13
70'x100' TWIN-HOME SF (11 LOTS)	22
100'x100' SF LOTS	15
100'x100' COTTAGE SF LOTS	90
TOTAL	160

UNIT SUMMARY

DESCRIPTION	NUMBER OF LOTS	NUMBER OF UNITS
80' X 100' SF LOTS	20	20
70' X 100' SF LOTS	13	13
35' X 100' TWIN-HOME LOTS	22	22
100' X 100' SF LOTS	15	15
90' X 90' SF COTTAGE COURT LOTS	90	90
TOTAL RES. LOTS/UNITS	160	160

REQUIRED PARKING SUMMARY

DESCRIPTION	CAR	ADA	M	BIKE
THE FARM	113	6	2	6
THE CLUB	108	5	2	6
THE MEADOWS	45	3	2	3
AGRI-FIELDS	2	1	0	1
SUBTOTAL NON-RES. PARKING	268	15	6	16
80' X 100' SF LOTS	40	–	–	–
70' X 100' SF LOTS	26	–	–	–
35' X 100' TWIN-HOME LOTS	44	–	–	–
100' X 100' SF LOTS	30	–	–	–
90' X 90' SF COTTAGE COURT LOTS	180	–	–	–
SUBTOTAL RES. PARKING	320	–	–	–
TOTAL PARKING REQUIRED.	558	15	6	16

PROVIDED PARKING SUMMARY

DESCRIPTION	CAR	ADA	M	BIKE
THE FARM	154	6	3	14
THE CLUB	118	6	2	6
THE MEADOWS	59	3	1	6
AGRI-FIELDS	13	1	0	1
SUBTOTAL NON-RES. PARKING	354	16	6	27
80' X 100' SF LOTS	40	–	–	–
70' X 100' SF LOTS	26	–	–	–
35' X 100' TWIN-HOME LOTS	44	–	–	–
100' X 100' SF LOTS	30	–	–	–
90' X 90' SF COTTAGE COURT LOTS	180	–	–	–
STREET	220	–	–	–
SUBTOTAL RES. PARKING	545	–	–	–
TOTAL PARKING REQUIRED.	899	16	6	27

PREPARED BY:

HUNSAKER & ASSOCIATES SAN DIEGO, INC

PLANNING 9707 Waples Street
ENGINEERING San Diego, Ca 92121
SURVEYING PH(858)558-4500 · FX(858)558-1414

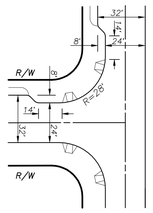
NO.	REVISIONS	DATE	BY
1	PRE-APP SUBMITTAL	10/11/18	HBA
2	FULL SUBMITTAL	12/27/18	HBA
3	RESUBMITTAL	4/16/19	HBA
4	RESUBMITTAL	11/01/19	HBA
5	RESUBMITTAL	01/17/20	HBA
6			
7			
8			

TENTATIVE MAP/ GPA/ REZONE/ SPP18-001
THE FARM IN POWAY
CITY OF POWAY, CALIFORNIA

SHEET 1 OF 15

W.O. 3526-0002

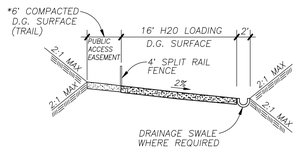
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TYPICAL STREET PARKING WITH INTERSECTION *BULB-OUT DETAIL

*ADJACENT TO PARKING WHERE FEASIBLE

NTS

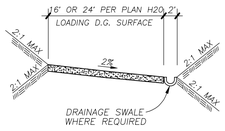


*6' TRAIL CAN BE MOVED TO OPPOSITE SIDE TO SUIT SITE CONDITIONS

COMBINED SDCWA ACCESS ROAD/TRAIL

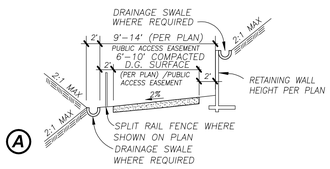
NOTE: SIGNAGE AT THE ENTRANCES OF ALL SDCWA ACCESS ROADS WILL BE REQUESTED STATING "SDCWA USE ONLY" \ "DESIGNATED TRAIL" IN FRONT OF TRAILS.

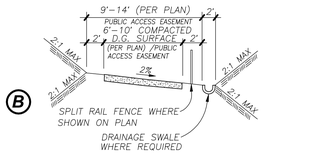
NTS



SDCWA ACCESS ROAD

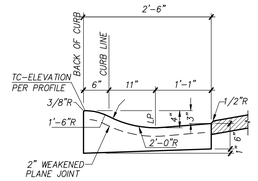
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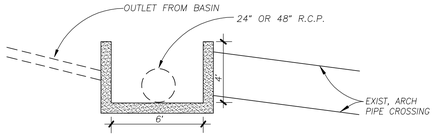
NATURE MULTI-USE TRAIL (PRIVATE MAINTAINED)

NTS



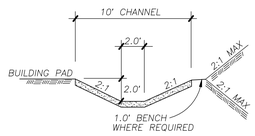
4" MOD. ROLLED CURB

NTS



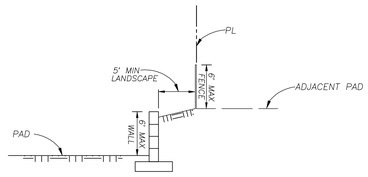
4' X 6' CONCRETE CHANNEL DETAIL

NTS



DRAINAGE CHANNEL

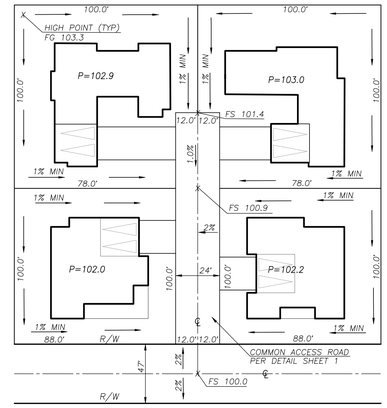
NTS



TYPICAL SIDE/REAR YARD WALL & FENCE DETAIL

*APPLICABLE WHERE SHOWN ON PLAN. WALL & FENCE COMBINATIONS SHALL BE IN CONFORMANCE WITH PMC 17.08.240

NTS

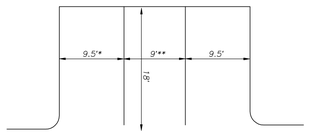


TYPICAL LOT CONFIGURATION (COTTAGES)

