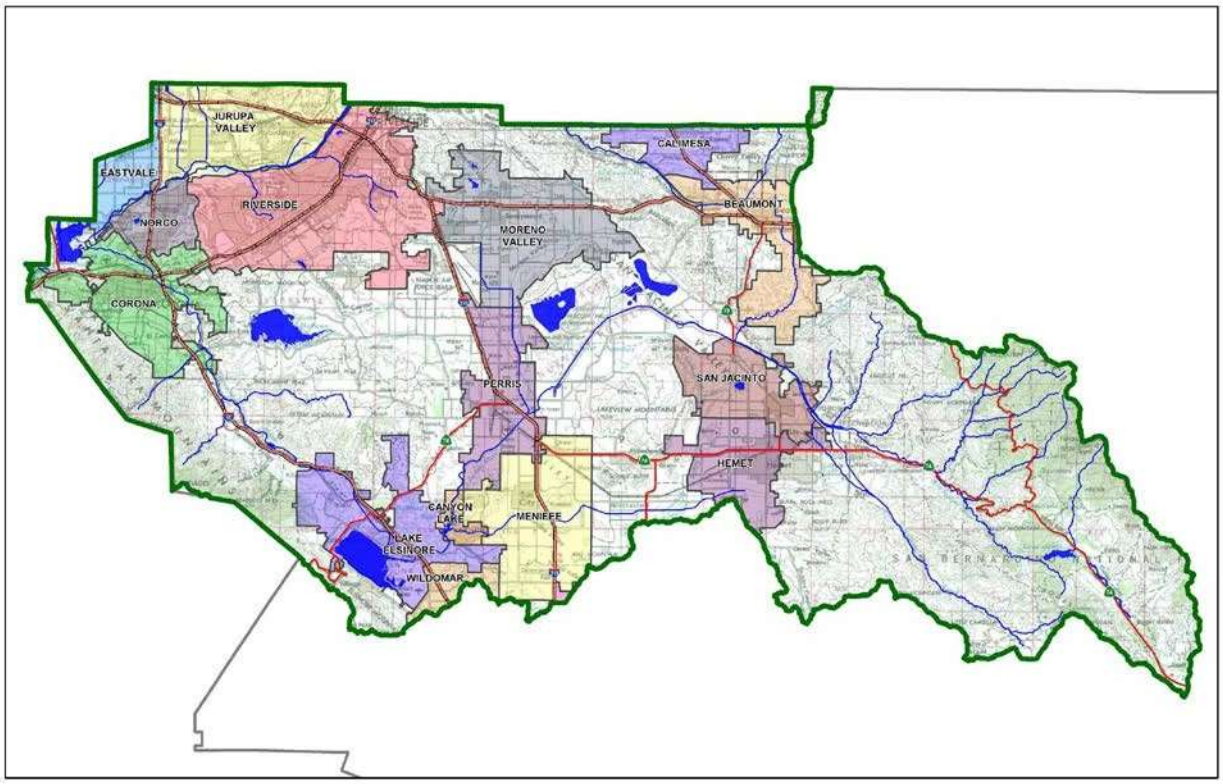
Project Specific Water Quality Management Plan

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

Project Title: APN 115-210-032 (NO ADDRESS ASSIGNED YET) LIGHT MANUFACTURING

Development No: DPR2022-0016

Design Review/Case No: WQ23-011P, PWWQ2023-0013



☒ **Preliminary**
☐ **Final**

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Prepared for Compliance with
Regional Board Order No. **R8-2010-0033**

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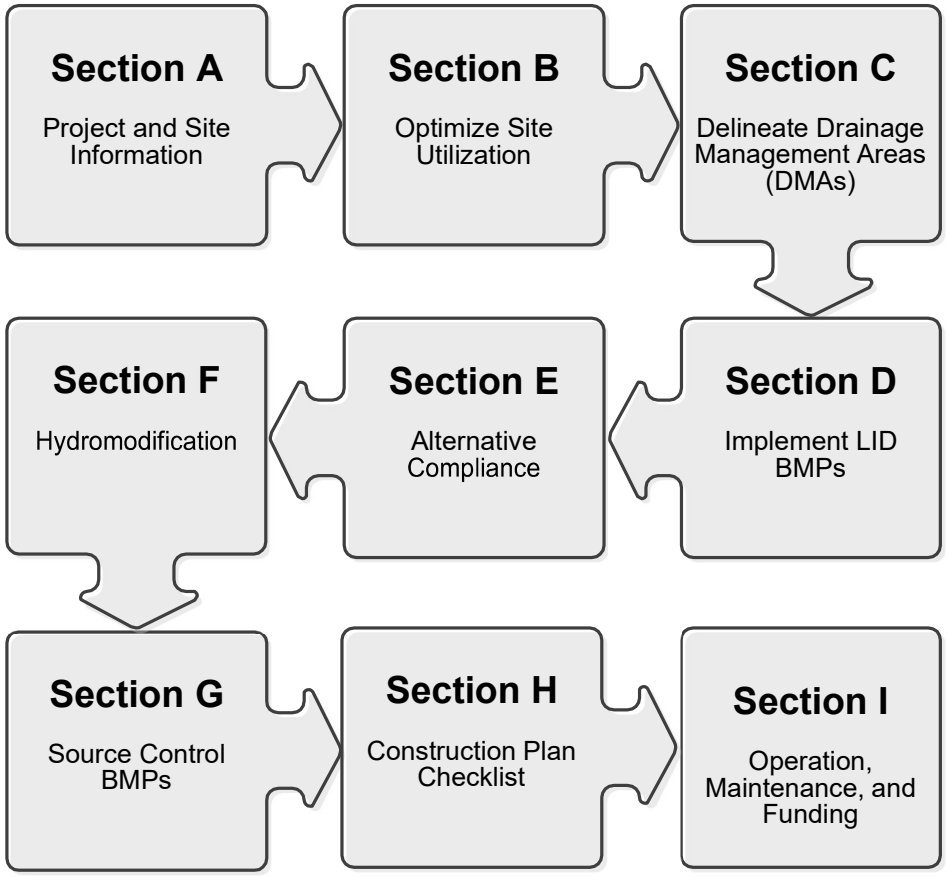
A Brief Introduction

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



OWNER'S CERTIFICATION

This Project-Specific Water Quality Management Plan (WQMP) has been prepared for Netzer Admati by Greystone Engineering Group for the APN 115-210-032 (NO ADDRESS ASSIGNED YET) LIGHT MANUFACTURING project.

This WQMP is intended to comply with the requirements of the City of Corona for R8-2010-0033; which includes the requirement for the preparation and implementation of a Project-Specific WQMP.

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

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

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

PREPARER'S CERTIFICATION

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

Preparer's Signature	Date
SOHEIL MOEINI	CIVIL ENGINEER
Preparer's Printed Name	Preparer's Title/Position

Preparer's Licensure:

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Section A: Project and Site Information

PROJECT INFORMATION	
Type of Project:	Light Manufacturing
Planning Area:	Temescal Canyon
Community Name:	Home Gardens
Development Name:	APN 115-210-032 (NO ADDRESS ASSIGNED YET) LIGHT MANUFACTURING
PROJECT LOCATION	
Latitude & Longitude (DMS): 33.874589, -117.531720	
Project Watershed and Sub-Watershed: SANTA ANA WATERSHED, TEMESCAL WASH	
APN(s): 115-210-032	
Map Book and Page No.: 201 pages 67-69	
PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s)	Light Manufacturing
Proposed or Potential SIC Code(s)	N/A
Area of Impervious Project Footprint (SF)	28,634 S.F.
Total Area of proposed Impervious Surfaces within the Project Limits (SF)/or Replacement	28,634 S.F.
Does the project consist of offsite road improvements?	☐ Y ☒ N
Does the project propose to construct unpaved roads?	☐ Y ☒ N
Is the project part of a larger common plan of development (phased project)?	☐ Y ☒ N
EXISTING SITE CHARACTERISTICS	
Total area of existing Impervious Surfaces within the project limits (SF)	0 S.F.
Is the project located within any MSHCP Criteria Cell?	☐ Y ☒ N
If so, identify the Cell number:	N/A
Are there any natural hydrologic features on the project site?	☐ Y ☒ N
Is a Geotechnical Report attached?	☒ Y ☐ N
If no Geotech. Report, list the NRCS soils type(s) present on the site (A, B, C and/or D)	Soil type B
What is the Water Quality Design Storm Depth for the project?	0.68

A.1 Maps and Site Plans

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

- Drainage Management Areas
- Proposed Structural BMPs
- Drainage Path
- Drainage Infrastructure, Inlets, Overflows
- Source Control BMPs
- Buildings, Roof Lines, Downspouts
- Impervious Surfaces
- Standard Labeling

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

A.2 Identify Receiving Waters

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

Table A.1 Identification of Receiving Waters

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Temescal Creek – Reach 1	pH	Water Contact Recreation Warm Freshwater Habitat	N/A
Prado Basin	pH	Water Contact Recreation Warm Freshwater Habitat	N/A
Santa Ana River, Reach 3	Copper, Lead, Indicator Bacteria,	Water Contact Recreation Warm Freshwater Habitat	N/A

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

Table A.2 Other Applicable Permits

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

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

Section B: Optimize Site Utilization (LID Principles)

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

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

Site Optimization

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

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

Existing drainage pattern involves a nearly flat lot, with a slight slope towards the north-east of the property, draining to an existing stormwater catch basin. Drainage patterns were adjusted slightly to accommodate for low spots with catch basins to properly collect the water and divert it to the infiltration system, before yet again sending overflow to the existing stormwater catch basin a the northeast of the property along S. Promenade Ave.

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

Existing vegetation on the site consists of a few trees around the edges of the property, most of these trees fall within the proposed landscape area of the development and can therefore be protected and kept. While the majority of the existing lot is open soil.

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

Per the soils report located in Appendix 3, exhibit 3A. The site is capable of infiltrating water at a rate of 3.9, beginning 5' below the surface. This natural infiltration capacity was preserved by directing all site drainage to a infiltration trench, sized to properly infiltrate the entire site.

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

The site currently has no impervious area, therefore any development would increase impervious area. However, per our calculations the new impervious areas will cause a less than 5% increase to the existing storm water system draining along S. Promenade Ave.

Section B: Optimize Site Utilization (LID Principles)

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

All site runoff has been accounted for and per the adjusted drainage patterns, drains to and is treated through an on-site infiltration trench. Overflow follows the existing path to the existing storm water basin along S. Promenade Ave.

Section C: Delineate Drainage Management Areas (DMAs)

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

Table C.1 DMA Classifications

DMA Name or ID	Surface Type(s)[1]	Area (Sq. Ft.)	DMA Type
DMA-1	Roofs, Concrete/Asphalt, Landscaping, Open Space	32,352	
A1	Roofs & Hardscape	28,243	Type D
A2	Landscaping	4,109	Type A

[1] *Reference Table 2-1 in the WQMP Guidance Document to populate this column*

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

DMA Name or ID	Area (Sq. Ft.)	Stabilization Type	Irrigation Type (if any)
A2	4,109	Planting Area	N/A

Table C.3 Type 'B', Self-Retaining Areas

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

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

Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas

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

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

DMA Name or ID	BMP Name or ID
A1	INFILTRATION TRANCH

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

Section D: Implement LID BMPs

D.1 Infiltration Applicability

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

If yes has been checked, Infiltration BMPs shall not be used for the site. If no, continue working through this section to implement your LID BMPs. It is recommended that you contact your Co-Permittee to verify whether or not your project discharges to an approved downstream 'Highest and Best Use' feature.

Geotechnical Report

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

Is this project classified as a small project consistent with the requirements of Chapter 2 of the WQMP Guidance Document? ☒ Y ☐ N 0.86 acres approx.

Infiltration Feasibility

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

Table D.1 Infiltration Feasibility

Does the project site…	YES	NO
…have any DMAs with a seasonal high groundwater mark shallower than 10 feet?		X
If Yes, list affected DMAs:		
…have any DMAs located within 100 feet of a water supply well?		X
If Yes, list affected DMAs:		
…have any areas identified by the geotechnical report as posing a public safety risk where infiltration of stormwater could have a negative impact?		X
If Yes, list affected DMAs:		
…have measured in-situ infiltration rates of less than 1.6 inches / hour? *Measured infiltration rate3.39 inches/hr*	X	
If Yes, list affected DMAs:		
…have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface?		X
If Yes, list affected DMAs:		
…geotechnical report identify other site-specific factors that would preclude effective and safe infiltration?		X
Describe here:		

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

D.2 Harvest and Use Assessment

Please check what applies*:*

- ☐ Reclaimed water will be used for the non-potable water demands for the project.
- ☐ Downstream water rights may be impacted by Harvest and Use as approved by the Regional Board (verify with the Copermittee).
- ☒ The Design Capture Volume will be addressed using Infiltration Only BMPs. In such a case, Harvest and Use BMPs are still encouraged, but it would not be required if the Design Capture Volume will be infiltrated or evapotranspired.

If any of the above boxes have been checked, Harvest and Use BMPs need not be assessed for the site. If neither of the above criteria applies, follow the steps below to assess the feasibility of irrigation use, toilet use and other non-potable uses (e.g., industrial use).

Therefore, Harvest and Use is not required for this Project

Irrigation Use Feasibility

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

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

Total Area of Irrigated Landscape: **0.11 (Acres)**

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

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

Total Area of Impervious Surfaces: **0.75 (Acres)**

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

Enter your EIATIA factor: **0.72**

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

Minimum required irrigated area: **0.54 (Acres)**

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

Minimum required irrigated area (Step 4)	Available Irrigated Landscape (Step 1)
0.54 (Acres)	0.11 (Acres)

Therefore, Irrigation Use is not feasible for this project

Toilet Use Feasibility

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

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

Projected Number of Daily Toilet Users: To be provided on final

Project Type: ***Light Manufacturing***

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

Total Area of Impervious Surfaces: ***0.75 (Acres)***

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-1 in Chapter 2 to determine the minimum number or toilet users per tributary impervious acre (TUTIA).

Enter your TUTIA factor: ***219***

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

Minimum number of toilet users: 164

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

Minimum required Toilet Users (Step 4)	Projected number of toilet users (Step 1)
164	?

Other Non-Potable Use Feasibility

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

N/A

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

Average Daily Demand: Projected Average Daily Use (gpd)

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

Total Area of Impervious Surfaces: Insert Area (Acres)

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

Enter the factor from Table 2-3: Enter Value

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

Minimum required use: Minimum use required (gpd)

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

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

If Irrigation, Toilet and Other Use feasibility anticipated demands are less than the applicable minimum values, Harvest and Use BMPs are not required and you should proceed to utilize LID Bioretention and Biotreatment, unless a site-specific analysis has been completed that demonstrates technical infeasibility as noted in D.3 below.

D.3 Bioretention and Biotreatment Assessment

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

Select one of the following:

- ☐ LID Bioretention/Biotreatment BMPs will be used for some or all DMAs of the project as noted below in Section D.4 (note the requirements of Section 3.4.2 in the WQMP Guidance Document).
- ☐ A site-specific analysis demonstrating the technical infeasibility of all LID BMPs has been performed and is included in Appendix 5. If you plan to submit an analysis demonstrating the technical infeasibility of LID BMPs, request a pre-submittal meeting with the Copermittee to discuss this option. Proceed to Section E to document your alternative compliance measures.

D.4 Feasibility Assessment Summaries

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

Table D.2 LID Prioritization Summary Matrix

DMA Name/ID	LID BMP Hierarchy				No LID (Alternative Compliance)
	1. Infiltration	2. Harvest and use	3. Bioretention	4. Biotreatment	
A1	☒	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

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

Per the soils report prepared by Soil Pacific Inc; and dated August 8,2024, (see appendix 3, Exhibit 3A): the infiltration rate is 3.39 inches per hour at 5 feet or deeper below the surface. Thus infiltration is possible for this site.

Permeable Pavement was ruled out as the site is a high traffic area.

Therefore, an Infiltration Trench system is proposed to properly infiltrate A1 to the site. The stormwater will be collected in a series of catch basins and downspouts and directed Trench 1 (see appendix 1, exhibit 1G). Per our calculations (See appendix 6, Exhibit 6B), we will need a treatment flow of approximately 0.7 cubic feet per second treated by the BMP device for area A1.

Area A2 is all landscape area and has the ability to self-treat via irrigation and infiltration. As per the aforementioned soils report, infiltration is feasible and has therefore been selected to mitigate this project.

D.5 LID BMP Sizing

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

Table D.3 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Enter BMP Name / Identifier Here*		
BASIN 1	[A]		[B]	[C]	[A] x [C]			
A1	28,643	Roofs/Asphalt	1	0.89	25,541.5			
						Design Storm Depth (in)	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
	A_T = 28,643				Σ= 25,192.8	0.7	1,469.6	4,470

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

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

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

Section E: Alternative Compliance (LID Waiver Program)

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

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

- Or -

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

List DMAs here.

E.1 Identify Pollutants of Concern

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

Table E.1 Potential Pollutants by Land Use Type

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

P = Potential

N = Not Potential

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

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

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

(4) Specifically petroleum hydrocarbons

(5) Specifically solvents

(6) Bacterial indicators are routinely detected in pavement runoff

E.2 Stormwater Credits

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

Table E.2 Water Quality Credits

Qualifying Project Categories	Credit Percentage[2]
N/A	
Total Credit Percentage[1]	

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

E.3 Sizing Criteria

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

Table E.3 Treatment Control BMP Sizing

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

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

E.4 Treatment Control BMP Selection

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

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

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

Table E.4 Treatment Control BMP Selection

Selected Treatment Control BMP Name or ID[1]	Priority Pollutant(s) of Concern to Mitigate[2]	Removal Efficiency Percentage[3]
Trench 1	Bacteria, Metals, Nutrients, Pesticides, Toxic Organic Compounds, Sediments, Trash & Debris, Oil & Grease	60% Medium (based on similar project)

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

Section F: Hydromodification

F.1 Hydrologic Conditions of Concern (HCOC) Analysis

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

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

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

If Yes, HCOC criteria do not apply.

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

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

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

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

Table F.1 Hydrologic Conditions of Concern Summary

	2 year – 24 hour		
	Pre-condition	**Post-condition**	**% Difference**
Time of Concentration	15.5	9	42%
Volume (Cubic Feet)	1.37	1.15	16%

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

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

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

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

Prado Dam

F.2 HCOC Mitigation

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

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

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

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

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

Section G: Source Control BMPs

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

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

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

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

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

Table G.1 Permanent and Operational Source Control Measures

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
A. On-site storm drain inlets	• Locations of inlets.	• Mark all inlets with the words "Only Rain Down the Storm Drain" or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify
D1. Need for future indoor & structural pest control		• Note building design features that discourage entry of pests.
D2. Landscape/ Outdoor Pesticide Use	• Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. • Show self-retaining landscape areas, if any. • Show stormwater treatment and hydrograph modification management BMPs. (See instructions in Chapter 3, Step 5 and guidance in Chapter 5.)	State that final landscape plans will accomplish all of the following. • Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. • Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. • Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. • Consider using pest-resistant plants, especially adjacent to hardscape. To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.
G. Refuse areas	• Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas. • If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area. • Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	• State how site refuse will be handled and provide supporting detail to what is shown on plans. • State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.
H. Industrial processes.	• N/A	• N/A
I. Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)	• N/A	• N/A

M. Loading Docks	• Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas shall be drained to the sanitary sewer, or diverted and collected for ultimate discharge to the sanitary sewer. • □ Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. • □ Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer	
N. Fire Sprinkler Test Water	• Provide a means to drain fire sprinkler test water to the sanitary sewer.	• Provide a means to drain fire sprinkler test water to the sanitary sewer.
P. Plazas, sidewalks, and parking lots.		• Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.

Section H: Construction Plan Checklist

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

Table H.1 Construction Plan Cross-reference

BMP No. or ID	BMP Identifier and Description	Corresponding Plan Sheet(s)
TRENCH 1	INFILTRATION SYSTEM	Appendix 1, exhibit 1G; Appendix 6, exhibit 6C&6D

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

Section I: Operation, Maintenance and Funding

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

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

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

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

Maintenance Mechanism: Insert text here.

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

☐ Y ☐ N

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

Appendix 1: Maps and Site Plans

Location Map, WQMP Site Plan and Receiving Waters Map

Appendix 2: Construction Plans

Grading and Drainage Plans

Appendix 3: Soils Information

Geotechnical Study and Other Infiltration Testing Data

Appendix 4: Historical Site Conditions

Phase I Environmental Site Assessment or Other Information on Past Site Use

Appendix 5: LID Infeasibility

LID Technical Infeasibility Analysis

Appendix 6: BMP Design Details

BMP Sizing, Design Details and other Supporting Documentation

Appendix 7: Hydromodification

Supporting Detail Relating to Hydrologic Conditions of Concern

Appendix 8: Source Control

Pollutant Sources/Source Control Checklist

Appendix 9: O&M

Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms

Appendix 10: Educational Materials

BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information

EXHIBIT C:

LID BMP Design Handbook

Please Visit

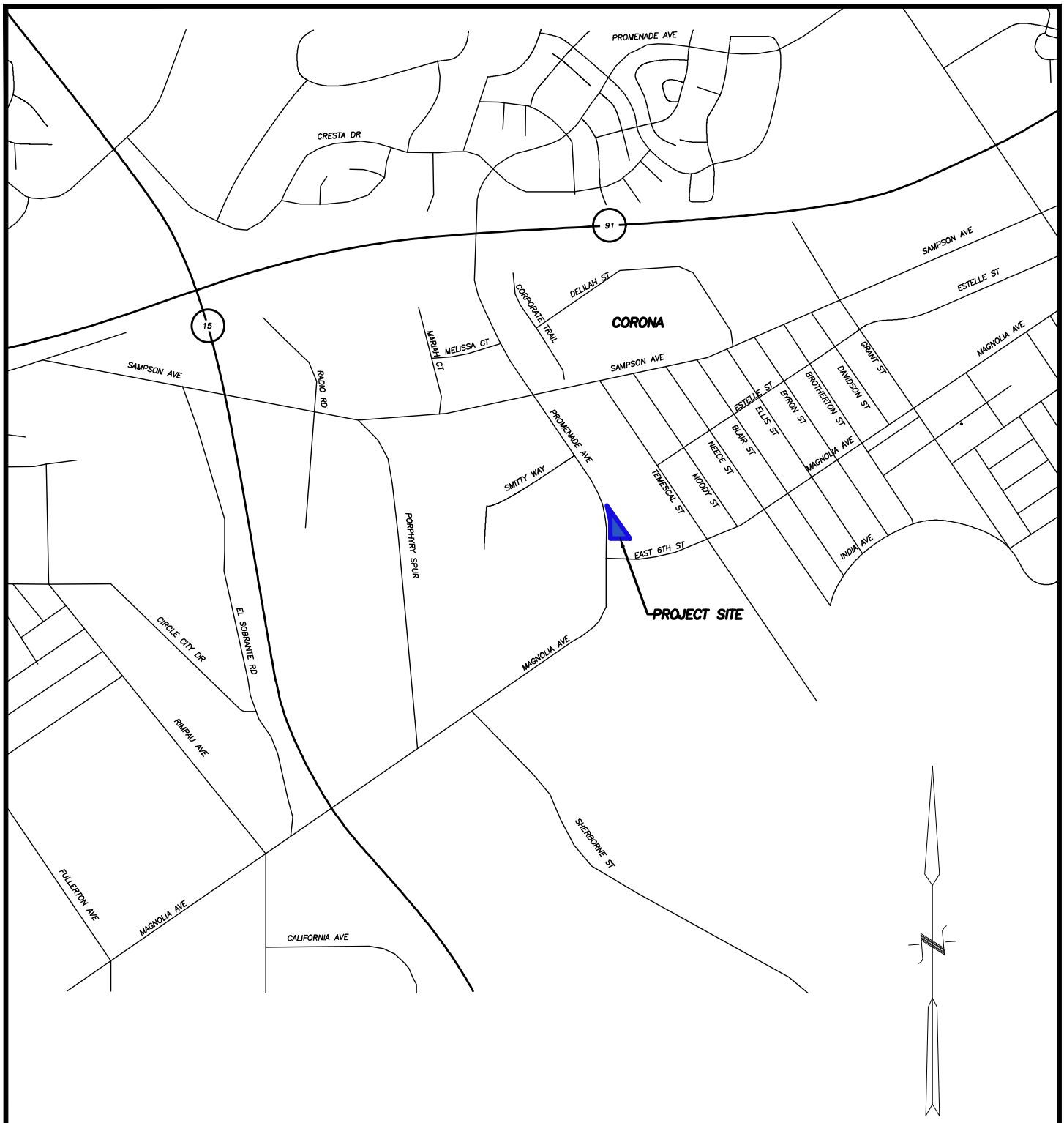
www.rcflood.org/npdes/developers

to access the current Handbook.

Transportation Project Guidance

Appendix 1: Maps and Site Plans

Location Map, WQMP Site Plan and Receiving Waters Map



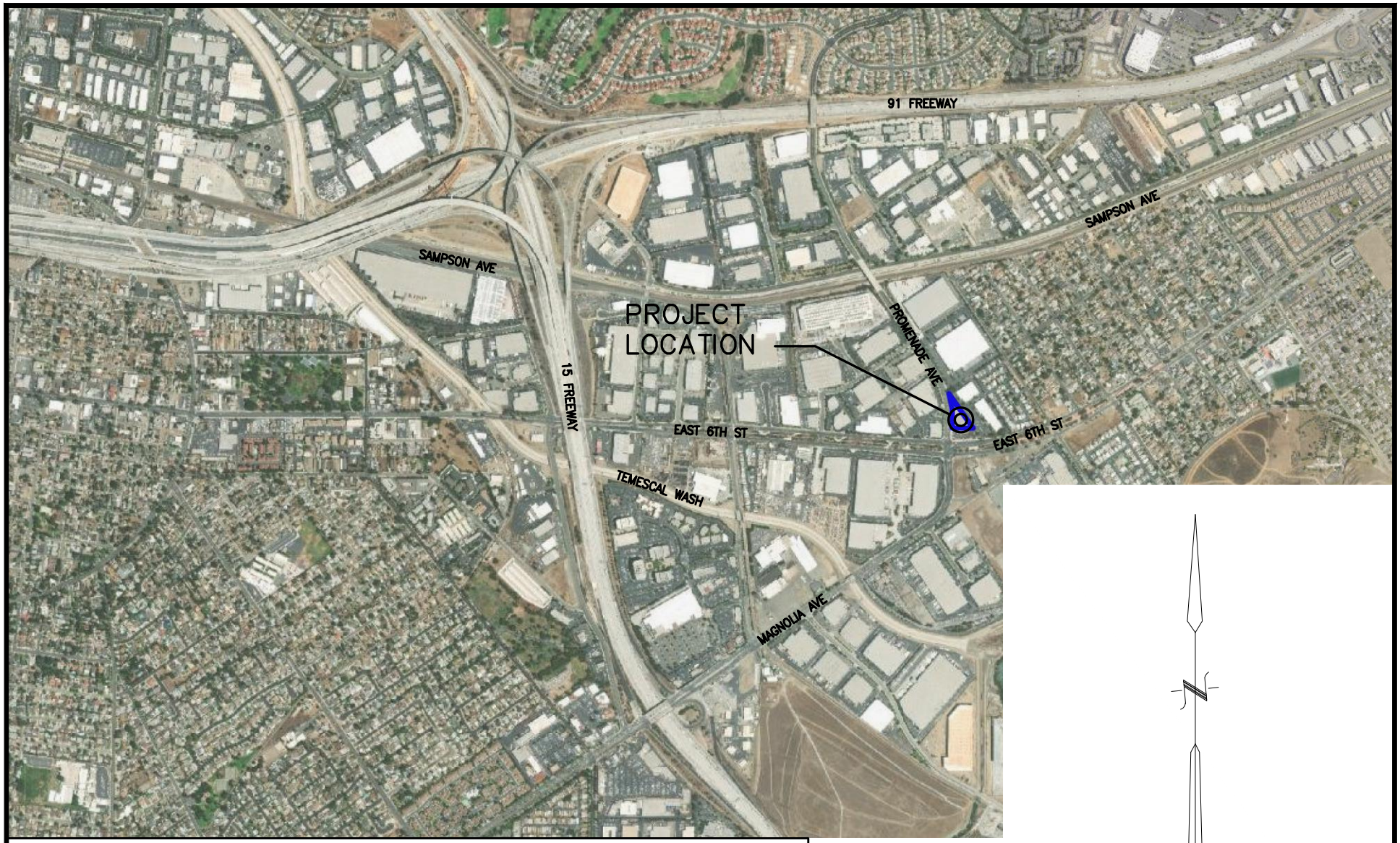
LOCATION MAP

N.T.S.

PLAN PREPARED BY:

GREYSTONE
ENGINEERING GROUP INC
11022 SANTA MONICA BLVD. SUITE 440 LOS ANGELES, CA 90025
(310) 405-2341 EMAIL: INFO@GREYSTONEENG.COM

EXHIBIT 1A



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VICINITY MAP

N.T.S.

EXHIBIT 1B

NPDES MUNICIPAL PERMIT
Santa Ana River Watershed
EXHIBIT SA-1
(Riverside, Corona, Norco Areas)

- SAR Core Monitoring Stations
- City Facilities
- County Facilities
- District Facilities
- Other Facilities
- Outfall Sites
- Landfill Sites
- Sewage Treatment Plants
- Blue Line Streams
- Thomas Bros Streets
- Incorporated Areas

0 4000 8000 12000 16000
Feet

N

RIVERSIDE

NORCO

CORONA

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT GEOGRAPHIC INFORMATION SYSTEM

Q:\NPDES Facility Maps\Santa Ana 2008\SAR2008AR.gws 11/25/2008

The graphical and tabular information shown on this document may be derived from a variety of public agency and/or private commercial sources such as Riverside County Transportation and Land Management Agency, Thomas Brothers Mapping, the Stephen P. Teale Data Center, GIS Technology Center, State of California, the United States Geologic Survey and the United States National Atlas. These sources may possess varying levels of accuracy and precision and this product is meant only as a guide to the relative position and scale of the depicted features. This GIS document is in no case to be interpreted as fundamental or decisive for purposes of land surveying, field engineering, plan drafting, code enforcement, land boundary determination and/or land acquisition.

Riverside County Watershed Map

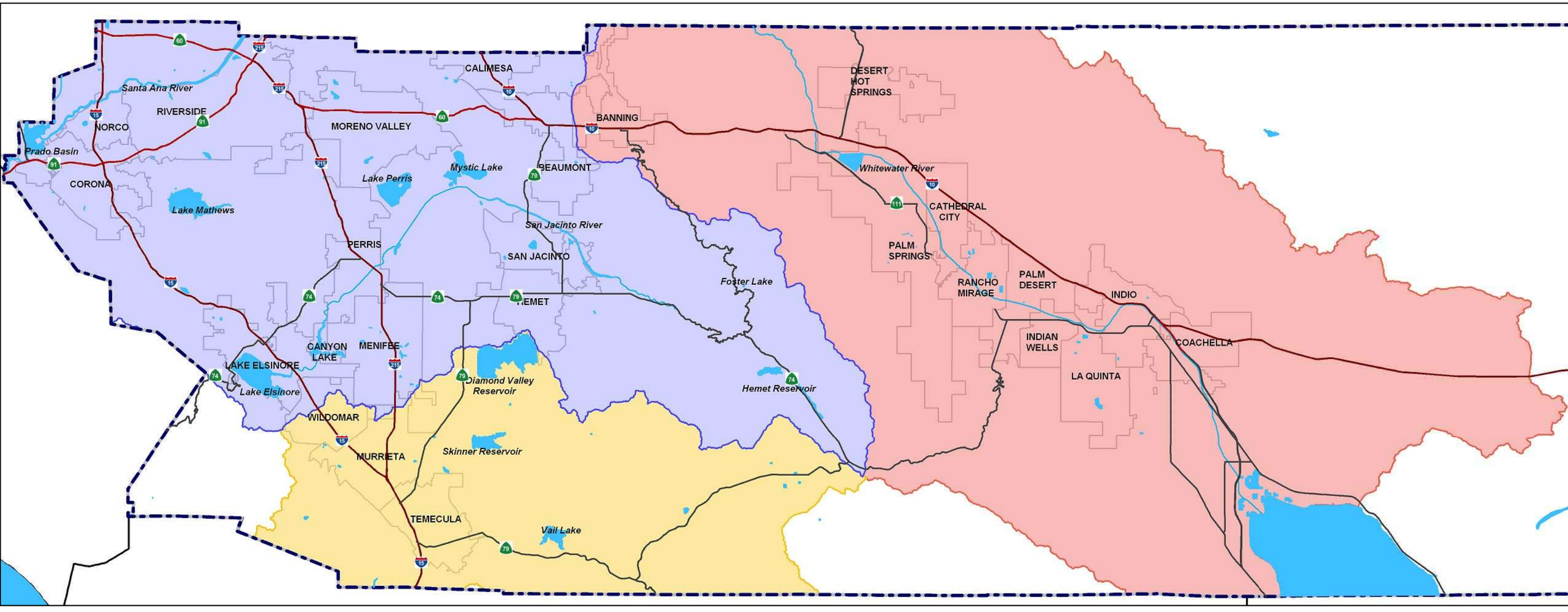


EXHIBIT 1D

FIGURE 1-2
SANTA ANA RIVER AND TRIBUTARIES

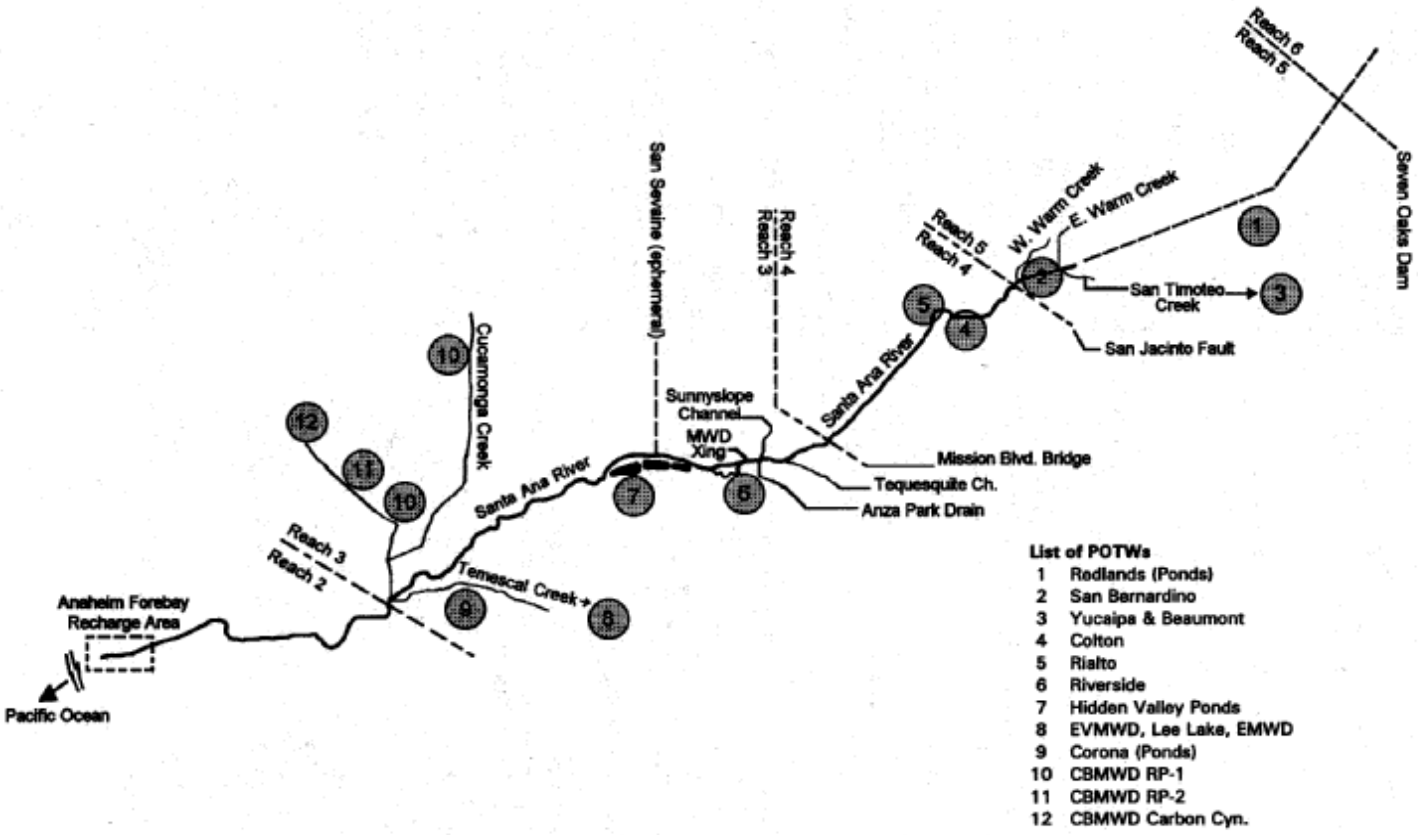


EXHIBIT 1E

Santa Ana River Watershed Basin Plan Reaches within the City of Corona

Legend

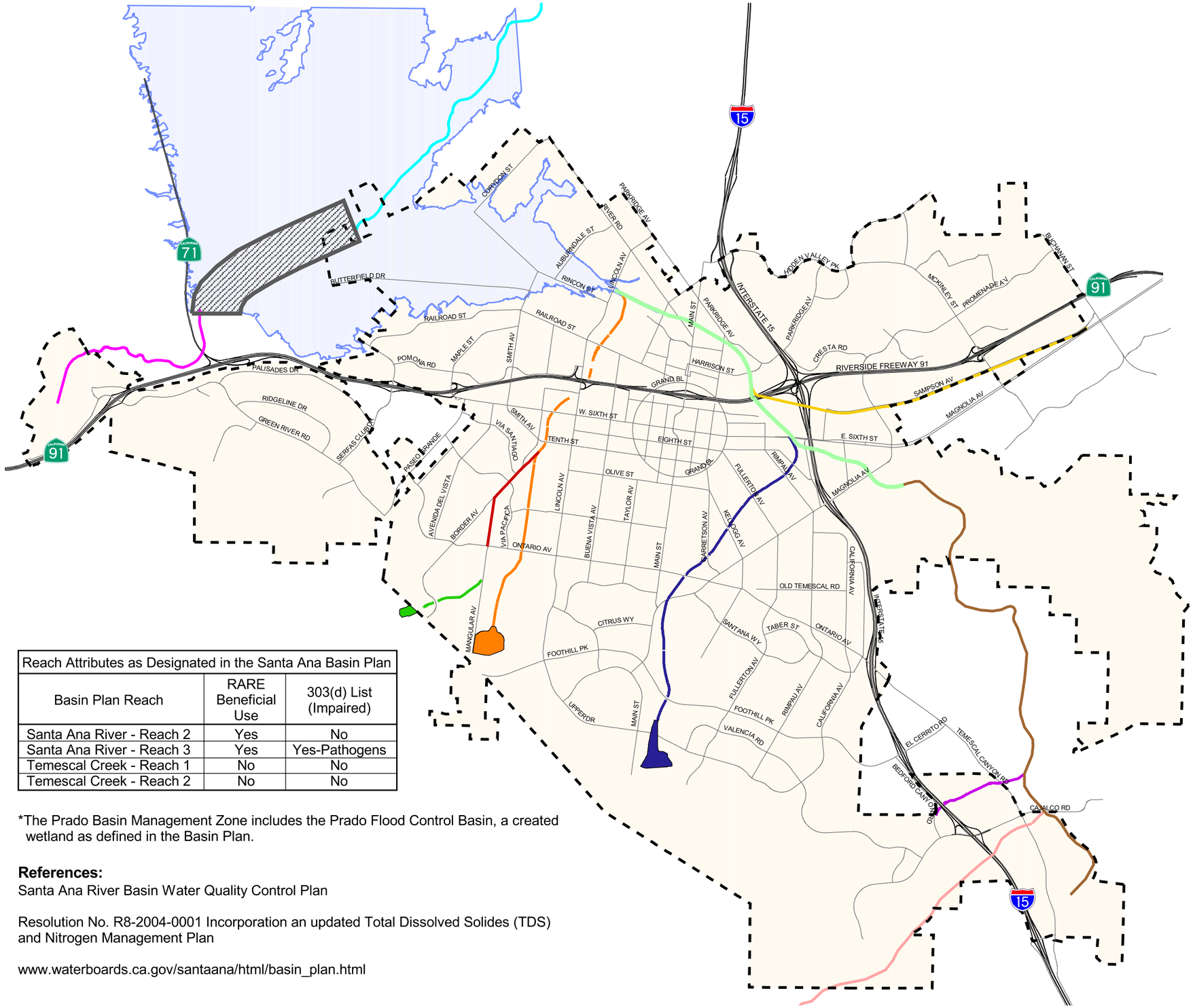
Basin Plan Reaches
- Santa Ana River - Reach 2
- Santa Ana River - Reach 3
- Approximate Extent of Santa Ana River - Reach 3
- Temescal Creek - Reach 1
- Temescal Creek - Reach 2
- Bedford Canyon Wash
- Joseph Canyon Wash

Other Tributaries
- Arlington Channel
- Mangular/Oak Street Channel
- Mabey Canyon Debris Basin
- Mabey Channel
- Main Street Debris Basin
- Main Street Channel
- Oak Street Debris Basin
- Oak Street Channel

Wetlands (Inland)
- Prado Basin Management Zone*

- City Boundary
- Street Centerline

N



Reach Attributes as Designated in the Santa Ana Basin Plan		
Basin Plan Reach	RARE Beneficial Use	303(d) List (Impaired)
Santa Ana River - Reach 2	Yes	No
Santa Ana River - Reach 3	Yes	Yes-Pathogens
Temescal Creek - Reach 1	No	No
Temescal Creek - Reach 2	No	No

*The Prado Basin Management Zone includes the Prado Flood Control Basin, a created wetland as defined in the Basin Plan.

References:

Santa Ana River Basin Water Quality Control Plan

Resolution No. R8-2004-0001 Incorporation an updated Total Dissolved Solides (TDS) and Nitrogen Management Plan

www.waterboards.ca.gov/santaana/html/basin_plan.html

EXHIBIT 1F

DRAINAGE MAP
POST-CONSTRUCTION

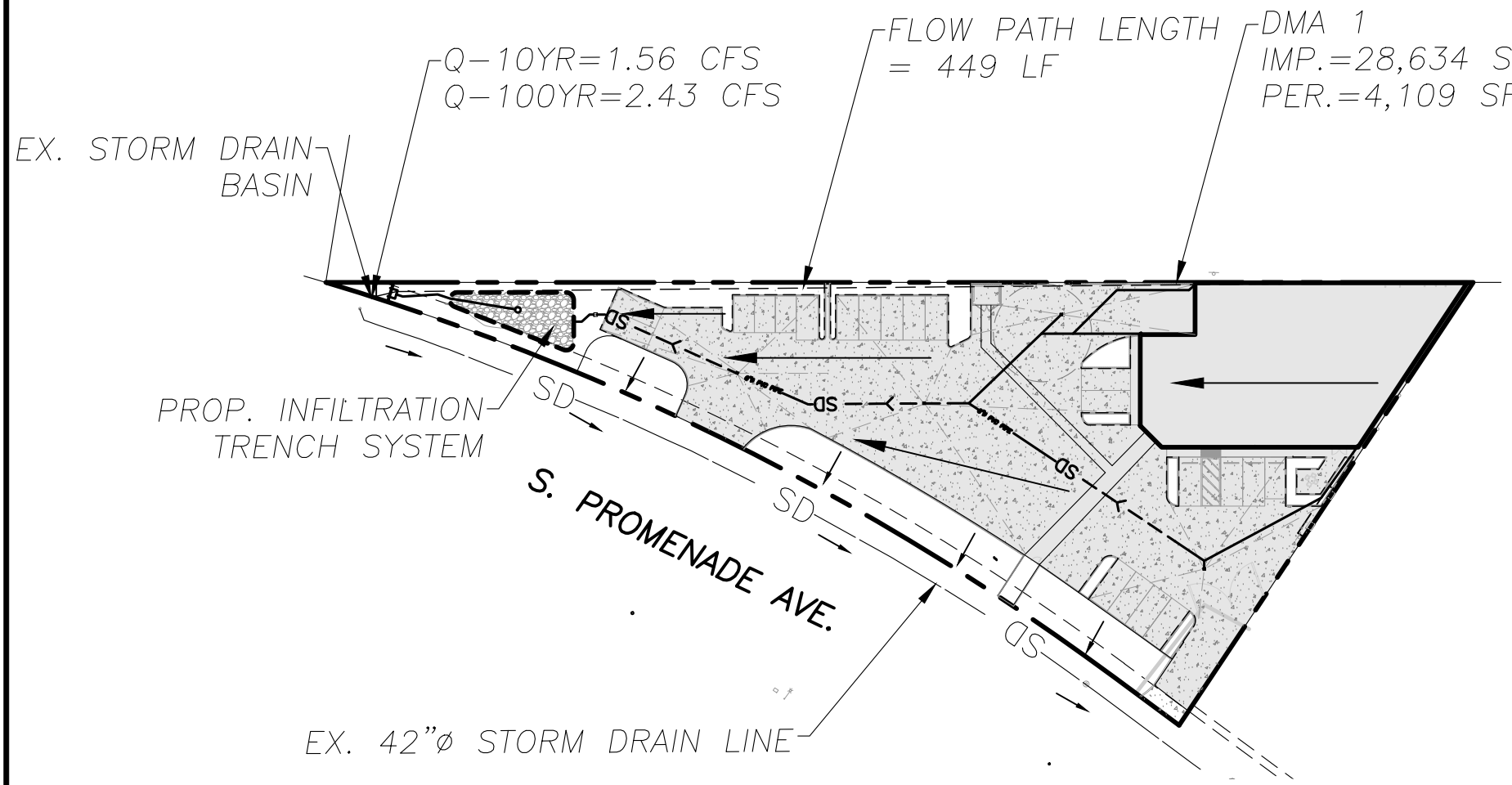


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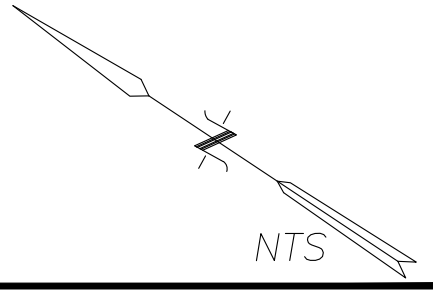
EXHIBIT 1G



Appendix 2: Construction Plans

Grading and Drainage Plans

GRADING PLAN GENERAL NOTES

PUBLIC WORKS DEPARTMENT

1. A GRADING PERMIT FROM THE PUBLIC WORKS DEPARTMENT IS REQUIRED. ALL GRADING SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF CORONA GRADING REGULATIONS- CORONA MUNICIPAL CODE 15.36, THESE PLANS, SPECIAL INSTRUCTIONS ON THE PERMIT, AND THE PRELIMINARY GEOTECHNICAL REPORT DATED 10/26/2010 AND ALL SUBSEQUENT ADDENDUMS.
2. SOURCE OF TOPOGRAPHY IS ______________ BY ________________ DATED ____________.
3. A PRE-GRADING MEETING AT THE SITE IS REQUIRED BETWEEN THE CITY INSPECTOR, THE CIVIL ENGINEER, THE GEOTECHNICAL ENGINEER AND THE GRADING CONTRACTOR. CALL THE DEPARTMENT OF PUBLIC WORKS DEPARTMENT INSPECTION DIVISION AT (951) 279-3511 TO SCHEDULE A PRE-GRADING MEETING AT LEAST 48 HOURS PRIOR TO START OF ANY WORK.
4. HOURS OF OPERATION ARE 7:00 A.M. TO 5:00 P.M. – MONDAY THROUGH FRIDAY EXCLUDING HOLIDAYS.
5. SEPARATE PERMITS SHALL BE REQUIRED FOR ANY IMPROVEMENT WORK IN THE PUBLIC RIGHT-OF-WAY.
6. CONSTRUCTION MATERIAL AND EQUIPMENT SHALL NOT OCCUPY ANY PORTION OF THE PUBLIC RIGHT-OF-WAY, SUCH AS STREET, ALLEY OR PUBLIC SIDEWALK AT ANY TIME. TEMPORARY USE OF PUBLIC RIGHT-OF-WAY, WHENEVER REQUESTED, MUST BE REVIEWED AND APPROVED BY THE PUBLIC WORKS DIRECTOR.
7. REPAIR OR REPLACE ALL EXISTING PUBLIC IMPROVEMENTS DAMAGED OR ALTERED AS REQUIRED BY THE PUBLIC WORKS DIRECTOR.
8. ALL SURVEY MONUMENTS SHALL BE PROTECTED AND PERPETUATED IN PLACE. ANY DISTURBED OR COVERED MONUMENTS SHALL BE RESET BY A QUALIFIED CIVIL ENGINEER OR A LICENSED LAND SURVEYOR.
9. PRIOR TO TAKING WATER FROM A CITY FIRE HYDRANT, THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE PUBLIC WORKS DEPARTMENT TO OBTAIN A FIRE HYDRANT WATER METER. METER LOCATION MAY NOT BE ALTERED WITHOUT DEPARTMENT OF WATER AND POWER APPROVAL.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES OR STRUCTURES ABOVE OR BELOW GROUND, SHOWN OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGE TO ANY UTILITIES OR STRUCTURES CAUSED BY HIS OPERATION.
11. STRICT ADHERENCE TO DUST CONTROL REQUIREMENTS SHALL BE ENFORCED. ADJACENT STREETS ARE TO BE CLEANED DAILY OF ALL DIRT AND DEBRIS RESULTING FROM THIS OPERATION.

12. SEPARATE PERMITS FROM THE BUILDING DIVISION SHALL BE REQUIRED FOR ALL WALLS.
13. AN APPROVED PRECISE GRADING PLAN WILL BE REQUIRED PRIOR TO A BUILDING PERMIT BEING ISSUED.
14. THE DESIGN CIVIL ENGINEER/GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST OF RECORD SHALL EXERCISE SUFFICIENT CONTROL DURING GRADING AND CONSTRUCTION TO ENSURE COMPLIANCE WITH THE PLANS, SPECIFICATIONS, AND CODE REQUIREMENTS WITHIN THEIR PURVIEW. THE ENGINEER SHALL SUBMIT "ACKNOWLEDGEMENT CONCERNING EMPLOYMENT" FORM TO THE CITY PRIOR TO THE ISSUANCE OF A GRADING PERMIT.
15. REVISIONS TO THE PLANS ARE TO BE SUBMITTED TO THE PUBLIC WORKS DIRECTOR FOR REVIEW AND APPROVAL PRIOR TO CHANGING ORIGINAL MYLARS.
16. THE CIVIL ENGINEER SHALL SUBMIT WRITTEN CERTIFICATION OF COMPLETION OF ROUGH GRADING IN ACCORDANCE WITH THE APPROVED GRADING PLAN AND CERTIFICATION OF BUILDING PAD ELEVATION PRIOR TO ISSUANCE OF THE BUILDING PERMIT. PAD ELEVATION GRADING TOLERANCE SHALL NOT EXCEED ± 0.10'.
17. AN "AS-BUILT" PRECISE GRADING PLAN SHALL BE SUBMITTED AT THE COMPLETION OF WORK SHOWING ALL WATER QUALITY MANAGEMENT PLAN FACILITIES.
18. GRADING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER WHO SHALL CERTIFY THAT ALL FILL HAS BEEN PROPERLY PLACED AND SUBMIT A FINAL COMPACTION REPORT FOR ALL FILLS OVER 1' DEEP.
19. THE GEOTECHNICAL ENGINEER SHALL, AFTER CLEARING AND PRIOR TO THE PLACEMENT OF FILL IN CANYONS, INSPECT EACH CANYON FOR AREAS OF ADVERSE STABILITY AND TO DETERMINE THE PRESENCE OR ABSENCE OF SUBSURFACE WATER OR SPRING FLOW. IF NEEDED, DRAINS WILL BE DESIGNED AND CONSTRUCTED PRIOR TO THE PLACEMENT OF FILL IN EACH RESPECTIVE CANYON.
20. FILL AREAS SHALL BE CLEANED OF ALL VEGETATION AND DEBRIS, SCARIFIED TO A MINIMUM DEPTH OF 12 INCHES AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACING OF FILL.
21. ALL DELETERIOUS MATERIALS, I.E. LUMBER, LOGS, BRUSH, OR ANY OTHER ORGANIC MATERIALS OR RUBBISH SHALL BE REMOVED FROM ALL AREAS TO RECEIVE COMPACTED FILL.
22. UNSUITABLE MATERIALS, SUCH AS TOPSOIL, WEATHERED BEDROCK, ETC., SHALL BE REMOVED AS REQUIRED BY THE GEOTECHNICAL ENGINEER (AND ENGINEERING GEOLOGIST, WHERE EMPLOYED) FROM ALL AREAS TO RECEIVE COMPACTED FILL OR DRAINAGE STRUCTURES.
23. FILLS SHALL BE BENCHED INTO COMPETENT MATERIAL.
24. WHEN CUT PADS ARE BROUGHT TO NEAR GRADE, THE GEOTECHNICAL ENGINEER SHALL DETERMINE IF THE BEDROCK IS EXTENSIVELY FRACTURED OR FAULTED AND WILL READILY TRANSMIT WATER. IF CONSIDERED NECESSARY BY THE GEOTECHNICAL ENGINEER, A COMPACTED FILL BLANKET WILL BE PLACED.
25. WHERE SUPPORT OR BUTTRESSING OF CUT AND NATURAL SLOPES IS DETERMINED TO BE NECESSARY BY THE GEOTECHNICAL ENGINEER, THE GEOTECHNICAL

ENGINEER SHALL SUBMIT DESIGN, LOCATIONS AND CALCULATIONS TO THE PUBLIC WORKS DIRECTOR PRIOR TO CONSTRUCTION. THE GEOTECHNICAL ENGINEER WILL INSPECT AND CONTROL THE CONSTRUCTION OF THE BUTTRESSING AND CERTIFY TO THE STABILITY OF THE SLOPE AND ADJACENT STRUCTURES UPON COMPLETION.

26. ALL CUT SLOPES SHALL BE INVESTIGATED, BOTH DURING AND AFTER GRADING BY THE GEOTECHNICAL ENGINEER, TO DETERMINE IF ANY SLOPE HAS STABILITY PROBLEMS. SHOULD EXCAVATION DISCLOSE ANY GEOLOGICAL HAZARDS, THE GEOTECHNICAL ENGINEER SHALL RECOMMEND NECESSARY TREATMENT TO THE PUBLIC WORKS DIRECTOR FOR APPROVAL. ALL APPROVALS TO BE GRANTED ON THE BASIS OF DETAILED GEOLOGICAL MAPPING AND WRITTEN RECOMMENDATION FROM THE GEOTECHNICAL ENGINEER.
27. MAXIMUM ALLOWABLE CUT AND FILL SLOPES ARE 2 TO 1 OR 30' IN HEIGHT WITHOUT APPROVAL OF THE PUBLIC WORKS DIRECTOR. IF PROPOSED CUT AND FILL SLOPES ARE STEEPER THAN 2:1 OR OVER 30' IN HEIGHT, STABILITY CALCULATIONS WITH A SAFETY FACTOR OF AT LEAST ONE AND FIVE TENTHS (1.5) SHALL BE SUBMITTED BY A GEOTECHNICAL ENGINEER FOR APPROVAL FROM THE PUBLIC WORKS DIRECTOR
28. PROVIDE 4' WIDE BY 1' HIGH BERM OR EQUIVALENT ALONG THE TOP OF ALL FILL SLOPES OVER 5' HIGH, EXCEPT WHERE SHOWN OTHERWISE ON THE PLANS.
29. ALL SLOPES ADJACENT TO PUBLIC RIGHT-OF-WAY SHALL CONFORM TO SECTION 15.36.220 OF THE CORONA MUNICIPAL CODE.
30. ALL SLOPES 4' OR HIGHER SHALL BE PLANTED AND COMPLY WITH REQUIREMENTS OF CHAPTER 17 OF THE CORONA MUNICIPAL CODE.
31. TERRACE DRAINS, INTERCEPTOR DRAINS AND DOWN DRAINS SHALL BE CONSTRUCTED OF 4" PCC (OR GUNITE) REINFORCED WITH 6" X 6" -2 1.4 X 1.4 W.W.M. REBAR SHALL BE GRADE 60 BILLET STEEL CONFORMING TO ASTM A615.
32. ALL CONCRETE STRUCTURES THAT COME IN CONTACT WITH THE ONSITE SOILS SHALL BE CONSTRUCTED WITH TYPE II OR V CEMENT AS DEEMED NECESSARY BY SOLUBLE SULFATE CONTENT TEST CONDUCTED BY THE GEOTECHNICAL ENGINEER. ALL CONCRETE SHALL BE 560-C-3250 (600-E 3250 FOR GUNITE) PER CITY STANDARDS AND SPECIFICATIONS.
33. GROUND SHALL BE PRE-WETTED PRIOR TO THE PLACEMENT OF CONCRETE. MOISTURE LOSS RETARDANT SHALL BE USED WHEN REQUIRED BY THE GEOTECHNICAL ENGINEER OR PUBLIC WORKS DIRECTOR.
34. CITY APPROVAL OF PLANS DOES NOT RELIEVE THE DEVELOPER OF RESPONSIBILITY FOR THE CORRECTION OF ERRORS AND/OR OMISSIONS DISCOVERED DURING CONSTRUCTION. UPON REQUEST, THE REQUIRED PLAN REVISIONS SHALL BE PROMPTLY SUBMITTED TO THE PUBLIC WORKS DIRECTOR FOR APPROVAL.

POST CONSTRUCTION BMP GENERAL NOTES:

1. THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMPS) FOR POST CONSTRUCTION STORM WATER TREATMENT.

2. CONSTRUCT THE STORM WATER TREATMENT FACILITIES AFTER ALL CONTRIBUTING DRAINAGE AREAS ARE STABILIZED AND TO THE SATISFACTION OF THE ENGINEER OF RECORD.
3. DO NOT USE THE DEVICES AS TEMPORARY SEDIMENT CONTROL FACILITIES DURING CONSTRUCTION.
4. THE FOLLOWING BMPS HAVE BEEN DESIGNED INTO THE PLANS. PLEASE REFER TO THE PROJECT'S APPROVED WATER QUALITY MANAGEMENT PLAN (WQMP) FOR ADDITIONAL BMPS AND OPERATION AND MAINTENANCE DETAILS:

EROSION CONTROL NOTES

1. EROSION CONTROL IS REQUIRED FOR GRADING OPERATIONS ON A YEAR ROUND BASIS. APPROVED PLANS ARE REQUIRED FOR ALL WORK REQUIRING A GRADING PERMIT.
2. IN CASE OF EMERGENCY, CALL __________________ (RESPONSIBLE PERSON) OF ______________ (FIRM) AT ______________ (24-HOUR PHONE NO).
3. THE ENGINEER OF RECORD WILL SUPERVISE EROSION CONTROL WORK AND ENSURE THAT WORK IS IN ACCORDANCE WITH APPROVED PLANS.
4. CITY APPROVAL OF PLANS DOES NOT RELIEVE THE DEVELOPER FROM RESPONSIBILITY FOR THE CORRECTION OF ERROR AND OMISSION DISCOVERED DURING CONSTRUCTION. UPON REQUEST, THE REQUIRED PLAN REVISIONS SHALL BE PROMPTLY SUBMITTED TO THE PUBLIC WORKS DIRECTOR FOR APPROVAL.
5. THE PUBLIC WORKS DIRECTOR RESERVES THE RIGHT TO MAKE CHANGES OR MODIFICATIONS TO THIS PLAN AS DEEMED NECESSARY.
6. STANDBY CREW FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS) OR TO REPAIR ANY DAMAGED BMPS WHEN RAIN IS IMMINENT.
7. AN EFFECTIVE COMBINATION OF EROSION AND SEDIMENT CONTROL BMPS SHALL BE IMPLEMENTED AND MAINTAINED TO PREVENT AND/OR MINIMIZE THE TRANSPORT OF SOIL IN RUNOFF FROM DISTURBED SOIL AREAS ON THE CONSTRUCTION SITE AT ALL TIMES. IN ADDITION, BMPS SHALL BE INSPECTED PRIOR TO PREDICTED STORM EVENTS AND FOLLOWING STORM EVENTS. BMPS SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE CITY INSPECTOR
8. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE FIVE-DAY RAIN PROBABILITY FORECAST EXCEEDS 40 PERCENT, AS FORECASTED BY THE NATIONAL WEATHER SERVICE.

9. AFTER A RAIN EVENT EXCEEDING ONE-QUARTER INCH IN ANY 12 HOUR PERIOD, OR UPON DIRECTION OF THE PUBLIC WORKS DIRECTOR, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK DAMS, SILT FENCES, AND DESILTING BASINS; AND THE BASINS SHALL BE PUMPED DRY AND RESTORED TO ORIGINAL DESIGN CONDITION. ANY EROSION CONTROL MEASURES DAMAGED DURING A RAIN EVENT SHALL ALSO BE IMMEDIATELY REPAIRED.
10. DESILTING BASINS ARE TO BE CONSTRUCTED AS GRADING OF INDIVIDUAL GRADING AREAS ARE COMPLETE PER ROUGH GRADING PLANS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
12. AREAS SHALL BE MAINTAINED IN SUCH A STATE THAT FIRE ACCESS SHALL BE MAINTAINED AT ALL TIMES (INCLUDING ACCESS TO NEIGHBORING PROPERTIES).
13. GRADED AREAS AROUND THE SITE PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
14. TEMPORARY EROSION PROTECTION IS REQUIRED FOR MANUFACTURED SLOPES PRIOR TO PERMANENT PLANTING.
15. ALL DISTURBED SLOPES SHALL BE PLANTED AND PROTECTED WITHIN 45 DAYS OF THE COMPLETION OF EACH STAGE OF GRADING. SUITABLE MEASURES TO PREVENT SLOPE EROSION INCLUDING, BUT NOT LIMITED TO, RAPID GROWTH VEGETATION SUFFICIENT TO STABILIZE THE SOIL, SHALL BE INSTALLED ON ALL DISTURBED AREAS UNTIL SUCH TIME AS THE PERMANENT VEGETATIVE COVER SUFFICIENTLY MATURES TO PROVIDE PERMANENT STABILITY.
16. NO OBSTRUCTION OR DISTURBANCE OF NATURAL DRAINAGE COURSES OR EXISTING STORM DRAIN INLETS SHALL OCCUR DURING GRADING OPERATIONS, UNLESS ADEQUATE TEMPORARY/PERMANENT DRAINAGE FACILITIES HAVE BEEN APPROVED AND INSTALLED TO CARRY SURFACE WATER TO THE NEAREST PRACTICAL STREET, STORM DRAIN OR NATURAL WATER COURSE. ALL EXISTING DRAINAGE COURSES ON THE PROJECT SITE MUST BE MAINTAINED IN A STATE TO ALLOW FOR CONTINUOUS FUNCTION.
17. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER THAT STORM RUNOFF WILL BE CONTAINED WITHIN THE PROJECT OR CHANNELED INTO THE STORM DRAIN SYSTEM WHICH SERVES THE RUNOFF AREA. STORM RUNOFF FROM ONE AREA SHALL NOT BE ALLOWED TO DIVERT TO ANOTHER RUNOFF AREA.
18. CONFORMANCE WITH THE REQUIREMENTS OF THESE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TO THIS SITE AND ADJACENT PROPERTIES. DURING GRADING OPERATIONS, TEMPORARY DRAINAGE CONTROL SHALL BE PROVIDED TO PREVENT PONDING WATER AND DAMAGE TO ADJACENT PROPERTIES. TEMPORARY DRAINAGE CONTROL SHALL CONSIST OF, BUT NOT BE LIMITED TO, CONSTRUCTING SUCH FACILITIES AND TAKING SUCH MEASURES AS ARE NECESSARY TO PREVENT, CONTROL AND ABATE WATER, MUD AND EROSION DAMAGE TO PUBLIC AND PRIVATE PROPERTY AS A RESULT OF THE CONSTRUCTION OF THIS PROJECT.

19. FILL AREAS WHILE BEING BROUGHT UP TO GRADE AND DURING PERIODS OF COMPLETION PRIOR TO FINAL GRADE, SHALL BE PROTECTED BY VARIOUS MEASURES TO ELIMINATE EROSION AND THE SILTATION OF DOWNSTREAM FACILITIES AND ADJACENT AREAS. THESE MEASURES MAY INCLUDE, BUT SHALL NOT BE LIMITED TO: TEMPORARY DOWN DRAINS, EITHER IN THE FORM OF PIPES OR PAVED DITCHES TO DESILT RUNOFF; PROTECTION SUCH AS SAND BAGS AROUND INLETS WHICH HAVE NOT BEEN BROUGHT UP TO GRADE; AND EARTH BERMS AND APPROPRIATE GRADING TO DIRECT DRAINAGE AWAY FROM THE EDGE OF THE TOP OF SLOPES SHALL BE CONSTRUCTED AND MAINTAINED ON THOSE FILL AREAS WHERE EARTHWORK OPERATIONS ARE NOT IN PROGRESS.
20. CLEARING AND GRUBBING SHOULD BE LIMITED TO AREAS THAT WILL RECEIVE IMMEDIATE GRADING. EROSION CONTROL MEASURES WILL BE REQUIRED TO PROTECT AREAS WHICH HAVE BEEN CLEARED AND GRUBBED PRIOR TO GRADING OPERATION, AND WHICH ARE SUBJECT TO RUNOFF DURING A RAIN EVENT. THESE MEASURES MAY INCLUDE BUT SHALL NOT BE LIMITED TO: GRADED DITCHES; BRUSH BARRIERS AND SILT FENCES. CARE SHALL BE EXERCISED TO PRESERVE VEGETATION BEYOND LIMITS OF GRADING.
21. CONSTRUCTION SITES SHALL BE MANAGED TO MINIMIZE THE EXPOSURE TIME OF DISTURBED SOIL AREAS THROUGH PHASING AND SCHEDULING OF GRADING TO THE EXTENT FEASIBLE AND THE USE OF TEMPORARY AND PERMANENT SOIL STABILIZATION.
22. STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO ELIMINATE OR REDUCE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.
23. CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT WIND OR RUNOFF DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJOINING PROPERTIES.
24. DISCHARGES OTHER THAN STORM WATER (NON-STORM WATER DISCHARGES) ARE PROHIBITED, EXCEPT AS AUTHORIZED BY AN INDIVIDUAL NPDES PERMIT, THE STATEWIDE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY, OR OTHER APPLICABLE GENERAL NPDES PERMIT. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, SOLVENTS, DETERGENTS, GLUES, LIME, PESTICIDES, HERBICIDES, FERTILIZERS, WOOD PRESERVATIVES, AND ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; CONCRETE AND RELATED CUTTING OR CURING RESIDUES; FLOATABLE WASTES; WASTES FROM STREET CLEANING; SUPER-CHLORINATED POTABLE WATER FROM LINE FLUSHING AND TESTING; AND RUNOFF FROM EQUIPMENT AND VEHICLE WASHING. DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ONSITE PHYSICALLY SEPARATED FROM POTENTIAL STORM WATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.

25. AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED IN TRASH OR RECYCLE BINS.
26. PAVED STREETS, SIDEWALKS AND OTHER IMPROVEMENTS SHALL BE MAINTAINED IN A NEAT AND CLEAN CONDITION, FREE OF LOSE SOIL, CONSTRUCTION DEBRIS AND TRASH. STREET SWEEPING OR OTHER EQUALLY EFFECTIVE MEANS SHALL BE USED ON A REGULAR BASIS TO CONTROL SILT THAT HAS BEEN DEPOSITED ON STREETS OR SIDEWALKS. WATERING SHALL NOT BE USED TO CLEAN STREETS.
27. DISCHARGING CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING GROUNDWATER THAT HAS INFILTRATED INTO THE CONSTRUCTION SITE IS PROHIBITED. DISCHARGING OF CONTAMINATED SOILS VIA SURFACE EROSION IS ALSO PROHIBITED. DISCHARGING NON-CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING ACTIVITIES MAY REQUIRE A NPDES PERMIT FROM THE SANTA ANA REGIONAL BOARD.
28. ALL CONSTRUCTION CONTRACTOR AND SUBCONTRACTOR PERSONNEL ARE TO BE MADE AWARE OF THE REQUIRED BEST MANAGEMENT PRACTICES AND GOOD HOUSEKEEPING MEASURES FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS.

"DECLARATION OF ENGINEER OF RECORD"

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS SHOWN ON THESE PLANS COMPLIES WITH ALL PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER OF RECORD FOR THE PLANS, I ASSUME FULL RESPONSIBILITY FOR THE DESIGN OF THE IMPROVEMENTS. WITH RESPECT TO THE PLAN CHECK PERFORMED BY THE CITY OF CORONA, I UNDERSTAND AND ACKNOWLEDGE THE FOLLOWING: (1) THE PLAN CHECK IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THE PLANS COMPLY WITH THE CITY'S STANDARDS, PROCEDURES, POLICIES, AND ORDINANCES, (2) THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS AND (3) THE PLAN CHECK DOES NOT RELIEVE ME OF MY LEGAL AND PROFESSIONAL RESPONSIBILITY FOR THE DESIGN OF THE IMPROVEMENTS. AS THE ENGINEER OF RECORD, I AGREE TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE CITY, ITS ELECTED OFFICIALS, EMPLOYEES, AND AGENTS FROM ANY AND ALL ACTUAL OR ALLEGED CLAIMS, DEMANDS, CAUSES OF ACTION, LIABILITY, LOSS, DAMAGE, OR INJURY TO PROPERTY OR PERSONS, INCLUDING WRONGFUL DEATH, WHETHER IMPOSED BY A COURT OF LAW OR BY ADMINISTRATIVE ACTION OF ANY FEDERAL, STATE, OR LOCAL GOVERNMENTAL AGENCY, ARISING OUT OF OR INCIDENT TO ANY NEGLIGENT ACTS, OMISSIONS, OR ERRORS BY THE ENGINEER OF RECORD ITS EMPLOYEES, CONSULTANTS, OR AGENTS.

NOTICE TO CONTRACTORS:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES

EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES, SHOWN OR NOT SHOWN ON THESE PLANS.

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION ON THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS OR PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL

WORKING HOURS; THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, THE OWNER, AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA)PHONE 1-800-422-4133, TWO (2) WORKING DAYS PRIOR TO DIGGING. NO CONSTRUCTION PERMIT ISSUED BY THE PUBLIC WORKS DEPARTMENT SHALL BE VALID INVOLVING UNDERGROUND FACILITIES UNLESS THE APPLICANT HAS AN INQUIRY NUMBER ISSUED BY U.S.A.

CARE SHOULD BE TAKEN TO PREVENT GRADED DITCHES AND SWALES FROM UNDERMINING STREET IMPROVEMENTS. UPON INSPECTION OF THE SITES, THE CITY ENGINEER MAY REQUIRE TEMPORARY GUNITE SWALES, ENTERING OR LEAVING IMPROVEMENTS.

SOILS ENGINEER:

THIS PLAN HAS BEEN REVIEWED BY RMA GROUP AND APPEARS TO BE IN GENERAL CONFORMANCE WITH THE RECOMMENDATIONS IN OUR REPORT DATED JUNE 18, 2015. THIS PLAN HAS BEEN REVIEWED FOR GEOTECHNICAL ASPECTS ONLY. WE MAKE NO REPRESENTATION REGARDING ACCURACY OF DIMENSIONS, QUANTITIES, MEASUREMENT, CALCULATIONS OR ANY PORTION OF THE DESIGN. GEOTECHNICAL CONDITIONS AND RECOMMENDATIONS SHOULD BE CONFIRMED BY THE GEOTECHNICAL CONSULTANT IN THE FIELD AT THE TIME OF CONSTRUCTION.

SOILS ENGINEER: RCE# GE# EXP:

ENGINEERING GEOLOGIST: CEG# EXP:

UNDERGROUND SERVICE ALERT

CALL BEFORE YOU DIG

CALL TOLL FREE
1-800-227-2600

TWO WORKING DAYS BEFORE YOU DIG

BEST MANAGEMENT PRACTICE NOTES:

1. EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NON-STORMWATER FROM THE PROJECT AT ALL TIMES.
2. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSE, OR WIND.
3. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIAL MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
4. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIAL MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
5. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
6. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
7. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
8. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
9. "I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the ESCP to reflect current conditions, or failing to properly and/ or adequately implement the ESCP may result in revocation of grading and/ or other permits or other sanctions provided by law."

Print Name______________________________
(Owner or authorized agent of the owner)

Signature______________________________ Date____________
(Owner or authorized agent of the owner)

CONTRACTORS NOTE:

THE EARTHWORK QUANTITIES ARE PROVIDED AS A COURTESY AND CONVENIENCE TO THE OWNERS, AND ARE FOR BONDING AND PLAN CHECK PURPOSES ONLY. THE YARDAGE FIGURES SHOWN ARE APPROXIMATE CALCULATED QUANTITIES BASED ON THE DIFFERENCE BETWEEN EXISTING GROUND ELEVATIONS AND DESIGNED ROUGH GRADE ELEVATIONS. THE CALCULATIONS MAKE NO PROVISIONS FOR STRIPPING, SHRINKAGE, BULKING OR ANY OTHER CONDITION NOT IMPLIED. FOR THIS REASON, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSULT THE PROJECTS SOILS ENGINEER AND GEOLOGIC INV.ESTIGATIONS, AND TO DETERMINE FOR HIMSELF, THE QUANTITIES OF EARTH MOVING THAT WILL BE REQUIRED TO COMPLETE THIS PROJECT.