NTS

FIRE NOTES

1. THE NORTHERN AREA OF THIS PROJECT IS WITHIN THE VERY HIGH FIRE HAZARD SEVERITY AREA (VHFHSA) OF THE CITY AND IS NEW CONSTRUCTION; THEREFORE, CALIFORNIA BUILDING CODE CHAPTER 7A AND POWAY MUNICIPAL CODE 15.24 WILL APPLY.
2. IN THE EVENT THE PROJECT IS PHASED, ROADWAY ACCESS, WATER SUPPLY SYSTEM AND REQUIRED FUEL MODIFICATION OF COMMON ROADWAY ACCESS SHALL BE COMPLETED IN EACH PHASE BEFORE A BUILDING PERMIT IS ISSUED FOR ANY PARCEL WITHIN THE PHASE.
3. PRIOR TO THE DELIVERY OF COMBUSTIBLE BUILDING MATERIAL ON SITE, THE APPROVED WATER SERVICE TO ALL FIRE HYDRANTS SHALL BE CONNECTED TO THE PUBLIC WATER SUPPLY, SATISFACTORILY PASS ALL REQUIRED TESTS AND BE APPROVED BY THE CITY.
4. PRIOR TO THE DELIVERY OF COMBUSTIBLE BUILDING MATERIAL ON SITE, THE APPROVED VEHICLE ACCESS, INCLUDING DRIVEWAYS, FOR FIREFIGHTING SHALL BE INSTALLED, SATISFACTORILY PASS ALL REQUIRED TESTS AND APPROVED BY THE CITY. ALL ACCESS SHALL BE PROVIDED WITHIN 150-FEET OF ALL CONTRUCTION AREAS. USE OF TEMPORARY VEHICLE ACCESS FOR FIRE FIGHTING SHALL REQUIRE PLAN SUBMMITAL, REVIEW AND APPROVAL BY THE CITY.
5. AN APPROVED WATER SUPPLY CAPABLE OF SUPPLYING THE REQUIRED FIRE FLOW FOR FIRE PROTECTION SHALL BE PROVIDED TO ALL PREMISES UPON WHICH FACILITIES, BUILDINGS, OR PORTIONS OF BUILDINGS WILL BE CONSTRUCTED. A WATER ANALYSIS SHALL BE PERFORMED TO ESTABLISH THE ADEQUACY OF THE EXISTING WATER MAINS AND ALL NECESSARY SYSTEM DESIGN TO SERVE THE PROJECT. COSTS OF THE WATER ANALYSIS SHALL BE THE RESPONSIBILITY OF THE APPLICANT. THE REQUIRED FIRE FLOW IN THE VHFHSA SHALL BE A MINIMUM OF 1,500GPM; ALL AREAS NOT LOCATED IN THE VHFHSA SHALL MEET THE REQUIREMENT OUTLINED IN APPENDIX B OF THE 2016 CALIFORNIA FIRE CODE.
6. FIRE HYDRANTS SHALL BE LOCATED WIHITN 600-FEET OF ANY PORTION OF RESIDENTIAL FACILITIES OR BUILDINGS, WITH SPACING BETWEEN HYDRANTS NOT TO EXCEED 600-FEET, AS MEASURED BY AN APPROVED ROUTE OF TRAVEL THAT FIRE ENGINE WOULD TRAVEL. FIRE HYDRANTS SHALL BE LOCATED WITHIN 400-FEET OF ANY PORTION OF NON-RESIDENTIAL FACILTIES OR BUILDINGS, WITH SPACING BETWEEN HYDRANTS NO TO EXCEED 400-FEET, AS MEASURED BY AN APPROVED ROUTE OF TRAVEL THAT AFIRE ENGINER WOULD TRAVEL.
7. ALL FLAMMABLE VEGETATION WITHIN APPROVED FUEL MODIFICATION ZONES SHALL BE REMOVED PRIOR TO THE ARRIVAL OF COMUBSTIBLE MATERIAL ON THE SITE AND SHALL BE MAINTAINED DURING THE DURATIONOF THE PROJECT UNTIL ALL ELEMENTS OF APPROVED FUEL MODIFICATION ZONES ARE INSTALLED AND APPROVED.
8. BUILDINGS AND STRUCTURES LOCATED WITHIN THE VHFHSA SHALL BE SETBACK A MINIMUM OF 30-FEET FROM PROPERTY LINES AND BIOLOGICAL OPEN SPACE EASEMENTS UNLESS THE POWAY MUNICIPAL CODE REQUIRES A GREATER MINIMUM. WHEN THE PROPERTY LINE ABUTS A ROADWAY THE SETBACK SHALL BE MEASURED FROM THE FARTHEST ROADWAY EDGE.
9. FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED, IMPROVED WIDTH OF NOT LESS THAN 20-FEET, EXCEPT SINGLE-FAMILY RESIENTIAL DRIVEWAYS SERVING NO MORE THAN TWO IMPORVED PARCELS CONTAINING DWELLING UNTS SHALL HAVE A MINIMUM OF 16-FEET OF UNOBSTRUCTED IMPROVED WIDTH. IN MOST CASES, THE CITY OF POWAY CONSTRUCTION STANDARDS FOR STREETS WILL BE MORE RESTRICTIVE (CHAPTER 12.20 PMC). THE MORE RESTRICTIVE STANDARD SHALL APPLY. VERTICAL OVERHEAD CLEARNACE SHALL BE A MINIMUM OF 13-FEET 6-INCHES. FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE PROPOSED LOADS OF FIRE APPARATUS NOT LESS THAN 75,000 POUNDS UNLESS AUTHORIZED BY THE FAHJ AND SHALL BE PROVIDED WITH AN APPROVED PAVED SURVACE AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES. WHEN DEEMED NECESSARY IN THE OPINION OF THE FIRE CODE OFFICIAL, A PAVED DRIVING SURFACE SHALL MEAN ASPHALT OR CONCRETE SURFACE. THE TURNING RADIUS OF A FIRE APPARATUS ACCESS ROAD SHALL BE A MINIMUMN OF 28-FEET AS MEASURED TO THE INSIDE EDGE OF THE IMPROVEMENT WIDTH OR AS APPROVED BY THE FIRE-CODE OFFICIAL.
10. FIRE ACCESS ROADWAYS, GATED ENTRANCES AND CARD READERS, GUARD STATIONS, OR CENTER MEDIANS, WHICH HAVE SEPARATAED LANES OF ONE-WAY TRAFFIC SHALL BE NOT LESS TAHN 12-FEET WIDE PER LANE.
11. PERMANENT ACCESS ROADWAYS FOR FIRE APPARATUS SHALL BE DESIGNATED AS "FIRE LANES" WITH APPROPRIATE SIGNS AND CURB MARKINGS. ACCESS ROADWAYS LESS THAN 28-FEET IN WIDTH SHALL BE DESIGNATED "FIRE LANES" ON BOTH SIDES.
12. APPROVED SIGNS OR OTHER APPROVED NOTICES SHALL BE PROVIDED AND MAINTAINED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS AND PROHIBIT THE OBSTRUCTION THEREOF OR BOTH. ALL NEW PUBLIC ROADS, ALL PRIVATE ROADS WITHIN MAJOR SUBDIVISIONS, AND ALL PRIVATE ROAD EASEMENTS SERVING FOUR OR MORE PARCELS SHALL BE NAMED. ROAD NAME SIGNS SHALL COMPLY WITH CITY OF POWAY SUPPLEMENTAL ENGINEERING STANDARDS, STREET SIGN SPECIFICATIONS.
13. FOR ALL NON-RESIDENTIAL FACILITIES OR BUILDINGS, APPROVED FIRE APPARATUS ACCESS ROADWAYS SHALL BE PROVIDED FOR EVERY FACILITY, BUILDING OR PORTION OF A BUILDING. THE FIRE APPARATUS ACCESS ROADWAY SHALL EXTEND TO WITHIN 150-FEET OF ALL PORTIONS OF THE FACILITY AND ALL PORTIONS OF THE EXTERIOR WALLS OF THE FIRST STORY OF THE BUILDING AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING OR FACILITY.
14. THE GRADIENT FOR A FIRE APPARATUS ACCESS ROADWAY SHALL NOT EXCEED 20-PERCENT. GRADES EXCEEDING 15-PERCENT (INCLINE OR DECLINE) SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE (PCC), WITH A DEEP BROOM FINISH PERPENDICULAR TO THE DIRECTION OF TRAVEL, OR EQUIVALENT, TO ENHANCE TRACTION. THE FIRE CODE OFFICIAL MAY REQUIRE ADDITIONAL MITIGATION MEASURES WHERE HE OR SHE DEEMS APPROPRIATE.
15. THE ANGLE OF DEPARTURE AND THE ANGLE OF APPROACH OF A FIRE ACCESS ROADWAY SHALL NOT EXCEED SEVEN DEGREES (12-PERCENT) OR AS APPROVED BY THE FIRE CODE OFFICIAL.
16. ALL DEAD-END FIRE ACCESS ROADS IN EXCESS OF 150-FEET IN LENGTH SHALL BE PROVIDED WITH APPROVED PROVISIONS THAT ALLOW EMERGENCY APPARATUS TO TURN AROUND. A CUL-DE-SAC SHALL BE PROVIDED IN RESIDENTIAL AREAS WHERE THE ACCESS ROADWAY SERVES MORE THAN TWO STRUCTURES. THE MINIMUM, UNOBSTRUCTED PAVED RADIUS WIDTH FOR A CUL-DE-SAC SHALL BE 38-FEET IN RESIDENTIAL AREAS. APPROVED CUI-DE-SAC SHALL BE LOCATED AT END OF FIRE APPARATUS ACCESS ADJACENT TO THE GREENHOUSE. APPROVED CUL-DE-SAC SHALL BE LOCATED AT END OF PARKING LOT NEAR TENNIS COURTS.
17. APPROVED NUMBERS OR ADDRESSES SHALL BE PLACED ON ALL FACILITIES AND BUILDINGS IN SUCH A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET FRONTING THE PROPERTY. NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND. THE ADDRESS IS REQUIRED AT PRIVATE DRIVEWAY ENTRANCES. EACH NON-RESIDENTIAL FACILITY OR BUILDING ADDRESS SHALL ALSO BE DISPLAYED ON THE ROOF IN A MANNER SATISFACTORY TO THE DIRECTOR OF SAFETY SERVICES, AND MEETING SHERIFF DEPARTMENT-ASTREA CRITERIA.
18. ALL GATES OR OTHER STRUCTURES OR DEVICES THAT COULD OBSTRUCT FIRE ACCESS ROADWAYS OR OTHERWISE HINDER EMERGENCY OPERATIONS ARE PROHIBITED UNLESS THEY MEET THE STANDARDS APPROVED BY THE FIRE CODE OFFICIAL AND RECEIVE SPECIFIC PLAN APPROVAL. ALL AUTOMATIC GATES ACROSS FIRE ACCESS ROADWAYS AND DRIVEWAYS SHALL BE EQUIPPED WITH APPROVED, EMERGENCY, KEY-OPERATED SWITCHES OVERRIDING ALL COMMAND FUNCTIONS AND OPENING THE GATE(S). GATES ACCESSING MORE THAN FOUR RESIDENCES OR RESIDENTIAL LOTS, OR GATES ACCESSING HAZARDOUS INSTITUTIONAL, EDUCATIONAL OR ASSEMBLY OCCUPANCY GROUP STRUCTURES SHALL ALSO BE EQUIPPED WITH APPROVED EMERGENCY TRAFFIC CONTROL-ACTIVATING STROBE LIGHT SENSOR(S), OR OTHER DEVICES APPROVED BY THE FIRE CODE OFFICIAL, WHICH WILL ACTIVATE THE GATE ON THE APPROACH OF EMERGENCY APPARATUS WITH A BATTERY BACKUP OR MANUAL-MECHANICAL DISCONNECT IN CASE OF POWER FAILURE. IN THE EVENT OF A POWER FAILURE, THE GATE SHALL BE AUTOMATICALLY TRANSFERRED TO A FAIL-SAFE MODE ALLOWING THE GATE TO BE MANUALLY PUSHED OPEN WITHOUT THE USE OF SPECIAL KNOWLEDGE OR EQUIPMENT. ALL AUTOMATIC GATES MUST MEET FIRE DEPARTMENT POLICIES DEEMED NECESSARY BY THE FIRE CODE OFFICIAL FOR RAPID, RELIABLE ACCESS. WHERE THIS SECTION REQUIRES AN APPROVED KEY-OPERATED SWITCH, IT SHALL BE DUAL KEYED OR DUAL SWITCHES SHALL BE PROVIDED TO FACILITATE ACCESS BY LAW ENFORCEMENT PERSONNEL.
19. IGNITION RESISTANT CLASS I CONSTRUCTION AS DESCRIBED IN THE CALIFORNIA BUILDING CODE CHAPTER 7A, IS REQUIRED FOR ALL FACILITIES, BUILDINGS AND STRUCTURES LOCATED IN THE VHFHSA.
20. ALL ONE AND TWO-FAMILY RESIDENTIAL FACILITIES REQUIRE AN APPROVED RESIDENTIAL FIRE SPRINKLER SYSTEM WITH A ONE-INCH METER MEETING POWAY MUNICIPAL CODE REQUIREMENTS. A SEPARATE PLAN SUBMITTAL AND APPROVAL TO THE POWAY FIRE DEPARTMENT, DIVISION OF FIRE PREVENTION, PREPARED BY A LICENSED SPRINKLER CONTRACTOR OR FIRE PROTECTION ENGINEER IS REQUIRED FOR EACH RESIDENTIAL SPRINKLER SYSTEM PRIOR TO INSTALLATION. THERE IS A SEPARATE FEE FOR THIS PLAN CHECK AND INSPECTION SERVICES. IF A ONE-INCH LATERAL OFF THE STREET MAIN IS CURRENTLY NOT PRESENT, ONE WILL HAVE TO BE INSTALLED. IF A PRESSURE PUMP IS REQUIRED FOR FIRE SPRINKLER OPERATION, AUXILIARY POWER IS REQUIRED.
21. ALL NON-RESIDENTIAL FACILITIES AND BUILDINGS GREATER THAN 5,000SF REQUIRE AN APPROVED FIRE SPRINKLER SYSTEM MEETING POWAY MUNICIPAL CODE REQUIREMENTS. THE FIRE SPRINKLER SYSTEM SHALL BE DESIGNED TO MEET MINIMUM DESIGN CRITERIA PER BUILDING OCCUPANCY AND THE ROOF PER NFPA 13 REQUIREMENTS. TWO SEPARATE PLAN SUBMITTALS TO THE FIRE DEPARTMENT WILL BE REQUIRED FOR EACH STRUCTURE, ONE FOR THE FIRE SPRINKLER DESIGN AND THE SECOND FOR THE FIRE SERVICE UNDERGROUND. EACH FACILITY OR BUILDING REQUIRES A SEPARATE PLAN SUBMITTAL FOR REVIEW AND APPROVAL. THERE IS A SEPARATE FEE FOR THIS PLAN CHECK AND INSPECTION SERVICES.
22. NON-RESIDENTIAL FACILITIES AND BUILDINGS EQUIPPED WITH A FIRE SPRINKLER SYSTEM SHALL HAVE A PROPERLY LICENSED CONTRACTOR INSTALL AN AUTOMATIC FIRE ALARM SYSTEM TO APPROVED STANDARDS. SYSTEM SHALL BE COMPLETELY MONITORED BY A UL LISTED CENTRAL STATION ALARM COMPANY OR PROPRIETARY REMOTE STATION. EACH FACILITY OR BUILDING REQUIRES A SEPARATE PLAN SUBMITTAL FOR REVIEW AND APPROVAL. THERE IS A SEPARATE FEE FOR THIS PLAN CHECK AND INSPECTION SERVICES.
23. ALL FACILITIES AND BUILDINGS LOCATED IN THE VHFHSA ARE REQUIRED: SINGLE-STORY STRUCTURES SHALL BE SETBACK A MINIMUM 15-FEET HORIZONTALLY FROM TOP OF SLOPE TO THE FARTHEST PROJECTION FROM A ROOF. A SINGLE-STORY STRUCTURE SHALL BE LESS THAN 12-FEET ABOVE GRADE. A TWO-STORY STRUCTURE SHALL BE SETBACK A MINIMUM OF 30-FEET HORIZONTALLY FROM TOP OF SLOPE TO THE FARTHEST PROJECTION FROM A ROOF. STRUCTURES GREATER THAN TWO STORIES MAY REQUIRE A GREATER SETBACK WHEN THE SLOPE IS GREATER THAN 2 TO 1. STRUCTURAL SETBACKS SHALL BE SHOWN ON THE SITE PLAN. SHOW SCALED CROSS SECTION PROFILES DENOTING THE TOP OF THE SLOPE, BUILDING/ROOF PROJECTIONS, AND THE SETBACK DISTANCE AT MULTIPLE LOCATIONS ON THE PLAN SUBMITTAL.
24. ALL RESIDENTIAL FACILITIES AND BUILDINGS LOCATED IN THE VHFHSA ARE REQUIRED: TO COMPLY WITH SECTION FOUR OF THE CITY OF POWAY LANDSCAPE AND IRRIGATION DESIGN MANUAL AND POWAY MUNICIPAL CODE 15.24 AS IT RELATES TO FUEL MANAGEMENT AND DEFENSIBLE SPACE. THIRTY FEET OF FUEL MANAGEMENT MEETING ZONE A IS REQUIRED MEASURED OUTWARD FROM THE FURTHEST PROJECT OF ALL FACILITIES AND BUILDINGS. TEN FEET OF VEGETATION FUEL MODIFICATION SHALL BE MAINTAINED ON BOTH SIDES OF ALL FIRE APPARATUS ACCESS ROADWAYS AND DRIVEWAYS NOT ALREADY LOCATED IN A FUEL MANAGEMENT AREA.
THE LANDSCAPE PLAN REQUIRES A SEPARATE LANDSCAPE AND IRRIGATION PLANS SUBMITTAL PREPARED PURSUANT TO THE CITY OF POWAY LANDSCAPE AND IRRIGATION DESIGN MANUAL REQUIREMENTS. EACH FACILITY OR BUILDING REQUIRES A SEPARATE PLAN SUBMITTAL FOR REVIEW AND APPROVAL. THERE IS A SEPARATE FEE FOR THIS PLAN CHECK AND INSPECTION SERVICES. THE APPLICANT SHALL SUBMIT AND RECEIVE SIGNED APPROVAL OF LANDSCAPE AND IRRIGATION PLANS PRIOR TO THE ISSUANCE OF THE BUILDING PERMIT. ALL FUEL MODIFICATIONS SHALL BE INSTALLED PRIOR TO THE FINAL INSPECTION FOR ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
25. A WATER MAIN SHALL BE INSTALLED CONNECTING PRIVATE STREET A WITH PRIVATE STREET C CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW ENABLING CONNECTION OF REQUIRED FIRE SERVICE FOR THE BARN. THE ADDITION OF A FIRE HYDRANT AND LOCATION OF REQUIRED BACKFLOW PREVENTION EQUIPMENT AND FIRE DEPARTMENT CONNECTION SHALL BE LOCATED AT THE APPROVAL OF THE FIRE DEPARTMENT.
26. THE TYPICAL LOT DRAWING FOR THE HOMESTEAD – VHFHSA SHALL BE REVISED TO SHOW A MINIMUM OF 30-FEET REAR YARD SETBACK FROM PARCEL BOUNDARY WITH NO ENCROACHMENT. THIS IS SHOWN ON SHEET A002 – DETAIL1.1.
27. THE EXISTING FIRE SPRINKLER SYSTEM AND FIRE ALARM SYSTEMS IN THE CLUB SHALL BE IMPROVED TO MEET CURRENT REQUIREMENTS INCLUDING THE INSTALLATION OF NEW FIRE HYDRANT(S) AND BACKFLOW PREVENTION DEVICES.
28. THE LOCATIONS OF ALL REQUIRED FIRE HYDRANTS, FIRE DEPARTMENT CONNECTIONS TO FIRE SPRINKLER SYSTEMS AND BACKFLOW PREVENTION DEVICES SHALL BE APPROVED BY THE FIRE DEPARTMENT.