APN: 115-210-032

LEGAL DESCRIPTION: THE LAND REFERRED TO HEREIN BELOW IS SITUATED COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS; PARCEL 2 OF PARCEL MAP NO. 29926, BOOK 201, PAGES 67-69 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER

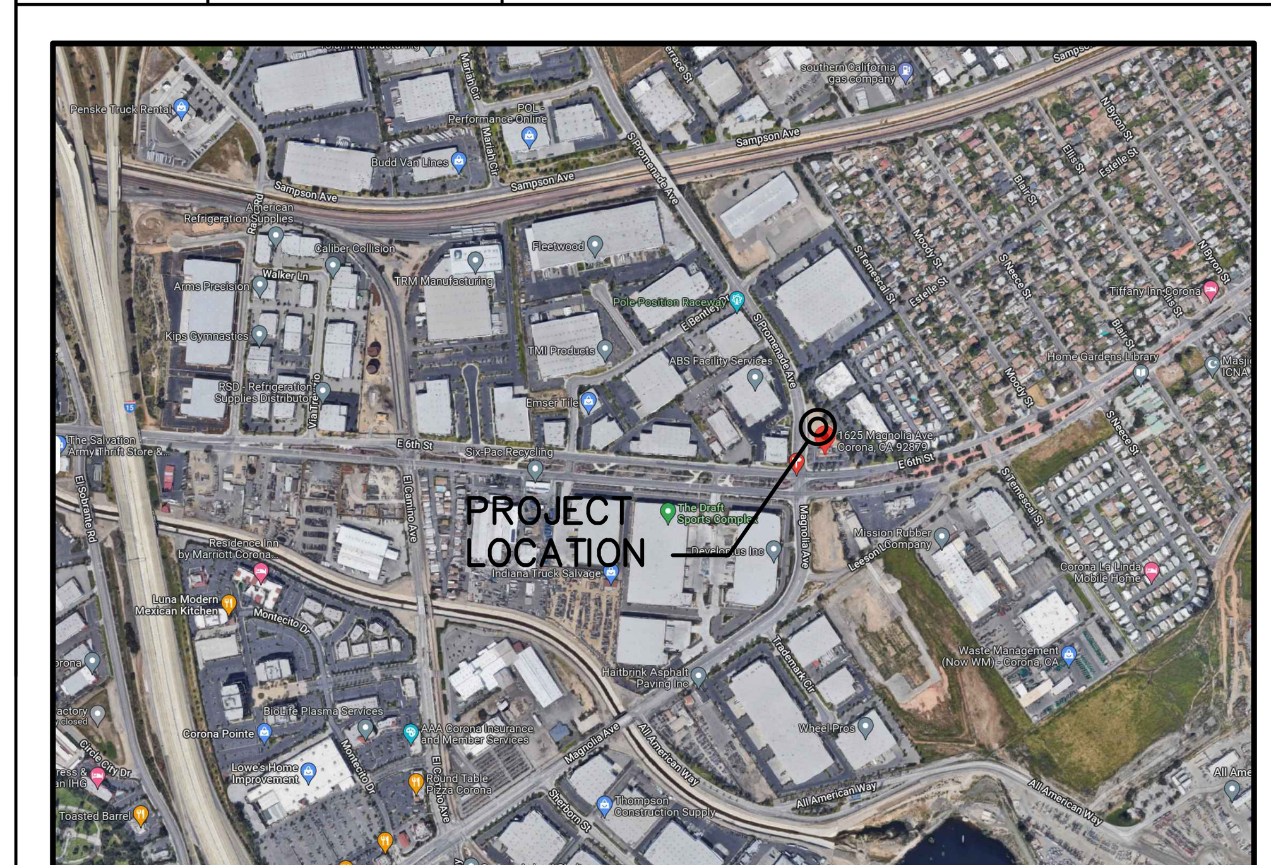
CLIENT: NETZER ADMATI & JOHNNY RAY GEER
249 WARWICK AVE.
SOUTH PASADENA, CA. 91030

CIVIL: GREYSTONE ENGINEERING GROUP INC.
11022 SANTA MONICA BLVD. #440
LOS ANGELES, CA. 90025
TEL: 310-405-2341
CONTACT: SOHEIL MOEINI

GEOTECHNICAL: SOIL PACIFIC
GEOTECHNICAL AND ENVIRONMENTAL SERVICES
675 N. ECKHOFF STREET, SUITE A
ORANGE, CA. 92868
TEL: 714-879-1203
DATE: OCTOBER 6, 2010
REPORT #: A-3390-07

SURVEYOR: MOLAI LAND & DESIGN
24308 BURBANK BLVD.
WOODLAND HILLS, CA 91367
TEL: 818-325-9225
EMAIL: MOLAI22@YAHOO.COM

SHEET INDEX



VICINITY MAP

REVISIONS	BY

CLIENT: LIGHT MANUFACTURING BLDG

PLAN PREPARED BY:

GREYSTONE ENGINEERING GROUP INC
11022 SANTA MONICA BLVD. SUITE 440 LOS ANGELES, CA 90025
(310) 405-2341 EMAIL: INFO@GREYSTONEENG.COM

REGISTERED PROFESSIONAL ENGINEER SOHEIL MOEINI No.84000 Exp. Sep. 2025 CIVIL STATE OF CALIFORNIA

CITY OF CORONA
APN 115-210-032
CORONA, CA. 92879

HV / 8/22/2024
SM/ 8/22/2024

COVER SHEET & NOTES

JOB #

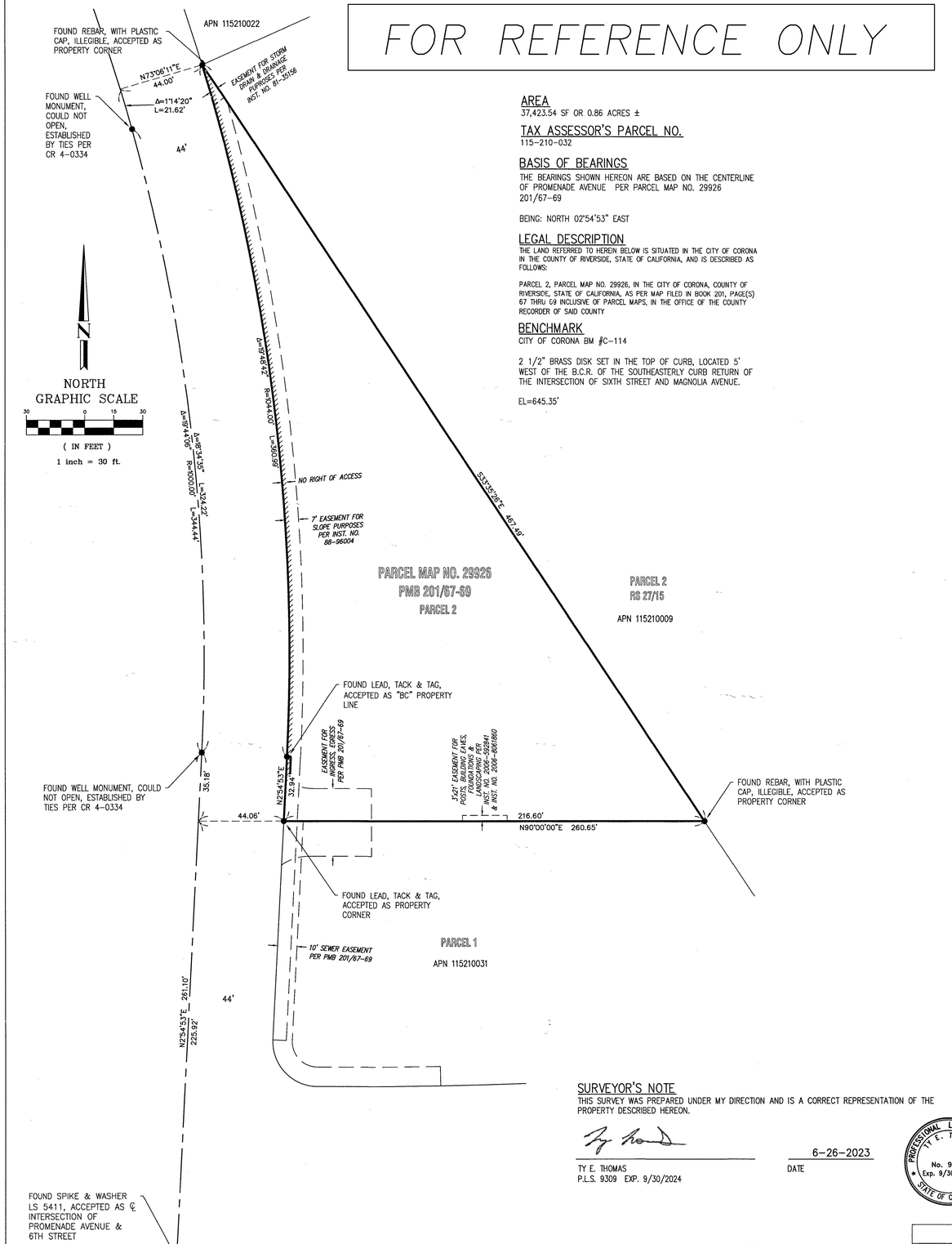
DATE 8/22/2024

SCALE

SHEET C-1 OF 11 SHEETS

BOUNDARY/TOPOGRAPHIC MAP
PROMENADE AVE
CITY OF CORONA
COUNTY OF RIVERSIDE
STATE OF CALIFORNIA

FOR REFERENCE ONLY



NORTH
GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

AREA
37,423.54 SF OR 0.86 ACRES ±

TAX ASSESSOR'S PARCEL NO.
115-210-032

BASIS OF BEARINGS
THE BEARINGS SHOWN HEREON ARE BASED ON THE CENTERLINE OF PROMENADE AVENUE PER PARCEL MAP NO. 29926 201/67-69

BEING: NORTH 02°54'53" EAST

LEGAL DESCRIPTION
THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF CORONA IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 2, PARCEL MAP NO. 29926, IN THE CITY OF CORONA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP FILED IN BOOK 201, PAGE(S) 67 THRU 69 INCLUSIVE OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY

BENCHMARK
CITY OF CORONA BM #C-114

2 1/2" BRASS DISK SET IN THE TOP OF CURB, LOCATED 5' WEST OF THE B.C.R. OF THE SOUTHEASTERLY CURB RETURN OF THE INTERSECTION OF SIXTH STREET AND MAGNOLIA AVENUE.

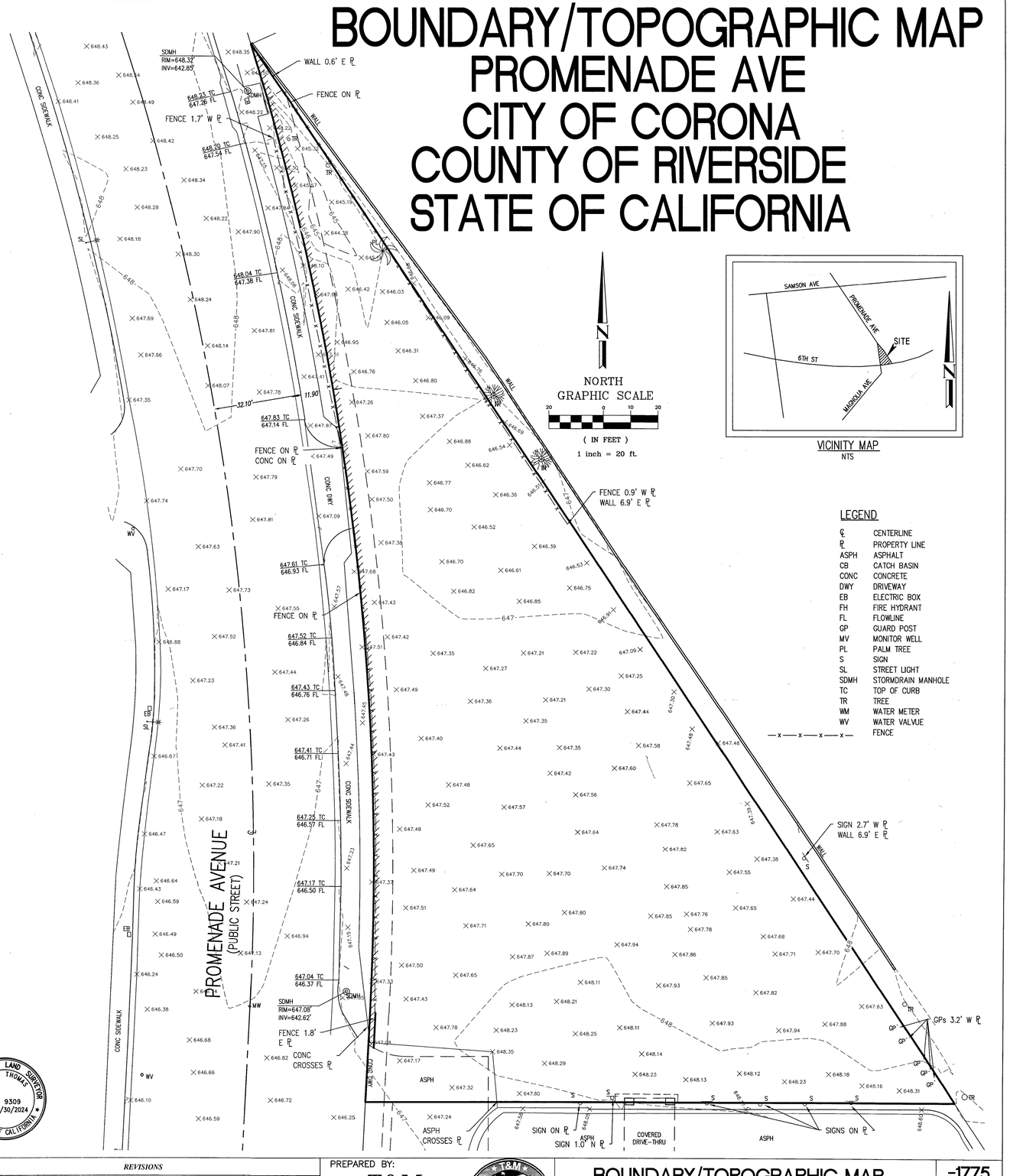
EL=645.35'

SURVEYOR'S NOTE
THIS SURVEY WAS PREPARED UNDER MY DIRECTION AND IS A CORRECT REPRESENTATION OF THE PROPERTY DESCRIBED HEREON.

TY E. THOMAS
P.L.S. 9309 EXP. 9/30/2024

6-26-2023
DATE

PROFESSIONAL LAND SURVEYOR * TY E. THOMAS * No. 9309 Exp. 9/30/2024 * STATE OF CALIFORNIA



NORTH
GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.

VICINITY MAP
NTS

LEGEND

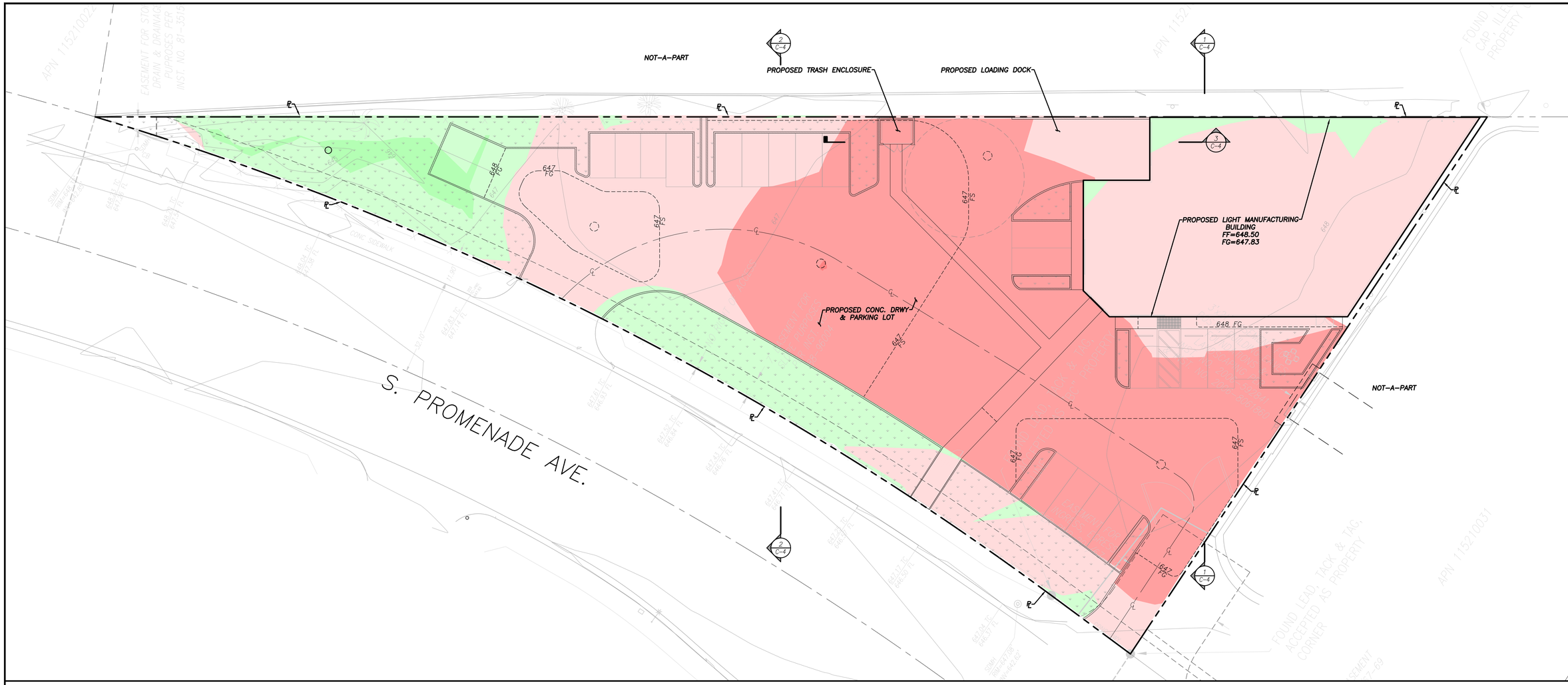
℄	CENTERLINE
℄	PROPERTY LINE
ASPH	ASPHALT
CB	CATCH BASIN
CONC	CONCRETE
DWY	DRIVEWAY
EB	ELECTRIC BOX
FH	FIRE HYDRANT
FL	FLOWLINE
GP	GUARD POST
MV	MONITOR WELL
PL	PALM TREE
S	SIGN
SL	STREET LIGHT
SDMH	STORMDRAIN MANHOLE
TC	TOP OF CURB
TR	TREE
WM	WATER METER
WV	WATER VALVUE
x—x—x—x—	FENCE

REVISIONS		
REV	DATE	DESCRIPTION
1	6-26-23	ADD UTILITIES & CURB ON WEST SIDE OF PROMENADE AVE.

PREPARED BY:
T&M SURVEYING
531 E. TRENTON AVE.
ORANGE, CA.
OFFICE 714-912-4042 CELL 714-906-8771
WWW.TNMSURVEYING.COM

BOUNDARY/TOPOGRAPHIC MAP
PROMENADE AVE.
CORONA, CALIFORNIA

PROJECT NO. -1775
SHEET 1 OF 1



CONSTRUCTION NOTES

1. STRUCTURAL FOUNDATION PER STRUCTURAL PLANS AND GEOTECHNICAL REPORT.
2. FOUNDATION EMBEDMENT PER SOILS REPORT RECOMMENDATIONS.
3. CONSTRUCT SDR 35 PVC PIPE(SIZE AS SHOWN) AT 1% MINIMUM SLOPE (MIN. PIPE SIZE 4"ø.).
4. CONSTRUCT CONC. CURB PER **3/C-5**.
5. EXISTING TO REMAIN.
6. EXISTING TO BE REMOVED.
7. CONSTRUCT 5" THK. SLAB ON GRADE WITH #4 REBARS AT 16" O.C. BOTH WAYS PER SOILS REPORT RECOMMENDATION.
8. CONSTRUCT CONC. DRWY PER **2/C-5**.
9. NOT USED
10. NOT USED
11. CONSTRUCT 1"ø DOMESTIC WATER METER.
12. CONSTRUCT 1"ø LANDSCAPE WATER METER.
13. CONSTRUCT CATCH BASIN PER **4/C-5**.
14. CONSTRUCT DRYWELL PER **1/C-5**.
15. CONSTRUCT SEDIMENT BASIN PER **5/C-5**.
16. NOT USED
17. CONSTRUCT TRASH ENCLOSURE PER **ARCH PLANS**.

LEGEND

ARCH.	ARCHITECTURAL
℄	CENTER LINE
CO	CLEANOUT
DG	DECOMPOSED GRANITE
℄	DAYLIGHT LINE
DN	DOWN
● DS	DOWNSPOUT
ELEV.	ELEVATOR
FF	FINISH FLOOR
FP	FIRE PLACE
FG	FINISH GRADE
FL	FLOW LINE
FP	FIRE PLACE
FS	FINISH SURFACE
GAL.	GALLON
HP	HIGH POINT
INV	INVERT
NAT.	NATURAL
NG	NATURAL GRADE
PA	PLANTER AREA
℄	PROPERTY LINE
RET	RETAINING
SEP.	SEPARATE
STD	STANDARD
TC	TOP OF CURB
TD	TOP OF DECK
TG	TOP OF GRATE
TW	TOP OF WALL
UNO	UNLESS NOTED OTHERWISE

RETAINING WALL

BLOCK WALL

CONTRACTOR TO VERIFY HARD SURFACE THICKNESS PER ARCHITECTURAL SPECIFICATIONS AND DETAILS TO DETERMINE ROUGH GRADE ELEVATIONS.

FS — SD — 12" SQ. CATCH BASIN PER NDS PLASTIC PRODUCTS PART NO. 1200-1204. U.N.O.

— SD — 6"ø SPEE-D BASIN PER NDS. PLASTIC PRODUCTS PART NO. 101, 201, 300. U.N.O.

INDICATES 4"ø PERF. SUBDRAIN

185.5 TC — EXISTING SPOT ELEVATIONS

— SD — STORM DRAIN PIPE

CONSTRUCT SDR 35 PVC PIPE(SIZE AS SHOWN) AT 1% MINIMUM SLOPE (MIN. PIPE SIZE 4"ø.).

— SP — FORCED PIPE PER SUMP PUMP PLANS

EARTHWORK EXHIBIT

1:16

EARTHWORK QUANTITIES

JOB:			**Job #**	-
	APN 115-210-032		**Date:**	**4/12/2023**
	Corona, CA 92879			
	SUMMARY			
	CUT			
	Item			**cu. yd.**
	Cut 1	Bldg		44
	Cut 2	Parking Lot		1,056
	Cut 3	Front Law n		2
	TOTAL	***CUT***	**=**	***1,103***
	FILL			
	Item			**cu. yd.**
	Fill 1	BUILDING		1
	Fill 2	PARKING LOT		77
	Fill 3	Front Law n		19
	TOTAL	***FILL***	**=**	***96***
	TOTAL			
	Item			**cu. yd.**
	CUT			(1,103)
	FILL			96
	TOTAL	***EXPORT***	**=**	***(1,006)***

EARTHWORK LEGEND

		MINIMUM ELEVATION	MAXIMUM ELEVATION
CUT		-3	-2
		-2	-1
		-1	0
FILL		0	1
		1	2

SCALE: 1: 16

0 16 32 48

REVISIONS	BY

CLIENT: **LIGHT MANUFACTURING BLDG**

PLAN PREPARED BY:

GREYSTONE
ENGINEERING GROUP INC
11022 SANTA MONICA BLVD. SUITE 440 LOS ANGELES, CA 90025
(310) 405-2341 EMAIL: INFO@GREYSTONEENG.COM

REGISTERED PROFESSIONAL ENGINEER — SOHEIL MOEINI — No.84000 — Exp. Sep. 2025 — CIVIL — STATE OF CALIFORNIA

CITY OF CORONA
APN 115-210-032
CORONA, CA. 92879
HV / 8/22/2024
SM/ 8/22/2024

EARTHWORK EXHIBIT

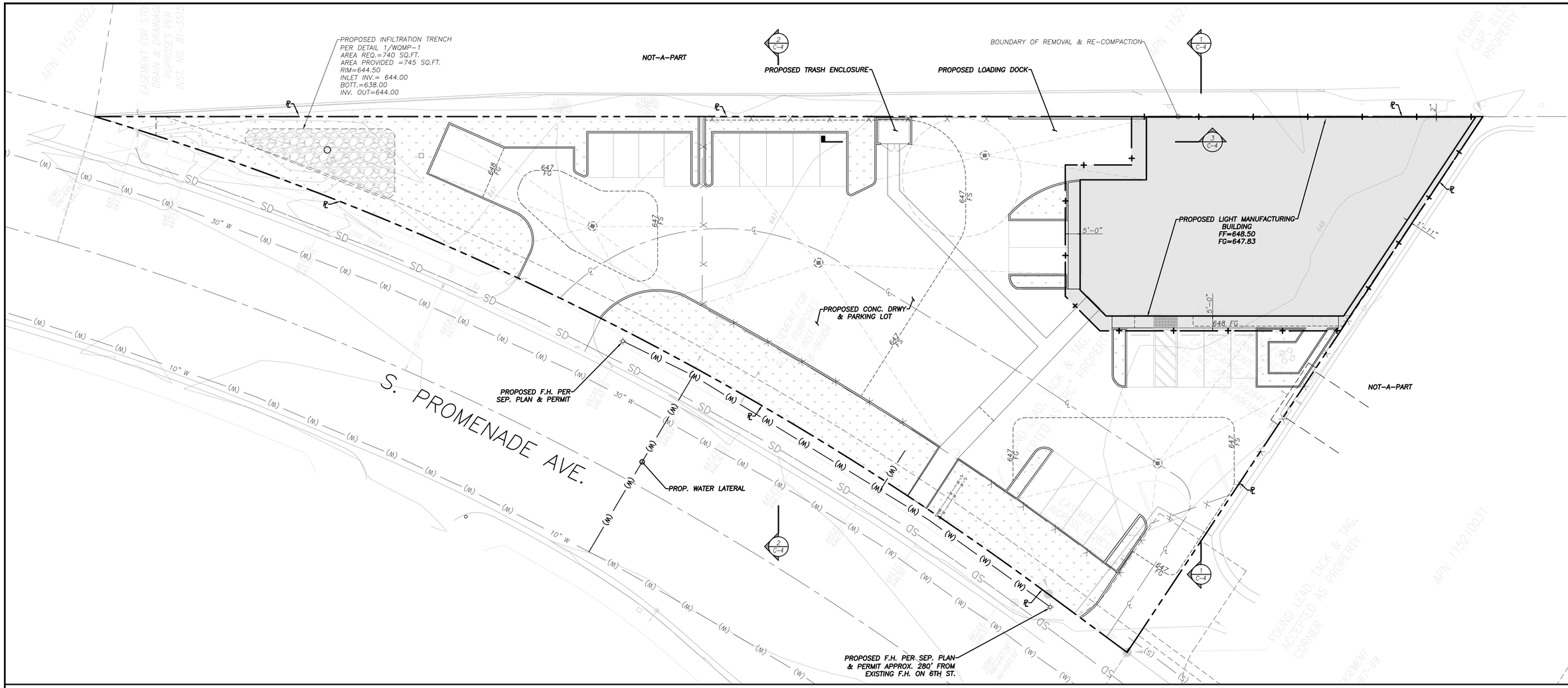
JOB # .

DATE 8/22/2024

SCALE

SHEET C-2.1

OF 11 SHEETS



CONSTRUCTION NOTES

1. STRUCTURAL FOUNDATION PER STRUCTURAL PLANS AND GEOTECHNICAL REPORT.
2. FOUNDATION EMBEDMENT PER SOILS REPORT RECOMMENDATIONS.
3. CONSTRUCT SDR 35 PVC PIPE(SIZE AS SHOWN) AT 1% MINIMUM SLOPE (MIN. PIPE SIZE 4"ø.).
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5. EXISTING TO REMAIN.
6. EXISTING TO BE REMOVED.
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10. NOT USED
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13. CONSTRUCT CATCH BASIN PER **4/C-5**.
14. CONSTRUCT DRYWELL PER **1/C-5**.
15. CONSTRUCT SEDIMENT BASIN PER **5/C-5**.
16. NOT USED
17. CONSTRUCT TRASH ENCLOSURE PER **ARCH PLANS**.

LEGEND

ARCH.	ARCHITECTURAL
℄	CENTER LINE
CO	CLEANOUT
DG	DECOMPOSED GRANITE
℘	DAYLIGHT LINE
DN	DOWN
● DS	DOWNSPOUT
ELEV.	ELEVATOR
FF	FINISH FLOOR
FP	FIRE PLACE
FG	FINISH GRADE
FL	FLOW LINE
FP	FIRE PLACE
FS	FINISH SURFACE
GAL.	GALLON
HP	HIGH POINT
INV	INVERT
NAT.	NATURAL
NG	NATURAL GRADE
PA	PLANTER AREA
ℙ	PROPERTY LINE
RET	RETAINING
SEP.	SEPARATE
STD	STANDARD
TC	TOP OF CURB
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TG	TOP OF GRATE
TW	TOP OF WALL
UNO	UNLESS NOTED OTHERWISE

RETAINING WALL

BLOCK WALL

CONTRACTOR TO VERIFY HARD SURFACE THICKNESS PER ARCHITECTURAL SPECIFICATIONS AND DETAILS TO DETERMINE ROUGH GRADE ELEVATIONS.

FS

SD — 12" SQ. CATCH BASIN PER NDS PLASTIC PRODUCTS PART NO. 1200-1204, U.N.O.

SD — 6"ø SPEE-D BASIN PER NDS. PLASTIC PRODUCTS PART NO. 101, 201, 300. U.N.O.

INDICATES 4"ø PERF. SUBDRAIN

185.5 TC — EXISTING SPOT ELEVATIONS

SD — STORM DRAIN PIPE
CONSTRUCT SDR 35 PVC PIPE(SIZE AS SHOWN) AT 1% MINIMUM SLOPE (MIN. PIPE SIZE 4"ø.).

SP — FORCED PIPE PER SUMP PUMP PLANS

REMOVAL & RE-COMPACTION PLAN

1:16

3. Compacted fill should have a minimum of 1.5 feet depth below proposed footing and extend at least 5 feet beyond all perimeter footings or to a distance equal to the depth of the certified compacted fill, whichever is the greatest.

PER SOILS REPORT DATED OCTOBER 6, 2010 PG. 8

EARTHWORK QUANTITIES

REMOVAL AND RECOMPACTION VOLUME = 1,542 CU. YDS.

INDICATES BOUNDARY OF R&R

INDICATES AREA OF R&R

SCALE: 1: 16

0 16 32 48

REVISIONS	BY

CLIENT: LIGHT MANUFACTURING BLDG

PLAN PREPARED BY:

GREYSTONE ENGINEERING GROUP INC
11022 SANTA MONICA BLVD. SUITE 440 LOS ANGELES, CA 90025
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CITY OF CORONA
APN 115-210-032
CORONA, CA. 92879

HV / 8/22/2024
SM/ 8/22/2024

REMOVAL & RE-COMPACTION PLAN

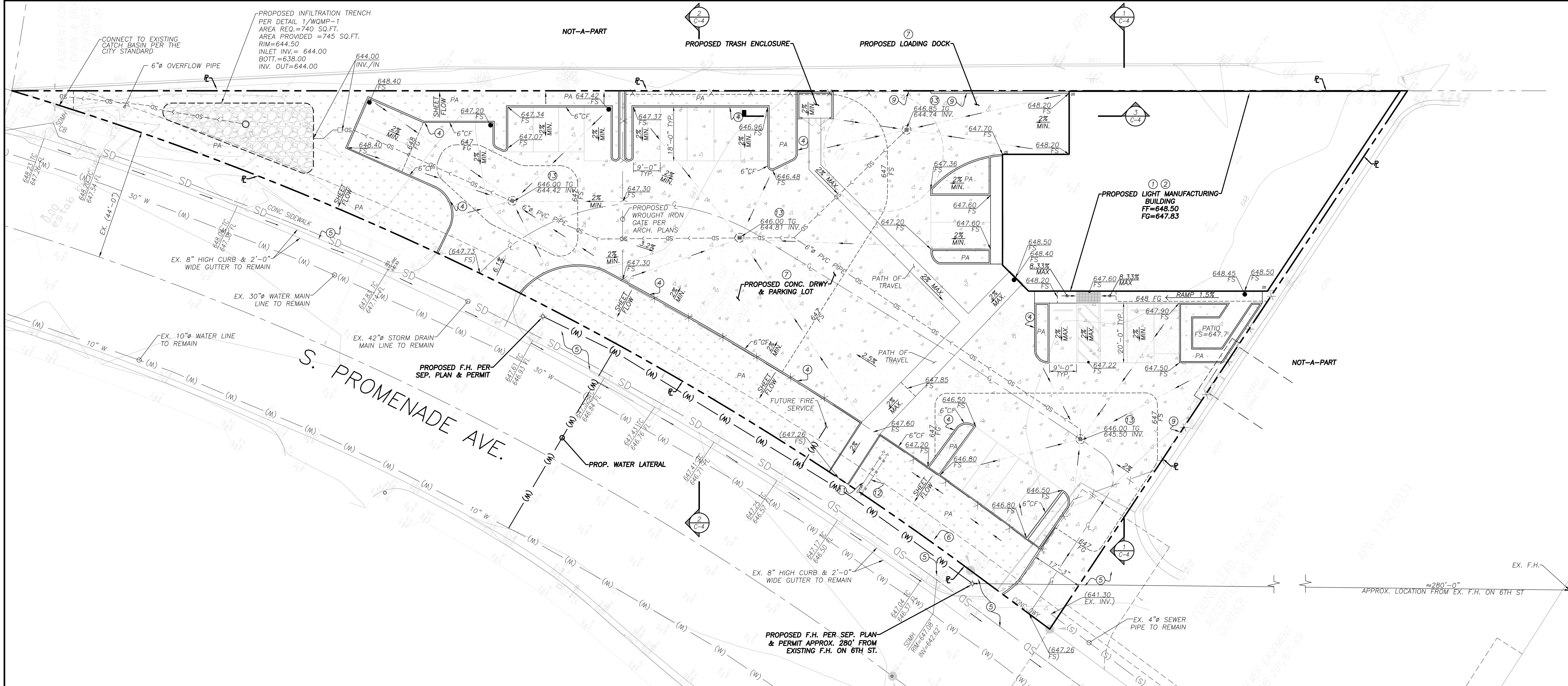
JOB # .