TYPICAL PARKING DETAIL

NTS

*AS SHOWN ON PLANS ALL END OF LINE PARKING SPACES ARE 9.5' IN WIDTH
**AS SHOWN ON PLANS ALL TYP. MID LINE PARKING SPACES ARE 9' IN WIDTH

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THE FARM IN POWAY
CITY OF POWAY, CALIFORNIA

SHEET 2 OF 15

W.O. 3526-0002

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SEE SHEET 5

SEE SHEET 4

SCALE 1" = 50'

BF-1-6

ST. ANDREWS COURT

ST. ANDREWS DRIVE

ALDERWOOD LANE

EXIST. 8" V.C.P. SEWER LINE

EXIST. 8" A.C.P. WATER LINE

PLUG

REMOVE EXIST. CONC. DITCH

REMOVE EXIST. SEWER

JOIN EXIST. SEWER MANHOLE

10' D.G. TRAIL

15' STORM DRAIN ESMT./10' D.G. TRAIL

REMOVE EXIST. SEWER AND MANHOLE

78' SEWER ESMT.

47' PUBLIC SEWER, WATER & ACCESS ESMT.

51' PUBLIC SEWER, WATER & ACCESS ESMT.

OFFICE/ MAINTENANC.

DRIVEWAY FOR SEWER ACCESS

VIVARIUM

THE BARN

6 SPACE BIKE RACK

1 - 4'X8' MOTORCYCLE SPACES

8 SPACE BIKE RACK

OSR-1 OS REC LOT

OSR-2 OS REC LOT

OSR-3 OS REC LOT

OSC-1 OS CON. LOT

OSC-2 OS CON. LOT

OSC-3 OS CON. LOT COMMUNITY GARDEN

OSC-4 OS CON. LOT PRIVATE STORM DRAIN

OSC-6 OS CON. LOT

BF-1 588.0 BASIN BOTTOM AREA 22,000 SF

BF-1 586.0 BASIN BOTTOM AREA 16,500 SF

PVT STREET 'A'

PVT STREET 'B'

VALLE VERDE RD

ESPOLA ROAD

MARTINCOIT RD.

24" BYPASS SD (PUBLIC)

4' POST & RAIL FENCING

STORM DRAIN ESMT. WITH 6' WIDE DG ACCESS ROAD/TRAIL CONNECTION

4 SPACE BIKE RACK

STORM DRAIN ESMT./DG ACCESS ROAD/TRAIL CONNECTION

DG TRAIL & SEWER ACCESS ROAD

DG TRAIL

EARTH SWALE

20' UTILITY EASEMENT

BROW DITCH TRANS. TO CURB OUTLET

JOIN EXIST. IMPROVEMENTS

BOLLARDS

PROPOSED LANDSCAPE OPEN SPACE EASEMENT

TRANS. TO EXIST. ASPHALT S/W

CAUTION! SDWCA RAMONA PIPELINE, 38" CCP. PROECT IN PLACE

EXIST. PP TO BE REMOVED

CONNECT TO EXIST WATER PIPELINE

TRANSITION TO EXIST. CURB

SDWCA RAMONA PIPELINE, 38" CP TEST STATION STA. 348+00 PROTECT IN PLACE

SDWCA RAMONA PIPELINE AIR VALVE STA. 353+15 PROTECT IN PLACE

CONST. 4' X 6' CONC. CHANNEL 585.5FL SEE DETAIL SHT. 2 CONST. @ S/ HEADWALL

CURB INLET PER FIELD SURVEY

SDWCA RAMONA PIPELINE BLOWOFF STA. 354+34, 18" BLOWOFF DISCHARGE PIPELINE TO 30" STORM DRAIN. PROTECT IN PLACE

HEADWALL AND STORM DRAIN FL PER FIELD SURVEY

25' LONG BUS STOP SIDEWALK PAD WITH BENCH & TRASH CAN

SDWCA RAMONA PIPELINE, 38" CP TEST STATION STA. 358+00 PROTECT IN PLACE

ACTUAL SD MANHOLE LOCATION PER FIELD SURVEY

EXIST STORM DRAIN ESMT.

42" BYPASS STORM DRAIN (PUBLIC)

JOIN EXIST. SEWER WITH MANHOLE/ IE 586.1

PROP. TRAFFIC SIGNAL & POLE

PROP. 6" CURB (TYP.)

9' COMPACTED DG TRAIL

EXIST. SEWER TO REMAIN

RELOCATED TRAFFIC SIGNAL & ST. LIGHT POLE

38" CP TEST STATION STA. 358+00 PROTECT IN PLACE

EXIST. POWER POLE TO BE REMOVED

36" BYPASS STORM DR (PUBLIC

PROP. RAISED MEDIAN

PROP. STRIPING AND TURN ARROW (TYP.)

CONN. TO EXIST. WATERLINE

EXIST. STREET SIGN (TYP.)

EXIST. STRIPING AND TURN ARROW

CONN. TO EXIST. WATERLINE

EXIST. TRAFFIC SIGNAL

EXIST. 6" CURB (TYP.)

EXIST. TRAFFIC SIGNAL/STREET LIGHT. POLE (

PROP. TRAFFIC SIGNAL & POLE

EXIST. STRIPING/LANE ARROWS

100' LEFT TURN POCKET

120' TRANSITION

REMOVE EXIST. CONC. DITCH

REMOVE EXIST. SEWER AND MANHOLE

LOA

CLA

TOT L

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THE FARM IN POWAY

CITY OF POWAY, CALIFORNIA

SHEET 3 OF 15

W.O. 3526-0002

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SEE SHEET 5

SEE SHEET 3

ALDERWOOD LANE

ST. ANDREWS DRIVE

PVT STREET 'A'

PVT STREET 'C'

PVT STREET 'A'

CLOUDCROFT DRIVE

ESPOLA ROAD

MARTINCOIT RD

EXIST. 8" V.C.P. SEWER LINE

REMOVE EXIST. CONC. DITCH

15' STORM DRAIN ESMT./10' D.G. TRAIL

JOIN EXIST. SEWER MANHOLE

REMOVE EXIST. SEWER

REMOVE EXIST. SEWER AND MANHOLE

78' SEWER ESMT.

24" BYPASS SD (PUBLIC)

BF-1
588.0
BASIN BOTTOM AREA 22,000 SF

BF-1
586.0
BASIN BOTTOM AREA 16,500 SF

STORM DRAIN ESMT. WITH 6' WIDE DG ACCESS ROAD/TRAIL CONNECTION

4' POST & RAIL FENCING

PRIVATE STORM DRAIN

4 SPACE BIKE RACK

6 SPACE BIKE RACK

8 SPACE BIKE RACK

4 SPACE BIKE RACK

3 - 4'X8' MOTORCYCLE SPACES

LOADING SPACE

LOADING SPACE

TOT LOT

COMMUNITY GARDEN

OFFICE/ MAINTENANCE

GREENHOUSE

VIVARIUM

CLASSROOM

THE BARN

THE SOCIAL

DRIVEWAY FOR SEWER ACCESS

SHARED DUMPSTERS

GARAGE DOOR ACCESS

DUMPSTER

4' PUBLIC SEWER, WATER & ACCESS ESMT.

51' PUBLIC SEWER, WATER & ACCESS ESMT.

EXIST STORM DRAIN ESMT.

42" BYPASS STORM DRAIN (PUBLIC)

JOIN EXIST. SEWER WITH MANHOLE/IE 586.1

PROP. TRAFFIC SIGNAL & POLE

PROP. 6" CURB (TYP.)

8' COMPACTED DG TRAIL

6' DG TRAIL CONNECTION

SEWER ESMT.

EXIST. STORM DRAIN ESMT.

EXIST. SEWER TO REMAIN

RELOCATED TRAFFIC SIGNAL & ST. LIGHT POLE

PROP. RAISED MEDIAN

PROP. STRIPING AND TURN ARROW (TYP.)

CONN. TO EXIST. WATERLINE

EXIST. STREET SIGN (TYP.)

EXIST. TRAFFIC SIGNAL

EXIST. 6" CURB (TYP.)

EXIST. POWER POLE TO BE REMOVED

36" BYPASS STORM DRAIN (PUBLIC)

EXIST. STRIPING AND TURN ARROW (TYP.)

CONN. TO EXIST. WATERLINE

EXIST. TRAFFIC SIGNAL/STREET LIGHT POLE (TYP.)

PROP. TRAFFIC SIGNAL & POLE

EXIST. STRIPING/LANE ARROWS

PROP. BERM

PROPOSED LANDSCAPE OPEN SPACE EASEMENT

TRANS. TO EXIST. ASPHALT S/W

90' TRANSITION TO EXIST. CURB

CAUTION! SDWCA RAMONA PIPELINE, 38" CCP PROTECT IN PLACE

JOIN EXIST. IMPROVEMENTS

ACTUAL CURB INLET LOCATION PER FIELD SURVEY

ACTUAL SD MANHOLE LOCATION PER FIELD SURVEY

STORM DRAIN ESMT.

CONN. TO EXIST. 8" VCP

SEWER & STORM DRAIN ESMT./10' D.G. TRAIL

STORM DRAIN ESMT./DG ACCESS ROAD/TRAIL CONNECTION

REMOVE EXIST. CONC. DITCH

CONST. 4' X 6' CONC. CHANNEL, SEE DETAIL SHT. 2

CONST. HEADWALL

SDWCA RAMONA PIPELINE AIR VALVE STA. 353+15 PROTECT IN PLACE

SDWCA RAMONA PIPELINE BLOWOFF STA. 354+34, 18" BLOWOFF DISCHARGE PIPELINE TO 30" STORM DRAIN. PROTECT IN PLACE

CURB INLET PER FIELD SURVEY

25' LONG BUS STOP SIDEWALK PAD WITH BENCH & TRASH CAN

SDWCA RAMONA PIPELINE 38" CP TEST STATION STA. 358+00 PROTECT IN PLACE

38" CP TEST STATION STA. 358+00 PROTECT IN PLACE

ACTUAL SD MANHOLE LOCATION PER FIELD SURVEY

HEADWALL AND STORM DRAIN FL PER FIELD SURVEY

OSCE OPEN SPACE EASEMENT

OS CON. LOT

OS REC LOT

OSR-1 OS REC LOT

OSR-2 OS REC LOT

OSR-3 OS REC LOT

OSR-4 OS REC LOT

OSR-5 OS REC LOT

OSR-6 OS REC LOT

OSC-1 OS CON. LOT

OSC-2 OS CON. LOT

OSC-3 OS CON. LOT COMMUNITY GARDEN

OSC-4 OS CON. LOT

OSC-5 OS CON. LOT

OSC-6 OS CON. LOT

OSC-7 OS CON. LOT COMMUNITY GARDEN

OSC-8 OS CON. LOT

PS-1 PS-2 PS-3 PS-4 PS-5 PS-6 PS-7 PS-8 PS-9 PS-10 PS-11 PS-12 PS-13 PS-14 PS-15 PS-16 PS-17 PS-18 PS-19 PS-20 PS-21 PS-22 PS-23 PS-24 PS-31

1 2 3 4 5 6 7 8 9 10 11 12 13 14 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 59 80

0 50 100 150
SCALE 1" = 50'

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THE FARM IN POWAY
CITY OF POWAY, CALIFORNIA

SHEET 4 OF 15

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SEE SHEET 7

SEE SHEET 6

SEE SHEET 4

DORSET WAY

ST. ANDREWS DRIVE

CLOUDCROFT CT

CLOUDCROFT DRIVE

PVT STREET 'A'

PVT STREET 'B'

PVT STREET 'D'

CLUB HOUSE
P=680.8
FF=681.5

POOL

DOG PARK

D.G. STAGE AND PATH

BASIN BOTTOM AREA 11,000 SF

BF-2

OSR-7
OS REC LOT
FUTURE CLUBHOUSE

OSR-8
OS REC LOT

OSC-9
OS CON. LOT

OSC-10
OS CON. LOT

OSC-11
OS CON. LOT

OSC-12
OS CON. LOT

910 ZONE

865 ZONE

6 SPACE BIKE RACK

2 4'x8' MOTORCYCLE SPOTS

1 MOTORCYCLE SPOT

10' DG TRAIL

6' DG TRAIL

10' TRAIL

10' CROSSWALK

EMERGENCY ACCESS ROAD

SDCWA DG ACCESS ROAD

SDCWA ACCESS SWING GATE

BOLLARDS

4' POST & RAIL FENCING

1.5' BENCH WITH TERRACE DRAIN

REMOVE EXIST WATERLINE

CONN. TO EXIST. WATERLINE

REMOVE EXIST. WATERLINE

EXIST. WATERLINE TO REMAIN

CONN. TO EXIST. 8" WATERLINE

CONN. TO EXIST. 18" STORM DRAIN (PUBLIC)

CONN. TO EXIST. SEWER

CONN. TO EXIST. 4" WATER

CONN. TO EXIST. STORM

ACTUAL MANHOLE LOCATION PER ORTHO PHOTO

PRIVATE STORM DRAIN

36" BYPASS STORM DRAIN (PUBLIC)

STORM DRAIN & WATER ESMT.

17' PUBLIC SEWER, WATER & ACCESS ESMT.

47' PUBLIC SEWER, WATER & ACCESS ESMT.

WATER ESMT. AND DG TRAIL

SDCWA PIPELINE 2 BLOW-OFF STA. 546+78. PROTECT IN PLACE

SDCWA PIPELINE 1 BLOW-OFF STA. 546+53. PROTECT IN PLACE

75,000lb SURFACE CAPACITY

SCALE 1" =50'

0 50 100 150

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THE FARM IN POWAY

CITY OF POWAY, CALIFORNIA

SHEET 5 OF 15

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SEE SHEET 7

SEE SHEET 7

SEE SHEET 5

PVT STREET 'E'
PVT STREET 'A'
PVT STREET 'D'
PVT STREET 'D'
PVT STREET 'A'
CLOUDCROFT CT
CLOUDCROFT DRIVE
BOCA RATON CT.
TAM O' SHANTER DR
TAM O' SHANTER CT.
COMMUNITY GARDEN P=756.0 9,000 SF
CLUB HOUSE P=680.8 FF=681.5
POOL
DOG PARK
BASIN BOTTOM AREA 11,000 SF
BF-2
6 SPACE BIKE RACK
8' MOTORCYCLE
4' POST & RAIL FENCING
5' BENCH WITH TERRACE DRAIN
910 ZONE
865 ZONE
CONN. TO EXIST. 8" WATERLINE
REPLACE PORTION OF EXIST 8" ACP WITH 12" PVC
CONNECT WITH EXIST. 12" ACP
ACTUAL MANHOLE LOCATION PER ORTHO PHOTO
REMOVE EXIST. WATERLINE
PRIVATE STORM DRAIN
CONN. TO EXIST. SEWER
CONN. TO EXIST. STORM DRAIN
SDCWA ACCESS SWING GATE
SDCWA ACCESS ROAD PER
6' DG TRAIL
10' TRAIL
10' CROSSWALK
EMERGENCY ACCESS ROAD
SDCWA DG ACCESS ROAD
EMERGENCY & SDCWA ACCESS SWING GATE
DG EMERGENCY ACCESS/ SDCWA ACCESS ROAD
SDCWA PIPELINE 2 BLOW-OFF STA. 546+78. PROTECT IN PLACE
SDCWA PIPELINE 1 BLOW-OFF STA. 546+53. PROTECT IN PLACE
36" BYPASS STORM DRAIN (PUBLIC)
47' PUBLIC SEWER, WATER & ACCESS ESMT.
PUBLIC WATER & ACCESS ESMT.
STORM DRAIN & WATER ESMT.
WATER ESMT. AND DG TRAIL
CONN. TO EXIST. 18" STORM DRAIN (PUBLIC)
CONN. TO EXIST. 8" WATERLINE
EXIST. WATERLINE TO REMAIN
REMOVE EXIST. WATERLINE
CONN. TO EXIST. SEWER
CONN. TO EXIST. 8" WATER
BOLLARDS
D.G. STAGE AND PATH
SDCWA DG ACCESS ROAD
OSC-12 OS CON. LOT
OSC-11 OS CON. LOT
OSC-10 OS CON. LOT
OSC-9 OS CON. LOT
OSR-7 OS REC LOT FUTURE CLUBHOUSE
OSR-8 OS REC LOT
PS-5
PS-27
PS-26
PS-4
12" V.C.P.
8" V.C.P.
16" VCP (SEWER)
(36" RCP SD)
8" A.C.P.
8" PVC
12"X8" REDUCER
8" DIP FITTER & SLEEVE
6" DIP FITTER & SLEEVE
6" M.C.P.
18" R.C.P.
CAUTION SDWA PIPELINE 2 CONCRETE ENCASED
CAUTION SDWA PIPELINE 1 CONCRETE ENCASED
CAUTION DRAIN PIPELINE 1 SDCWA CONCRETE ENCASED
SCALE 1" =50'

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SEE SHEET 8

STARMOUNT WAY

ST. ANDREWS DRIVE

TAM O' SHANTER DR

PVT STREET 'E'

PVT STREET 'F'

OSC-16 OS CON. LOT

OSC-15 OS CON. LOT

OSC-14 OS CON. LOT

OSC-13 OS CON. LOT

146 P=727.1 FF=727.8

147 P=731.4 FF=732.1

148 P=735.0 FF=735.7

121 P=729.2 FF=729.9

120 P=732.4 FF=733.1

119 P=736.8 FF=737.5

118 P=740.8 FF=741.5

117 P=746.0 FF=746.7

116 P=752.0 FF=752.7

115 P=772.6 FF=773.3

114 P=772.6 FF=773.3

113 P=767.6 FF=768.3

112 P=767.6 FF=768.3

111 P=762.9 FF=763.6

110 P=762.9 FF=763.6

149 P=758.1 FF=758.8

150 P=758.1 FF=758.8

151 P=754.0 FF=754.7

152 P=754.0 FF=754.7

153 P=750.0 FF=750.7

154 P=750.0 FF=750.7

155 P=746.8 FF=747.5

156 P=746.8 FF=747.5

157 P=746.5 FF=745.9

158 P=745.9

159

109 P=748.0 FF=748.7

108 P=748.0 FF=748.7

107 P=744.9 FF=745.6

106 P=744.9 FF=745.6

6" PUBLIC SEWER, WATER & ACCESS ESMT.

6' DG TRAIL

16' SDCWA DG ACCESS ROAD

SDCWA ACCESS SWING GATE

10' CROSSWALK

10' DG TRAIL

12' WALL

EXIST 12" PVC WATER

EXISTING 20' WATER ESMT

SDCWA PIPELINE 1 MANHOLE & AIR VALVE STA. 560+90. PROTECT IN PLACE

POWAY NO. 3 SERVICE CONNECTION, STA. 560+87. PROTECT IN PLACE

EXIST 12" DIC WATER

SDCWA DG ACCESS ROAD

5' WALL

3' WALL

2 SPACE BIKE RACK

COMMUNITY GARDEN P=756.0 9,000 SF

740.5FS

TW 744.0 BW 740.5

TW 740.0 BW 735.0

SLOPE HEIGHT = 68' SLOPES OVER 30' VERTICAL HEIGHT REQUIRES CITY COUNCIL APPROVAL

ACTUAL MANHOLE LOCATION PER ORTHO PHOTO

CONN. TO EXIST. 8" WATERLINE

REPLACE PORTION OF EXIST. 8" ACP WITH 12" PVC

CONNECT WITH EXIST. 12" ACP.

REMOVE EXIST WATERLINE

CONN. TO EXIST.

10" A.C.P.

8" A.C.P.

12" A.C.P.

21" RCP

21" CMP

10"X8" REDUCER

8" V.C.P.

0 50 100 150

SCALE 1" =50'

SEE SHEET 5

SEE SHEET 6

PREPARED BY:

HUNSAKER & ASSOCIATES SAN DIEGO, INC

PLANNING 9707 Waples Street
ENGINEERING San Diego, Ca 92121
SURVEYING PH(858)558-4500 - FX(858)558-1414

TENTATIVE MAP/ GPA/ REZONE/ SPP18-001

THE FARM IN POWAY

CITY OF POWAY, CALIFORNIA

SHEET 7 OF 15

W.O. 3526-0002

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0 50 100 150
SCALE 1" =50'

ST. ANDREWS DRIVE
ST. ANDREWS PLACE
BURNING HILLS DRIVE
GLEN ARDEN LANE
ST. ANDREWS DRIVE
TAM O' SHANTER DR
(PRIVATE STREET)
PVT STREET 'E'

CONN. TO EX. STORM DRAIN
BYPASS STORM DRAIN
CONN. TO EX. STORM DRAIN
PRIVATE STORM DRAIN
EXIST. SEWER TO REMAIN
10' DG TRAIL
OSC-27 OS CON. LOT
OSC-26 OS CON. LOT
OSC-18 OS CON. LOT
OSC-19 OS CON. LOT COMMUNITY GARDEN
OSC-17 OS CON. LOT
OSC-20 OS CON. LOT
EXIST. SDCWA ACCESS TO BE MAINTAINED
PROTECT IN PLACE EXISTING OAK TREES
PROPOSED 10' WIDE PUBLIC ACCESS EASEMENT REQUESTED OF AND CONTINGENT UPON APPROVAL OF CHATEU HOA
END OF TRAIL. CONNECT TO EXIST. SIDEWALK
SDWCA ACCESS SWING GATE
EXIST. TRAIL
125' SDCWA ROW PER POS. NO. 18154
4' POST & RAIL FENCING
CONN. TO EX. BROW DITCH
BASIN BOTTOM AREA 6,480 SF
BF-3
BASIN BOTTOM AREA 5,240 SF
BF-4
BARN P=700.3 FF=701.0
1 SPACE BIKE RACK
4'x6' MOTOR-CYCLE SPOT
16' SDCWA DG ACCESS ROAD
6' DG TRAIL
4' PUBLIC SEWER, WATER & ACCESS EASMT.
PRIVATE STORM DRAIN
BYPASS STORM DRAIN (PUBLIC)
EXIST. SEWER TO REMAIN
5' TRAIL CONNECTION
TYPE 'F' CATCH BASIN CONN. TO EX. STORM DRAIN
16" RCP STORM DRAIN
124 P=702.0 FF=702.3
123 P=713.0 FF=713.7
145 P=722.6 FF=723.3
122 P=723.4 FF=724.1
146 P=727.1 FF=727.8
121 P=729.2 FF=729.9

" NOT A PART "

SEE SHEET 9
SEE SHEET 7

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HUNSAKER & ASSOCIATES SAN DIEGO, INC	THE FARM IN POWAY
PLANNING 9707 Waples Street	CITY OF POWAY, CALIFORNIA
ENGINEERING San Diego, Ca 92121	SHEET 8 OF 15
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SEE SHEET 8

GLEN ARDEN LANE

BYPASS STORM DRAIN

8" A.C.P.

10" A.C.P.

ST. ANDREWS DRIVE

8" V.C.P.

DEL PASO DRIVE

EXISTING SEWER LATERALS TO BE ABANDONED OR RELOCATED AS REQUIRED

EX P.P. TO REMAIN

15' AGRI ROAD

BASIN BOTTOM AREA 4,200 SF

BF-6

658.0

663.0TW

658.0BW

OSC-25 OS CON. LOT

OSC-26 OS CON. LOT

10' DG TRAIL

4' POST & RAIL FENCING

144 P=691.0 FF=691.7

143 P=701.0 FF=701.7

142 P=711.0 FF=711.7

141 P=723.0 FF=723.7

140 P=730.0 FF=730.7

139 P=734.0 FF=734.7

138 P=741.0 FF=741.7

696.0TW 691.0BW

715.0TW 711.0BW

717.0TW 734.0BW

683.0TW 678.0BW

OPEN SPACE OSC-24 OS CON. LOT

OPEN SPACE EASEMENT

PROTECT IN PLACE EXISTING OAK TREE

2 SPACE BIKE RACK

OPEN SPACE

EXISTING SEWER LATERALS TO BE ABANDONED OR RELOCATED AS REQUIRED

CONSTRUCT SEWER FORCE MAIN MANHOLE AT EXISTING SEWER STUB ALTERNATIVE "B"

SMH IE 726.0 RIM ELEV. 734.0 ALTERNATIVE "A"

137 P=740.0 FF=740.7

COMMUNITY GARDEN

COMMON SEWER FORCE MAIN TRENCH FOR LOTS 128–131 4–1.5" SEWER FORCE MAINS ALTERNATIVE "B"

*OSC-21 IS DESIGNATED AS FIRE ZONE A

*OSC-21 OS CON. LOT

730.0TW 725.0BW

136 P=725.0 FF=725.7

8" PVC GRAVITY SEWER ALTERNATIVE "A"

SEWER ALTERNATIVE "B"

715.0TW 710.0BW

135 P=710.0 FF=710.7

PVT. SEWER PUMP (TYP.) ALTERNATIVE "B"

SMH IE 696.0 RIM ELEV. 704.0 ALTERNATIVE "A"

SEWER ALTERNATIVE "A"

134 P=699.0 FF=699.7

SEWER NOTE

ALTERNATIVE "A" (GRAVITY SEWER) IS THE PREFERED OPTION AND IS SUBJECT TO PERMISSION FROM OLD COACH GOLF ESTATES FOR PERMISSION TO CONSTRUCT THE SEWER CONNECTION WITHIN THEIR PRIVATE EASEMENT. IF PERMISSION CANNOT BE OBTAINED ALTERNATIVE "B" (PUMPED SEWER) WILL BE IMPLEMENTED.