DATE 8/22/2024

SCALE

SHEET C-2.2

OF 11 SHEETS



CONSTRUCTION NOTES

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ARCH.	ARCHITECTURAL
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DG	DECOMPOSED GRANITE
D	DAYLIGHT LINE
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● DS	DOWNSPOUT
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TC	TOP OF CURB
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UNO	UNLESS NOTED OTHERWISE
(symbol)	RETAINING WALL
(symbol)	BLOCK WALL
(arrow)	CONTRACTOR TO VERIFY HARD SURFACE THICKNESS PER ARCHITECTURAL SPECIFICATIONS AND DETAILS TO DETERMINE ROUGH GRADE ELEVATIONS.
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—SD—	6"ø SPEE-D BASIN PER NDS. PLASTIC PRODUCTS PART NO. 101, 201, 300. U.N.O.
(arrow)	INDICATES 4"ø PERF. SUBDRAIN
185.5 TC	EXISTING SPOT ELEVATIONS
—SD—	STORM DRAIN PIPE
	CONSTRUCT SDR 35 PVC PIPE(SIZE AS SHOWN) AT 1% MINIMUM SLOPE (MIN. PIPE SIZE 4"ø).
—SP—	FORCED PIPE PER SUMP PUMP PLANS

GRADING & DRAINAGE PLAN

1:16

REVISIONS	BY

CLIENT: LIGHT MANUFACTURING BLDG

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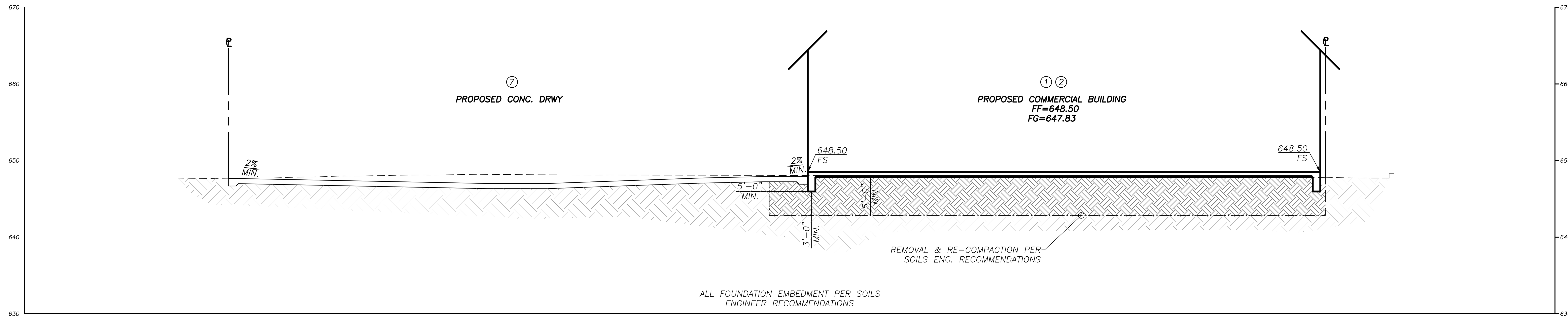
APN 115-210-032
CORONA, CA. 92879

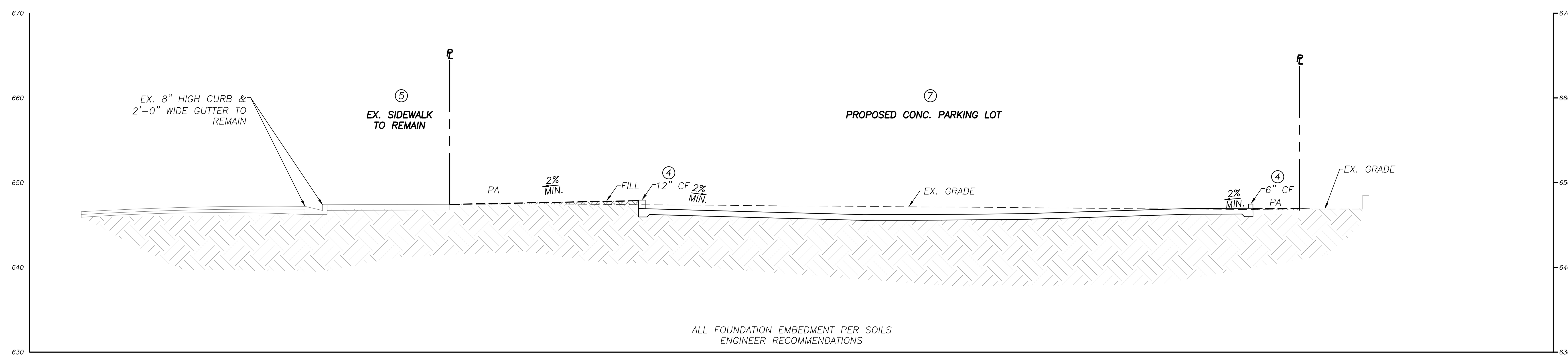
HV / 8/22/2024
SM/ 8/22/2024

GRADING & DRAINAGE PLAN

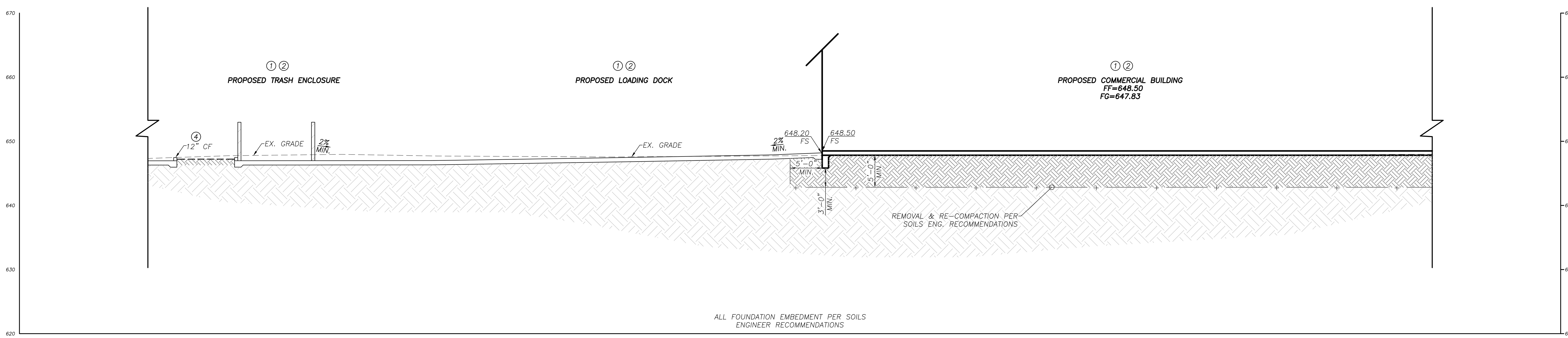
JOB #	
DATE	8/22/2024
SCALE	
SHEET	EXHIBIT 12
OF	11 SHEETS



SECTION 1
1:8



SECTION 2
1:8



SECTION 3
1:8

REVISIONS	BY

CLIENT: LIGHT MANUFACTURING BLDG

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SM/ 8/22/2024
HV / 8/22/2024

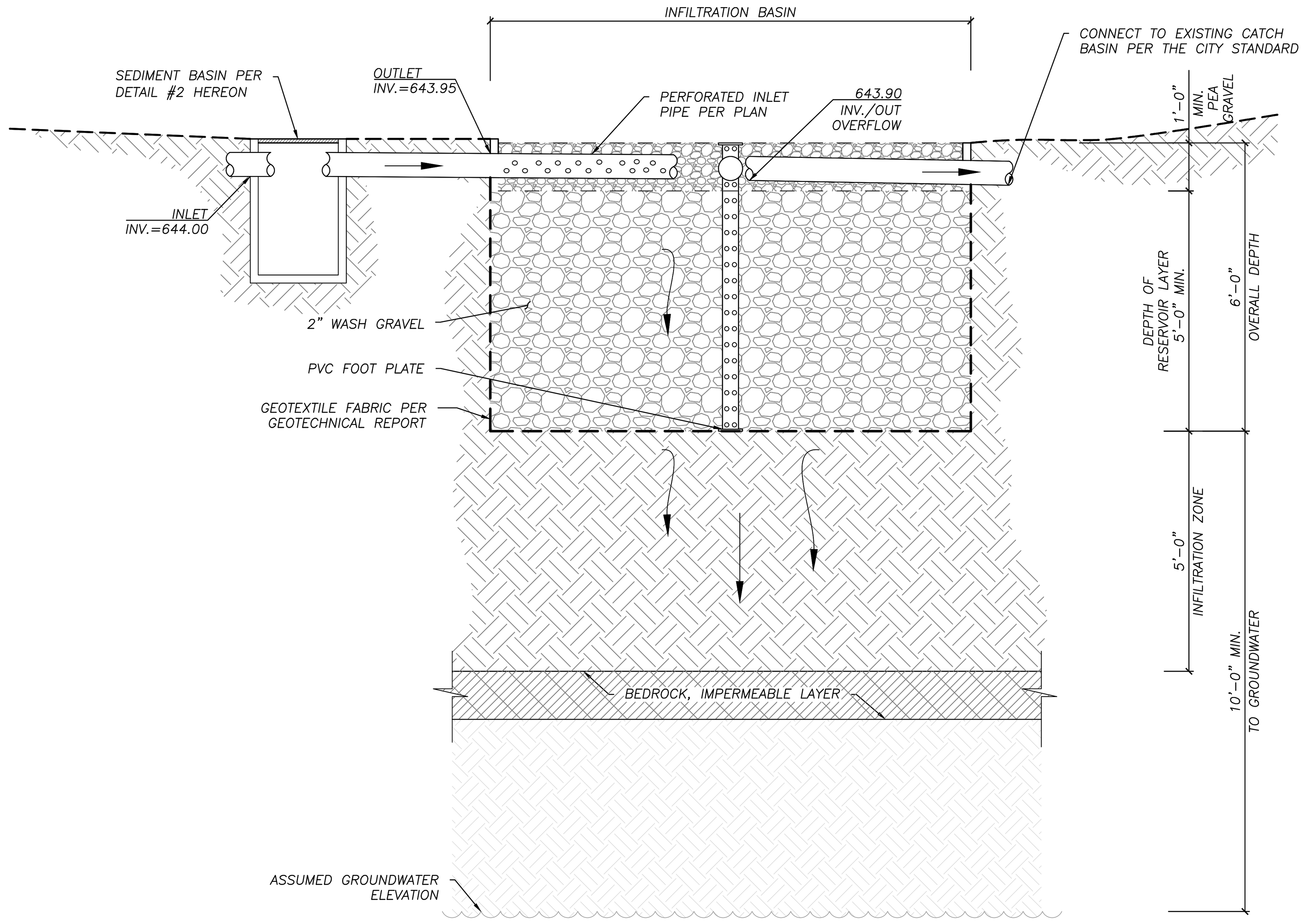
SECTIONS

JOB #

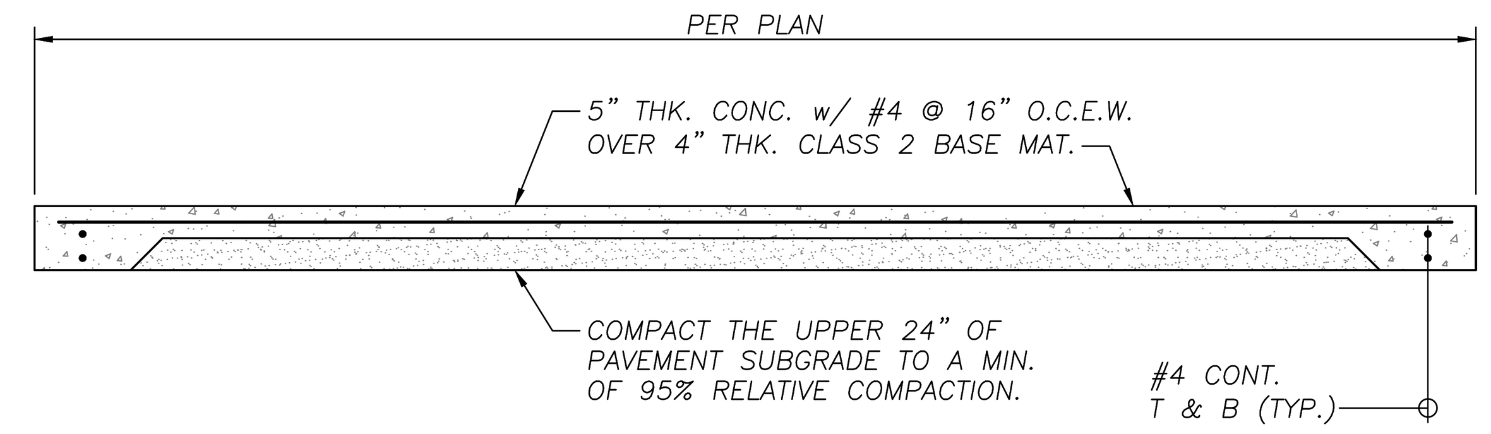
DATE 8/22/2024

SCALE

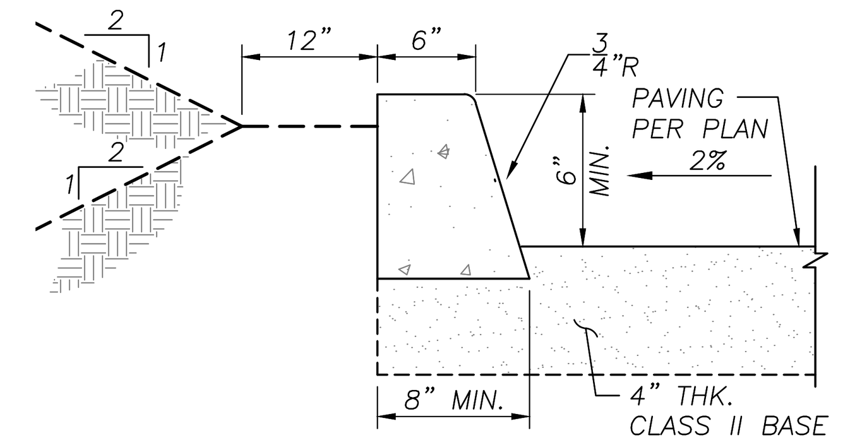
SHEET C-4
OF 11 SHEETS



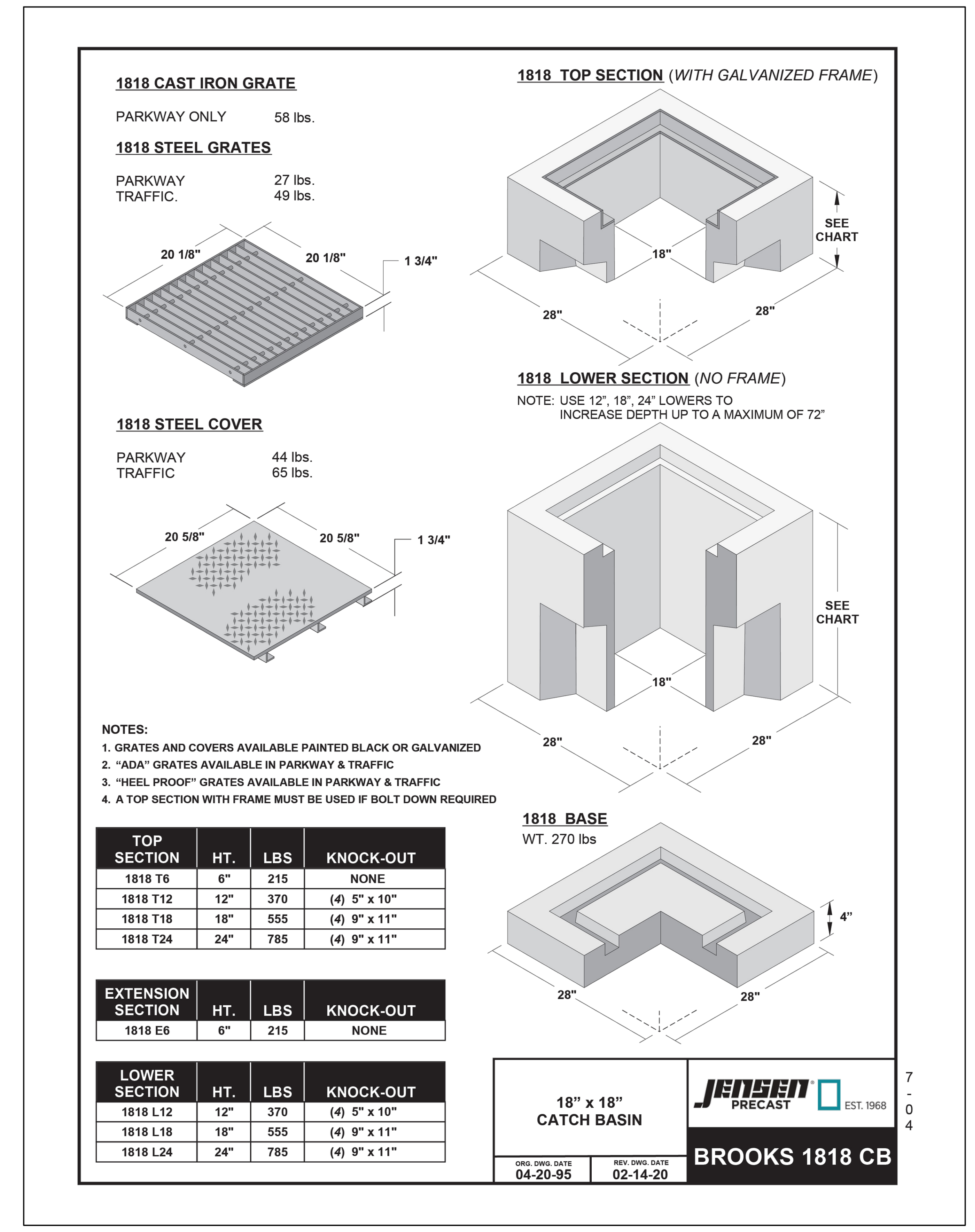
DETAIL NO. 1 INFILTRATION TRENCH
N.T.S.



DETAIL NO. 2 CONCRETE DRIVEWAY
N.T.S.



DETAIL NO. 3 CONCRETE CURB
N.T.S.



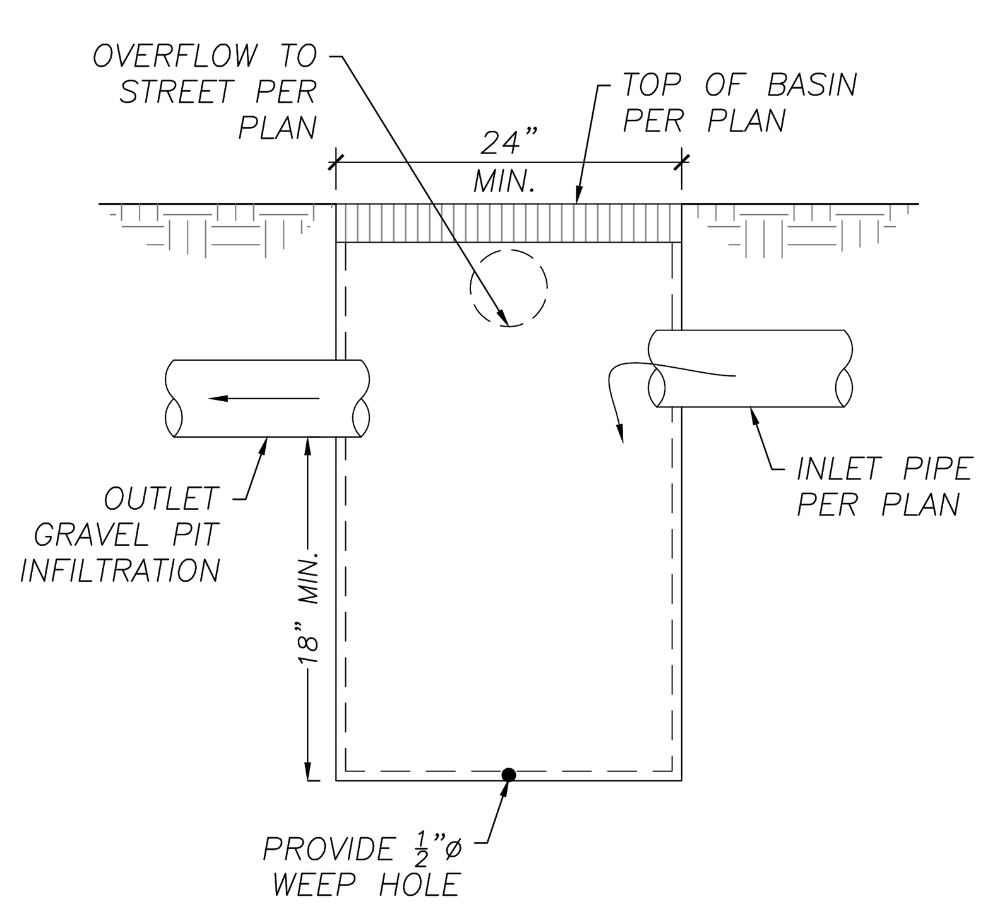
NOTES:
1. GRATES AND COVERS AVAILABLE PAINTED BLACK OR GALVANIZED
2. "ADA" GRATES AVAILABLE IN PARKWAY & TRAFFIC
3. "HEEL PROOF" GRATES AVAILABLE IN PARKWAY & TRAFFIC
4. A TOP SECTION WITH FRAME MUST BE USED IF BOLT DOWN REQUIRED

TOP SECTION	HT.	LBS	KNOCK-OUT
1818 T6	6"	215	NONE
1818 T12	12"	370	(4) 5" x 10"
1818 T18	18"	555	(4) 9" x 11"
1818 T24	24"	785	(4) 9" x 11"

EXTENSION SECTION	HT.	LBS	KNOCK-OUT
1818 E6	6"	215	NONE

LOWER SECTION	HT.	LBS	KNOCK-OUT
1818 L12	12"	370	(4) 5" x 10"
1818 L18	18"	555	(4) 9" x 11"
1818 L24	24"	785	(4) 9" x 11"

DETAIL NO. 4 CATCH BASIN
N.T.S.



DETAIL NO. 5 SEDIMENT BASIN
N.T.S.

REVISIONS	BY

CLIENT: LIGHT MANUFACTURING BLDG

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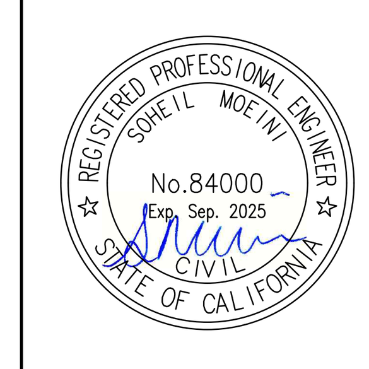

CITY OF CORONA
APN 115-210-032
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SM/ 8/22/2024
HV / 8/22/2024

DETAILS

JOB #
DATE 8/22/2024
SCALE
SHEET C-5
OF 11 SHEETS

WQMP PLAN

1:16

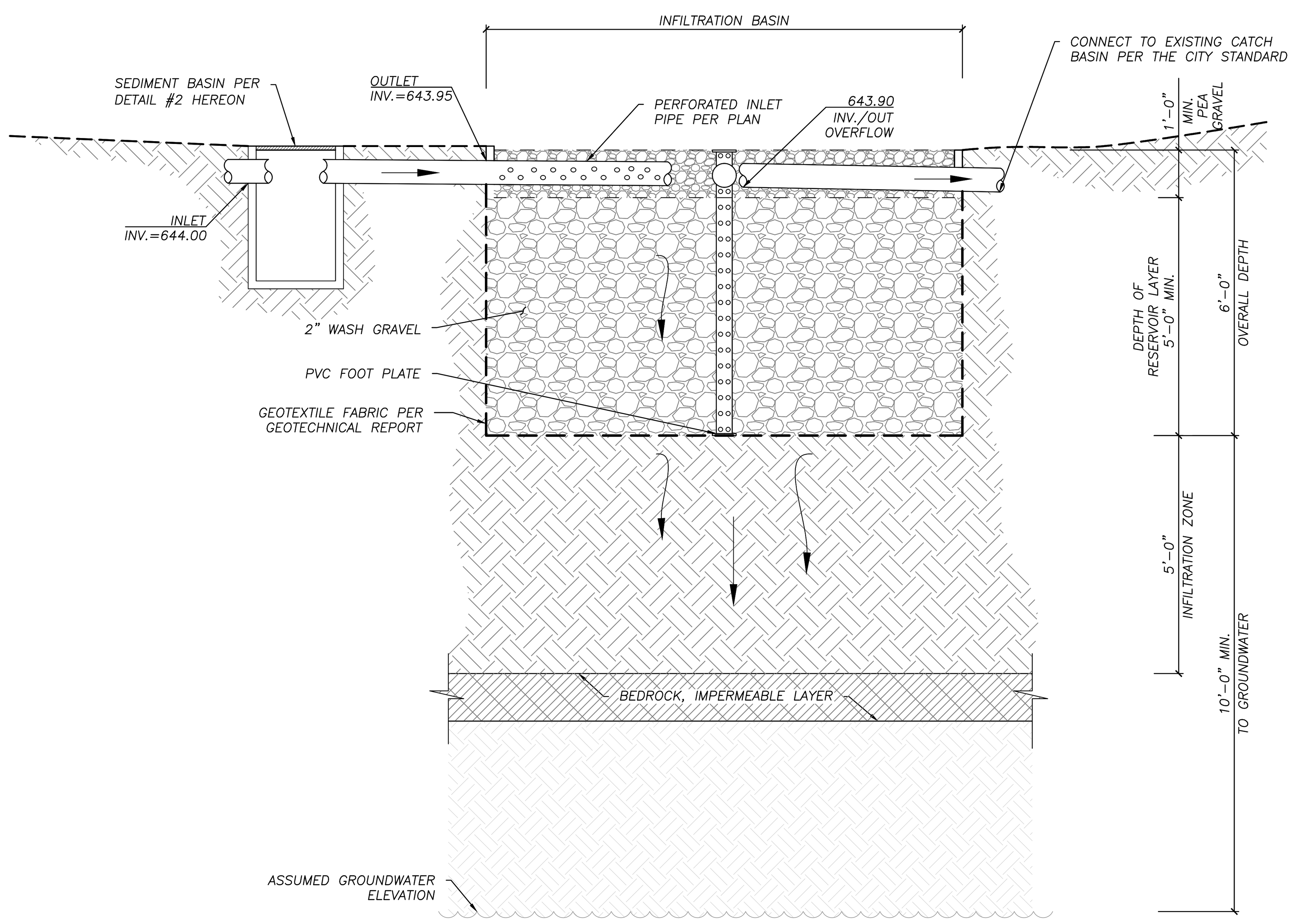
— — — SUB-AREA BOUNDARY

(A1) SUB-AREA DESIGNATION

▨ INDICATES PROPOSED IMPERVIOUS AREA

SCALE: 1: 16

0 16 32 48



DETAIL NO. 1 INFILTRATION TRENCH

N.T.S.

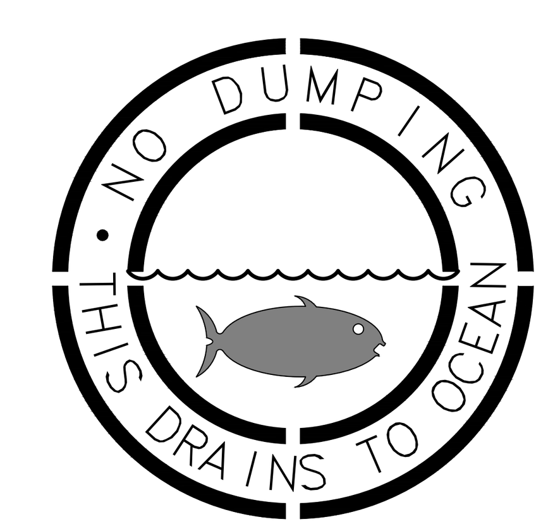
NOTE:

ANY CHANGES (TYPE, SIZE, LOCATION) TO APPROVED STORMWATER BEST MANAGEMENT PRACTICE(S) (BMPs) MUST OBTAIN WRITTEN APPROVAL FROM LOS ANGELES, DEPARTMENT OF PUBLIC WORKS, BUREAU OF SANITATION PRIOR TO CONSTRUCTION OF BMP(s).

NOTE TO CONTRACTOR

CONTRACTOR TO VERIFY THE LOCATIONS OF ALL PROPOSED STRUCTURES, ELEVATIONS, AND DIMENSIONS PRIOR TO CONSTRUCTION. CONTRACTOR TO CONTACT PROJECT ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY CONSTRUCTION.

NOTE: ALL SLOPES TO BE VEGETATED



DETAIL NO. 1

SCALE: NTS

STENCIL TO BE PAINTED NEAR CATCH BASINS THAT DRAIN INTO BMP DEVICES

REVISIONS	BY

CLIENT: LIGHT MANUFACTURING BLDG

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WQMP PLAN

JOB # .

DATE 8/22/2024

SCALE

SHEET WQMP-1 OF 11 SHEETS

WET WEATHER EROSION CONTROL PLAN (WWECP) GENERAL NOTES:

LIGHT MANUFACTURING BLDG
APN 115-210-032

EROSION AND SEDIMENT CONTROL PLAN (ESCP) GENERAL NOTES:

1. IN CASE OF EMERGENCY, CALL (RESPONSIBLE PERSON) AT (24-HOUR TELEPHONE).
   I. PLEASE FILL IN NAME AND NUMBER
2. TOTAL DISTURBED AREA ____________–____________ WDID # ________________________
   I. RISK LEVEL 1 2 3 (CIRCLE ONE AS DETERMINED BY STATE GENERAL PERMIT FOR SITES GREATER THAN 1 ACRE)
3. A STAND-BY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON (NOVEMBER 1 TO APRIL 15). NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF EMERGENCY DEVICES WHEN RAIN IS IMMINENT.
4. EROSION CONTROL DEVICES SHOWN ON THIS PLAN MAY BE REMOVED WHEN APPROVED BY THE BUILDING OFFICIAL IF THE GRADING OPERATION HAS PROGRESSED TO THE POINT WHERE THEY ARE NO LONGER REQUIRED.
5. GRADED AREAS ADJACENT TO FILL SLOPES LOCATED AT THE SITE PERIMETER MUST DRAIN AWAY FROM THE TOP OF SLOPE AT THE CONCLUSION OF EACH WORKING DAY. ALL LOOSE SOILS AND DEBRIS THAT MAY CREATE A POTENTIAL HAZARD TO OFF-SITE PROPERTY SHALL BE STABILIZED OR REMOVED FROM THE SITE ON A DAILY BASIS.
6. ALL SILT AND DEBRIS SHALL BE REMOVED FROM ALL DEVICES WITHIN 24 HOURS AFTER EACH RAINSTORM AND BE DISPOSED OF PROPERLY.
7. A GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN ANY DEVICE EXCEEDS TWO FEET. THE DEVICE SHALL BE DRAINED OR PUMPED DRY WITHIN 24 HOURS AFTER EACH RAINSTORM. PUMPING AND DRAINING OF ALL BASINS AND DRAINAGE DEVICES MUST COMPLY MUST COMPLY WITH THE APPROPRIATE BMP FOR DEWATERING OPERATIONS.
8. THE PLACEMENT OF ADDITIONAL DEVICES TO REDUCE EROSION DAMAGE AND CONTAIN POLLUTANTS WITHIN THE SITE IS LEFT TO THE DISCRETION OF THE FIELD ENGINEER. ADDITIONAL DEVICES AS NEEDED SHALL BE INSTALLED TO RETAIN SEDIMENTS AND OTHER POLLUTANTS ON SITE.
9. DESILTING BASINS MAY NOT BE REMOVED OR MADE INOPERABLE BETWEEN NOVEMBER 1 AND APRIL 15 OF THE FOLLOWING YEAR WITHOUT THE APPROVAL OF THE BUILDING OFFICIAL.
10. STORM WATER POLLUTION AND EROSION CONTROL DEVICES ARE TO BE MODIFIED, AS NEEDED, AS THE PROJECT PROGRESSES, THE DESIGN AND PLACEMENT OF THESE DEVICES IS THE RESPONSIBILITY OF THE FIELD ENGINEER. PLANS REPRESENTING CHANGES MUST BE SUBMITTED FOR APPROVAL IF REQUESTED BY THE BUILDING OFFICIAL.
11. EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NON-STORM WATER FROM THE PROJECT SITES AT ALL TIMES.
12. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND.
13. STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
14. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOILS AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
15. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
16. DEVELOPERS/CONTRACTORS ARE RESPONSIBLE TO INSPECT ALL EROSION CONTROL DEVICES AND BMPS ARE INSTALLED AND FUNCTIONING PROPERLY IF THERE IS A 50% OR GREATER PROBABILITY OF PREDICTED PRECIPITATION, AND AFTER ACTUAL PRECIPITATION. A CONSTRUCTION SITE INSPECTION CHECKLIST AND INSPECTION LOG SHALL BE MAINTAINED AT THE PROJECT SITE AT ALL TIMES AND AVAILABLE FOR REVIEW BY THE BUILDING OFFICIAL (COPIES OF THE SELF-INSPECTION CHECK LIST AND INSPECTION LOGS ARE AVAILABLE UPON REQUEST).
17. TRASH AND CONSTRUCTION-RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
18. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
19. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
20. AS THE ENGINEER/QSD OF RECORD, I HAVE SELECTED APPROPRIATE BMPS TO EFFECTIVELY MINIMIZE THE NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORM WATER QUALITY. THE PROJECT OWNER AND CONTRACTOR ARE AWARE THAT THE SELECTED BMPS MUST BE INSTALLED, MONITORED, AND MAINTAINED TO ENSURE THEIR EFFECTIVENESS.

____ __________________
CIVIL ENGINEER/QSD SIGNATURE DATE

21. THE FOLLOWING NOTES MUST BE ON THE PLAN:
    AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, "I CERTIFY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH THE SYSTEM DESIGNED TO ENSURE THAT A QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFORMATION SUBMITTED IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT SUBMITTING FALSE AND/ OR INACCURATE INFORMATION, FAILING TO UPDATE THE ESCP TO REFLECT CURRENT CONDITIONS, OR FAILING TO PROPERLY AND/OR ADEQUATELY IMPLEMENT THE ESCP MAY RESULT IN REVOCATION OF GRADING AND/OR OTHER PERMITS OR OTHER SANCTIONS PROVIDED BY LAW."

____ ______________
OWNER OR AUTHORIZED REPRESENTATIVE (PERMITTEE) DATE

22. DEVELOPERS/CONTRACTORS ARE RESPONSIBLE TO INSPECT ALL EROSION CONTROL DEVICES AND BMPS ARE INSTALLED AND FUNCTIONING PROPERLY AS REQUIRED BY THE STATE CONSTRUCTION GENERAL PERMIT. A CONSTRUCTION SITE INSPECTION CHECKLIST AND INSPECTION LOG SHALL BE MAINTAINED AT THE PROJECT SITE AT ALL TIMES AND AVAILABLE FOR REVIEW BY THE BUILDING OFFICIAL.
23. THE FOLLOWING BMPS FROM THE "2009 CONSTRUCTION BMP HANDBOOK/PORTAL" MUST BE IMPLEMENTED FOR ALL CONSTRUCTION ACTIVITIES AS APPLICABLE. AS AN ALTERNATIVE, DETAILS FROM "CALTRANS STORMWATER QUALITY HANDBOOKS, CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (BMP) MANUAL" MAY BE USED. ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE BUILDING OFFICIAL.

EROSION CONTROL
EC1 – SCHEDULING
EC2 – PRESERVATION OF EXISTING VEGETATION
EC3 – HYDRAULIC MULCH
EC4 – HYDROSEEDING
EC5 – SOIL BINDERS
EC6 – STRAW MULCH
EC7 – GEOTEXTILES & MATS
EC8 – WOOD MULCHING
EC9 – EARTH DIKES AND DRAINAGE SWALES
EC10 – VELOCITY DISSIPATION DEVICES
EC11 – SLOPE DRAINS
EC12 – STREAMBANK STABILIZATION
EC13 – RESERVED
EC14 – COMPOST BLANKETS
EC15 – SOIL PREPARATION\ROUGHENING
EC16 – NON-VEGETATED STABILIZATION

TEMPORARY SEDIMENT CONTROL
SE1 – SILT FENCE
SE2 – SEDIMENT BASIN
SE3 – SEDIMENT TRAP
SE4 – CHECK DAM
SE5 – FIBER ROLLS
SE6 – GRAVEL BAG BERM
SE7 – STREET SWEEPING AND VACUUMING
SE8 – SANDBAG BARRIER
SE9 – STRAW BALE BARRIER
SE10 – STORM DRAIN INLET PROTECTION
SE11 – ACTIVE TREATMENT SYSTEMS
SE12 – TEMPORARY SILT DIKE
SE13 – COMPOST SOCKS & BERMS
SE14 – BIOFILTER BAGS

WIND EROSION CONTROL
WE1 – WIND EROSION CONTROL

TEMPORARY TRACKING CONTROL
TC1 – STABILIZED CONSTRUCTION ENTRANCE EXIT
TC2 – STABILIZED CONSTRUCTION ROADWAY
TC3 – ENTRANCE/OUTLET TIRE WASH

NON-STORMWATER MANAGEMENT
NS1 – WATER CONSERVATION PRACTICES
NS2 – DEWATERING OPERATIONS
NS3 – PAVING AND GRINDING OPERATIONS
NS4 – TEMPORARY STREAM CROSSING
NS5 – CLEAR WATER DIVERSION
NS6 – ILLICIT CONNECTION/DISCHARGE
NS7 – POTABLE WATER/IRRIGATION
NS8 – VEHICLE AND EQUIPMENT CLEANING
NS9 – VEHICLE AND EQUIPMENT FUELING
NS10 – VEHICLE AND EQUIPMENT MAINTENANCE
NS11 – PILE DRIVING OPERATIONS
NS12 – CONCRETE CURING
NS13 – CONCRETE FINISHING
NS14 – MATERIAL AND EQUIPMENT USE
NS15 – DEMOLITION ADJACENT TO WATER
NS16 – TEMPORARY BATCH PLANTS

WASTE MANAGEMENT & MATERIAL POLLUTION CONTROL
WM1 – MATERIAL DELIVERY AND STORAGE
WM2 – MATERIAL USE
WM3 – STOCKPILE MANAGEMENT
WM4 – SPILL PREVENTION AND CONTROL
WM5 – SOLID WASTE MANAGEMENT
WM6 – HAZARDOUS WASTE MANAGEMENT
WM7 – CONTAMINATION SOIL MANAGEMENT
WM8 – CONCRETE WASTE MANAGEMENT
WM9 – SANITARY/SEPTIC WASTE MANAGEMENT
WM10 – LIQUID WASTE MANAGEMENT

ASPHALT AND BITUMINOUS PRODUCTS

PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS FROM ASPHALT AND BITUMINOUS OPERATIONS, BY PREVENTING RUN-ON AND RUN-OFF DURING THE OPERATION, PROPERLY DISPOSING OF WASTES, AND TRAINING EMPLOYEES AND SUBCONTRACTORS.

- AVOID PRIME OR TACK COATING DURING WET WEATHER.
- STORE MATERIALS AWAY FROM DRAINAGE COURSES TO PREVENT MATERIAL FROM ENTERING THE RUN-OFF.
- COVER CATCH BASINS AND MANHOLES WHEN APPLYING SEAL COAT, TACK COAT, SLURRY SEAL, FOG SEAL, ETC.
- MAKE SURE SAND OR GRAVEL PLACED OVER NEW ASPHALT DOESN'T WASH INTO STORM DRAINS, STREETS, OR CREEKS.
- DISPOSE OF OLD ASPHALT PROPERLY. COLLECT AND REMOVE ALL BROKEN ASPHALT FROM THE SITE AND RECYCLE WHENEVER POSSIBLE. DO NOT DISPOSE OF ASPHALT PRODUCTS INTO WATERWAYS.
- FOLLOW THE STORM WATER PERMITTING REQUIREMENTS FOR INDUSTRIAL ACTIVITIES IF PAVING INVOLVES AN ON-SITE MIXING PLANT.

ADDITIONAL GENERAL NOTES

TEMPORARY EROSION CONTROL MEASURES EFFECTIVE DURING RAINY SEASON

OCTOBER 1 TO APRIL 15

1. TEMPORARY EROSION CONTROL DEVICES SHOWN ON THE WWECP WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED AS AND WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES TO MEET "AS GRADED" CONDITIONS.
2. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER AS DIRECTED BY THE INSPECTOR.
3. WHEN DIRECTED BY THE INSPECTOR, A 12-INCH BERM SHALL BE MAINTAINED ALONG THE TOP OF THE SLOPE OF THOSE FILLS ON WHICH GRADING IS NOT IN PROGRESS.
4. PROVIDE VELOCITY CHECK DAMS ACROSS THE OUTLET OF ALL LOTS DRAINING INTO THE STREET.
5. ALL FILLS SHALL BE GRADED TO PROMOTE DRAINAGE AWAY FROM THE EDGES OF THE FILL.
6. ALL UTILITY TRENCHES SHALL BE BLOCKED AT THE PRESCRIBED INTERVALS FROM THE BOTTOM TO TOP WITH A DOUBLE ROW OF SANDBAGS PRIOR TO BACKFILL. STORM AND SEWER TRENCHES SHALL BE BLOCKED AT THE PRESCRIBED INTERVALS WITH A DOUBLE ROW OF SANDBAGS EXTENDING UPWARD, TO WITHIN TWO SANDBAGS FROM THE GRADED SURFACE OF THE STREET. SANDBAGS ARE TO BE PLACED WITH ALTERNATE HEADER AND STRETCHER COURSES. THE INTERVALS PRESCRIBED BETWEEN SANDBAG BLOCKING SHALL DEPEND ON THE SLOPE OF THE GROUND SURFACE, BUT NOT TO EXCEED THE FOLLOWING:

GRADE OF STREET	INTERVAL
LESS THAN 2%	AS REQUIRED
2% TO 4%	100 FEET
4% TO 10%	50 FEET
OVER 10%	25 FEET

7. PROVIDE STANDARD "VELOCITY CHECK DAMS" AT ALL UNPAVED STREET AREAS AT THE INTERVALS INDICATED IN PARAGRAPH 6 ABOVE. VELOCITY CHECK DAMS MAY BE CONSTRUCTED OF SANDBAGS, TIMBER, OR OTHER EROSION RESISTANT MATERIAL APPROVED BY THE INSPECTOR AND SHALL EXTEND COMPLETELY ACROSS THE STREET OR CHANNEL AT RIGHT ANGLES TO THE CENTERLINE. EARTH DAMS MAY NOT BE USED AS "VELOCITY CHECK DAMS".
8. PROVIDE STANDARD "VELOCITY CHECK DAMS" IN ALL UNPAVED GRADED CHANNELS AT THE INTERVALS INDICATED BELOW.

GRADE OF CHANNEL CHECK DAMS	INTERVALS BETWEEN
LESS THAN 3%	100 FEET
3% TO 6%	50 FEET
OVER 6%	25 FEET

9. THE STANDARD "VELOCITY CHECK DAM" SHALL HAVE A MINIMUM HEIGHT OF 12-INCHES. VELOCITY CHECK DAMS ACROSS OUTLETS OF ALL LOTS SHALL HAVE A MINIMUM HEIGHT OF 18-INCHES. VELOCITY CHECK DAMS CONSTRUCTED WITH SANDBAGS THAT ARE 18-INCHES HIGH SHALL BE BUILT WITH A DOUBLE ROW.
10. AFTER SEWER AND UTILITY TRENCHES ARE BACKFILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS FLOW AT FREQUENT INTERVALS WHEN TRENCHES ARE NOT ON THE CENTERLINE OF A CROWNED STREET.
11. EXCEPT AS OTHERWISE DIRECTED BY THE INSPECTOR, ALL DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE FORECAST OF RAIN PROBABILITY EXCEED 40% AND MAINTAINED DURING THE RAINY SEASON (OCTOBER 1 TO APRIL 15).
12. AFTER EACH STORM, ALL "DESILTING BASINS" AND "VELOCITY CHECK DAMS" SHALL BE PUMPED DRY AND REMOVED OF ALL DEBRIS AND SILT WITH IN 24 HOURS AND RESTORED TO THEIR ORIGINAL CAPACITY.
13. EROSION CONTROL DEVICES SHALL BE STOCKPILED IN PARKWAYS AT INTERVALS SHOWN ON THE WWECP, READY TO BE PLACED IN POSITION WHEN RAIN IS FORECASTED OR WHEN DIRECTED BY THE INSPECTOR.
14. ALL CUT AND FILL SLOPES GREATER THAN 1 VERTICAL TO 3 HORIZONTAL SHALL BE COVERED WITH 10 MIL PLASTIC SHEETING HELD IN PLACE WITH SANDBAGS (UNLESS PLANTED OR HYDRO-SEEDED).
15. BRUSH AND VEGETATIVE GROUND COVER MAY NOT BE REMOVED MORE THAN 10-FEET ABOVE FILLS DURING THE RAINY SEASON WHICH OCCURS BETWEEN OCTOBER 1 AND APRIL 15.

JOB ADDRESS:

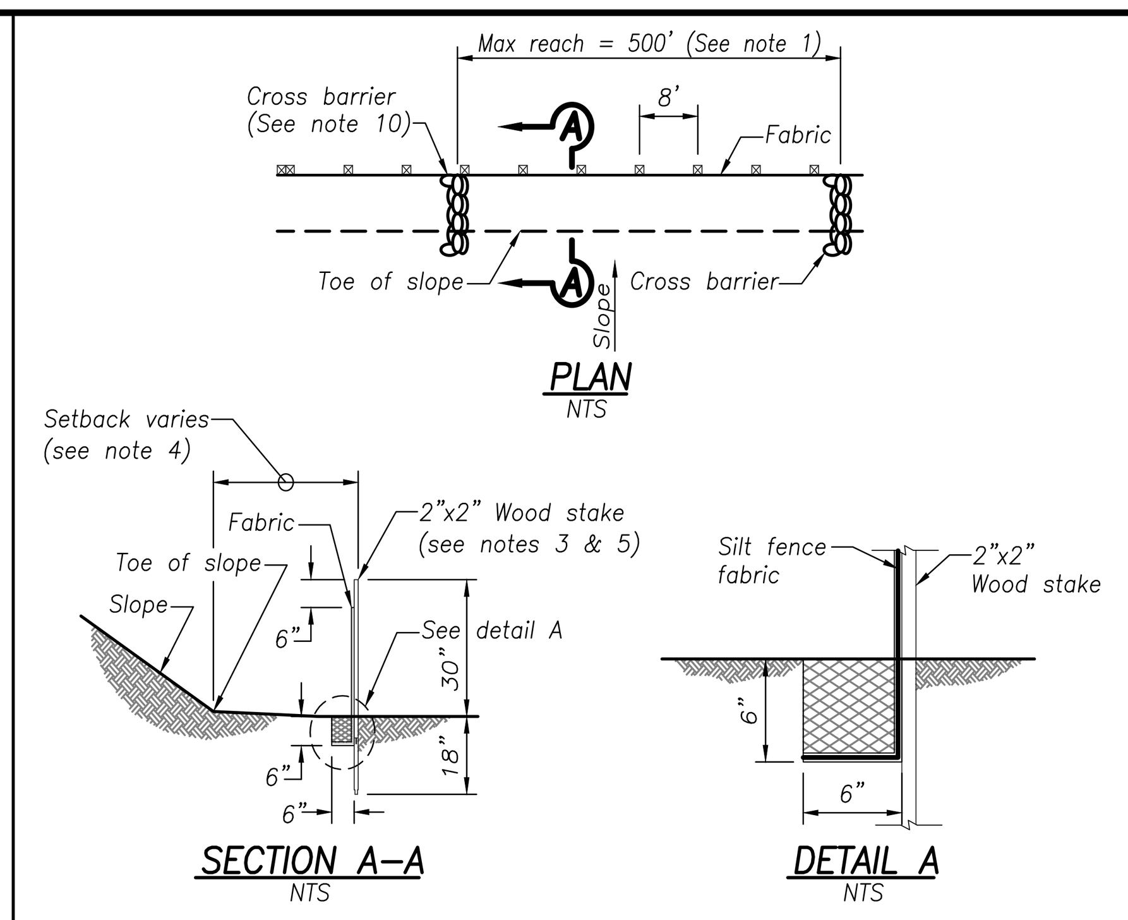
OWNER: NAME – **LIGHT MANUFACTURING BLDG**
ADDRESS – **APN 115-210-032**
PHONE – –

24 HR. EMERGENCY CONTACT: NAME –
ADDRESS –
PHONE –

FOR DESILTING BASINS:

1. ALL "DESILTING BASINS" BUILT ON LOTS ADJACENT TO DWELLINGS MUST BE COMPLETELY LINED WITH AC-2 OR GUNITE.
2. SIZES OF "DESILTING BASINS" AND "WEIRS" SHALL BE SHOWN ON THE PLANS AND HAVE THE CAPACITY TO SERVICE THE AFFECTED WATERSHED.
3. ALL SPILLWAYS FROM BASINS SHALL BE PAVED TO EXISTING PAVED STREETS, EXISTING STORM DRAIN CATCH BASINS OR OTHER APPROVED WATERCOURSES.
4. RETENTION OR DESILTING BASINS MAY NOT BE REMOVED OR MADE INOPERATIVE WITHOUT PRIOR APPROVAL OF THE PUBLIC WORKS ENGINEER UNTIL ALL SURFACE IMPROVEMENTS HAVE BEEN COMPLETED.
5. SEWER OR STORM DRAIN TRENCHES THAT ARE CUT THROUGH BASIN DIKES OR BASIN INLET DIKES SHALL BE PLUGGED WITH SANDBAGS FROM TOP OF PIPE TO TOP OF DIKE. SEWER LINES SHALL FIRST BE ENCASED IN CONCRETE BEFORE SANDBAGS ARE PLACED.
6. "DESILTING" AND "RETENTION" BASINS SHALL BE CONSTRUCTED AS FOLLOWS:
   (A.) OUTLET AND APRON – (AS DESCRIBED ON BMP ESC56, "TEMPORARY SEDIMENT BASIN").
   (B.) DIKES:
      1. SHALL BE COMPACTED TO 95% COMPACTION AND SHALL BE CONSTRUCTED UNDER THE DIRECT SUPERVISION OF THE PUBLIC WORKS EROSION CONTROL INSPECTOR.
      2. THE PLACEMENT OF SPILLWAYS AND OUTLET PIPES SHALL BE AS FAR AS PRACTICABLE FROM INLETS.
      3. BASIN WALLS SHALL NOT EXCEED 2:1 SLOPE.
   (C) INLET TO BASINS:
      1. WALLS SHALL BE PAVED WITH AC-3 OR CONSTRUCTED SANDBAG BERMS WHEN APPROVED BY THE PUBLIC WORKS EROSION CONTROL INSPECTOR.
      2. SLOPE OF INLETS SHALL BE EQUAL TO OR MORE THAN THE SLOPE OF THE CARRYING SURFACE IMMEDIATELY ABOVE THE INLET TO AVOID "SILTING UP" OF THE INLETS.
   (D) IF A GRAVITY PIPE IS IMPRACTICABLE, A STAND-BY PUMP SHALL BE PROVIDED FOR EACH DESILTING BASIN. A GUARD IS TO BE ON CONTINUOUS DUTY WHILE THE BASIN CONTAINS WATER.
   (E) DESILTING BASINS REQUIRED FOR TEMPORARY EROSION CONTROL SHALL NOT BE PERMITTED IN THE STREET AREAS UNLESS SPECIFICALLY AUTHORIZED BY THE PUBLIC WORKS ENGINEER.
7. A "STANDBY EMERGENCY CREW" SHALL BE ALERTED BY THE DEVELOPER OR CONTRACTOR TO PERFORM EMERGENCY WORK DURING RAINSTORMS. THE PARTY TO BE CONTACTED IS:

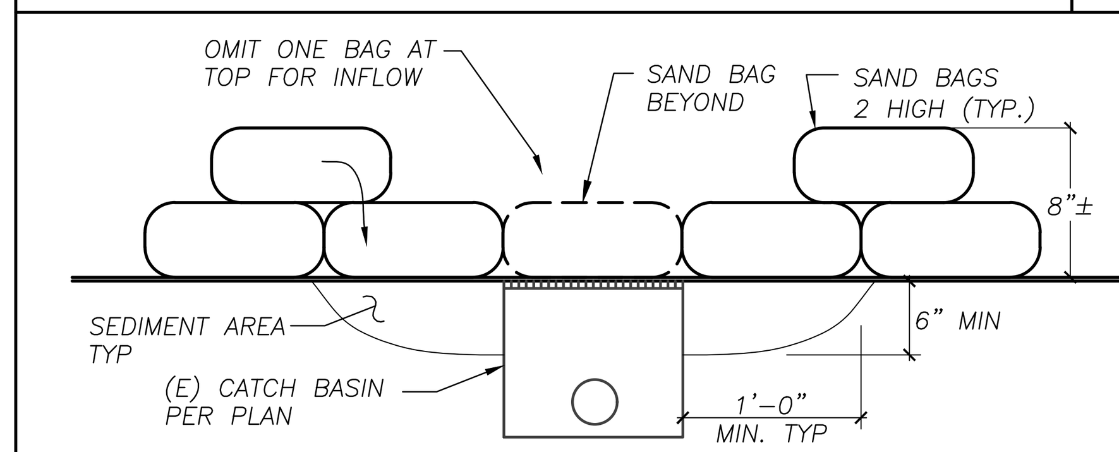
NAME: **LIGHT MANUFACTURING BLDG**
TELEPHONE: ( )



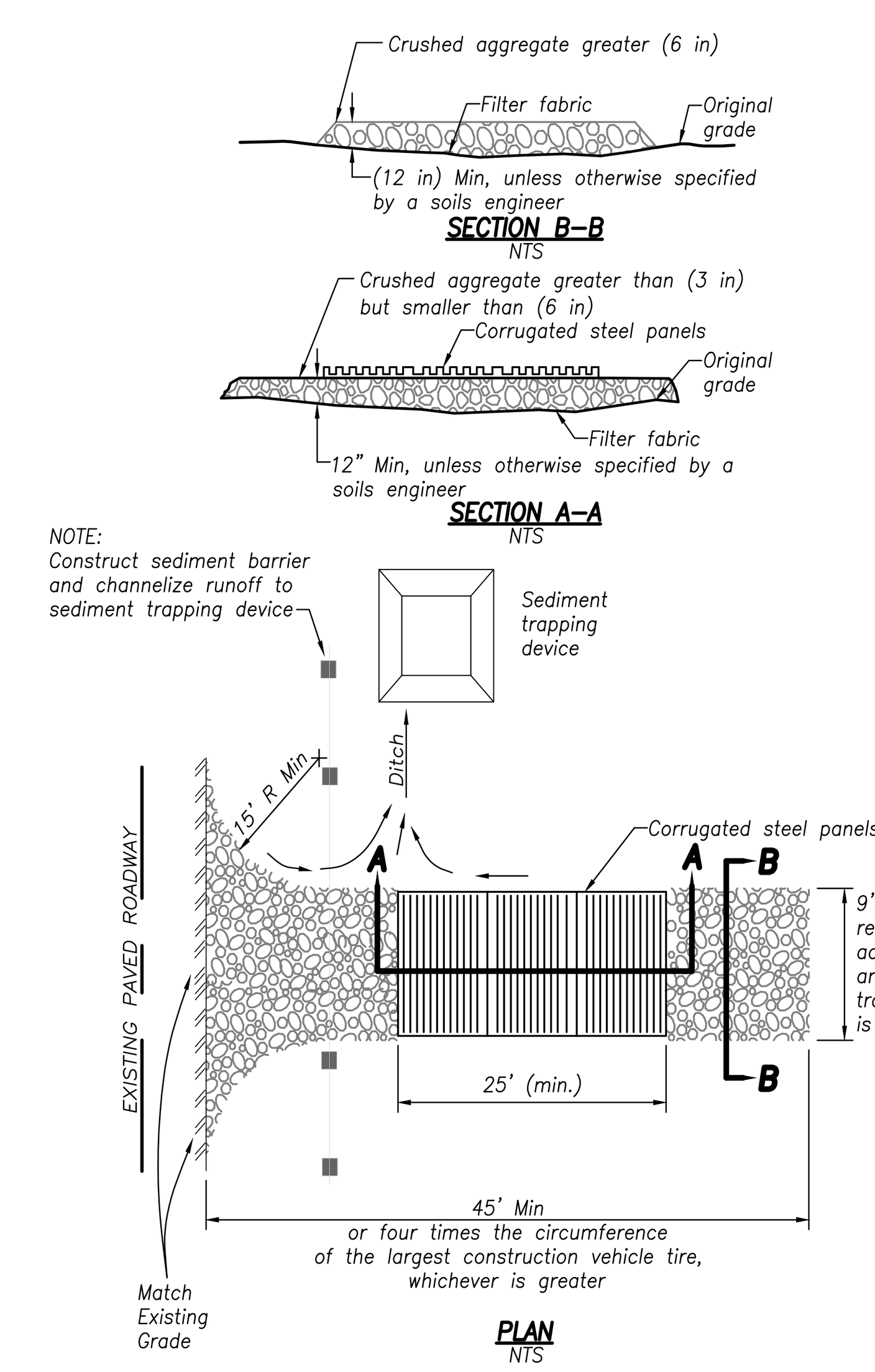
NOTES:
1. Construct the length of each reach so that the change in base elevation along the reach does not exceed ⅓ the height of the linear barrier, in no case shall the reach length exceed 500'.
2. The last 8'-0" of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension may vary to fit field condition.
5. Stakes shall be spaced at 8'-0" maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow-through of sediment at joint. The tops of the stakes shall be secured with wire.
8. For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of ⅓ and a maximum of ½ the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sandbag rows and layers should be offset to eliminate gaps.

SE-1

SILT FENCE | G



LOCAL CATCH BASIN INLET PROTECTION | H



TC-1

STABILIZED CONSTRUCTION ENTRANCE/EXIT | I

Dust Control Practices

Dust control BMPs generally stabilize exposed surfaces and minimize activities that suspend or track dust particles. The following table presents dust control practices that can be applied to varying site conditions that could potentially cause dust. For heavily traveled and disturbed areas, wet suppression (watering), gravel asphalt surfacing, temporary gravel construction entrances, equipment wash-out areas, and haul truck covers can be employed as dust control applications. Permanent or temporary vegetation and mulching can be employed for areas of occasional or no construction traffic. Preventive measures include minimizing surface areas to be disturbed, limiting onsite vehicle traffic to 15 mph or less, and controlling the number and activity of vehicles on a site at any given time.

Site Condition	Permanent Vegetation	Mulching	Wet Suppression (Watering)		Gravel or Asphalt	Temporary Gravel Construction Entrances/ Equipment Wash Down	Synthetic Covers	Minimize Extent of Disturbed Area
Disturbed Areas not Subject to Traffic	X	X	X		X			X
Disturbed Areas Subject to Traffic			X		X	X		X
Material Stockpiles		X	X				X	X
Demolition			X			X	X	
Clearing/ Excavating			X					X
Truck Traffic on Unpaved Roads			X		X	X	X	
Tracking					X	X		

Additional Preventative Measures include:

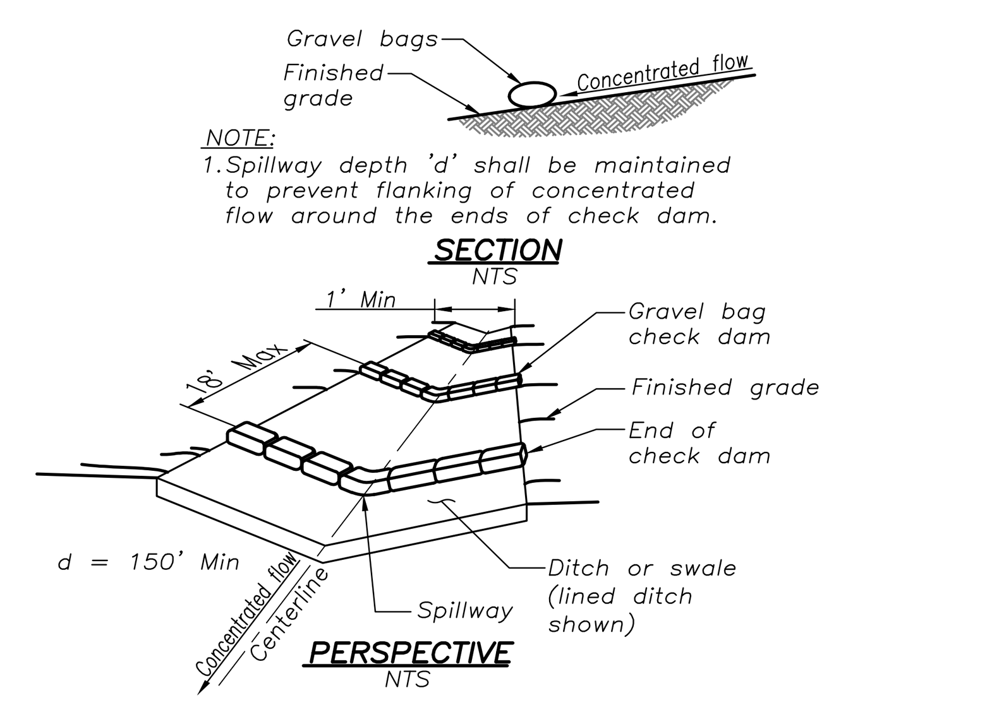
- *Schedule construction activities to minimize exposed area (see CASQA BMP EC-1, Scheduling).*
- *Quickly treat exposed soils using water, mulching, or stone/gravel layering.*
- *Identify and stabilize key access points prior to commencement of construction.*
- *Minimize the impact of dust by anticipating the direction of prevailing winds.*
- *Restrict construction traffic to stabilized roadways within the project site, as practicable.*
- *Water should be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution.*
- *All distribution equipment should be equipped with a positive means of shutoff.*
- *Unless water is applied by means of pipelines, at least one mobile unit should be available at all times to apply water or dust palliative to the project.*
- *If reclaimed waste water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board (RWQCB) requirements. Non-potable water should not be conveyed in tanks or drain pipes that will be used to convey potable water and there should be no connection between potable and non-potable supplies. Non-potable tanks, pipes, and other conveyances should be marked, NON-POTABLE WATER – DO NOT DRINK.*
- *Pave access points where unpaved traffic surfaces adjoin paved roads.*
- *Provide covers for haul trucks transporting materials that contribute to dust.*
- *Provide for rapid clean up of sediments deposited on paved roads. Furnish stabilized construction road entrances and wheel wash areas.*
- *Stabilize inactive areas of construction sites using temporary vegetation.*

Inspection & Maintenance

- *Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities.*
- *BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.*
- *Check areas protected to ensure coverage.*
- *Most water-based dust control measures require frequent application, often daily or even multiple times per day.*

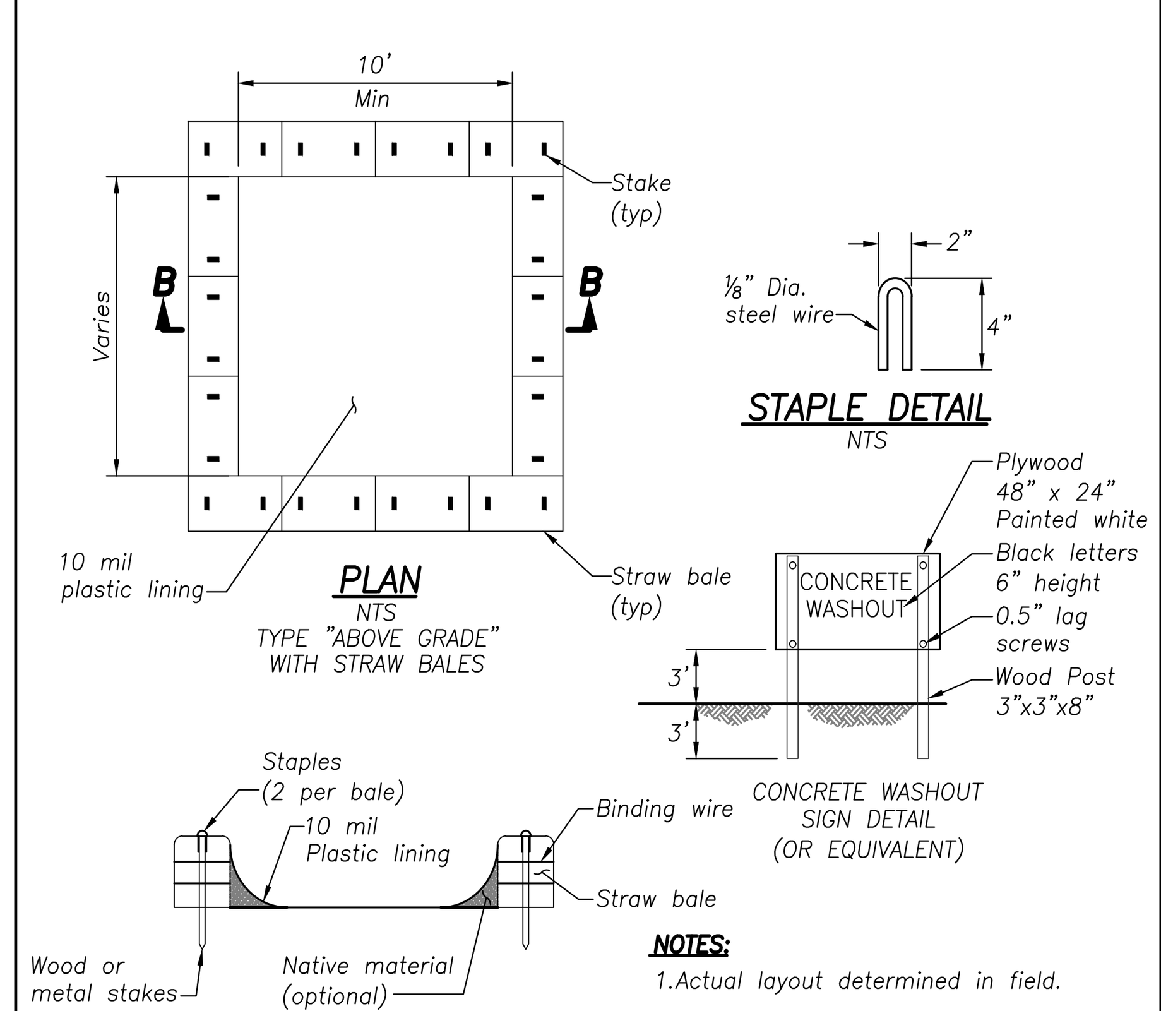
WE-1

WIND EROSION CONTROL | C



SC-4

TEMPORARY CHECK DAM (TYPE 2) | D



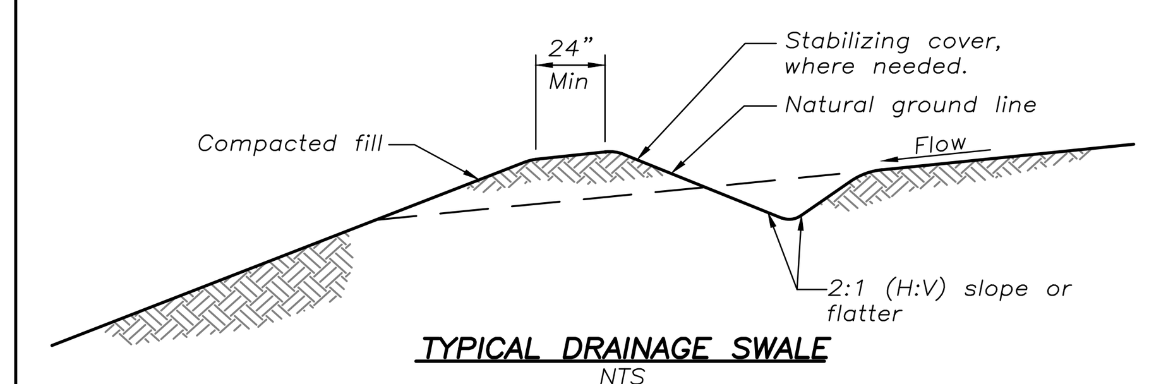
NOTES:
1. Actual layout determined in field.
2. The concrete washout sign shall be installed within 30 ft. of the temporary concrete washout facility.

WM-8

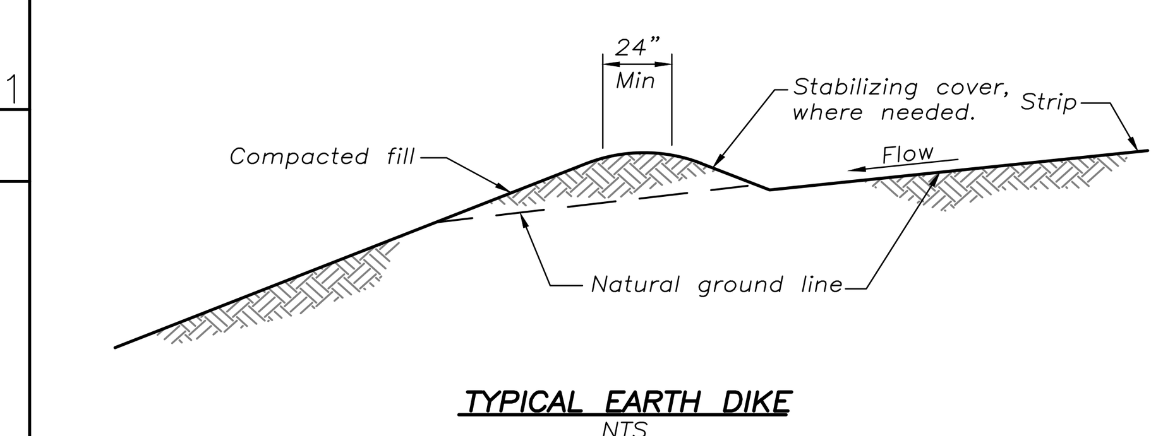
CONCRETE WASTE MANAGMENT | F

INDEX OF SHEETS

VICINITY MAP

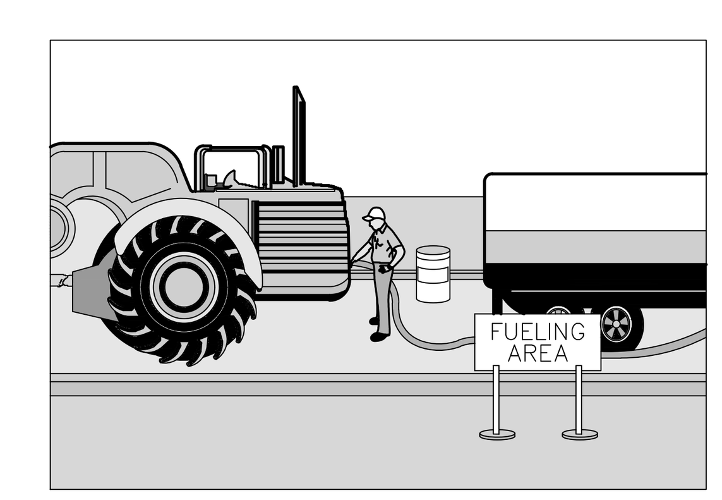


NOTES:
1. Stabilize inlet, outlets and slopes.
2. Properly compact the subgrade.



EC-9

EARTH DIKES AND DRAINAGE SWALES | A



Implementation

- *Use offsite fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate fueling area at a site.*
- *Discourage "topping-off" of fuel tanks.*
- *Absorbent spill cleanup materials and spill kits should be available in fueling areas and on fueling trucks, and should be disposed of properly after use.*
- *Drip pans or absorbent pads should be used during vehicle and equipment fueling, unless the fueling is performed over an impermeable surface in a dedicated fueling area.*
- *Use absorbent materials on small spills. Do not hose down or bury the spill. Remove the absorbent materials promptly and dispose of properly.*
- *Avoid mobile fueling of mobile construction equipment around the site; rather, transport the equipment to designated fueling areas. With the exception of tracked equipment such as bulldozers and large excavators, most vehicles should be able to travel to a designated area with little lost time.*
- *Train employees and subcontractors in proper fueling and cleanup procedures.*
- *When fueling must take place onsite, designate an area away from drainage courses to be used. Fueling areas should be identified in the SWPPP.*
- *Dedicted fueling areas should be protected from stormwater runon and runoff, and should be located at least 50 feet away from downstream drainage facilities and watercourses. Fueling must be performed on level-grade areas.*
- *Protect fueling areas with berms and dikes to prevent runon, runoff, and to contain spills.*
- *Nozzles used in vehicle and equipment fueling should be equipped with an automatic shutoff to control drips. Fueling operations should not be left unattended.*
- *Use vapor recovery nozzles to help control drips as well as air polution where required by Air Quality Management Districts (AQMD).*
- *Federal, state, and local requirements should be observed for any stationary above ground storage tanks.*

Inspection and Maintenance

- *Inspect BMPs in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.*
- *Vehicles and equipment should be inspected each day of use for leaks. Leaks should be repaired immediately or problem vehicles or equipment should be removed from the project site.*
- *Keep ample supplies of spill cleanup materials onsite.*
- *Immediately clean up spills and properly dispose of contaminated soil and cleanup materials.*

NS-9

VEHICLE/EQUIPMENT FUELING | B

REVISIONS	BY

CLIENT: **LIGHT MANUFACTURING BLDG**

PLAN PREPARED BY:

GREYSTONE ENGINEERING GROUP INC
11022 SANTA MONICA BLVD. SUITE 440 LOS ANGELES, CA 90025
(310) 405-2341 EMAIL: INFO@GREYSTONEENG.COM

REGISTERED PROFESSIONAL ENGINEER
SOHEIL MOEINI
No.84000
Exp. Sep. 2025
CIVIL
STATE OF CALIFORNIA
[illegible]

CITY OF CORONA
APN 115-210-032
CORONA, CA. 92879
HV / 8/22/2024
SM/ 8/22/2024

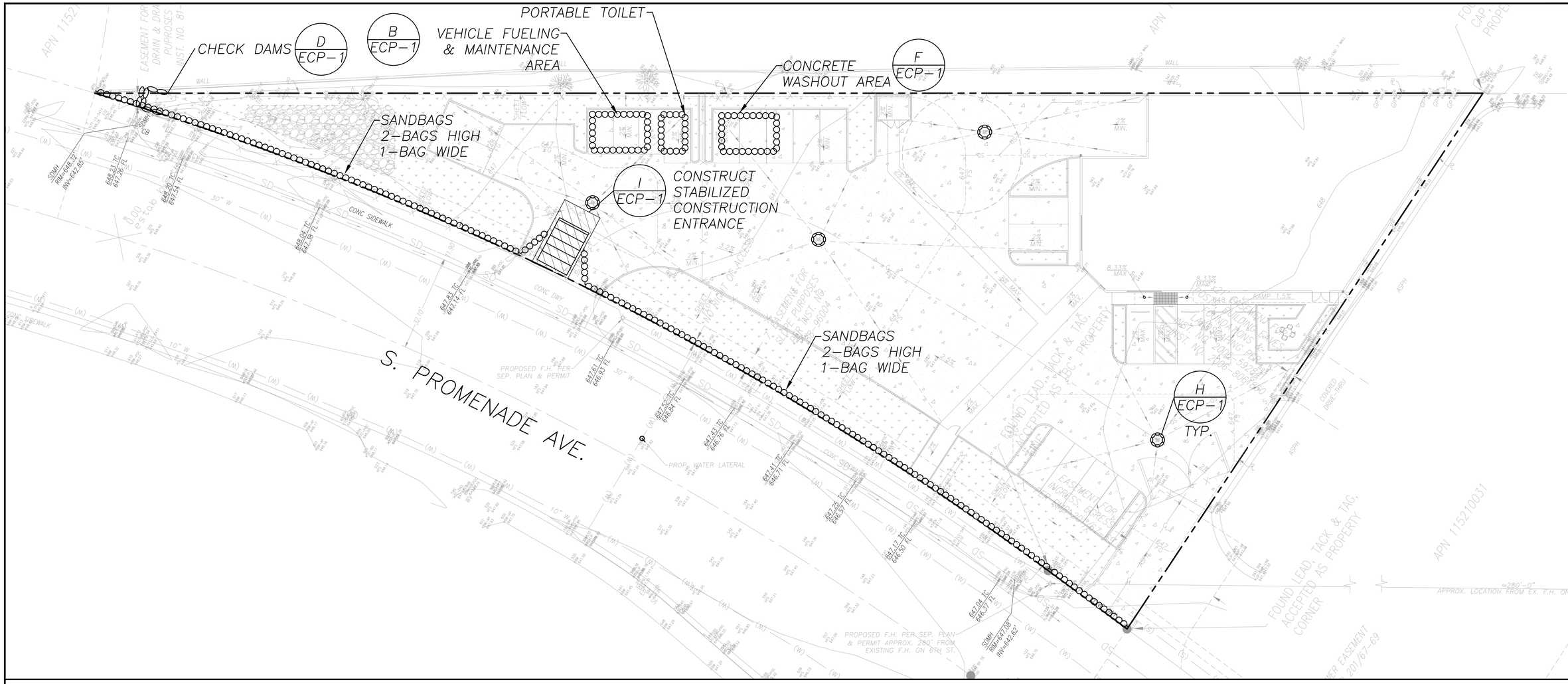
EROSION CONTROL NOTES

JOB # .

DATE 8/22/2024

SCALE

SHEET ECP-1
OF 11 SHEETS



EROSION CONTROL PLAN

1:16

GRADE BREAK

SILT FENCE

SANDBAGS

NOTES:

1. ALL GRADED AND DISTURBED AREAS TO BE JUTTE NETTED OR PER EC3, EC4, EC7 & WE1, AS SOON AS GRADING IS COMPLETE.
2. CONTRACTOR TO REVIEW ALL BMP'S AND PROJECT ENGINEER AS SITE REQUIRES DURING ALL PHASES OF CONSTRUCTION.
3. AREAS BEYOND THE LIMITS OF GRADING AS SHOWN HEREON SHALL BE LEFT UNDISTURBED UNTIL LANDSCAPING IS TO BE DONE. NO STRIPPING OF THE EARTH OUTSIDE THE LIMITS OF GRADING UNTIL LANDSCAPING IS TO BE DONE.
4. ALL SEDIMENT TRAPS TO BE CLEANED AFTER EACH STORM DURING ALL PHASES OF CONSTRUCTION.
5. PROVIDE 4-MILL VISQUEEN OVER ALL DISTURBED VERTICAL EXCAVATIONS AND SLOPE AREAS.