697.0TW 692.0BW

133 P=692.0 FF=692.7

SMH IE 680.0 RIM ELEV. 688.0 ALTERNATIVE "A"

BOCA RATON LANE

INDIAN CANYON LANE

CONNECT TO EX. STORM DRAIN

8" PVC GRAVITY SEWER ALTERNATIVE "A"

SEE SEWER CONTINUATION ON SHEET 15

REMOVE EXIST. STORM DRAIN

4' POST & RAIL FENCING

BYPASS STORM DRAIN

CONN. TO EXIST. 10" WATERLINE

REMOVE PORTION OF EXIST 12" WATER LINE

719.0TW 714.2BW

132 P=714.2 FF=714.9

OSC-22 OS CON. LOT

131 P=723.0 FF=723.7

130 P=722.5 FF=723.2

129 P=717.9 FF=718.6

128 P=713.1 FF=713.8

127 P=704.8 FF=705.5

126 P=695.3 FF=696.0

125 P=686.9 FF=687.6

709.8TW 704.8BW

47' PUBLIC SEWER, WATER & ACCESS ESMT.

PRIVATE STORM DRAIN

PVT STREET 'E'

IE 705.0

IE 676.0

IE 666.0

IE 656.0 JOIN EXIST. SEWER

TYPE "F" CATCH BASIN CONN. TO EX. STORM DRAIN

CROSSWALK

TG702.0

CONNECT TO EXISTING 12" WATER LINE

OSC-23 OS CON. LOT

683.0 BASIN BOTTOM AREA 2,700 SF

BF-5

OSC-20 OS CON. LOT 662.0

BASIN BOTTOM AREA 5,240 SF

BF-4

667.0TW 662.0BW

EXIST. SEWER TO REMAIN

BYPASS STORM DRAIN (PUBLIC)

PS-8

16" PRIVATE STORM DRAIN

EXISTING 69KV OVERHEAD LINE AND EASEMENT TO REMAIN

" NOT A PART "

" NOT A PART "

EX P.P. TO REMAIN

EX P.P. TO REMAIN

TAM O' SHANTER DR

TAM O' SHANTER DR

H&A

0 50 100 150

SCALE 1" =50'

PREPARED BY:

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PLANNING 9707 Waples Street
ENGINEERING San Diego, Ca 92121
SURVEYING PH(858)558-4500 FAX(858)558-1414

TENTATIVE MAP/ GPA/ REZONE/ SPP18-001

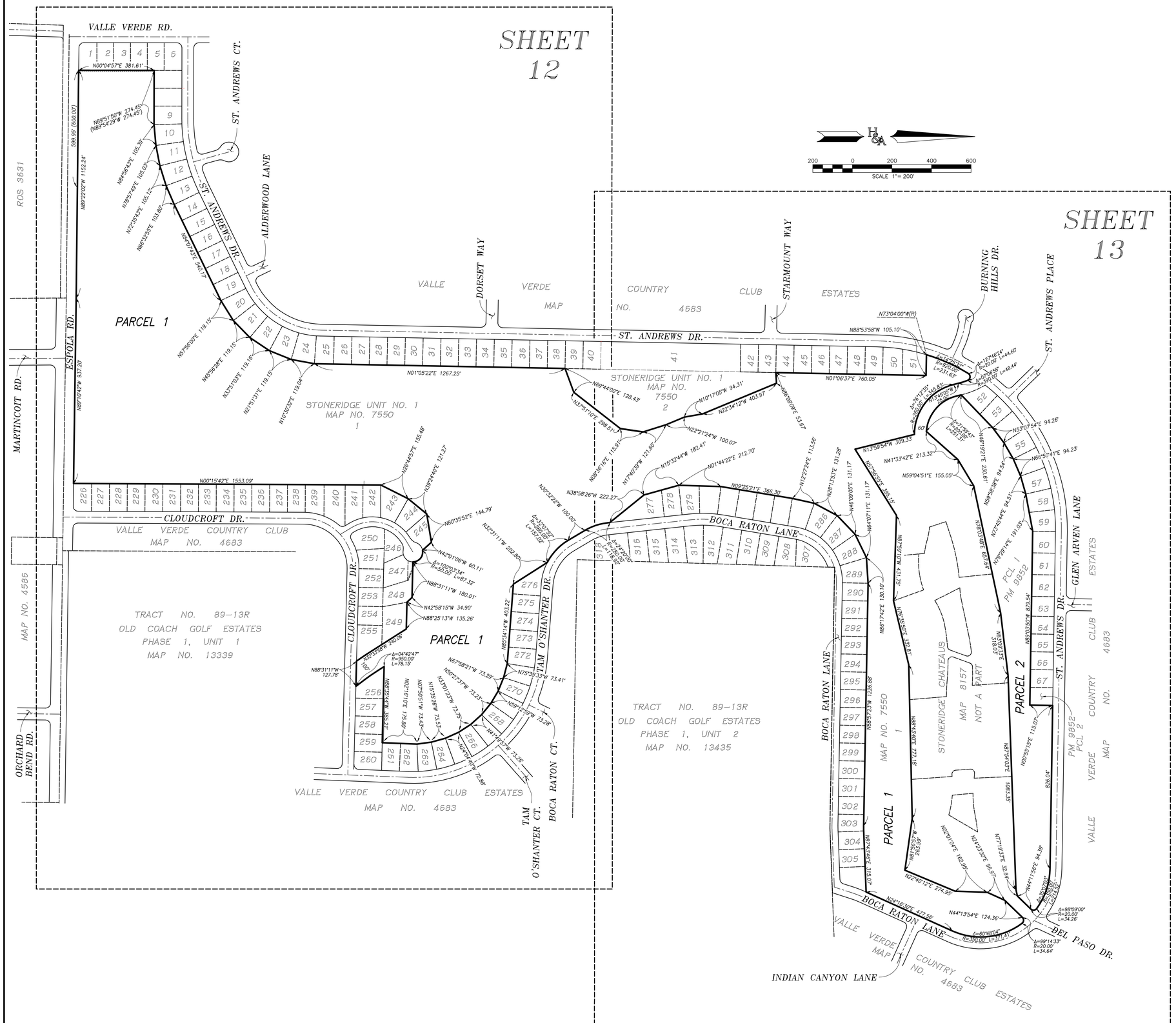
THE FARM IN POWAY

CITY OF POWAY, CALIFORNIA

SHEET 9 OF 15

W.O. 3526-0002

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TITLE REFERENCE

THIS SURVEY IS BASED ON THE PRELIMINARY TITLE REPORT ISSUED BY FNTG-CHICAGO TITLE COMPANY AS ORDER NO. 00101078-996-SD1-RT4 DATED NOVEMBER 28, 2018.

LEGAL DESCRIPTION:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF POWAY, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL ONE:

LOT 1 OF STONERIDGE UNIT NO. 1, IN THE CITY OF POWAY, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 7550, RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, FEBRUARY 14, 1973.

ASSESSOR'S PARCEL NUMBER: 273-110-07-00 AND 273-110-08-00

PARCEL TWO:

PARCEL 1 OF PARCEL MAP NO. 9852, IN THE CITY OF POWAY, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, MARCH 27, 1980

ASSESSOR'S PARCEL NUMBER: 273-110-18-00

SEE SHEET 11 FOR LIST OF TITLE REPORT EXCEPTIONS

SEE SHEET 12 AND 13 FOR PLOTTED EXCEPTIONS

PREPARED BY:
HUNSAKER & ASSOCIATES SAN DIEGO, INC
PLANNING 9707 Waples Street
ENGINEERING San Diego, Ca 92121
SURVEYING PH(858)558-4500 · FX(858)558-1414

TENTATIVE MAP/ GPA/ REZONE/ SPP18-001
THE FARM IN POWAY
CITY OF POWAY, CALIFORNIA

SHEET 10 OF 15

W.O. 3326-0002

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NOTE:

SEE SHEETS 12 AND 13 FOR PLOTTED TITLE REPORT EXCEPTIONS REFERENCED HEREON.

TITLE REPORT EXCEPTIONS

A. PROPERTY TAXES, INCLUDING ANY PERSONAL PROPERTY TAXES AND ANY ASSESSMENTS COLLECTED WITH TAXES, ARE AS FOLLOWS:

TAX IDENTIFICATION NO.: 273-110-07-00
FISCAL YEAR: 2018-2019
1ST INSTALLMENT: $15,507.00, OPEN (DELINQUENT AFTER DECEMBER 10)
PENALTY: $1,550.70
2ND INSTALLMENT: $15,507.00, OPEN (DELINQUENT AFTER APRIL 10)
PENALTY AND COST: $1,560.70
CODE AREA: 17049

B. PROPERTY TAXES, INCLUDING ANY PERSONAL PROPERTY TAXES AND ANY ASSESSMENTS COLLECTED WITH TAXES, ARE AS FOLLOWS:

TAX IDENTIFICATION NO.: 273-110-08-00
FISCAL YEAR: 2018-2019
1ST INSTALLMENT: $1,110.71, OPEN (DELINQUENT AFTER DECEMBER 10)
PENALTY: $111.07
2ND INSTALLMENT: $1,110.71, OPEN (DELINQUENT AFTER APRIL 10)
PENALTY AND COST: $121.07
CODE AREA: 17048

C. PROPERTY TAXES, INCLUDING ANY PERSONAL PROPERTY TAXES AND ANY ASSESSMENTS COLLECTED WITH TAXES, ARE AS FOLLOWS:

TAX IDENTIFICATION NO.: 273-110-18-00
FISCAL YEAR: 2018-2019
1ST INSTALLMENT: $974.44, OPEN (DELINQUENT AFTER DECEMBER 10)
PENALTY: $97.44
2ND INSTALLMENT: $974.44, OPEN (DELINQUENT AFTER APRIL 10)
PENALTY AND COST: $107.44
CODE AREA: 17049

D. THE LIEN OF SUPPLEMENTAL OR ESCAPED ASSESSMENTS OF PROPERTY TAXES, IF ANY, MADE PURSUANT TO THE PROVISIONS OF CHAPTER 3.5 (COMMENCING WITH SECTION 75) OR PART 2, CHAPTER 3, ARTICLES 3 AND 4, RESPECTIVELY, OF THE REVENUE AND TAXATION CODE OF THE STATE OF CALIFORNIA AS A RESULT OF THE TRANSFER OF TITLE TO THE VESTEE NAMED IN SCHEDULE A OR AS A RESULT OF CHANGES IN OWNERSHIP OR NEW CONSTRUCTION OCCURRING PRIOR TO DATE OF POLICY.

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

2 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: SEPTEMBER 8, 1930, IN BOOK 1817, PAGE 122, OF DEEDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

AN AGREEMENT TO MODIFY THE TERMS AND PROVISIONS OF SAID DOCUMENT AS THEREIN PROVIDED. RECORDED: JULY 2, 1974 AS INSTRUMENT NO. 74-177788, OF OFFICIAL RECORDS

3 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: UNITED STATES OF AMERICA
PURPOSE: PIPELINES OR CONDUITS FOR THE TRANSPORTATION OF WATER, IN, UNDER, UPON AND ACROSS THE SAME, AND FOR ANY OTHER STRUCTURES APPURTENANT
RECORDED: NOVEMBER 17, 1949, IN BOOK 3389, PAGE 426 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

THE ROUTE OF SAID EASEMENT WAS REALIGNED BY A DECLARATION OF TAKING RECORDED APRIL 19, 1955 IN BOOK 5611, PAGE 285 OF OFFICIAL RECORDS.