- B / ECP-1 — VEHICLE FUELING & MAINTENANCE AREA
- D / ECP-1 — CHECK DAMS
- I / ECP-1 — CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE
- F / ECP-1 — CONCRETE WASHOUT AREA
- G / ECP-1 — SILT FENCE
- H / ECP-1 — LOCAL CATCH BASIN INLET PROTECTION

SCALE: 1: 16

0 16 32 48

REVISIONS	BY

CLIENT: LIGHT MANUFACTURING BLDG

PLAN PREPARED BY:

GREYSTONE ENGINEERING GROUP INC
11022 SANTA MONICA BLVD. SUITE 440 LOS ANGELES, CA 90025
(310) 405-2241 EMAIL: INFO@GREYSTONEENG.COM

REGISTERED PROFESSIONAL ENGINEER — No. 84000 — Exp. Sep. 2025 — CIVIL — STATE OF CALIFORNIA

CITY OF CORONA

APN 115-210-032

CORONA, CA. 92879

HV / 8/22/2024 | SM/ 8/22/2024

EROSION CONTROL PLAN

JOB # .

DATE 8/22/2024

SCALE

SHEET ECP-2

OF 11 SHEETS

SWPPP BMP SELECTION

Table 3.2 Temporary Erosion Control BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP Used		If not used, state reason
			YES	NO	
EC-1	Scheduling				
EC-2	Preservation of Existing Vegetation				
EC-3	Hydraulic Mulch				
EC-4	Hydroseed				
EC-5	Soil Binders				
EC-6	Straw Mulch				
EC-7	Geotextiles and Mats				
EC-8	Wood Mulching				
EC-9	Earth Dike and Drainage Swales				
EC-10	Velocity Dissipation Devices				
EC-11	Slope Drains				
EC-12	Stream Bank Stabilization				
EC-14	Compost Blankets				
EC-15	Soil Preparation-Roughening				
EC-16	Non-Vegetated Stabilization				
WE-1	Wind Erosion Control				
Alternate BMPs Used:					**If used, state reason:**

[1] Applicability to a specific project shall be determined by the QSD.
[2] The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements.
[3] Run-on from offsite shall be directed away from all disturbed areas, diversion of offsite flows may require design/analysis by a licensed civil engineer and/or additional environmental permitting

Table 3.3 Temporary Sediment Control BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP used		If not used, state reason
			YES	NO	
SE-1	Silt Fence				
SE-2	Sediment Basin				
SE-3	Sediment Trap				
SE-4	Check Dams				
SE-5	Fiber Rolls				
SE-6	Gravel Bag Berm				
SE-7	Street Sweeping				
SE-8	Sandbag Barrier				
SE-9	Straw Bale Barrier				
SE-10	Storm Drain Inlet Protection				
SE-11	ATS				
SE-12	Temporary Silt Dike				
SE-13	Compost Sock and Berm				
SE-14	Biofilter Bags				
TC-1	Stabilized Construction Entrance and Exit				
TC-2	Stabilized Construction Roadway				
TC-3	Entrance Outlet Tire Wash				
Alternate BMPs Used:					**If used, state reason:**

[1] Applicability to a specific project shall be determined by the QSD
[2] The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements
[3] Risk Level 2 &3 shall provide linear sediment control along toe of slope, face of slope, and at the grade breaks of exposed slope

Table 3.4 Temporary Non-Stormwater BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP used		If not used, state reason
			YES	NO	
NS-1	Water Conservation Practices				
NS-2	Dewatering Operation				
NS-3	Paving and Grinding Operation				
NS-4	Temporary Stream Crossing				
NS-5	Clear Water Diversion				
NS-6	Illicit Connection- Illegal Discharge Connection				
NS-7	Potable Water Irrigation Discharge Detection				
NS-8	Vehicle and Equipment Cleaning				
NS-9	Vehicle and Equipment Fueling				
NS-10	Vehicle and Equipment Maintenance				
NS-11	Pile Driving Operation				
NS-12	Concrete Curing				
NS-13	Concrete Finishing				
NS-14	Material and Equipment Use Over Water				
NS-15	Demolition Removal Adjacent to Water				
NS-16	Temporary Batch Plants				
Alternate BMPs Used:			**If used, state reason:**		

[1] Applicability to a specific project shall be determined by the QSD

JOB ADDRESS: APN 115-210-032 PERMIT #: _____ _____ _____

STORMWATER DEVELOPMENT CONSTRUCTION PROGRAM

PRIORITY PROJECTS

CERTIFICATION STATEMENT

AS THE OWNER OR AUTHORIZED AGENT OF THE OWNER, I CERTIFY THAT THE APPROXIMATE BMP'S WILL BE IMPLEMENTED IS EFFECTIVELY MINIMIZE THE NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORM WATER QUALITY. THE PROJECT CONTRACTOR IS AWARE THAT THE SELECTED BMP'S MUST BE INSTALLED, MONITORED, AND MAINTAINED TO ENSURE THEIR EFFECTIVENESS, THE BMP'S NOT SELECTED FOR IMPLEMENTATION ARE REDUNDANT OR DEEMED NOT APPLICABLE TO THE PROPOSED CONSTRUCTION ACTIVITIES.

COMPLETED FORM TO BE ATTACHED TO THE LOCAL STORM WATER POLLUTION PREVENTION PLAN.

PRINT NAME: LIGHT MANUFACTURING BLDG
(OWNER OR AUTHORIZED AGENT OF THE OWNER)

SIGNATURE: _____ DATE: _____
(OWNER OR AUTHORIZED AGENT OF THE OWNER)

JOB ADDRESS: APN 115-210-032 PERMIT #: _____ _____ _____

DEPARTMENT OF BUILDING AND SAFETY

MINIMUM REQUIREMENTS FOR CONSTRUCTION PROJECTS/ CERTIFICATION STATEMENT

THE FOLLOWING IS INTENDED AS AN ATTACHMENT TO THE CONSTRUCTION/GRADING PLANS AND REPRESENT THE MINIMUM STANDARDS OF GOOD HOUSEKEEPING WHICH MUST BE IMPLEMENTED ON ALL SITES CLASSIFIED AS DEVELOPMENT CONSTRUCTION PROJECTS.

DEVELOPMENT CONSTRUCTION PROJECTS ARE DEFINED AS PROJECTS WHERE THERE IS LESS THAN TWO ACRES OF DISTURBED SOIL, NOT LOCATED IN DESIGNATED HILLSIDE AREAS, AND NOT ON OR ADJACENT TO AN ENVIRONMENTAL SENSITIVE AREA. NOTE: A PROJECT IN A DESIGNATED HILLSIDE AREA WITH LESS THAN TWO ACRES OF DISTURBED SOIL AND NOT IN OR ADJACENT TO AN ENVIRONMENTAL SENSITIVE AREA, MAY BE CLASSIFIED AS A DEVELOPMENT CONSTRUCTION PROJECT IF THE GRADING PRE-INSPECTION (GPI) IS NOT REQUIRED OR THE ENTIRE LOT HAS A SLOPE OF TEN PERCENT OR LESS.

- ☐ ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ONSITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSE, OR WIND.
- ☐ STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY WIND OR WATER.
- ☐ FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL NOR THE SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
- ☐ EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ONSITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
- ☐ TRASH AND CONSTRUCTION-RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.

Table 3.5 Temporary Materials Management BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP used		If not used, state reason
			YES	NO	
WM-01	Material Delivery and Storage				
WM-02	Material Use				
WM-03	Stockpile Management				
WM-04	Spill Prevention and Control				
WM-05	Solid Waste Management				
WM-06	Hazardous Waste Management				
WM-07	Contaminated Soil Management				
WM-08	Concrete Waste Management				
WM-09	Sanitary-Septic Waste Management				
WM-10	Liquid Waste Management				
Alternate BMPs Used:					**If used, state reason:**

[1] Applicability to a specific project shall be determined by the QSD.

INSPECTION LOG

THE SITE SHALL BE INSPECTED BEFORE STORM EVENTS WITH PREDICTED PROBABILITY OF 50% OR GREATER AND EVERY DAY DURING AND WITHIN 48 AFTER STORM EVENTS WITH 0.50 INCHES OR GREATER OF ACTUAL PRECIPITATION, AND DOCUMENTED ON THE CONSTRUCTION SITE INSPECTION CHECKLIST. INCIDENTS OF NON-COMPLIANCE MUST BE REPORTED TO THE ENGINEER.

Date and Time of Inspection:		Date Report Written:			
Inspection Type: (Circle one)	Weekly *Complete Parts I,II,III and VII*	Pre-Storm *Complete Parts I,II,III,IV and VII*	During Rain Event *Complete Parts I, II, III, V, and VII*	Post-Storm *Complete Parts I,II,III,VI and VII*	
Part I. General Information					
Site Information					
Construction Site Name:					
Construction stage and completed activities:			Approximate area of site that is exposed:		
Photos Taken: (Circle one)	Yes	No	Photo Reference IDs:		
Weather					
Estimate storm beginning: (date and time)		Estimate storm duration: (hours)			
Estimate time since last storm: (days or hours)		Rain gauge reading and location: (in)			
Is a "Qualifying Event" predicted or did one occur (i.e., 0.5" rain with 48-hrs or greater between events)? (Y/N) If yes, summarize forecast:					
Exemption Documentation (explanation required if inspection could not be conducted). Visual inspections are not required outside of business hours or during dangerous weather conditions such as flooding or electrical storms.					
Inspector Information					
Inspector Name:		Inspector Title:			
Signature:		Date:			

Part II. BMP Observations. Describe deficiencies in Part III.

Minimum BMPs for Risk Level ____ Sites	Failures or other short comings (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Good Housekeeping for Construction Materials			
Inventory of products (excluding materials designed to be outdoors)			
Stockpiled construction materials not actively in use are covered and bermed			
All chemicals are stored in watertight containers with appropriate secondary containment, or in a completely enclosed storage shed			
Construction materials are minimally exposed to precipitation			
BMPs preventing the off-site tracking of materials are implemented and properly effective			
Good Housekeeping for Waste Management			
Wash/rinse water and materials are prevented from being disposed into the storm drain system			
Portable toilets are contained to prevent discharges of waste			
Sanitation facilities are clean and with no apparent for leaks and spills			
Equipment is in place to cover waste disposal containers at the end of business day and during rain events			
Discharges from waste disposal containers are prevented from discharging to the storm drain system / receiving water			
Stockpiled waste material is securely protected from wind and rain if not actively in use			
Procedures are in place for addressing hazardous and non-hazardous spills			
Appropriate spill response personnel are assigned and trained			
Equipment and materials for cleanup of spills is available onsite			
Washout areas (e.g., concrete) are contained appropriately to prevent discharge or infiltration into the underlying soil			
Good Housekeeping for Vehicle Storage and Maintenance			
Measures are in place to prevent oil, grease, or fuel from leaking into the ground, storm drains, or surface waters			
All equipment or vehicles are fueled, maintained, and stored in a designated area with appropriate BMPs			
Vehicle and equipment leaks are cleaned immediately and disposed of properly			

Minimum BMPs for Risk Level ____ Sites	Adequately designed, implemented and effective (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
Good Housekeeping for Landscape Materials			
Stockpiled landscape materials such as mulches and topsoil are contained and covered when not actively in use			
Erodible landscape material has not been applied 2 days before a forecasted rain event or during an event			
Erodible landscape materials are applied at quantities and rates in accordance with manufacturer recommendations			
Bagged erodible landscape materials are stored on pallets and covered			
Good Housekeeping for Air Deposition of Site Materials			
Good housekeeping measures are implemented onsite to control the air deposition of site materials and from site operations			
Non-Stormwater Management			
Non-Stormwater discharges are properly controlled			
Vehicles are washed in a manner to prevent non-stormwater discharges to surface waters or drainage systems			
Streets are cleaned in a manner to prevent unauthorized non-stormwater discharges to surface waters or drainage systems.			
Erosion Controls			
Wind erosion controls are effectively implemented			
Effective soil cover is provided for disturbed areas inactive (i.e., not scheduled to be disturbed for 14 days) as well as finished slopes, open space, utility backfill, and completed lots			
The use of plastic materials is limited in cases when a more sustainable, environmentally friendly alternative exists.			
Sediment Controls			
Perimeter controls are established and effective at controlling erosion and sediment discharges from the site			
Entrances and exits are stabilized to control erosion and sediment discharges from the site			
Sediment basins are properly maintained			
Linear sediment control along toe of slope, face of slope an at grade breaks (Risk Level 2 & 3 Only)			
Limit construction activity to and from site to entrances and exits that employ effective controls to prevent offsite tracking (Risk Level 2 & 3 Only)			

Part VI. Additional Post-Storm Observations. Visually observe (inspect) stormwater discharges at all discharge locations within two business days (48 hours) after each qualifying rain event, and observe (inspect) the discharge of stored or contained stormwater that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Complete Part VII (Corrective Actions) as needed.

Discharge Location, Storage or Containment Area	Visual Observation

Part VII. Additional Corrective Actions Required. Identify additional corrective actions not included with BMP Deficiencies (Part III) above. Note if SWPPP change is required.

Required Actions	Implementation Date

Ensure all storm, drain inlets and perimeter controls, runoff control BMPs and pollutants controls at entrances and exits are maintained and protected from activities the reduce their effectiveness (Risk Level 2 & 3 Only)			
Inspect all immediate access roads daily (Risk Level 2 & 3 Only)			
Run-On and Run-Off Controls			
Run-on to the site is effectively managed and directed away from all disturbed areas.			
Other			
Are the project SWPPP and BMP plan up to date, available on-site and being properly implemented?			

Part III. Descriptions of BMP Deficiencies

Deficiency	Repairs Implemented: Note - Repairs must begin within 72 hours of identification and, complete repairs as soon as possible.	
	Start Date	Action
1.		
2.		
3.		
4.		

Part IV. Additional Pre-Storm Observations. Note the presence or absence of floating and suspended materials, sheen, discoloration, turbidity, odors, and source(s) of pollutants(s).

	Yes, No, N/A
Do stormwater storage and containment areas have adequate freeboard? If no, complete Part III.	
Are drainage areas free of spills, leaks, or uncontrolled pollutant sources? If no, complete Part VII and describe below.	
Notes:	
Are stormwater storage and containment areas free of leaks? If no, complete Parts III and/or VII and describe below:	
Notes:	

Part V. Additional During Storm Observations. If BMPs cannot be inspected during inclement weather, list the results of visual inspections at all relevant outfalls, discharge points, and downstream locations. Note odors or visible sheen on the surface of discharges. Complete Part VII (Corrective Actions) as needed.

Outfall, Discharge Point, or Other Downstream Location	
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description

REVISIONS	BY

CLIENT: LIGHT MANUFACTURING BLDG

PLAN PREPARED BY:

GREYSTONE ENGINEERING GROUP, INC
11022 SANTA MONICA BLVD. SUITE 440 LOS ANGELES, CA 90025
(310) 405-2341 EMAIL: INFO@GREYSTONEENG.COM

REGISTERED PROFESSIONAL ENGINEER — SOHEYL MOEINI — No. 84000 — Exp. Sep. 2025 — CIVIL — STATE OF CALIFORNIA

CITY OF CORONA
APN 115-210-032
CORONA, CA. 92879

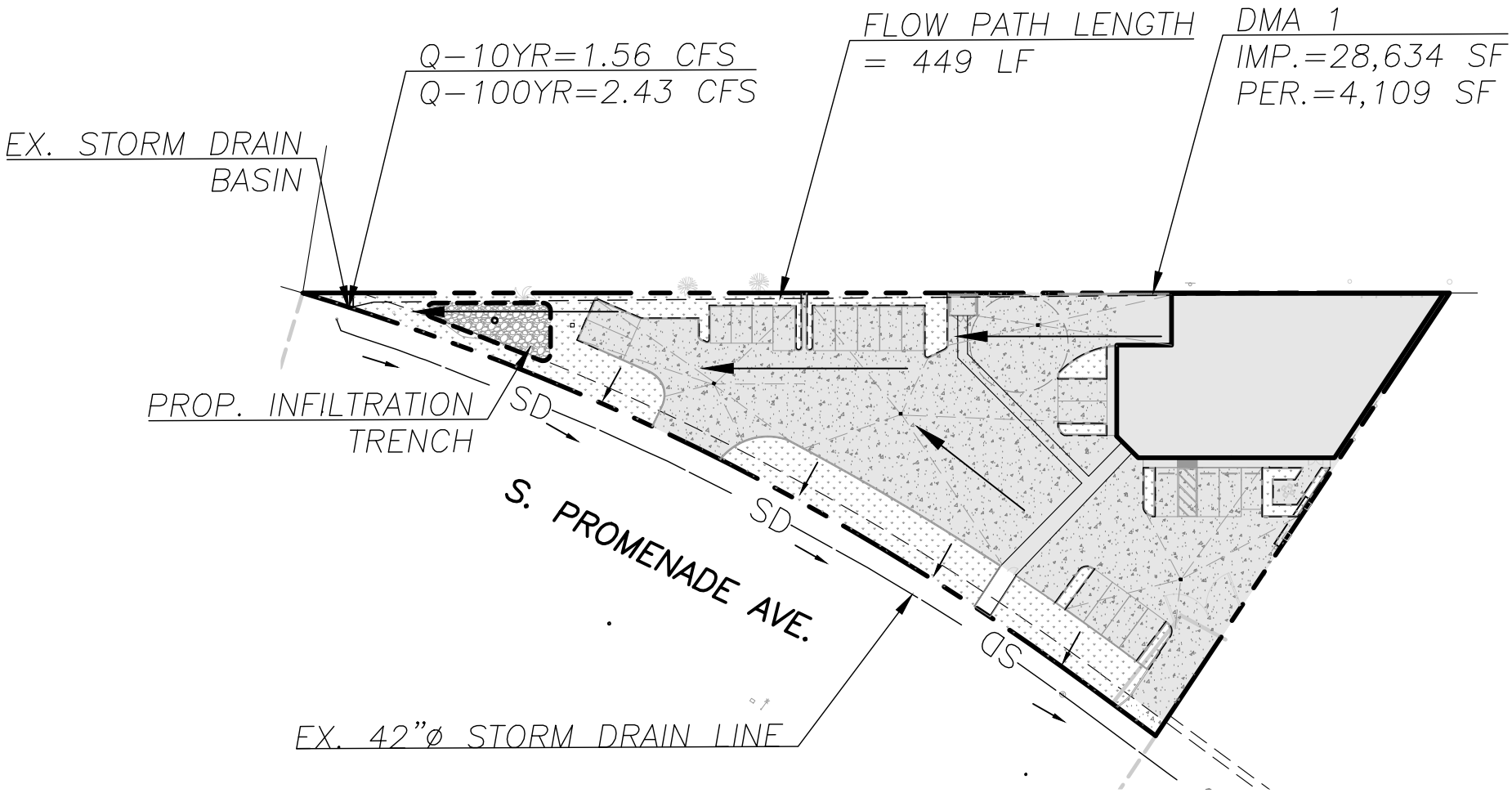
SM/ 8/22/2024
HV / 8/22/2024

EROSION CONTROL ATTACHMENTS

JOB # .
DATE 8/22/2024
SCALE

SHEET ECP-3
OF 11 SHEETS

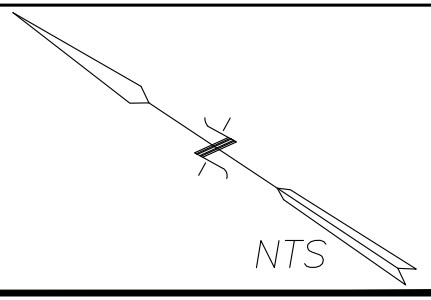
HYDROLOGY MAP
POST-CONSTRUCTION



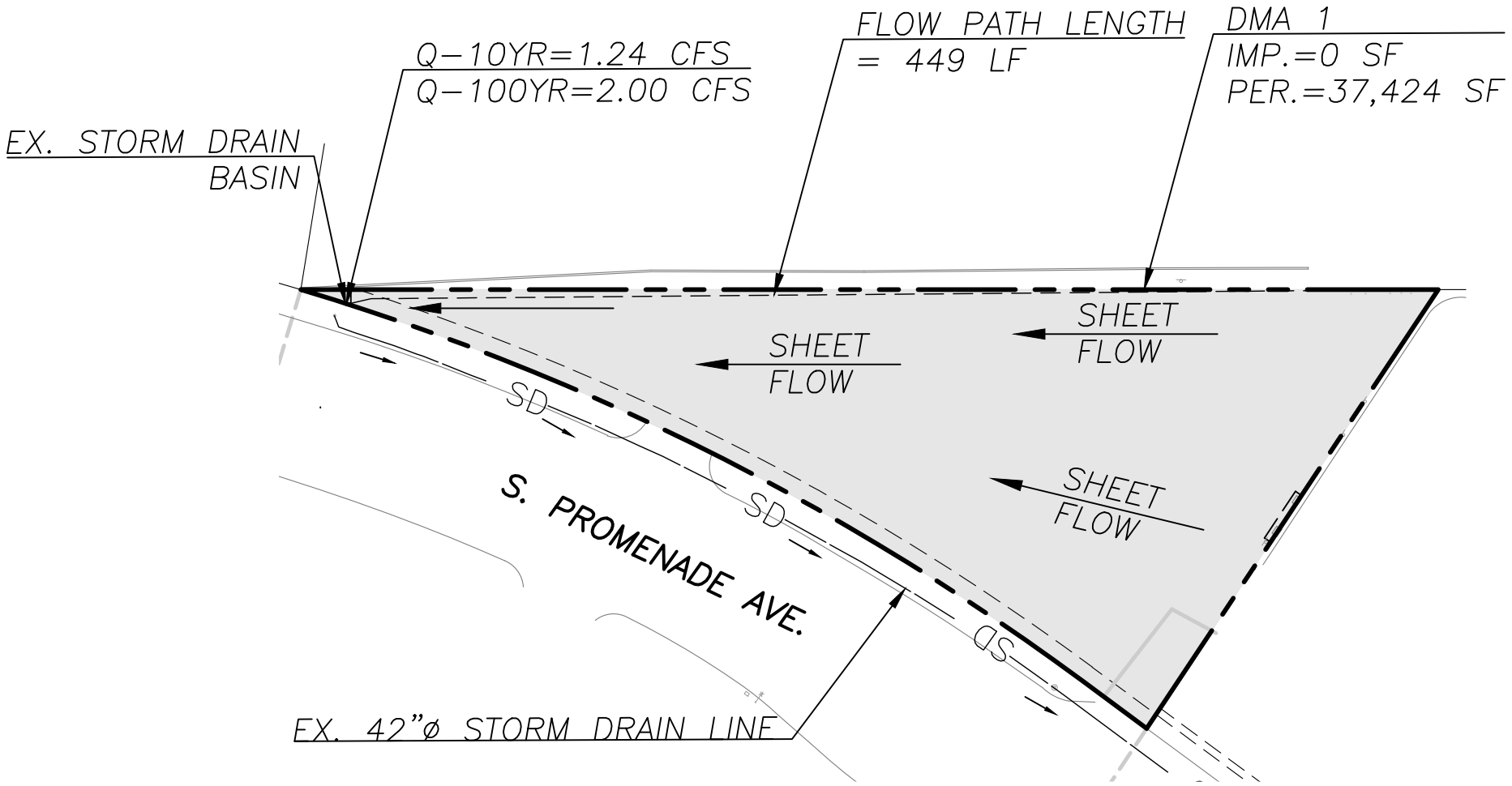
PLAN PREPARED BY:

GREYSTONE
ENGINEERING GROUP INC
11022 SANTA MONICA BLVD. SUITE 440 LOS ANGELES, CA 90025
(310) 405-2341 EMAIL: INFO@GREYSTONEENG.COM

EXHIBIT 9



HYDROLOGY MAP
PRE-CONSTRUCTION



PLAN PREPARED BY:

GREYSTONE
ENGINEERING GROUP INC

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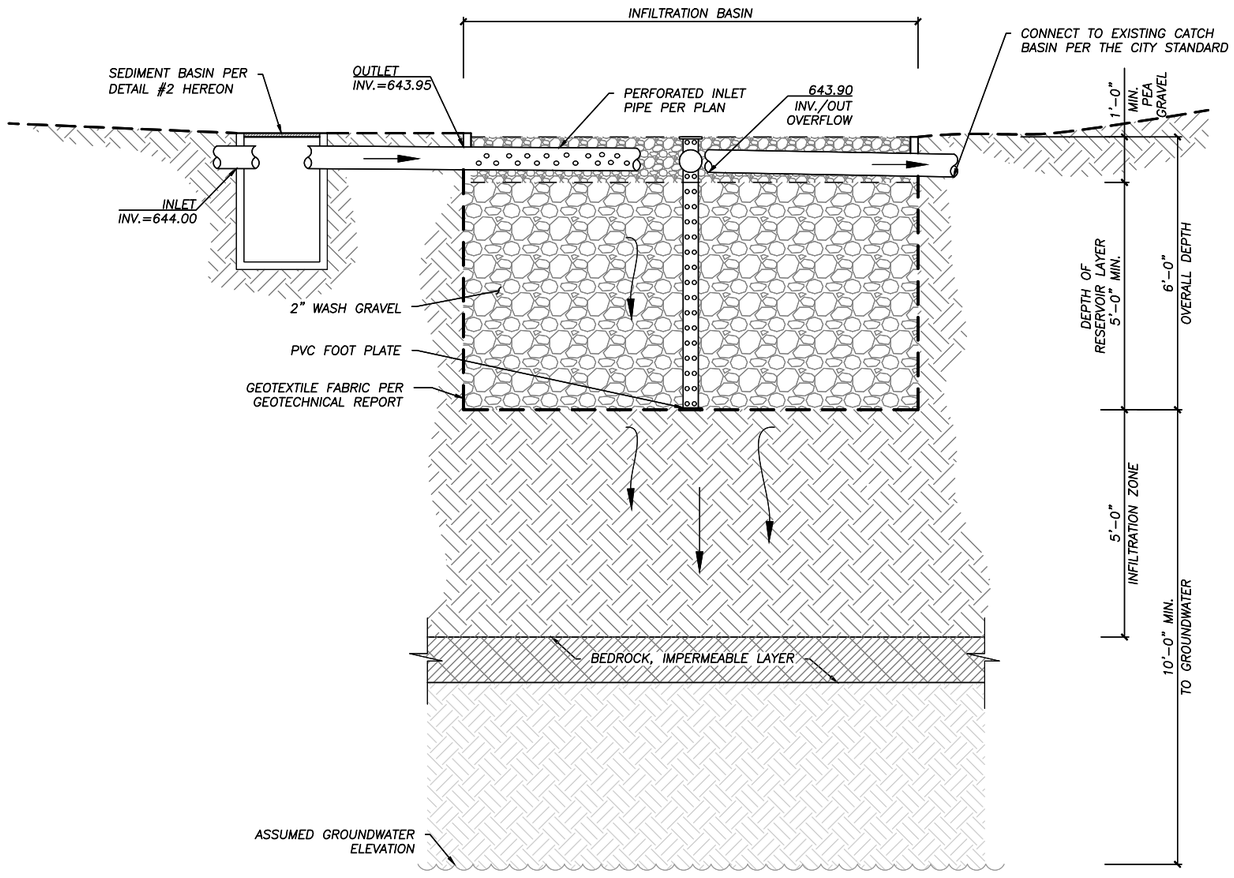
EXHIBIT 8

NTS



INFILTRATION TRENCH DETAIL

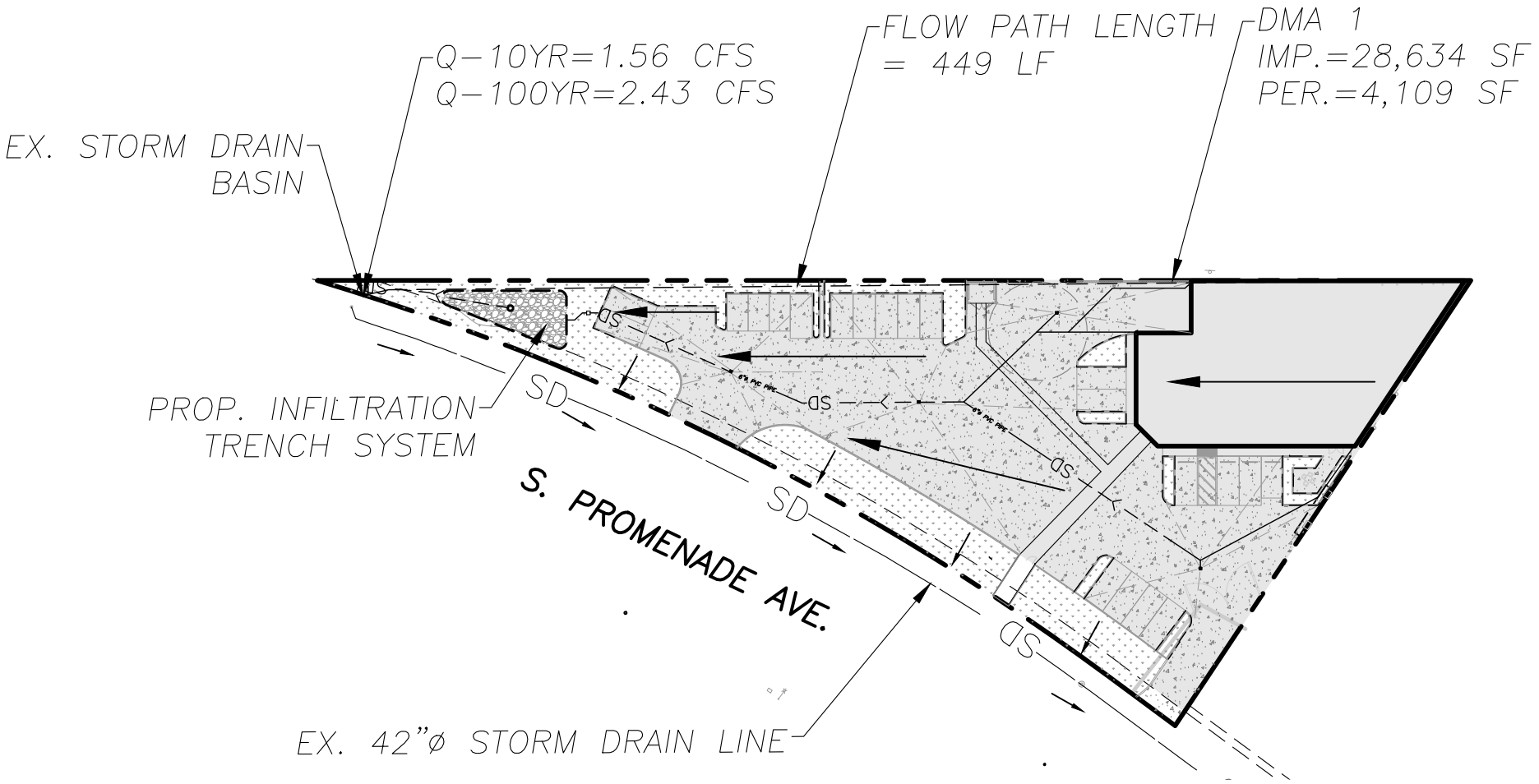
PLAN PREPARED BY:

GREYSTONE
ENGINEERING GROUP INC

11022 SANTA MONICA BLVD. SUITE 440 LOS ANGELES, CA 90025
(310) 405-2341 EMAIL: INFO@GREYSTONEENG.COM

EXHIBIT 6D

DRAINAGE MAP
POST-CONSTRUCTION



PLAN PREPARED BY:

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ENGINEERING GROUP INC
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(310) 405-2341 EMAIL: INFO@GREYSTONEENG.COM

EXHIBIT 1G

NTS

Appendix 3: Soils Information

Geotechnical Study and Other Infiltration Testing Data

soil PACIFIC INC.
Geotechnical and Environmental Services

Project No. A-8833-21
August 8, 2024

Mr. Netzar Admati
249 Warwick Avenue
South Pasadena, CA 91030

Subject: **Additional On-site Infiltration Testing**
Proposed Commercial Building
NE Corner of 6th Street and Promenade Avenue
APN 115210032, Corona, California

Dear Sir:

Pursuant to your request and inquiry, we are pleased to submit our design recommendation letter concerning the proposed on-site infiltration testing. This design recommendation is based on a newly tested on-site infiltration percolation test at a designated location by the project civil engineer.

In accordance with WQMP design recommendations a larger auger drill rig was used to perform a boring to a depth of -5 feet below the existing grade. Encountered soils at the proposed infiltration depth were mainly silty sand with some gravel.

On-site infiltration testing was performed between -1 to -5 feet below the existing grade. The calculated design rate of on-site infiltration basin is in the order of 3 .39 inches per hour including the factor of safety for the location of the tested area.

The opportunity to be of service is appreciated. Should any question arise concerning this clarification letter please contact this office for further clarification.

Respectfully submitted,

SOIL PACIFIC, INC.

Hoss Eftekhari
RCE

REGISTERED PROFESSIONAL ENGINEER
HOSS EFTEKHARI
No. C50121
EXP. 6/30/25
CIVIL
STATE OF CALIFORNIA

675 N. Eckhoff, Suite A, Orange, CA 92868 ○ Tel (714) 879-1203 ○ Fax (714) 879-4812

Porchet Method, Aka Inverse Borehole Method /LB

$\Delta T := 15$ Time Interval 50 Minutes

$D0 := 5$ Initial Depth to Water, (inch)

$Df := 55$ Final Depth to Water, (inch)

$Dr := 58$ Total Depth of the Test Hole

$r := 3$ Test Hole Redius, Inch

$H0 := Dr - D0$ Initial height of water at the selected time interval

$H0 = 53$

$Hf := Dr - Df$ Final height of water at the selected time interval

$Hf = 3$

$\Delta H := H0 - Hf$ $\Delta H = \Delta D$Change in height over the time interval

$\Delta H = 50$

$$Havg := \frac{(H0 + Hf)}{2}$$

$Havg = 28$

The Conversion Equation is used:

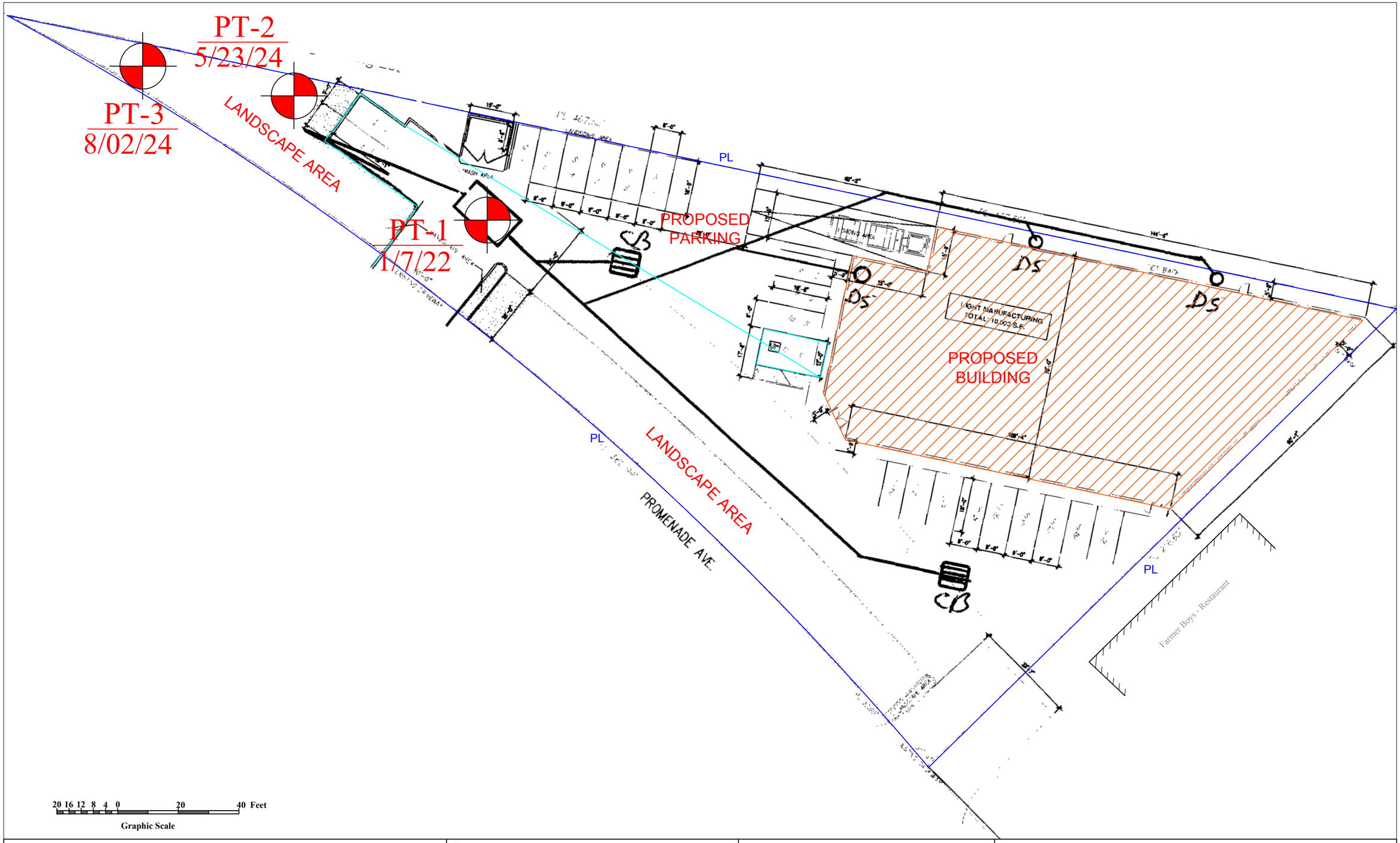
$$IR := \frac{\Delta H \cdot (60 \cdot r)}{\Delta T \cdot (r + 2Havg)}$$

$IR = 10.169$ inch /Hour Infiltration rate without including factor of safety

$FS := 3$

$$Infilt := \frac{IR}{FS}$$

$Infilt = 3.39$ Per Hour



LEGEND

Percolation Test Location

soil PACIFIC Inc.
Geotechnical & Environmental Services
675 N. Eckhoff, Suite # A
Orange, CA 92868

Project Location:
NE Corner of 6th St. and
Promenade Ave., Corona.CA

GEOTECHNICAL PLAN

FIGURE-A-1-1	PROJECT NO.:A-3388UP-24
DATE :8/02/2024	SCALE: 1"=30'

Appendix 4: Historical Site Conditions

Phase I Environmental Site Assessment or Other Information on Past Site Use

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Subject Property Address

APN: 115-210-032

Corona, CA 92879

ENCON Project Number

1101039ESAI

Report Date

1/27/2011

Prepared for

Wilshire State Bank

3200 Wilshire Blvd., 7th Floor

Los Angeles, CA 90010

ENCON Solutions, Inc.

Environmental Consulting and Real Estate Due Diligence
3255 Wilshire Blvd. Suite 1508, Los Angeles, CA 90010
213.380.0555, 213.38ENCON, Fax 213-380-0505

ENCON Solutions, Inc.

Environmental Consulting and Real Estate Due Diligence

3255 Wilshire Blvd. Suite 1508, Los Angeles, CA 90010
213.380.0555, 213.38ENCON, Fax 213-380-0505

1/27/2011

Mr. Ryan Park

Wilshire State Bank

3200 Wilshire Blvd., 7th Floor

Los Angeles, CA 90010

Phone: 213-427-7994

Fax: 213-639-8156

Attached please find our PHASE I ENVIRONMENTAL SITE ASSESSMENT, ("the Report") for the above-mentioned Subject Property. This report has been prepared by ENCON for the Client under the professional supervision of the principal and/or senior staff whose seal(s) and signatures appear hereon. Neither ENCON, nor any staff member assigned to this investigation has any interest or contemplated interest, financial or otherwise, in the subject or surrounding properties, or in any entity which owns, leases, or occupies the subject or surrounding properties, and has no personal bias with respect to the parties involved.

The assessment was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession, and in accordance with generally accepted practices of other consultants currently practicing in the same locality under similar conditions. No other representation, expressed or implied, and no warranty or guarantee is included or intended. The Report speaks only as of its date, in the absence of a specific written update of the Report, signed and delivered by ENCON.

There are no intended or unintended third party beneficiaries to this Report, unless specifically named. ENCON is an independent contractor, not an employee of either the issuer or the borrower, and its compensation was not based on the findings or recommendations made in the Report or on the closing of any business transaction. Thank you for the opportunity to prepare this Report, and assist you with this project. Please call us if you have any questions or if we may be of further assistance.

Respectfully Submitted,

Staff Consultant:

Chris Benigno

Environmental Assessor, REA

Hyung Kim

Principal Consultant, P.E., REA, NV-CEM, CHMM

TABLE OF CONTENTS

EXECUTIVE SUMMARY

ENCON Solutions (ENCON) performed a Phase I Environmental Site Assessment of the Subject Property in conformance with the scope and limitations of ASTM Practice E1527-05. Any exceptions to, or deletions from, this practice are described in Section 1.0 of this Report.

REPORT COMPONENT	SUMMARY OF FINDINGS
Subject Property Characteristics **(Current Tenant and Site Description)**	The Property, identified as APN 115-210-032 Corona, CA 92879, is a triangular-shaped parcel of approximately 37,462 square feet with a generally flat topography. It is currently vacant and undeveloped, consisting of native soil and gravel, with minimal vegetative ground cover along the eastern side. There are three trailer trucks temporarily parked on the lot. Chain-link perimeter fencing restricts access from the east side.
Summary of Property Reconnaissance	No RECs (Recognized Environmental Conditions) were found during site reconnaissance.
Historical Use of Subject Property and Vicinity	Summary of Historical Property Use: The Property was vacant and undeveloped land from 1901 through 1947. By 1953, use of the Property had changed briefly to agricultural in nature. By 1967, the Property had become vacant again as nearby sites began to be developed into residential and commercial uses. Improvement of surrounding areas continued through present time with no notable changes on the Property. Summary of Vicinity Use: The land immediately surrounding the Property was vacant and had been undeveloped from as early as 1901 through 1947. By 1953, use of the land had changed briefly to agricultural in nature. Commercial and residential development of adjacent sites to the east and south initially became apparent by 1967 and continued on through the next three decades for the remaining nearby properties.
Federal, State and Local Agency Concerns	The Property is not listed on any of the researched Federal or State agency databases.
Potential Off-site Sources	No RECs (Recognized Environmental Conditions) were identified.
Non-CERCLA Items	The Property lies within a 500-year flood zone. However, unless Client contracted ENCON to investigate specific non-CERCLA items, these items were generally not included in the scope of services for this Phase I Environmental Site Assessment.
Inaccessible or Un-surveyed Portions of Subject Property	Full access to the entire property was provided to ENCON, and there were no notable portions of the Property excluded from the survey and field inspection.
Data Gap	The largest data gap in this research was from 1902 to 1921. From 1921 to present the data gaps ranged from one to 4 years. However, ENCON does not believe that any gaps in the information reviewed would affect our ability to identify recognized environmental concerns.

Refer to Section 7.0, Recommendations and Opinions.

1.0 SCOPE OF WORK & LIMITATIONS

The primary purpose of this *Phase I Environmental Site Assessment Report* (the *Report*) is to assist *Client,* in its underwriting of a proposed mortgage loan on the Subject Property, and to identify *Recognized Environmental Conditions (RECs)* in connection with the Subject Property described in this *Report.* The investigation was conducted in accordance with the *Client's* Environmental Site Assessment scope of work for the use and benefit of the *Client,* its successors, and assignees and the U.S. Small Business Administration (U.S. SBA) if financing is to be authorized by U.S. SBA. It is based, in part, upon documents, writings, and information owned, possessed, or secured by the *Client.* Neither this report, nor any information contained herein, shall be used or relied upon for any purpose by any other person or entity without the express written permission of the *Client.*

This report has been prepared by ENCON Solutions (ENCON) for the *Client* under the professional supervision of the principal and/or senior staff whose seal(s) and signature(s) appear hereon. Neither ENCON, nor any staff member assigned to this investigation has any interest or contemplated interest, financial or otherwise, in the subject or surrounding properties, or in any entity which owns, leases, or occupies the subject or surrounding properties or which may be responsible for environmental issues identified during the course of this investigation, and has no personal bias with respect to the parties involved.

The purpose of this practice is to define good commercial and customary practice for conducting an *environmental site assessment* of a parcel(s) of *commercial real estate* with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and *petroleum products.* As such, this practice is intended to permit a *user (Client, Purchaser, Lender, Owner)* to satisfy one of the requirements to qualify for the *innocent landowner*, *contiguous property owner*, or *bona fide prospective purchaser* limitations on CERCLA liability (hereinafter, the "*landowner liability protections*," or "*LLPs*"): that is, the practice that constitutes "*all appropriate inquiry* into the previous ownership and uses of the *property* consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35)(B).

Controlled substances are not included within the scope of this standard. Persons conducting an *environmental site assessment* as part of an EPA Brownfields Assessment and Characterization Grant awarded under CERCLA 42 U.S.C. §9604(k)(2)(B) must include controlled substances as defined in the Controlled Substances Act (21 U.S.C. §802) within the scope of the assessment investigations to the extent directed in the terms and conditions of the specific grant or cooperative agreement. Additionally, an evaluation of *business environmental risk* associated with a parcel of *commercial real estate* may necessitate investigation beyond that identified in this practice.

In defining a standard of good commercial and customary practice for conducting an *environmental site assessment* of a parcel of *property*, the goal of the processes established by this practice is to identify *recognized environmental conditions (RECs).* The term *recognized environmental conditions (RECs)* means the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, groundwater, or surface water of the *property.* The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not *RECs.*

ENCON has performed this *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E1527-05.

SCOPE OF WORK

This *Report* was prepared for the exclusive use of *Client.* This *Report* has been prepared in accordance with our *Standard Conditions For Engagement* and *Authorization Letter* and *Agreement for Environmental Services* approved and signed by *Client,* and with the limitations described below, all of which are integral parts of this *Report.* A copy of the signed *Standard Conditions For Engagement* and *Authorization Letter* and *Agreement for Environmental Services* is maintained at the ENCON Solutions, Los Angeles, California office.

The information reported was obtained through sources deemed reasonably ascertainable, as defined in ASTM E1527-05; a visual site survey of areas readily observable, easily accessible or made accessible by the property contact and interviews with owners, agents, occupants, or other appropriate persons involved with the Subject Property. Municipal information was obtained through file reviews of reasonably ascertainable standard government record sources, and interviews with the authorities having jurisdiction over the *property*. Findings, conclusions and recommendations included in the *Report* are based on our visual observations in the field, the municipal information reasonably obtained, information provided by the *Client*, and/or a review of readily available and supplied documents.

ENCON renders no opinion as to the *property* condition at un-surveyed and/or inaccessible portions of the Subject Property, which are described below. ENCON relies completely on the information, whether written, graphic or verbal, provided by the property contact or as shown on any documents reviewed or received from the property contact, owner or agent, or municipal source, and assumes that information to be true and correct. The observations in this *Report* are valid on the date of the survey. Where access to portions of the Subject Property or to structures on the Subject Property was unavailable or limited, ENCON renders no opinion as to the presence of petroleum products or hazardous substances in that portion of the Subject Property or structure. In addition, ENCON renders no opinion as to the presence of, or indirect evidence relating to, petroleum products or hazardous substances where direct observation of the interior walls, floor, or ceiling of a structure was obstructed by objects or coverings on or over these surfaces.

The conclusions provided by ENCON are based on the information obtained by visual survey of the Subject Property, and information provided by agents representing the Subject Property, or agents of the owner. In addition, ENCON has relied on certain information provided by state and other referenced parties, and on information contained in the files of federal, state and/or local agencies available to ENCON at the time of the assessment. Although there may have been some degree of overlap in the information provided by these various sources, ENCON did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of these *Environmental Services*.

CERCLA Requirements Other Than *All Appropriate Inquiry* (ASTM E1527-05 1.1.3) - This practice does not address whether requirements in addition to *All Appropriate Inquiries* have been met in order to qualify for the *LLPs* (specified in 42 U.S.C. §9607(b)(3)(a) and (b) including the continuing obligation not to impede the integrity and effectiveness of *Activity and Use Limitations*), or the duty to take reasonable steps to prevent releases, or the duty to comply with legally required release reporting obligations).

It is acknowledged that ENCON's judgments shall not be based on scientific or technical tests or procedures beyond the Scope of Services or beyond the time and budgetary constraints imposed by the *Client*. It is acknowledged further that ENCON's conclusions shall not rest on pure science but on such considerations as economic feasibility and available alternatives. *Client* also acknowledges that, because geologic and soil formations are inherently random, variable, and indeterminate in nature, the Services and opinions provided under this Agreement with respect to such Services, are not guaranteed to be a representation of actual conditions on the Subject Property, which are also subject to change with time as a result of natural or man-made processes, including water permeation. In performing the Services, ENCON shall use that degree of care and skill ordinarily exercised by environmental consultants or engineers performing similar services in the same or similar locality. The standard of care shall be determined solely at the time the Services are rendered and not according to standards utilized at a later date. The Services shall be rendered without any other warranty, expressed or implied, including, without limitation, the warranty of merchantability and the warranty of fitness for a particular purpose.

The ASTM Standard E1527-05 does not encompass analytical testing to evaluate Asbestos Containing Materials (ACM), radon, lead-based paint (LBP), drinking water quality, lead in drinking water, wetlands, regulatory compliance, cultural and historical resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, biological agents, mold, stored chemicals, debris, fill materials, surface water, or subsurface samples (soil and groundwater) as part of a Phase I ESA. Such additional information regarding non-ASTM E1527-05 issues may be provided merely for the *User's* convenience, and cannot be used to bind this report as a whole to the compliance and conformance with ASTM guidelines. No disassembly of systems or building components or physical or invasive testing is to be performed unless Contract Engagement specifically calls for such testing as an additional scope of work. ENCON has performed this *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E1527-05. This *Report* may not include all

environmental conditions which can materially impact the Subject Property other than those defined as RECs in ASTM E1527-05.

As our standard procedure and scope of work defined by ASTM E1527-05, ENCON is not contracted to perform *Environmental Liens* and *Activity and Use Limitations (AULs)* searches via title records, and such is beyond the scope of services included in this report.

This *Phase I Environmental Site Assessment* did not necessarily comply with the ASTM "Standard Practice for Assessment of Vapor Intrusion into Structures on Property" (Standard Practice E 2600 - 08). For assessment of potential vapor intrusion in the subject building(s) and to determine if a "vapor intrusion condition" (VIC) exists on-site, additional investigation beyond ASTM E1527-05 is required.

Business Environmental Risk is defined as a risk, which can have material environmental impact, or environmentally driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to the issues requiring investigation. Activity and Use Restrictions arising from Business Environmental Risk or Compliance Violation are defined as restrictions on the use of, or access to, a site/facility to (1) reduce or eliminate exposure to hazardous substance onsite, or (2) prevent activities that could interfere with a response action either as Engineering Controls or Institutional Controls. Evaluation of Business Environmental Risks was not within the scope of services included in this report.

The assessment was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession, and in accordance with generally accepted practices of other consultants currently practicing in the same locality under similar conditions. No other representation, expressed or implied, and no warranty or guarantee is included or intended. The *Report* speaks only as of its date, in the absence of a specific written update of the *Report*, signed and delivered by ENCON.

Additional information that becomes available after our survey and report submission concerning the Subject Property should be provided to ENCON so that our conclusions may be revised and modified if necessary, at additional cost. This *Report* has been prepared in accordance with our *Standard Conditions for Engagement*, which is an integral part of this *Report*.

Adjoining sites, neighboring sites or surrounding properties mentioned in this *Report* are defined only up to one parcel immediately next to the Subject Property, and ENCON will only check immediately adjoining properties to identify historical use of the surrounding areas via historical sources or data on such adjoining properties, and/or walk-through visual inspection along Subject Property's perimeters to identify obvious signs of environmental concerns.

It is often not possible (under "*reasonably ascertainable*" clause of ASTM guideline) to identify every single historical business tenants or occupants of the Subject Property. ENCON cannot be liable for not identifying all such past tenants or occupants of the project site.

INDEPENDENT CONTRACTOR STATUS / PROFESSIONAL RESPONSIBILITY

In performing Services under the mutually agreed contractual agreement and verbal engagement, ENCON operates as, and has the status of, an independent contractor. Subject to any limitations established by the *Client* as to the degree of care and amount of time and expenses to be incurred and any other limitations contained in the mutually agreed contractual agreement and verbal engagement, ENCON performs the Services consistent with that level of care and skill ordinarily exercised by other professional consultants under similar circumstances at the time the Services are performed. *Client* hereby acknowledges that whenever a Project involves hazardous or toxic materials there are certain inherent risk factors involved (such as limitations on laboratory analytical methods, variations in subsurface conditions, economic loss to *Client* or property owner, a potential obligation for disclosure to regulatory agencies, a potential for a decrease in market value of real property, and the like) that may adversely affect the results of the Project, even though the Services are performed with such skill and care. No other representation, warranty, or guarantee, express or implied, is included or intended by the mutually agreed contractual agreement and verbal engagement.

QUALIFICATION STATEMENT OF ENVIRONMENTAL PROFESSIONAL

ENCON states that this *Phase I Environmental Site Assessment* was performed under *Environmental Professional (EP)'s* direct supervision, that he/she has prepared and/or reviewed and approved the report, and that the methods and procedures utilized in the development of this report conform to minimum industry standards using both the American Society for Testing Methods (ASTM) Standard E1527-05 and the United States – Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) as guidelines. ENCON certifies that ENCON's *Environmental Professionals* and Subcontractors are properly licensed and/or certified to conduct *Phase I Environmental Site Assessments.*

ENCON's EP declares that, to the best of his/her professional knowledge and belief, he/she meets the definition of *Environmental Professional* as defined in 40 CFR Part 312. ENCON's EP who prepared this assessment possesses the specific qualifications based upon education, training and experience to assess a property of the nature, history, and setting of the subject Property. ENCON has developed and performed the "*All Appropriate Inquiries*" in accordance with the standards and practices as defined in 40 CFR Part 312.

ABBREVIATIONS:

ENCON may use various abbreviations to describe various site, building, or system components or legal descriptions. Not all abbreviations may be applicable to all reports. Abbreviations most often used are defined below.

AAI	All Appropriate Inquiries
ACM	Asbestos-Containing Material
ACT	Acoustic Ceiling Tile
ADA	Americans with Disabilities Act
AHERA	Asbestos Hazard Emergency Response Act
AHU	Air Handling Unit
AMSL	Above Mean Sea Level
APA	American Plywood Association
APCD	Air Pollution Control District
AQMD	Air Quality Management District
AS	Air Sparging
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
AUL	Activity and Use Limitation
bgs	Below Ground Surface
BOD	Biochemical (or Biological) Oxygen Demand
BTEX	Benzene-Toluene-Ethylbenzene-Xylene
BTU	British Thermal Unit (a measurement of heat)
BTUH	British Thermal Units per Hour
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
CMU	Concrete Masonry Unit
COCs	Chemicals of Concern
DEP	Department for Environmental Protection
DEQ	Department of Environmental Quality
DOE	Department of Ecology (WA)
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control (CA)
EIFS	Exterior Insulating Finishing System
EP	Environmental Professional
EPA	Environmental Protection Agency
EPDM	Ethylene Propylene Diene Monomer (rubber membrane roof)
ESA	Environmental Site Assessment
MCL	Maximum Contaminant Level
MDP	Main Distribution Panel
mg/L	Milligrams per Liter
MSDS	Material Safety Data Sheet
MSL	Mean Sea Level
MSSL	Maximum Soil Concentration Limit
MTBE	Methyl Tertiary Butyl Ether
ND	None Detected
NFA	No Further Action (letter)
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
O&M	Operations and Maintenance
OVA	Organic Vapor Analyzer
PCB	Polychlorinated Biphenyl
PCE	Perchloroethylene
PEC	Potential Environmental Concern
PEL	Permissible airborne Exposure Level
PERC	Perchloroethylene
PID	Photoionization Detector
POTW	Publicly Owned Treatment Works
Ppb	Parts per Billion
Ppm	Parts per Million
PRG	Preliminary Remedial Goal
PRP	Potentially Responsible Parties
PTAC	Packaged Through-wall Air Conditioning (Unit)
QAQC	Quality Assurance Quality Control
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RI/FS	Remedial Investigation & Feasibility Study
RQ	Reportable Quantity
RTU	Roof Top Unit
RWQCB	Regional Water Quality Control Board (CA)
SBA	Small Business Association
SPCC	Spill Prevention Control and Countermeasure Plan

EUL	Expected Useful Life, Effective Useful Life
FCU	Fan Coil Unit
FEMA	Federal Emergency Management Agency
FHA	Forced Hot Air
FHW	Forced Hot Water
FID	Flame ionization detector
FIRM	Flood Insurance Rate Map
FOIA	Freedom Of Information Act
FRT	Fire Retardant Treated plywood
GC/MS	Gas Chromatography/Mass Spectrometry
GFI	Ground Fault Interrupter (circuit)
GPR	Ground-Penetrating Radar
GWB	Gypsum Wall Board
HCP	Handicapped Person
HID	High Intensity Discharge (lighting)
HMTA	Hazardous Materials Transportation Act
HVAC	Heating, Ventilating and Air Conditioning
HWH	Hot Water Heater
LBP	Lead-Based Paint
LDL	Laboratory Detection Limit
LEL	Lower Explosive Limit
LLP	Landowner Liability Protection
LQG	Large Quantity Generator (of hazardous wastes)
LUST	Leaking Underground Storage Tank
SQG	Small Quantity Generator (of hazardous wastes)
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compound
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resource Control Board (CA)
TAT	Turn-around time
TCE	Trichloroethylene
TCEQ	Texas Commission of Environmental Quality (TX)
TCLP	Toxicity Characteristic Leaching Procedure
TOC	Total Organic Carbon
TPH	Total Petroleum Hydrocarbons Note: TPHg = TPH as gasoline. TPHd = TPH as diesel fuel
TSA	Transaction Screen Assessment
UBC	Uniform Building Code
UEL	Upper Explosive Limit
ug/L	Micrograms per Liter
USGS	United States Geological Survey
UST	Underground Storage Tank
VAV	Variable Air Volume box
VCT	Vinyl Composition Tile
VOC	Volatile Organic Compound
VWC	Vinyl Wall Covering

2.0 SUBJECT PROPERTY CHARACTERISTICS

2.1 PROJECT INFORMATION & PROPERTY LOCATION

Project Information	
ITEM	
ENCON Project Number	1101039ESAI
Client Project Number	N/A
Subject Property Address	APN 115-210-032 Corona, CA 92879
Subject Property Name	N/A
Property Inspection Date	January 23, 2011
Weather Condition	Sunny, 75 degrees Fahrenheit
ENCON's Field Assessor	Rachel Benigno, Environmental Consultant
ENCON's Environmental Consultant / QAQC Reviewer	Hyung Kim, Principal Consultant, P.E., REA, CHMM, NV-CEM John Winkler, Professional Geologist, REA Michael A. Miller, Senior Reviewer, M.S., REA Mary Osborne, Senior Reviewer, REA, NV-CEM
Property Location	The Property is located on the northeast corner of Sixth Street and Promenade Avenue in Riverside County.
General Setting	The general setting is mixed commercial and light industrial
Property Type	Vacant land

2.2 PROPERTY IMPROVEMENT & BUILDING/LAND DESCRIPTION

Property Improvement & Building/Land Description	
ITEM	
General Layout of Property	The Property is a triangular-shaped parcel with a generally flat topography. It is currently vacant and undeveloped, consisting of native soil and gravel, with minimal vegetative ground cover along the eastern side. There are three trailer trucks temporarily parked on the lot. Chain-link perimeter fencing restricts access from the east side.
Access to Property	Access to the Property is achieved along Promenade Avenue.
Lot Size & Shape	Triangular-shape, 37,462 sq. ft.
Description of Unimproved Areas	The entire property is 100% unimproved.

2.3 CURRENT OCCUPANTS & USE OF THE PROPERTY

Current Occupants & Use of the Property	
ITEM	
Present Occupant	None (Vacant land)
Business Operation(s)	None
Number of Occupants/Units	N/A

2.4 MUNICIPAL SERVICES & UTILITIES

Municipal Services & Utilities	
ITEM	
Potable Water	N/A
Gas/Oil Source for Heating	N/A
Electrical	N/A
Sewage Disposal System	N/A
Solid Waste Disposal	N/A

3.0 SUBJECT PROPERTY RECONNAISSANCE

3.1 LIMITING CONDITIONS

The information reported herein was obtained through sources deemed reliable, a visual site survey of areas readily observable, easily accessible or made accessible by the property contact, and interviews with owners, agents, occupants, or other appropriate persons involved with the Subject Property.

No disassembly of systems or building components or physical or invasive testing was performed. ENCON renders no opinion as to the property condition at un-surveyed and/or inaccessible portions of the Subject Property. ENCON relies completely on the information, whether written, graphic or verbal, provided by the property contact or as shown on any documents reviewed or received from the property contact, owner or agent, or municipal source, and assumes that information to be true and correct. The observations in this *Report* are valid on the date of the survey. Note: Typically lenders have environmental policies where due diligence reports are valid for one year from the report date. However, such policies and standards can vary from each lender or user. For CERCLA landowner liability protection, Phase I ESA reports are valid for 180 days, per ASTM E1527-05, Section 4.6.

3.2 SUBJECT PROPERTY RECONNAISSANCE

Subject Property Reconnaissance	
ITEM	
Processes that generate or handle Petroleum Products or Hazardous Substances	None observed
Underground Storage Tanks (USTs)	None observed
Aboveground Storage Tanks (ASTs)	None observed
Fuel Islands / Dispensers	None observed
Any type of fueling systems	None observed
Containers of Hazardous Materials and/or Petroleum Products related to subject property's operations/processes	None observed
Other containers of suspect hazardous materials in drums, barrels, or other storage, or unlabeled/unidentified containers on site	None observed
Containers not attributed to current use of the Subject Property	None observed
Significant surface staining either on unpaved or paved land	None observed
Unusual areas of asphalt/cement patch or surface depressions	None observed
Stockpiled soils with visual contamination	None observed
Fill material of questionable origin / Piles	None observed
Stressed vegetation	None observed
Any type of heavy equipment or machinery of environmental concern on site	None observed
Hydraulic equipment or machinery of environmental concern (PCB-oil / hydraulic oil) such as hydraulic lifts, compactors, etc.	None observed
Drains for machinery/equipment cleaning or flushing	None observed
Wastewater treatment units & clarifiers	None observed

Subject Property Reconnaissance	
ITEM	
Evidence of onsite surface water impoundment, pits, dry wells or illegal dumping, stormwater removal and sensitive surface water features such as lagoons, ponds, and other water bodies	None observed
Drains and sumps	None observed
Any regulated surface wastewater discharges	None observed
Storm water or surface-water drainage system having any abnormal accumulation of petroleum or chemical run-off or foreign materials, any unusual blockage of the storm-water control system	None observed
Any stained catch basins, drip pads, or sumps	None observed
Herbicide and/or & pesticide use which poses environmental concern	None observed
Septic systems or cesspools	None observed
Wells (any irrigation wells, injection wells, abandoned wells, groundwater-monitoring wells, dry wells, septic wells, oil wells, gas wells, domestic water wells, vapor recovery wells or other-monitoring wells)	None observed
Railroad tracks or spurs	None observed
Visual evidence of improper handling/disposal or solid wastes	None observed
Other visual evidence of spills, leakage, staining, corrosion, soil/groundwater contamination	None observed
Dry-cleaning operation on site	None observed

3.3 DETAILED DESCRIPTION OF SITE RECONNAISSANCE AND ENVIRONMENTAL CONDITIONS

No RECs (Recognized Environmental Conditions) were found during site reconnaissance.

3.4 NON-CERCLA ITEMS

The following table summarizes non-CERCLA issues for which the survey of interior areas of the Subject Property focused, if requested by the Client as an addition to ENCON's standard Scope of Services. No implication is intended as to the relative importance of inquiry into such non-scope considerations, and this list of non-scope considerations is not intended to be all-inclusive.

NON-CERCLA ITEMS	
ITEM	**LOCATION AND DESCRIPTION**
Suspect asbestos-containing building materials in damaged condition if the structure is built prior to 1978	Not applicable – no evidence of building materials or construction debris.
Suspect lead-based paint in damaged condition if the structure is residential and was built prior to 1978	Not applicable
Lead in drinking water	No structures are present. A lead in drinking water survey was not included in the current scope of services.
Radon gas concern	A radon survey was not included in the current scope of services.

NON-CERCLA ITEMS	
ITEM	**LOCATION AND DESCRIPTION**
Visual evidence of Urea Formaldehyde	Not applicable, no structures are present. A UFFI survey was not included in the current scope of services.
Suspect PCB-oil concern with hydraulic equipment, ballasts, transformers, etc.	None observed.
Wetland, creeks, swale, pits, ponds, lagoons, or any other water bodies	Not applicable. However, based on a review of the EDR Radius Report, the Property is not within a mapped National Wetland Inventory location. A wetlands survey was not included in the current scope of services.
Visual evidence of mold problems from wet areas, roof leaks, moisture around air conditioning or plumbing units	Not applicable, no structures area present.
Air quality problems (unusual smells, noxious odors, or visual emissions, air emission stacks)	Not applicable. None observed.
Is the property within a flood zone (Federal Emergency Management Agency Flood Insurance Rate Map)	500-year flood zone (EDR Radius Map Report)
Regulatory compliance, Cultural and historical resources, Industrial hygiene, Health and safety, Ecological resources, Endangered species, Business Environmental Risk	These items were not included in the current scope of services.

3.5 *ADJACENT PROPERTIES*

For the scope of this assessment, properties are defined and categorized based upon their physical proximity to the Subject Property. An adjoining property is any real estate property whose border is contiguous or partially contiguous with the subject property, or that would be if the property was not separated by a roadway, street, public thoroughfare, river, or stream.

Adjacent Properties	
ITEM	
North	Vacant industrial warehouse/office building at 555 S. Promenade Avenue
South	Farmer Boys Restaurant at 1625 E. Sixth Street
West	Promenade Avenue followed by ISD Corp. and National Van Lines at 1595 E. Sixth Street, Golf Ventures West at 560 S. Promenade Avenue, and Pole Position Raceway (Indoor Karting) at 1594 E. Bentley Drive
East	Magnolia Center at 1655 E. Sixth Street

None of the adjacent businesses appear to pose an immediate environmental threat to the Property.

3.6 PHYSICAL SETTING

TOPOGRAPHY

The Subject Property's physical location was researched employing a United States Geological Survey (USGS) 7.5 Minute Topographic Quadrangle (Quad) Map relevant to the Subject Property. The USGS 7.5 Minute Quad Map has an approximate scale of 1 inch to 2,000 feet, and may show physical features with environmental significance such as wetlands, water bodies, roadways, mines, and buildings.

Physical and natural features illustrated on the Quad Map served as areas of visual emphasis when conducting the site inspection of the Subject Property. The USGS 7.5 Minute Quad Map was used as the only Standard Physical Setting Source, and is sufficient as a single reference.

The Corona North Quad Map shows no physical features that may have environmentally impacted the subject property. The subject property and general area are identified as urban developed. No mines, wells, wetlands, or aboveground tanks were mapped in the general area of the subject property. The elevation of the site is approximately 652 feet above mean sea level with a moderate topographic down-slope toward the west.

HYDROGEOLOGY

Groundwater flow direction at the subject property cannot be confirmed without survey measurement of static groundwater level at triangular points. It is, however, expected to flow in the direction of surface topographical contour, or toward the wetland or nearest water body or discharge basin (percolation channel).

It is important to note that groundwater flow direction can be influenced locally and regionally by the presence of local wetland features, surface topography, recharge and discharge areas, horizontal and vertical inconsistencies in the types and location of subsurface soils, and proximity to water pumping wells. Depth and gradient of the water table can change seasonally in response to variation in precipitation and recharge, and over time, in response to urban development such as storm water controls, impervious surfaces, pumping wells, cleanup activities, dewatering, seawater intrusion barrier projects near the coast, and other factors.

SOURCES OF DATA

Current USGS 7.5 Minute Topographical Map
California Department of Water Resource's (CDWR) Bulletin 104-A, 1961
www.dwr.water.ca.gov/
State Water Resources Control Board Geotracker Website, http://geotracker.swrcb.ca.gov/.

4.0 SUBJECT PROPERTY AND VICINITY HISTORY

4.1 HISTORICAL RECORDS SEARCH RESOURCES

HISTORICAL RECORDS RESEARCH RESOURCES	
ITEM	**REFERENCE SOURCE**
Previous Environmental Reports	Not identified or provided to ENCON for review
Sanborn Map Company Fire Insurance Maps	EDR (No map coverage)
Historical Aerial Photographs	EDR-supplied aerial photos
Historical City Directories	EDR City Directory Abstract
Building/Planning Department Zoning/Land Use Records	TICOR Title Property Profiles
Recorded Land Title Records	Not reviewed or provided to ENCON for review
Historical Topographic Maps	EDR-supplied USGS topographic maps
Oil & Gas Maps	Department of Conservation, Division of Oil, Gas & Geothermal Resources, corresponding Wildcat and District Maps for the subject property and immediate vicinity
Interviews	Not applicable to this project
Property Tax Files	N/A
Other Historical Records	None used

4.2 PREVIOUS ENVIRONMENTAL REPORTS

ENCON was not provided with or made aware of previous Environmental Site Assessments or other documentation of environmental studies performed for the Subject Property.

4.3 SANBORN MAP COMPANY FIRE INSURANCE MAPS

Sanborn Map Company maps were created for insurance underwriters from 1867 to 1970, and often contain information regarding the uses of individual structures, and the locations of fuel and/or chemical storage tanks that may have been on a particular property. ENCON subcontracted with EDR to provide copies of Sanborn Map Company maps.

EDR responded that Sanborn Map Company fire insurance maps were not drawn for the Property or surrounding vicinity.

4.4 HISTORICAL AERIAL PHOTOGRAPHS

ENCON reviewed aerial photographs supplied by the EDR Aerial Photo Decade Package. A summary of findings is provided below:

Historical Aerial Photographs		
DATE	SOURCE	DESCRIPTION
2005	EDR	No notable changes from earlier photograph except for the construction of a restaurant on the southern adjacent lot.
2002	USGS	No notable changes from earlier photograph except for the construction of warehouse/office buildings on western adjacent lots.
1994	USGS	No notable changes from earlier photograph.
1990	USGS	No notable changes from earlier photograph except for the construction of Promenade Avenue along the west side of the Property and warehouse/office buildings on eastern adjacent lots.
1977	Teledyne	No notable changes from earlier photograph.
1967	Western	The Property and adjacent sites remain vacant while nearby properties to the east are improved with a mobile home park and nearby properties to the south are improved with commercial buildings.
1953	Pacific Air	The Property and surrounding areas appear to be used for agriculture purposes.
1948	USGS	No notable changes from earlier photograph.
1938	Laval	No notable changes from earlier photograph.
1931	Fairchild	The Property and surrounding areas are undeveloped.

4.5 CITY DIRECTORIES

ENCON reviewed an EDR City Directory Abstract for the years spanning 1922 through 2003. These years are not necessarily inclusive. A summary of the information obtained is provided below.

Subject Property		
YEAR	BUSINESS LISTING	SOURCE
1921-2002	Address Not Listed in Research Source	Various

Adjoining Properties		
YEAR	*BUSINESS LISTING*	*SOURCE*
1993	Davis Taylor Jett Co Ed Faxon Auto Literature Peacock Ron Peacock Radaker Corp Orange Belt Optometric Society Oranco Pest Control Faxon Auto Literature Faxon & Johnson Custom Computer Systems Inc Fay Chas D Marshman Construction Inc Schulz Tool & Machine	Pacific Bell

4.6 BUILDING RECORDS / PROPERTY PROFILE

Property Profile:

The following property information was obtained based upon a review of a TICOR Title property profile:

- Current Property Owner: Ameritrust
- Lot Size: 37,462 sq. ft.
- Building Size: N/A
- Construction Date: N/A
- Site Use: None

4.7 USER PROVIDED INFORMATION

USER/CUSTOMER QUESTIONNAIRE	
QUESTION	**CUSTOMER TO ANSWER**
(1.) Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25). Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state or local law?	The User has not informed ENCON of any knowledge of cleanup liens filed or recorded against the property.
(2.) Activity and land use limitations (AULs) that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26). Are you aware of any AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?	The User has not informed ENCON of any knowledge of activity or land use limitations associated with the property.
(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28). As the *user* of this *ESA* do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an adjoining *property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?	The User has not informed ENCON of any specialized knowledge or experience related to the property or nearby properties.
(4.) Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29). Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?	The User has not informed ENCON of any information pertaining to the purchase price with respect to the fair market value of the property.
(5.) Commonly known or *reasonably ascertainable* information about the *property* (40 CFR 312.30). Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *Environmental Professional (EP)* to identify conditions indicative of releases or threatened releases? For example, as *user*, (a.) Do you know the past uses of the *property*? (b.) Do you know of specific chemicals that are present or once were present at the *property*? (c.) Do you know of spills or other chemical releases that have taken place at the *property*? (d.) Do you know of any environmental cleanups that have taken place at the *property*?	The User has not informed ENCON of any commonly known or reasonably ascertainable information about the property that would identify conditions indicative of releases or threatened releases, other than as described in Section 4.10 (Interviews), if applicable.

(6.) The degree of obviousness of the presence of likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31). As the *User* of this *ESA*, based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of contamination at the *property*?	The User has not informed ENCON of any obvious indicators that point to the presence or likely presence of contamination at the property, other than as described in Section 4.10 (Interviews), if applicable.

The User has not informed ENCON of any specific prior knowledge of cleanup liens, activity or land use limitations, specialized user knowledge, information about the fair market value, site history, or current site activities. Valuation and environmental information is being collected as part of due diligence measures for the associated transaction. An environmental cleanup lien/AUL search is not required from the environmental consultant as part of this investigation. Title searches shall be conducted by the User, concurrently with environmental due diligence work.

4.8 Historical Topographic Maps

Development history of the subject property and surrounding area was researched using historical 7.5 Minute USGS Topographic Maps provided by EDR. The following is a summary of observations:

Date	Remarks
1901, 1902, 1947, 1967, 1973, 1982, 1988, 1997	The subject property appears as a vacant land with generally level terrain.

4.9 Oil & Gas Maps

ENCON did not review Oil and Gas maps during the course of this site assessment because other records were obtained, which are considered sufficient to meet ASTM E1527-05 standard guidelines. Sufficient information was available from alternate sources to adequately characterize the site.

4.10 Interviews

No site contact representative was provided to ENCON for this Phase I environmental site assessment. Based on the apparent history of no previous development and current site conditions, the lack of a property interview is not considered a data gap for this project.

4.11 Other Historical Records

No other historical records were used.

4.12 Summary of Historical Property and Vicinity Use

Summary of Historical Property Use:

The subject property was vacant and undeveloped land from 1901 through 1947. By 1953, use of the Property had changed briefly to agricultural in nature. By 1967, the Property had become vacant again as nearby sites began to be

developed into residential and commercial uses. Improvement of surrounding areas continued through present time with no notable changes on the Property.