4. COVENANTS, CONDITIONS AND RESTRICTIONS (BUT OMITTING ANY COVENANT OR RESTRICTIONS, IF ANY, BASED UPON ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW) AS SET FORTH IN THE DOCUMENT

RECORDED: SEPTEMBER 21, 1959, IN BOOK 7891, PAGE 183, OF OFFICIAL RECORDS

NOTE: SECTION 12956.1 OF THE GOVERNMENT CODE PROVIDES THE FOLLOWING: "IF THIS DOCUMENT CONTAINS ANY RESTRICTION BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, NATIONAL ORIGIN, SOURCE OF INCOME AS DEFINED IN SUBDIVISION (P) OF SECTION 12955, OR ANCESTRY, THAT RESTRICTION VIOLATES STATE AND FEDERAL FAIR HOUSING LAWS AND IS VOID, AND MAY BE REMOVED PURSUANT TO SECTION 12956.2 OF THE GOVERNMENT CODE. LAWFUL RESTRICTIONS UNDER STATE AND FEDERAL LAW ON THE AGE OF OCCUPANTS IN SENIOR HOUSING OR HOUSING FOR OLDER PERSONS SHALL NOT BE CONSTRUED AS RESTRICTIONS BASED ON FAMILIAL STATUS."

SAID COVENANTS, CONDITIONS AND RESTRICTIONS PROVIDE THAT A VIOLATION THEREOF SHALL NOT DEFEAT THE LIEN OF ANY MORTGAGE OR DEED OF TRUST MADE IN GOOD FAITH AND FOR VALUE.

5 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: AUGUST 7, 1961 AS INSTRUMENT NO. 135196 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

6 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: UTILITIES, INGRESS AND EGRESS
RECORDED: SEPTEMBER 6, 1961 AS INSTRUMENT NO. 154922 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

7 EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS DELINEATED OR AS OFFERED FOR DEDICATION, ON THE MAP OF SAID TRACT/PLAT;

PURPOSE: SEWER, DRAINAGE AND ACCESS ROAD
AFFECTS: A PORTION OF PARCEL ONE
RECORDING NO: TRACT NO. 4683, DECEMBER 21, 1960

8 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: VALLE VERDE COMMUNITY SERVICES DISTRICT
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: MARCH 20, 1962 AS INSTRUMENT NO. 47093 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

9 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: VALLE VERDE COMMUNITY SERVICES DISTRICT
PURPOSE: ROAD AND PIPELINE PURPOSES
RECORDED: MARCH 20, 1962 AS INSTRUMENT NO. 47094 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

10 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: VALLE VERDE COMMUNITY SERVICES DISTRICT
PURPOSE: SEWAGE TREATMENT PLANT AND WATER RECLAMATION PLANT AND A PIPELINE OR PIPELINES
RECORDED: MARCH 20, 1962 AS INSTRUMENT NO. 47095 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

11 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: POWAY MUNICIPAL WATER DISTRICT
PURPOSE: PIPELINES
RECORDED: APRIL 25, 1962 AS INSTRUMENT NO. 70974 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

12 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: FEBRUARY 20, 1963 AS INSTRUMENT NO. 30748 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

13 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: APRIL 23, 1963 AS INSTRUMENT NO. 69852 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

TITLE REPORT EXCEPTIONS CONTINUED

14 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: APRIL 23, 1963 AS INSTRUMENT NO. 69853 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

15. A DOCUMENT ENTITLED "AGREEMENT AND CONSENT RELATING TO ENCROACHMENT ON EASEMENT OF FIRST SAN DIEGO AQUEDUCT,"EXECUTED BY THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY, ET AL, SUBJECT TO ALL THE TERMS, PROVISION(S) AND CONDITIONS THEREIN CONTAINED, RECORDED DECEMBER 19, 1963, AS INSTRUMENT NO. 226291, OF OFFICIAL RECORDS.

16. COVENANTS, CONDITIONS AND RESTRICTIONS (BUT OMITTING ANY COVENANT OR RESTRICTIONS, IF ANY, BASED UPON ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW) AS SET FORTH IN THE DOCUMENT

RECORDED: JUNE 17, 1970 AS INSTRUMENT NO. 105100, OF OFFICIAL RECORDS

NOTE: SECTION 12956.1 OF THE GOVERNMENT CODE PROVIDES THE FOLLOWING: "IF THIS DOCUMENT CONTAINS ANY RESTRICTION BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, NATIONAL ORIGIN, SOURCE OF INCOME AS DEFINED IN SUBDIVISION (P) OF SECTION 12955, OR ANCESTRY, THAT RESTRICTION VIOLATES STATE AND FEDERAL FAIR HOUSING LAWS AND IS VOID, AND MAY BE REMOVED PURSUANT TO SECTION 12956.2 OF THE GOVERNMENT CODE. LAWFUL RESTRICTIONS UNDER STATE AND FEDERAL LAW ON THE AGE OF OCCUPANTS IN SENIOR HOUSING OR HOUSING FOR OLDER PERSONS SHALL NOT BE CONSTRUED AS RESTRICTIONS BASED ON FAMILIAL STATUS."

SAID COVENANTS, CONDITIONS AND RESTRICTIONS PROVIDE THAT A VIOLATION THEREOF SHALL NOT DEFEAT THE LIEN OF ANY MORTGAGE OR DEED OF TRUST MADE IN GOOD FAITH AND FOR VALUE.

MODIFICATION(S) OF SAID COVENANTS, CONDITIONS AND RESTRICTIONS

RECORDED: AUGUST 13, 1971 AS INSTRUMENT NO. 180213, OF OFFICIAL RECORDS

17 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: COUNTY OF SAN DIEGO
PURPOSE: DRAINAGE
RECORDED: APRIL 29, 1971 AS INSTRUMENT NO. 86896 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

18. A DOCUMENT SUBJECT TO ALL THE TERMS, PROVISIONS AND CONDITIONS THEREIN CONTAINED.

ENTITLED: DECLARATION OF COVENANTS FOR STREET IMPROVEMENTS
RECORDED: MAY 27, 1971 AS INSTRUMENT NO. 111220, OF OFFICIAL RECORDS

19 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: THE COUNTY OF SAN DIEGO
PURPOSE: DRAINAGE
RECORDED: MAY 27, 1971 AS INSTRUMENT NO. 111221 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

20 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: JONATHAN LIPPITT
PURPOSE: UNDERGROUND COMMUNICATION PURPOSES AND UTILITIES
RECORDED: NOVEMBER 30, 1971 AS INSTRUMENT NO. 278237 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

21 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: JONATHAN LIPPITT
PURPOSE: UNDERGROUND COMMUNICATION PURPOSES AND UTILITIES
RECORDED: NOVEMBER 30, 1971 AS INSTRUMENT NO. 278245 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

22. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: JONATHAN LIPPITT
PURPOSE: UNDERGROUND COMMUNICATION PURPOSES AND UTILITIES
RECORDED: NOVEMBER 30, 1971 AS INSTRUMENT NO. 278246 OF OFFICIAL RECORDS
AFFECTS: EXACT LOCATION NOT SHOWN OF RECORD.

23 EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS DELINEATED OR AS OFFERED FOR DEDICATION, ON THE RECORDED MAP SHOWN BELOW:

MAP OF: STONERIDGE UNIT NO. 1, MAP NO. 7550
PURPOSE: A PERPETUAL EASEMENT FOR OPEN SPACE OVER, UPON, ACROSS AND UNDER THAT SUBJECT LAND AND NO BUILDINGS, STRUCTURE OR OTHER THING WHATSOEVER SHALL BE CONSTRUCTED, ERECTED, PLACED OR MAINTAINED ON THE SUBJECT LAND EXCEPT AS MAY BE PERMITTED BY A SPECIAL USE PERMIT ISSUED PURSUANT TO THE ZONING ORDINANCE OF THE COUNTY OF SAN DIEGO
AFFECTS: THAT PORTION OF SAID LAND AS SHOWN ON SAID MAP.

A PORTION OF SAID EASEMENT HAS BEEN VACATION AND ABANDONED BY RESOLUTION RECORDED JUNE 12, 1979 AS INSTRUMENT NO. 79-242994 OF OFFICIAL RECORDS AND RE-RECORDED OCTOBER 30, 1979 AS INSTRUMENT NO. 79-455083 OF OFFICIAL RECORDS.

24. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: HWEI-CHIH HSUI AND JULIA JO-TIN HSUI
PURPOSE: DRIVE WAY AND INCIDENTAL PURPOSES
RECORDED: APRIL 13, 1972 AS INSTRUMENT NO. 90874 OF OFFICIAL RECORDS
AFFECTS: EXACT LOCATION NOT SHOWN OF RECORD.

25 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO COUNTY FLOOD CONTROL DISTRICT
PURPOSE: DRAINAGE CHANNELS
RECORDED: MAY 9, 1972 AS INSTRUMENT NO. 116481 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

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

GRANTED TO: POWAY MUNICIPAL WATER DISTRICT, A PUBLIC CORPORATION
PURPOSE: RIGHT OF WAY
RECORDING DATE: JANUARY 31, 1973
RECORDING NO: 1973-027705 OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT.

27 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: MARCH 19, 1973 AS INSTRUMENT NO. 73-071284 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

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

GRANTED TO: SAN DIEGO COUNTY FLOOD CONTROL DISTRICT ZONE 1
PURPOSE: DRAINAGE CHANNEL AND ALL STRUCTURES INCIDENTAL THERETO
RECORDING DATE: JULY 13, 1973
RECORDING NO: 1973-194636 OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT.

29 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: POMERADO COUNTY WATER DISTRICT
PURPOSE: SEWER PIPELINES
RECORDED: OCTOBER 12, 1973 AS INSTRUMENT NO. 73-287796 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

30 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO COUNTY FLOOD CONTROL DISTRICT
PURPOSE: DRAINAGE CHANNEL
RECORDED: AUGUST 19, 1974 AS INSTRUMENT NO. 74-224982 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

TITLE REPORT EXCEPTIONS CONTINUED

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

GRANTED TO: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: TRANSFORMER PAD
RECORDING DATE: NOVEMBER 13, 1974
RECORDING NO: 1974-300157 OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT.

32 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: NOVEMBER 19, 1974 AS INSTRUMENT NO. 74-305009 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

33. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: DECEMBER 17, 1974 AS INSTRUMENT NO. 74-326926 OF OFFICIAL RECORDS
AFFECTS: EXACT LOCATION NOT SHOWN OF RECORD.

34 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: POWAY MUNICIPAL WATER DISTRICT
PURPOSE: PIPELINES
RECORDED: OCTOBER 27, 1976 AS INSTRUMENT NO. 76-358148 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

35 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: AUGUST 30, 1977 AS INSTRUMENT NO. 77-355795 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

36 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: POWAY MUNICIPAL WATER DISTRICT
PURPOSE: PIPELINES
RECORDED: JUNE 29, 1979 AS INSTRUMENT NO. 79-270592 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

37. AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: OCTOBER 15, 1981 AS INSTRUMENT NO. 81-326907 OF OFFICIAL RECORDS
AFFECTS: EXACT LOCATION NOT SHOWN OF RECORD.

38 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: MAY 24, 1984 AS INSTRUMENT NO. 84-194923 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

39 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE: PUBLIC UTILITIES, INGRESS AND EGRESS
RECORDED: APRIL 11, 1989 AS INSTRUMENT NO. 89-187647 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

40. A DOCUMENT SUBJECT TO ALL THE TERMS, PROVISIONS AND CONDITIONS THEREIN CONTAINED.

ENTITLED: COVENANT REGARDING REAL PROPERTY
RECORDED: FEBRUARY 5, 1990 AS INSTRUMENT NO. 90-063343, OF OFFICIAL RECORDS

41. A DOCUMENT SUBJECT TO ALL THE TERMS, PROVISIONS AND CONDITIONS THEREIN CONTAINED.

ENTITLED: COVENANT REGARDING ENCROACHMENT REMOVAL AGREEMENT NO. 97-026
RECORDED: DECEMBER 10, 1997 AS INSTRUMENT NO. 1997-0626008, OF OFFICIAL RECORDS

42. A DOCUMENT SUBJECT TO ALL THE TERMS, PROVISIONS AND CONDITIONS THEREIN CONTAINED.

ENTITLED: COVENANT REGARDING ENCROACHMENT REMOVAL AGREEMENT NO. 99-073
RECORDED: JANUARY 27, 2000 AS INSTRUMENT NO. 2000-0041760, OF OFFICIAL RECORDS

43 AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT. (NO REPRESENTATION IS MADE AS TO THE PRESENT OWNERSHIP OF SAID EASEMENT)

IN FAVOR OF: CITY OF POWAY
PURPOSE: PIPELINE OR PIPELINES, TOGETHER WITH SUCH FIXTURES AND APPURTENANCES TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS
RECORDED: FEBRUARY 18, 2000 AS INSTRUMENT NO. 2000-084437 OF OFFICIAL RECORDS
AFFECTS: THAT PORTION OF SAID LAND AS DESCRIBED IN THE DOCUMENT ATTACHED HERETO.

44. A DOCUMENT SUBJECT TO ALL THE TERMS, PROVISIONS AND CONDITIONS THEREIN CONTAINED.

ENTITLED: COVENANT REGARDING ENCROACHMENT REMOVAL AGREEMENT NO. 2000-024
RECORDED: MAY 25, 2000 AS INSTRUMENT NO. 2000-0273519, OF OFFICIAL RECORDS

45. A DOCUMENT ENTITLED "JOINT USE AGREEMENT BETWEEN THE CITY OF POWAY AND THE SAN DIEGO COUNTY WATER AUTHORITY".
DATED AUGUST 3, 2000 EXECUTED BY SAN DIEGO COUNTY WATER AUTHORITY AND CITY OF POWAY, SUBJECT TO ALL THE TERMS, PROVISION(S) AND CONDITIONS THEREIN CONTAINED.
RECORDED AUGUST 3, 2000, AS INSTRUMENT NO. 2000-0411132, OF OFFICIAL RECORDS.

46. A DEED OF TRUST TO SECURE AN INDEBTEDNESS IN THE AMOUNT SHOWN BELOW,

AMOUNT: $9,000,000.00
DATED: JANUARY 2, 2018
TRUSTOR/GRANTOR NO STONE LEFT UNTURNED, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY
TRUSTEE: CHICAGO TITLE INSURANCE COMPANY
BENEFICIARY: STONERIDGE CC LENDING COMPANY LLC
RECORDING DATE: JANUARY 10, 2018
RECORDING NO: 2018-0011125 OF OFFICIAL RECORDS

PREPARED BY:
HUNSAKER & ASSOCIATES SAN DIEGO, INC
PLANNING: 9707 Waples Street
ENGINEERING: San Diego, Ca 92121
SURVEYING: PH(858)558-4500 FX(858)558-1414

TENTATIVE MAP/ GPA/ REZONE/ SPP18-001
THE FARM IN POWAY
CITY OF POWAY, CALIFORNIA

SHEET 11 OF 15

W.O. 3526-0002

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NOTE:

△ SEE SHEET 11 FOR LIST OF EXCEPTIONS PER THE TITLE REPORT REFERENCED.

PREPARED BY:

HUNSAKER & ASSOCIATES SAN DIEGO, INC

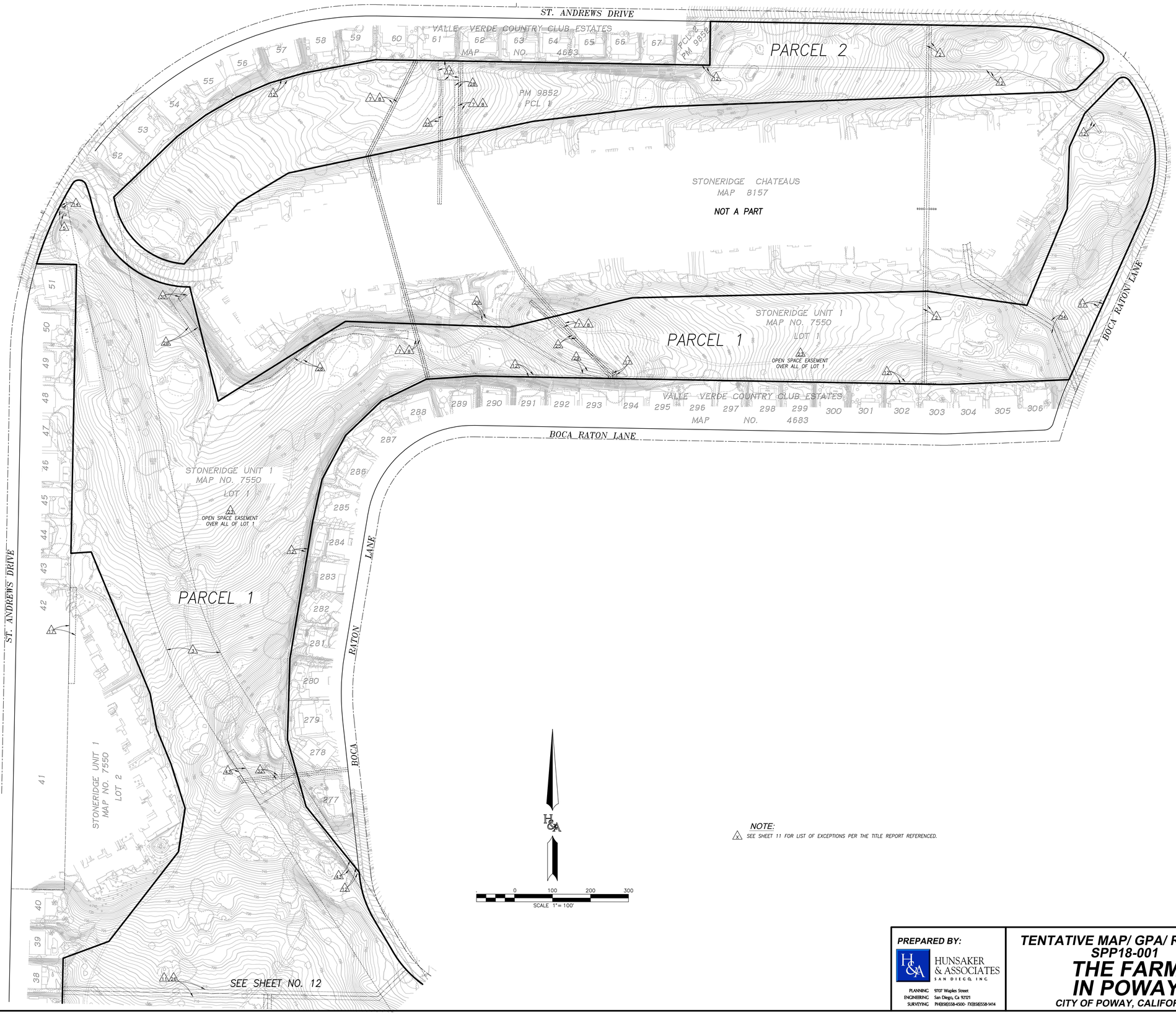
PLANNING 9707 Waples Street
ENGINEERING San Diego, Ca 92121
SURVEYING PH(858)558-4500 FX(858)558-1414

TENTATIVE MAP/ GPA/ REZONE/ SPP18-001
THE FARM IN POWAY
CITY OF POWAY, CALIFORNIA

SHEET 12 OF 15

W.O. 3526-0002

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NOTE:

SEE SHEET 11 FOR LIST OF EXCEPTIONS PER THE TITLE REPORT REFERENCED.

PREPARED BY:

HUNSAKER & ASSOCIATES SAN DIEGO, INC

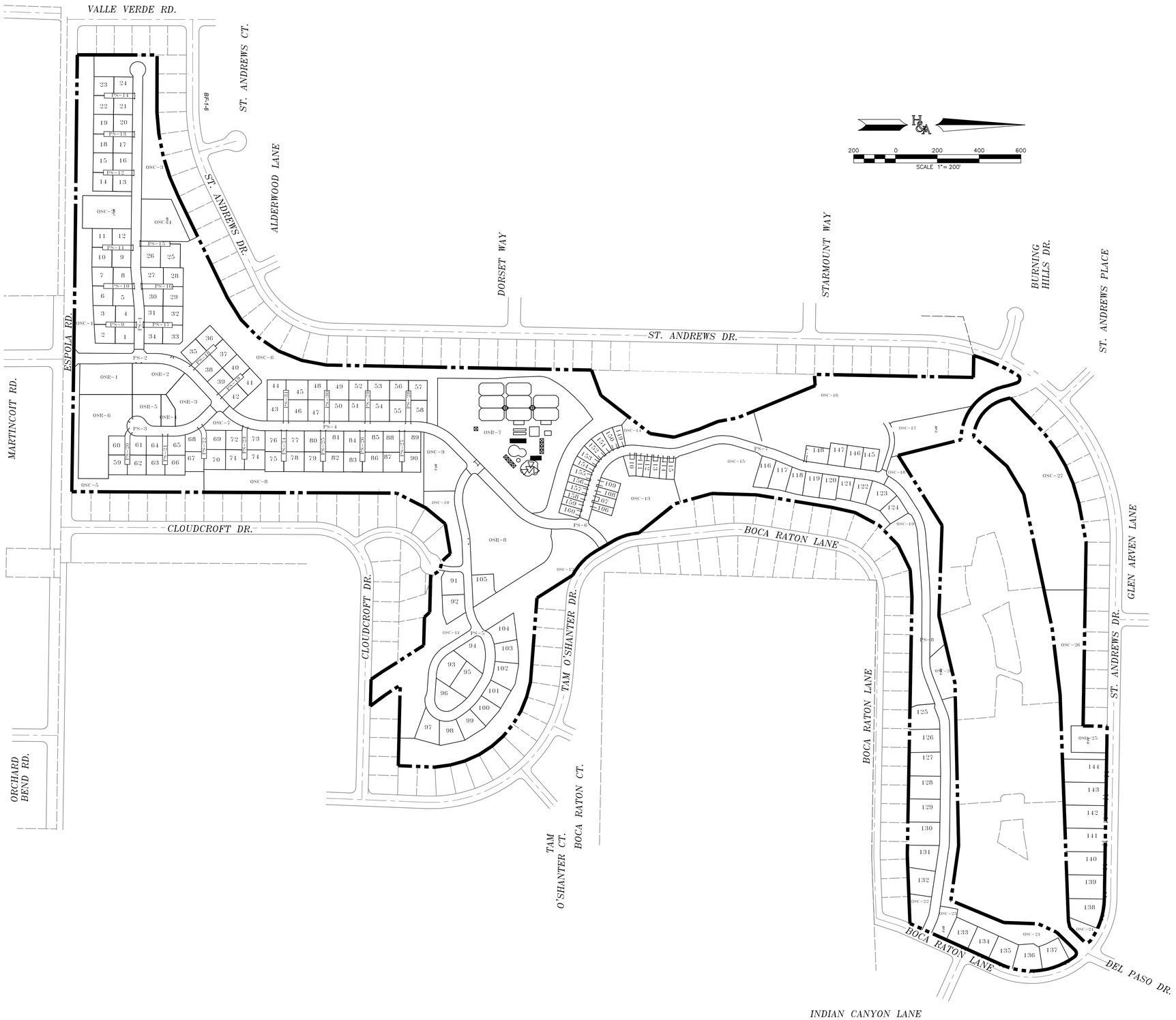
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TENTATIVE MAP/ GPA/ REZONE/ SPP18-001
THE FARM IN POWAY
CITY OF POWAY, CALIFORNIA

SHEET 13 OF 15

W.O. 3526-0002

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LOT SUMMARY SHEET

PREPARED BY:

HUNSAKER & ASSOCIATES SAN DIEGO, INC

PLANNING 9707 Waples Street
ENGINEERING San Diego, Ca 92121
SURVEYING PH(858)558-4500 · FX(858)558-1414

TENTATIVE MAP/ GPA/ REZONE/ SPP18-001
THE FARM IN POWAY
CITY OF POWAY, CALIFORNIA

SHEET 14 OF 15

W.O. 5526-0002

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COTTAGE LOTS (R-C)		
LOT NO.	SQFT.	AC.
1	7,098	0.16
2	8,301	0.19
3	8,881	0.20
4	7,064	0.16
5	7,976	0.18
6	8,538	0.20
7	8,495	0.20
8	6,799	0.16
9	7,500	0.17
10	8,430	0.19
11	8,021	0.18
12	7,119	0.16
13	7,098	0.16
14	8,010	0.18
15	8,394	0.19
16	7,461	0.17
17	7,098	0.16
18	8,010	0.18
19	8,369	0.19
20	7,461	0.17
21	7,098	0.16
22	8,010	0.18
23	8,010	0.18
24	7,098	0.16
25	10,274	0.24
26	9,572	0.22
27	8,259	0.19
28	8,010	0.18
29	8,390	0.19
30	7,823	0.18
31	6,973	0.16
32	8,010	0.18
33	7,925	0.18
34	6,942	0.16
35	7,416	0.17
36	8,010	0.18
37	8,865	0.20
38	8,526	0.20
39	7,638	0.18
40	8,010	0.18
41	7,979	0.18
42	7,628	0.18
43	7,956	0.18
44	8,010	0.18
45	9,435	0.22
46	9,486	0.22
47	7,956	0.18
48	8,010	0.18
49	9,401	0.22
50	9,523	0.22
51	7,931	0.18
52	8,010	0.18
53	9,401	0.22
54	9,420	0.22
55	7,956	0.18
56	8,010	0.18
57	8,010	0.18
58	8,057	0.18
59	8,010	0.18
60	7,098	0.16
61	7,208	0.17
62	8,010	0.18
63	8,010	0.18
64	7,098	0.16
65	7,772	0.18
66	8,579	0.20
67	8,158	0.19
68	7,296	0.17
69	8,424	0.19
70	9,369	0.22
71	8,010	0.18
72	7,196	0.17
73	8,238	0.19
74	8,788	0.20
75	8,010	0.18
76	7,800	0.18
77	8,560	0.20
78	8,723	0.20
79	8,010	0.18
80	7,800	0.18
81	8,967	0.21
82	8,796	0.20
83	8,010	0.18
84	7,800	0.18
85	8,690	0.20
86	8,856	0.20
87	8,010	0.18
88	7,800	0.18
89	7,788	0.18
90	8,010	0.18
TOTAL	728,055	16.71
MIN.	6,799	0.16
MAX.	10,274	0.24
AVERAGE	8,090	0.19

ESTATE LOTS (R-E)		
LOT NO.	SQFT.	AC.
91	11,565	0.27
92	12,148	0.28
93	14,386	0.33
94	14,963	0.34
95	14,582	0.33
96	14,044	0.32
97	12,996	0.30
98	11,195	0.26
99	11,118	0.26
100	10,832	0.25
101	10,191	0.23
102	12,914	0.30
103	11,026	0.25
104	12,714	0.29
105	13,260	0.30
TOTAL	187,934	4.31
MIN.	10,191	0.23
MAX.	14,963	0.34
AVERAGE	12,529	0.29

TWIN LOTS (R-T)		
LOT NO.	SQFT.	AC.
106	3,496	0.08
107	4,339	0.10
108	3,457	0.08
109	4,574	0.11
110	4,785	0.11
111	3,573	0.08
112	3,359	0.08
113	4,411	0.10
114	3,368	0.08
115	3,943	0.09
149	3,919	0.09
150	4,603	0.11
151	4,919	0.11
152	4,261	0.10
153	4,961	0.11
154	3,928	0.09
155	4,618	0.11
156	3,310	0.08
157	3,968	0.09
158	3,350	0.08
159	3,712	0.09
160	4,388	0.10
TOTAL	89,242	2.05
MIN.	3,310	0.08
MAX.	4,961	0.11
AVERAGE	4,056	0.09

GARDEN LOTS (R-G)		
LOT NO.	SQFT.	AC.
116	10,303	0.24
117	10,888	0.25
118	8,990	0.21
119	9,333	0.21
120	9,274	0.21
121	7,870	0.18
122	9,219	0.21
123	12,553	0.29
124	9,475	0.22
145	7,975	0.18
146	8,179	0.19
147	8,481	0.19
148	8,567	0.20
TOTAL	121,107	2.78
MIN.	7,870	0.18
MAX.	12,553	0.29
AVERAGE	9,316	0.21

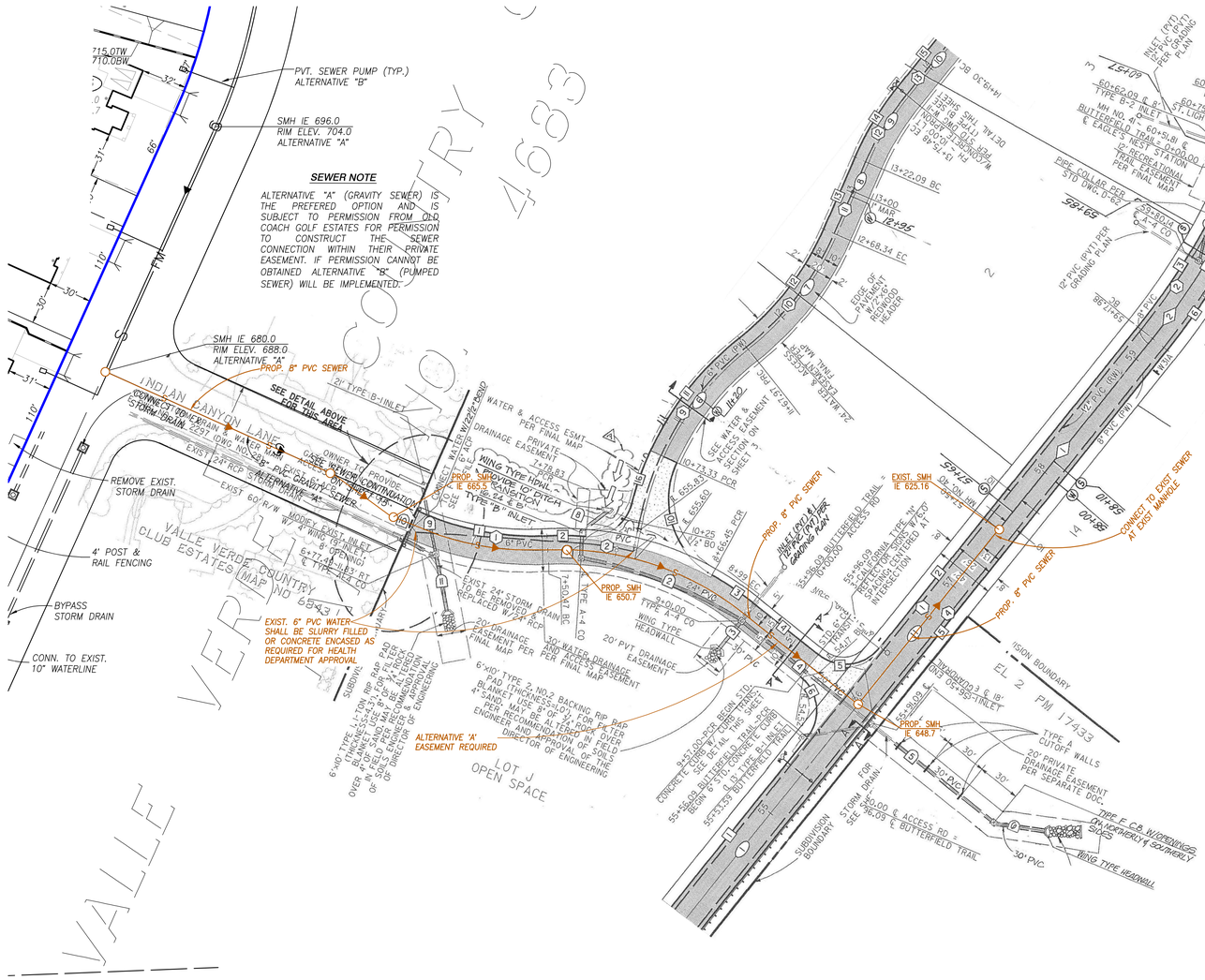
HOMESTEAD LOTS (R-H)		
LOT NO.	SQFT	AC
125	15,496	0.36
126	16,149	0.37
127	16,303	0.37
128	17,651	0.41
129	16,887	0.39
130	16,944	0.39
131	16,463	0.38
132	15,169	0.35
133	13,210	0.30
134	13,196	0.30
135	13,665	0.31
136	14,994	0.34
137	14,149	0.32
138	19,263	0.44
139	20,384	0.47
140	20,523	0.47
141	21,209	0.49
142	21,656	0.50
143	22,230	0.51
144	23,116	0.53
TOTAL	348,657	8.00
MIN.	13,196	0.30
MAX.	23,116	0.53
AVERAGE	17,433	0.40

OSC LOTS		
LOT NO.	SQFT.	AC.
1	125,418	2.88
2	36,660	0.84
3	92,670	2.13
4	38,155	0.88
5	66,251	1.52
6	331,704	7.61
7	10,394	0.24
8	115,133	2.64
9	41,921	0.96
10	34,200	0.79
11	107,508	2.47
12	198,087	4.55
13	88,119	2.02
14	52,342	1.20
15	116,697	2.68
16	299,787	6.88
17	53,811	1.24
18	60,847	1.40
19	63,650	1.46
20	20,635	0.47
21	82,832	1.90
22	11,962	0.27
23	13,809	0.32
24	8,695	0.20
25	21,714	0.50
26	103,780	2.38
27	230,338	5.29
TOTAL	2,427,119	55.72
AVERAGE	89,893	2.06

OS REC LOTS		
LOT NO.	SQFT.	AC.
1	37,769	0.87
2	30,697	0.70
3	31,137	0.71
4	8,827	0.20
5	17,674	0.41
6	77,454	1.78
7	298,419	6.85
8	136,197	3.13
TOTAL	638,174	14.65
AVERAGE	42,545	0.98

PRIVATE STREETS (PS)		
LOT NO.	SQFT.	AC.
1	65,791	1.51
2	41,443	0.95
3	24,597	0.56
4	62,935	1.44
5	80,426	1.85
6	34,821	0.80
7	77,481	1.78
8	97,937	2.25
9	3,264	0.07
10	3,289	0.08
11	3,264	0.07
12	3,264	0.07
13	3,264	0.07
14	3,264	0.07
15	3,336	0.08
16	3,499	0.08
17	3,216	0.07
18	3,484	0.08
19	3,430	0.08
20	3,741	0.09
21	3,264	0.07
22	3,651	0.08
23	3,676	0.08
24	3,480	0.08
25	3,480	0.08
26	3,480	0.08
27	3,480	0.08
28	3,528	0.08
29	3,528	0.08
30	3,528	0.08
31	3,528	0.08
TOTAL	564,369	12.96
AVERAGE	18,205	0.42

PROJECT SUMMARY		
NEIGHBORHOOD	SQFT.	AC.
HOMESTEAD LOTS	348,657	8.00
GARDEN LOTS	121,107	2.78
ESTATE LOTS	187,934	4.31
TWIN LOTS	89,242	2.05
COTTAGE LOTS	728,055	16.71
OSC LOTS	2,427,119	55.72
OSR LOTS	638,174	14.65
PVT STREETS	564,369	12.96
TOTAL AREA	5,104,657	117.19



GRAVITY SEWER TO BUTTERFIELD, ALTERNATIVE 'A'

CONTINUED FROM SHEET 9 **1"= 40'**

LOT SUMMARY TABLES

PREPARED BY:
HUNSAKER & ASSOCIATES SAN DIEGO, INC
PLANNING 9707 Waples Street
ENGINEERING San Diego, Ca 92121
SURVEYING PH(858)558-4500 · FX(858)558-1414

TENTATIVE MAP/ GPA/ REZONE/ SPP18-001

THE FARM IN POWAY

CITY OF POWAY, CALIFORNIA

SHEET 15 OF 15

W.O. 3526-0002

R:\1390\&Pln\Tentative Map\The Farms TM Sheet 15.dwg[]Jan-17-2020:10:14

ATTACHMENT 5 – COPY OF PROJECT'S DRAINAGE REPORT

This is the cover sheet for Attachment 5.

If hardcopy or CD is not attached, the following information should be provided:

Title:
Prepared By:
Date:

DRAINAGE REPORT INCLUDED AS A SEPERATE DOCUMENT

ATTACHMENT 6 – COPY OF PROJECT'S GEOTECHNICAL REPORT

This is the cover sheet for Attachment 6.

If hardcopy or CD is not attached, the following information should be provided:

Title: Geologic Reconnaissance The Farms Poway
Prepared By: Geocon Inc.
Date: 4/10/2019

GEOLOGIC RECONNAISSANCE

THE FARMS AT POWAY
POWAY, CALIFORNIA

GEOCON
INCORPORATED

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

COLLIERS INTERNATIONAL
SAN DIEGO, CALIFORNIA

APRIL 10, 2019
PROJECT NO. G2158-32-04

Project No. G2158-32-04
April 10, 2019

Colliers International
4350 La Jolla Village Drive, Suite 500
San Diego, California 92122

Attention: Ms. Erin McKinley

Subject: GEOLOGIC RECONNAISSANCE
THE FARMS AT POWAY
POWAY, CALIFORNIA

Dear Ms. McKinley:

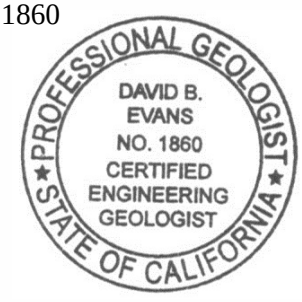
In accordance with your authorization of our Proposal No. LG-18396, dated October 23, 2018, we have performed a geologic reconnaissance for The Farms at Poway project in Poway, California. The accompanying report describes the soil and geologic conditions on the property and provides geotechnical considerations related to future design and construction.

If you have any questions regarding this study, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON INCORPORATED

David B. Evans
CEG 1860



Trevor E. Myers
RCE 63773



Joseph P. Pagnillo
CEG 2679



DBE:TEM:JPP:dmc

(e-mail) Addressee

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