Summary of Vicinity Use:

The land immediately surrounding the Property was vacant and had been undeveloped from as early as 1901 through 1947. By 1953, use of the land had changed briefly to agricultural in nature. Commercial and residential development of adjacent sites to the east and south initially became apparent by 1967 and continued on through the next three decades for the remaining nearby properties.

4.13 DATA GAPS

ASTM E1527-05 and the US-EPA AAIs require that the report identify and comment on significant data gaps that affect the ability of the *environmental professional* to identify *Recognized Environmental Conditions*.

Searches for recorded environmental cleanup liens (§ 312.25) The *all appropriate inquiries* rule requires that environmental site assessments include searches for environmental cleanup liens against the Subject Property that are filed or recorded under federal, state, tribal, or local laws. The objective of this requirement is to identify liens placed upon the property that indicate that environmental response actions were taken to address past releases at, on, or to the Subject Property. The ASTM E1527-05 standard also requires a search for environmental cleanup liens, although the scope of the search is limited to reasonably ascertainable recorded land title records. The *all appropriate inquiries* rule differs from the ASTM E1527-05 standard with respect to the party responsible for conducting the search for environmental cleanup liens. Under the ASTM E1527-05 standard, the *User*, or prospective property owner, is responsible for the environmental cleanup lien search and is required to provide the results of the search to the *environmental professional*. The *all appropriate inquiries* rule allows that either the prospective property owner or the *environmental professional* may conduct the search. If the search is performed by the prospective property owner and the property owner does not provide the search results to the *environmental professional*, the *environmental professional* should treat the lack of information as a data gap and should comment on the significance of the data gap on his or her ability to identify conditions indicative of releases or threatened releases.

The largest data gap in this research was from 1902 to 1921. From 1921 to present the data gaps ranged from one to 4 years. However, ENCON does not believe that any gaps in the information reviewed would affect our ability to identify recognized environmental concerns.

5.0 REGULATORY RECORD SEARCH

5.1 PROCEDURE

The most current databases sources maintained by state and federal offices were provided by governmental record search database suppliers. Such databases were searched for properties with reported environmental issues within radii specified by ASTM Standard E1527-05, either by using geocoding information that identified the coordinates of the properties in the databases or by checking the street addresses of practically reviewable non-geocoded "orphan" properties within the same zip code. The database report is included as an appendix to this *Report*. The database report may identify a certain "orphan sites" which are those facilities that could not be mapped or geocoded due to inadequate address information. We attempted to locate the facilities via various mapping programs, but cannot be held liable for not correctly locating these orphan sites to determine their impact to the Subject Property.

The Property address was not identified on any researched environmental regulatory agency database.

5.2 FEDERAL AGENCY RECORDS

FEDERAL AGENCY RECORDS		
SOURCE	**CRITERIA FOR MINIMUM SEARCH DISTANCE (MILES)**	**NO. OF PROPERTIES WITHIN SEARCH DISTANCE**
NPL	1.0	0
De-listed NPL	0.5	0
CERCLIS	0.5	1
CERCLIS-NFRAP	0.5	0
RCRA-CORRACTS	1.0	0
RCRA-TSDF	0.5	0
RCRA-Generator	Subject Property and Adjoining Properties	0
ERNS	Subject Property Only	0
Federal IC/EC Registries	Subject Property Only	0
Other Federal List	Subject Property Only	0

Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS) and CERCLIS - No Further Remedial Action Planned (CERCLIS-NFRAP) Sites:

CERCLIS is the EPA's compilation of sites for which the EPA has evidence of, or is investigating, a release or threatened release, of hazardous substances which may be subject to review in accordance with the terms and conditions of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Superfund Act). Sites to be included are identified primarily by the reporting of hazardous substances; the presence of hazardous waste Treatment, Storage and Disposal Facilities (TSDFs); or releases larger than specified Reportable Quantities (RQ), established by the EPA. CERCLIS-NFRAP sites are sites where investigation has been conducted and it has been determined that no further remedial action is planned or there was no evidence of a release.

One CERCLIS site was identified within the specified search radius:

Advanced Fuels Filtration Systems (1451 Magnolia Avenue)

This site is located downgradient from the Property and is listed as a Removal Only Site with no site assessment work needed.

The site listed above is not suspected to have an adverse environmental impact on the Subject Property based on one or more of the following rationale: a) horizontal distance from the Subject Property; b) down/cross-gradient location with respect to the assumed shallow groundwater flow direction; c) the nature of the reported release (e.g., contamination confined only within soil media, absence of groundwater impact, lack of transporting media such as groundwater); and/or d) regulatory status (e.g., case closed, remediation action underway, no reported violations).

5.3 STATE AGENCY RECORDS

STATE AGENCY RECORDS		
SOURCE	**CRITERIA FOR MINIMUM SEARCH DISTANCE (MILES)**	**NO. OF PROPERTIES WITHIN SEARCH DISTANCE**
State/Tribal Equivalent NPL	1.0	0
State/Tribal Equivalent CERCLIS	0.5	1
State/Tribal SWLF	0.5	0
State/Tribal LUST	0.5	3
State/Tribal UST	Subject Property and Adjoining Properties	0
State/Tribal IC/EC Registries	Subject Property Only	0
State/Tribal Voluntary Cleanup Sites	0.5	0
State/Tribal Brownfield Sites	0.5	0
Other State List	Subject Property Only	0

State/Tribal Equivalent CERCLIS:

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response (RESPONSE), including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

One ENVIROSTOR site was identified within the specified search radius:

U.S. Battery Mfg Co (1675 Sampson Avenue)

This site is an active facility shown on this database as covered by a tiered permit issued by DTSC.

The site listed above is not suspected to have an adverse environmental impact on the Subject Property based on one or more of the following rationale: a) horizontal distance from the Subject Property; b) down/cross-gradient location with respect to the assumed shallow groundwater flow direction; c) the nature of the reported release (e.g., contamination confined only within soil media, absence of groundwater impact, lack of transporting media such as groundwater); and/or d) regulatory status (e.g., case closed, remediation action underway).

State/Tribal SWIS / SWLF:

SWIS (Solid Waste Information System) / SWLF (Solid Waste Landfill): Active, Closed and Inactive Landfills. SWIS/SWLF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites. As legislated under the Solid Waste Management and Resource Recovery Act of 1972, each state maintains lists of certain facilities, i.e. Active solid waste disposal sites, Inactive or Closed solid waste disposal sites and Transfer facilities.

One SWIS/SWLF site was identified within the specified search radius.

All American Asphalt Inert Fill Operation (1776 All American Way)

This facility converts inert construction/demolition debris into asphalt with no reported violations.

It is not suspected to have an adverse environmental impact on the Subject Property based on one or more of the following rationale: a) horizontal distance from the Subject Property; b) down/cross-gradient location with respect to the assumed shallow groundwater flow direction; c) the nature of the reported release (e.g., contamination confined only within soil media, absence of groundwater impact, lack of transporting media such as groundwater); and/or d) regulatory status (e.g., case closed, remediation action underway, no reported violations).

State/Tribal LUST:

LUST: State/Tribal Leaking Underground Storage Tanks: This is a list of state sites that have reported leaking underground storage tanks. A site may be placed on a LUST list by reporting that the tank system(s) failed tank testing, that routine monitoring of tank's system(s) showed evidence of leakage, or that verification sampling during tank removal showed subsurface contamination.

Generally, only such sites located within less than a one-eighth of one mile radius from the target property represent a potential environmental concern.

Three LUST sites beyond 1/8-mile were identified within the specified search radius.

Equal/Higher Elevation	Address	Direction / Distance
CAMCO CONSTRUCTION Status: Completed - Case Closed	*1776 ALL AMERICAN WAY*	*SSE 1/4 - 1/2 (0.453 mi.)*

Lower Elevation	Address	Direction / Distance
ED'S AUTO WRECKING Status: Completed - Case Closed	*1480 MAGNOLIA AVE*	*SSW 1/4 - 1/2 (0.335 mi.)*
SIX PAC INDUSTRIES INC	*1428 E SIXTH ST*	*W 1/4 - 1/2 (0.351 mi.)*

Two of the above LUST sites are listed with "case closed" status and the third site is listed as a soil only release, indicating a low potential for migration with distance. .

None of the sites is suspected to have an adverse environmental impact on the Subject Property based on one or more of the following rationale: a) horizontal distance from the Subject Property; b) down/cross-gradient location with respect to the assumed shallow groundwater flow direction; c) the nature of the reported release (e.g., contamination confined only within soil media, absence of groundwater impact, lack of transporting media such as groundwater); and/or d) regulatory status (e.g., case closed, remediation action underway, no reported violations).

5.4 LOCAL AGENCY RECORDS

County of Riverside Department of Environmental Health:

ENCON found no County of Riverside Department of Environmental Health records pertaining to environmental conditions at the Property.

6.0 FINDINGS AND CONCLUSIONS

ENCON performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-05 of the Subject Property. Any exceptions to, or deletions from, this practice are described in Section 1.0 of this Report.

REPORT COMPONENT	SUMMARY OF FINDINGS
Subject Property Characteristics **(Current Tenant and Site Description)**	The Property, identified as APN 115-210-032 Corona, CA 92879, is a triangular-shaped land with a generally flat topography. It is currently vacant and undeveloped, consisting of native soil and gravel, with minimal vegetative ground cover along the eastern side. There are three trailer trucks and one trailer home parked on the lot. Chain-link perimeter fencing restricts access from the east side.
Summary of Property Reconnaissance	No RECs (Recognized Environmental Conditions) were found during site reconnaissance.
Historical Use of Subject Property and Vicinity	Summary of Historical Property Use: The Property was a vacant and undeveloped land from 1901 through 1947. By 1953, use of the Property had changed briefly to agricultural in nature. By 1967, the Property had become vacant again as nearby sites began to be developed into residential and commercial uses. Improvement of surrounding areas continued through present time with no notable changes on the Property. Summary of Vicinity Use: The land immediately surrounding the Property was vacant and had been undeveloped from as early as 1901 through 1947. By 1953, use of the land had changed briefly to agricultural in nature. Commercial and residential development of adjacent sites to the east and south initially became apparent by 1967 and continued on through the next three decades for the remaining nearby properties.
Federal, State and Local Agency Concerns	The Property is not listed on any of the researched Federal or State agency databases.
Potential Off-site Sources	No RECs (Recognized Environmental Conditions) were identified.
Non-CERCLA Items	The Property lies within a 500-year flood zone. However, unless Client contracted ENCON to investigate specific non-CERCLA items, these items were generally not included in the scope of services for this Phase I Environmental Site Assessment.
Inaccessible or Un-surveyed Portions of Subject Property	Full access to the entire property was provided to ENCON, and there were no notable portions of the Property excluded from the survey and field inspection.
Data Gap	The largest data gap in this research was from 1902 to 1921. From 1921 to present the data gaps ranged from one to 4 years. However, ENCON does not believe that any gaps in the information reviewed would affect our ability to identify recognized environmental concerns.

Refer to Section 7.0, Recommendations and Opinions.

7.0 RECOMMENDATIONS AND OPINIONS

ENCON Solutions (ENCON) performed a Phase I Environmental Site Assessment of the Subject Property in conformance with the scope and limitations of ASTM Practice E1527-05.

ENCON recommends No Further Action based on the current site conditions and available public records, due to minimal risk of contamination at the Subject Property.

8.0 REFERENCES

During the preparation of this Report, a number of sources were contacted, individuals were interviewed, and various federal, state, county or local municipal agencies were consulted. Documentation applicable to the Subject Property in those departments and agencies was requested and reviewed when and where reasonably ascertainable, as detailed in ASTM E1527-05. Individuals listed without phone numbers were contacted in person or by e-mail. Reference sources for site-specific information, hydrogeologic setting, technical data, historical research data, environmental reports and other records used are identified throughout this Report in corresponding sections. Any additional reference sources not cited in the preceding sections in this report, if applicable, are disclosed in this section.

Appendix 5: LID Infeasibility

LID Technical Infeasibility Analysis

Technical Infeasibility Criteria

Technical infeasibility for on-site infiltration may result from conditions including the following:

1. The corrected in-situ infiltration rate is less than 0.3 inches per hour, as determined by infiltration test, and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of retention-based stormwater quality control measures;
2. Locations where the seasonal high groundwater level is within 10 feet of the surface, as determined by soils investigations;
3. Locations within 100 feet of a groundwater well used for drinking water;
4. Brownfield development sites where infiltration poses a risk of pollutant mobilization;
5. Other locations where pollutant mobilization is a documented concern (e.g., at or near properties that are contaminated or store hazardous substances underground);
6. Locations with potential geotechnical hazards;
7. Smart growth and infill or redevelopment locations where the density and/or nature of the project would create significant difficulty for compliance with the onsite retention requirement;
8. Locations where infiltration may adversely impact biological resources; or
9. Locations where infiltration may cause health and safety concerns.

It may be technically infeasible for stormwater runoff harvest and use for the following situations:

1. Projects that would not provide sufficient irrigation or (where permitted) domestic grey water demand for use of stored stormwater runoff due to limited landscaping or extensive use of low water use plant palettes in landscaped areas;
2. Projects that are required to use recycled water for landscape irrigation;
3. Projects in which the harvest and use of stormwater runoff would conflict with local, state, or federal ordinances or building codes;
4. Locations where storage facilities may cause potential geotechnical hazards as outlined in the geotechnical report; or
5. Locations where storage facilities may cause health and safety concerns.

It may be technically infeasible for Bioretention (with underdrains) for the following situations:

1. Projects that have less than 0.3 in/hr infiltration rate and do not have sufficient land area to construct an above ground system;
2. Projects that have no potential connection to existing or proposed storm drain systems.

Appendix 6: BMP Design Details

BMP Sizing, Design Details and other Supporting Documentation

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

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

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

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

Santa Ana River Watershed
Santa Margarita Watershed

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

N

Rain Gage Locations

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Isohyetal Map for the 85th Percentile 24 hour Storm Event

July 2011

EXHIBIT 6A

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	GREYSTONE ENGINEERING INC	Date	
Designed by	HV	Case No	
Company Project Number/Name	CORONA		

BMP Identification

BMP NAME / ID: INFILTRATION TRENCH

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85} = 0.70 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
A1	*28243*	*Mixed Surface Types*	*1*	*0.89*	*25192.8*			
	28243		***Total***		**25192.8**	**0.70**	***1469.6***	***1525***

Notes:

EXHIBIT 6B

Infiltration Trench - Design Procedure	BMP ID	Legend:	Required Entries
			Calculated Cells

Company Name: _____ Date: _____

Designed by: _____ County/City Case No.: _____

Design Volume

Enter the area tributary to this feature, Max = 10 acres — A_t = 1 acres

Enter V_{BMP} determined from Section 2.1 of this Handbook — V_{BMP} = 1,470 ft^3

Calculate Maximum Depth of the Reservoir Layer

Enter Infiltration rate — I = 3.4 in/hr

Enter Factor of Safety, FS (unitless) — FS = 3

Obtain from Table 1, Appendix A: "Infiltration Testing" of this BMP Handbook

n = 40 %

Calculate D_1. $D_1 = \dfrac{I \text{ (in/hr)} \times 72 \text{ hrs}}{12 \text{ (in/ft)} \times (n/100) \times FS}$ — D_1 = 16.95 ft

Enter depth to historic high groundwater mark (measured from finished grade) — 35 ft

Enter depth to top of bedrock or impermeable layer (measured from finished grade) — 35 ft

D_2 is the smaller of:

Depth to groundwater - 11 ft; & Depth to impermeable layer - 6 ft — D_2 = 24.0 ft

D_{MAX} is the smaller value of D_1 and D_2, must be less than or equal to 8 feet. — D_{MAX} = 8.0 ft

Trench Sizing

Enter proposed reservoir layer depth D_R, must be ≤ D_{MAX} — D_R = 5.00 ft

Calculate the design depth of water, d_W

Design $d_W = (D_R) \times (n/100)$ — Design d_W = 2.00 ft

Minimum Surface Area, A_S $A_S = \dfrac{V_{BMP}}{d_W}$ — A_S = 735 ft^2

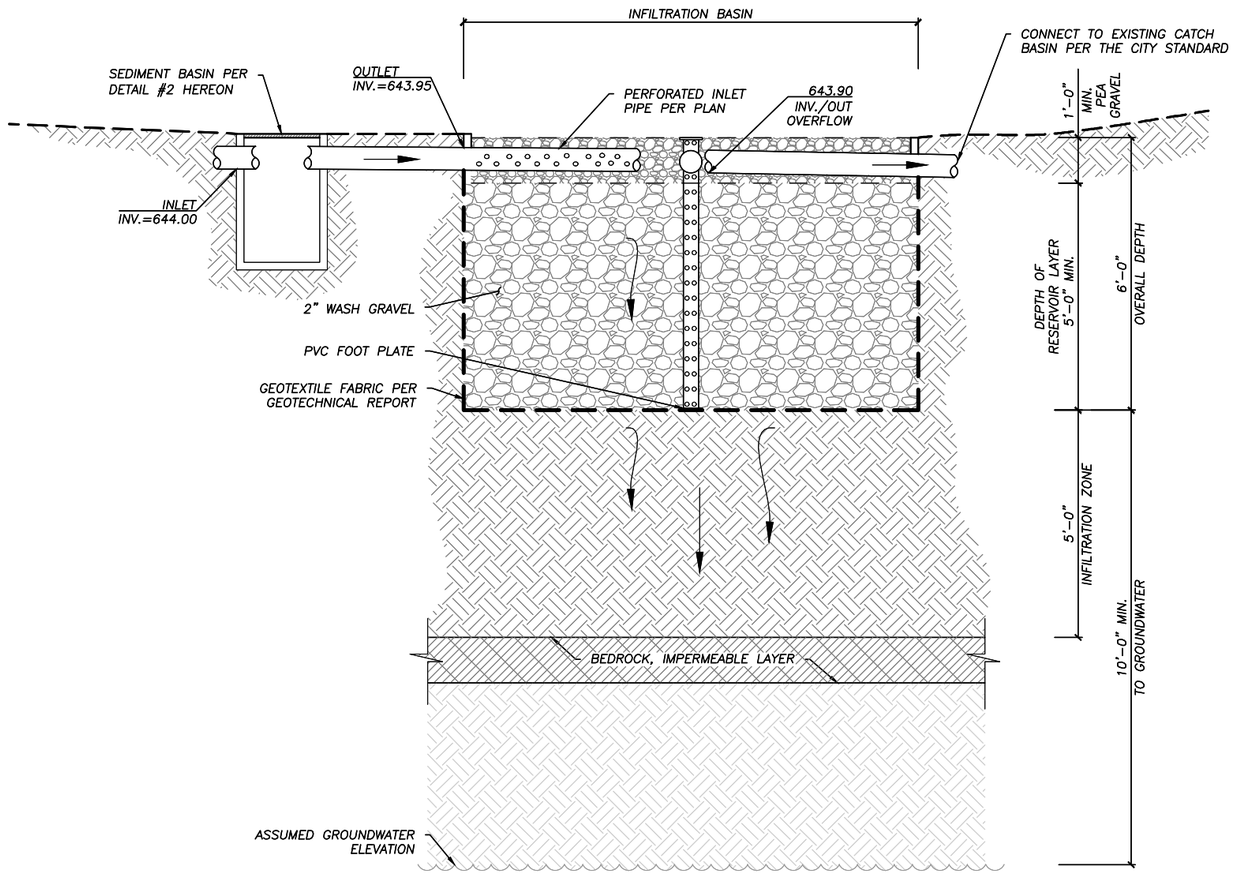
Proposed Design Surface Area — A_D = 740 ft^2

Minimum Width = D_R + 1 foot pea gravel — 6.00 ft

Sediment Control Provided? (Use pulldown) — Yes

Geotechnical report attached? (Use pulldown) — Yes

If the trench has been designed correctly, there should be no error messages on the spreadsheet.



PLAN PREPARED BY:

GREYSTONE
ENGINEERING GROUP INC
11022 SANTA MONICA BLVD. SUITE 440 LOS ANGELES, CA 90025
(310) 405-2341 EMAIL: INFO@GREYSTONEENG.COM

EXHIBIT 6D

INFILTRATION TRENCH DETAIL

Appendix 7: Hydromodification

Supporting Detail Relating to Hydrologic Conditions of Concern

JURUPA VALLEY
EASTVALE
NORCO
CORONA
RIVERSIDE
MORENO VALLEY
CALIMESA
BEAUMONT
BANNING
SAN JACINTO
HEMET
PERRIS
MENIFEE
CANYON LAKE
LAKE ELSINORE
WILDOMAR
MURRIETA
PRADO DAM
LAKE MATHEWS
MYSTIC LAKE
SITE
ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5
ZONE 7

Legend

Stream Type
- Not Susceptible Stream Channels
- Potentially Susceptible Stream Channels
- Large River (Not Susceptible)
- Santa Ana River
- Adequate Sump

Watershed Areas
- Not Applicable Area
- Applicable Area
- Applicable Area Watershed Boundaries

- Flood Control and Water Conservation District Boundary
- Study Area
- County Boundary

0 1 2 3 4 Miles

HCOC Applicability Map

Hydromodification Susceptibility Documentation Report and Mapping
Riverside County Flood Control and Water Conservation District

EXHIBIT 7A Map 2

Appendix 8: Source Control

Pollutant Sources/Source Control Checklist

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

How to use this worksheet (also see instructions in Section G of the WQMP Template):

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your WQMP Exhibit.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs in your WQMP. Use the format shown in Table G.1on page 23 of this WQMP Template. Describe your specific BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting BMPs or substituting alternative BMPs for those shown here.

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☒ A. **On-site storm drain inlets**	☒ **Locations of inlets.**	☒ **Mark all inlets with the words "Only Rain Down the Storm Drain" or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify.**	☒ **Maintain and periodically repaint or replace inlet markings.** ☒ **Provide stormwater pollution prevention information to new site owners, lessees, or operators.** ☒ **See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com** ☒ **Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."**
☐ B. **Interior floor drains and elevator shaft sump pumps**		☐ **State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.**	☐ **Inspect and maintain drains to prevent blockages and overflow.**
☐ C. **Interior parking garages**		☐ **State that parking garage floor drains will be plumbed to the sanitary sewer.**	☐ **Inspect and maintain drains to prevent blockages and overflow.**

EXHIBIT 8A

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☒ D1. **Need for future indoor & structural pest control**		☒ **Note building design features that discourage entry of pests.**	☒ **Provide Integrated Pest Management information to owners, lessees, and operators.**
☒ D2. **Landscape/ Outdoor Pesticide Use**	☒ **Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained.** ☒ **Show self-retaining landscape areas, if any.** ☒ **Show stormwater treatment and hydrograph modification management BMPs. (See instructions in Chapter 3, Step 5 and guidance in Chapter 5.)**	**State that final landscape plans will accomplish all of the following.** ☒ **Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.** ☒ **Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.** **Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.** ☒ **Consider using pest-resistant plants, especially adjacent to hardscape.** **To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.**	☒ **Maintain landscaping using minimum or no pesticides.** ☒ **See applicable operational BMPs in "What you should know for…..Landscape and Gardening"** at http://rcflood.org/stormwater/**Error! Hyperlink reference not valid.** ☒ **Provide IPM information to new owners, lessees and operators.**

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☐ E. **Pools, spas, ponds, decorative fountains, and other water features.**	☐ **Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet. (Exception: Public pools must be plumbed according to County Department of Environmental Health Guidelines.)**	**If the Co-Permittee requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.**	☐ **See applicable operational BMPs in** "Guidelines for Maintaining Your Swimming Pool, Jacuzzi and Garden Fountain" at http://rcflood.org/stormwater/
☐ F. **Food service**	☐ **For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment.** ☐ **On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.**	☐ **Describe the location and features of the designated cleaning area.** ☐ **Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.**	☐ **See the brochure, "**The Food Service Industry Best Management Practices for: Restaurants, Grocery Stores, Delicatessens and Bakeries" at http://rcflood.org/stormwater/ **Provide this brochure to new site owners, lessees, and operators.**
☒ G. **Refuse areas**	☒ **Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas.** ☒ **If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area.** ☒ **Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.**	☒ **State how site refuse will be handled and provide supporting detail to what is shown on plans.** ☒ **State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.**	☒ **State how the following will be implemented:** **Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
❑ H. **Industrial processes.**	❑ **Show process area.**	❑ **If industrial processes are to be located on site, state: "All process activities to be performed indoors. No processes to drain to exterior or to storm drain system."**	❑ **See Fact Sheet SC-10, "Non-Stormwater Discharges" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com** See the brochure "Industrial & Commercial Facilities Best Management Practices for: Industrial, Commercial Facilities" at http://rcflood.org/stormwater/

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
❑ I. **Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)**	❑ **Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area.** ❑ **Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults.** ❑ **Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.**	**Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains.** **Where appropriate, reference documentation of compliance with the requirements of Hazardous Materials Programs for:** ▪ **Hazardous Waste Generation** ▪ **Hazardous Materials Release Response and Inventory** ▪ **California Accidental Release (CalARP)** ▪ **Aboveground Storage Tank** ▪ **Uniform Fire Code Article 80 Section 103(b) & (c) 1991** ▪ **Underground Storage Tank** **www.cchealth.org/groups/hazmat/**	❑ **See the Fact Sheets SC-31, "Outdoor Liquid Container Storage" and SC-33, "Outdoor Storage of Raw Materials " in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
❑ J. **Vehicle and Equipment Cleaning**	❑ **Show on drawings as appropriate:** **(1) Commercial/industrial facilities having vehicle/equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses.** **(2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use).** **(3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer.** **(4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.**	❑ **If a car wash area is not provided, describe any measures taken to discourage on-site car washing and explain how these will be enforced.**	**Describe operational measures to implement the following (if applicable):** ❑ **Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system.** Refer to "Outdoor Cleaning Activities and Professional Mobile Service Providers" for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/ ❑ **Car dealerships and similar may rinse cars with water only.**

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
❑ K. **Vehicle/Equipment Repair and Maintenance**	❑ **Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater.** ❑ **Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas.** ❑ **Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.**	❑ **State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area.** ❑ **State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.** ❑ **State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.**	**In the Stormwater Control Plan, note that all of the following restrictions apply to use the site:** ❑ **No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains.** ❑ **No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately.** ❑ **No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.** Refer to "Automotive Maintenance & Car Care Best Management Practices for Auto Body Shops, Auto Repair Shops, Car Dealerships, Gas Stations and Fleet Service Operations". Brochure can be found at http://rcflood.org/stormwater/ Refer to Outdoor Cleaning Activities and Professional Mobile Service Providers for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
❑ L. **Fuel Dispensing Areas**	❑ **Fueling areas[6] shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable.** ❑ **Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area[1].] The canopy [or cover] shall not drain onto the fueling area.**		❑ **The property owner shall dry sweep the fueling area routinely.** ❑ **See the Fact Sheet SD-30 , "Fueling Areas" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**

[6] **The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.**

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☒ M. **Loading Docks**	☒ **Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas shall be drained to the sanitary sewer, or diverted and collected for ultimate discharge to the sanitary sewer.** ☒ **Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation.** ☒ **Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.**		☒ **Move loaded and unloaded items indoors as soon as possible.** ☒ **See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☒ N. **Fire Sprinkler Test Water**		☒ **Provide a means to drain fire sprinkler test water to the sanitary sewer.**	☒ **See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**
O. **Miscellaneous Drain or Wash Water or Other Sources** ❑ **Boiler drain lines** ❑ **Condensate drain lines** ❑ **Rooftop equipment** ❑ **Drainage sumps** ❑ **Roofing, gutters, and trim.** ❑ **Other sources**		❑ **Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system.** ❑ **Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system.** ❑ **Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment.** ❑ **Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water.** ❑ **Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.** **Include controls for other sources as specified by local reviewer.**	

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☒ P. **Plazas, sidewalks, and parking lots.**			☒ **Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.**

Appendix 9: O&M

Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms

Operations and Maintenance (O&M) Plan

Water Quality Management Plan

for

Corona – APN 115-210-032

Prepared for:

Netzer Admati

249 Warwick Ave.

South Pasadena, CA 91030

Prepared by:

Greystone Engineering Group Inc.

11022 Santa Monica Blvd. #440

Los Angeles, CA 90025

Tel: 310-405-2341

Contact: Soheil Moeini

Prepared on:

6/9/2023

EXHIBIT 9A

Operations and Maintenance Plan

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Non-Structural Source Control BMPs			
Yes	**Education for Property Owners, Tenants and Occupants** All owners & tenants will be given a copy of the recorded CC&R's which will contain a section outlining the environmental awareness education materials. Educational materials will be provided to residents/tenants, including education materials and restrictions to reduce pollutants from reaching the storm drain system.	Prior to occupancy and annually thereafter. Frequency: Annually	*Owner or POA*
Yes	**Activity Restriction** Activity restriction shall be clearly noted within the CC&R's or lease agreement. The POA shall restrict activities that have the potential to create adverse impacts on water quality. Activities include but are not limited to: prohibiting vehicle maintenance activities within parking areas and stalls, prohibiting long-term parking without prior authorization, and prohibiting outdoor vehicle washing. Restriction shall begin upon occupancy	The Owner will prescribe activity restrictions to protect surface water quality, through lease terms or other equally effective measure, for the property. Restrictions include, but are not limited to, prohibiting vehicle maintenance or vehicle washing. Frequency: Ongoing	*Owner or POA*

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Yes	**Common Area Landscape Management** Common area landscape management that includes minimizing fertilizer and pesticide application, use of slow-release fertilizers, maintenance activities, providing education to homeowners and tenants (via project owner and/or POA), and providing education and training for employees on management of landscape materials and storm water management. *Landscape Management Includes:* • *Mitigation of the potential dangers of fertilizer and pesticide usage through the incorporation of an Integrated Pest Management Program (IPM).* • *Monitor for runoff and efficiency regularly.* • *Implementation of a water budget.* • *Irrigation systems shall be automatically controlled and designed, installed, and maintained so as to minimize overspray and runoff onto streets, sidewalks, driveways, structures, windows, walls, and fences.* • *Use of native and drought tolerant species when replanting*	Maintenance shall be consistent with City requirements. Fertilizer and/or pesticide usage shall be consistent with City/County Management Guidelines for Use of Fertilizers. Maintenance includes mowing, weeding, and debris removal on a weekly basis. Trimming, replanting, and replacement of mulch shall be performed on an as-needed basis to prevent exposure of erodible surfaces. Trimmings, clippings, and other landscape wastes shall be properly disposed of in accordance with local regulations. Materials temporarily stockpiled during maintenance activities shall be placed away from water courses and storm drains inlets. Frequency: Monthly	*Owner or POA*

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Yes	**BMP Maintenance** The POA will be responsible for the implementation and maintenance of each applicable non-structural BMP, as well as scheduling inspections and maintenance of all applicable structural BMP facilities through its staff, landscape contractor, and/or any other necessary maintenance contractors.	Maintenance of structural BMPs implemented at the project site shall be performed at the frequency prescribed in this WQMP. Records of inspections and BMP maintenance shall be kept by the Owner and shall be available for review upon request. Frequency: Ongoing	*Private Areas: Owner or POA* *Public Areas: City*
No	**Title 22 CCR Compliance**	Not Applicable	Not Applicable
No	**Spill Contingency Plan**	Not Applicable	Not Applicable
No	**Underground Storage Tank Compliance** There are no underground storage tanks.	Not Applicable	Not Applicable
No	**Hazardous Materials Disclosure Compliance** There are no hazardous materials stored on site.	Not Applicable	Not Applicable
No	**Uniform Fire Code Implementation**	Not Applicable	Not Applicable

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Yes	**Common Area Litter Control** The POA will be responsible for performing trash pickup and sweeping of littered common areas as needed and weekly at a minimum. Any trash/debris waste collected shall be properly disposed of in accordance with local regulations. Responsibilities will also include noting improper disposal of materials by the public and reporting such violations for further investigation.	Litter patrol, violations investigations, reporting and other litter control activities shall be performed on a weekly basis and in conjunction with routine maintenance activities. Frequency: Weekly	*Owner or POA*
Yes	**Employee Training** All employees of the POA and any contractors will require training to ensure that employees are aware this WQMP and of maintenance activities that may result in pollutants reaching the storm drain. Training will include, but not be limited to, spill cleanup procedures, proper waste disposal, housekeeping practices, etc	Educate all new employees/ managers on storm water pollution prevention, particularly good housekeeping practices, prior to the start of the rainy season (October 1). Refresher courses shall be conducted on an as needed basis. Frequency: Annually	*Owner or POA*
Yes	**Housekeeping of Loading Docks** No below-grade loading docks are proposed. Housekeeping measures will be implemented to keep any delivery areas clean and orderly condition. Includes sweeping, removal of trash & debris on a weekly basis, and use of dry methods for cleanup.	Sweep delivery areas weekly and remove any trash/debris. Keep area clean of trash and debris at all times. Spills shall be cleaned up immediately using dry methods. Frequency: Weekly	*Owner or POA*

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Yes	**Common Area Catch Basin Inspection** All on-site storm drain inlets, curb and gutters and ribbon gutter systems shall be inspected and cleaned out by the HOA at least once a year, prior to the rainy season, no later than October 1st of each year. All public drainage facilities will be maintained by the City.	Catch basin inlets and other drainage facilities shall be inspected after each storm event and once per year. Inlets and other facilities shall be cleaned prior to the rainy season, by October 1st each year. Frequency: Annually	Private Areas: Owner or POA Public Areas: City
Yes	**Street Sweeping Private Streets and Parking Lots** The POA shall be responsible for the street sweeping of all private street, drive aisles and parking areas within the project quarterly, and prior to the rainy season, no later than October 1st each year. The City shall be responsible for sweeping of public streets	Streets & parking lots must be swept at least quarterly (every 3 months), including prior to the start of the rainy season (October 1st). Frequency: Quarterly	Private Areas: Owner or POA Public Areas: City
No	**Retail Gasoline Outlets** There are no gasoline stations proposed.	Not Applicable	Not Applicable
Structural Source Control BMPs			
Yes	**Provide Storm Drain System Stenciling and Signage** The phrase “NO DUMPING! DRAINS TO OCEAN” or an equally effective phrase approved by the City, will be stenciled on all major storm drain inlets within the project site to alert the public to the destination of pollutants discharged into storm water. Stencils shall be in place by completion of construction	Storm drain stencils shall be inspected for legibility, at minimum, once prior to the storm season, no later than October 1st each year. Those determined to be illegible will be restenciled as soon as possible. Frequency: Annually	Private Areas: Owner or POA Public Areas: City

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
No	**Design and Construct Outdoor Material Storage Areas to Reduce Pollutant Introduction** Outdoor storage prohibited.	Not Applicable	Not Applicable
Yes	**Design and Construct Trash and Waste Storage Areas to Reduce Pollutant Introduction** All trash and waste shall be stored in containers that have lids or tarps to minimize direct precipitation into the containers. Any trash storage areas will be paved, covered, and either be sloped to landscaping areas or include a barrier to keep drainage out of the storm drain.	Sweep trash area at least once per week and before October 1st each year. Maintain area clean of trash and debris at all times. Frequency: Weekly	*Owner or POA*
Yes	**Use Efficient Irrigation Systems & Landscape Design** Irrigation systems would be designed to meet City standards for water efficient landscaping, as applicable in accordance with City Municipal Code. Where feasible, includes incorporation of native tolerant species for landscaping, protection of slopes and efficient irrigation. May be used in conjunction with educational materials to homeowners/tenants as well as activity restrictions.	In conjunction with routine maintenance activities, verify that landscape design continues to function properly by adjusting properly to eliminate overspray to hardscape areas, and to verify that irrigation timing and cycle lengths are adjusted in accordance with water demands, given time of year, weather, and day or night time temperatures. Frequency: Monthly	*Owner or POA*

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
No	**Protect Slopes and Channels and Provide Energy Dissipation**	Not Applicable	Not Applicable
Yes	**Loading Docks** No below-grade loading docks are proposed. Housekeeping measures will be implemented to keep any delivery areas clean and orderly condition. Includes sweeping, removal of trash & debris on a weekly basis, and use of dry methods for cleanup.	Sweep delivery areas weekly and remove any trash/debris. Keep area clean of trash and debris at all times. Spills shall be cleaned up immediately using dry methods. Frequency: Weekly	*Owner or POA*
No	**Maintenance Bays** There will be no maintenance bays	Not Applicable	Not Applicable
No	**Vehicle Wash Areas** There will be no vehicle wash areas	Not Applicable	Not Applicable
No	**Outdoor Processing Areas** There will be no outdoor processing areas	Not Applicable	Not Applicable
No	**Equipment Wash Areas** There will be no equipment wash areas	Not Applicable	Not Applicable
No	**Fueling Areas** There will be no fueling areas	Not Applicable	Not Applicable

No	**Hillside Landscaping**	Not Applicable	Not Applicable

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
No	**Wash Water Controls for Food Preparation Areas** There will be no food processing areas	Not Applicable	Not Applicable
No	**Community Car Wash Racks** There will be no community car wash areas.	Not Applicable	Not Applicable
	Treatment Control BMPs		
Yes	**Treatment Control BMP # 1** Infiltration BMP – Infiltration Trench	Maintenance should be done during dry weather conditions when no flow is entering the system. A person can open the manhole on the Underground system and inspect the system to determine the need for maintenance. If needed remove sediment and trash. Frequency: Annually, Before storm season or after rain event as needed.	*Owner or POA*

Responsible Party

The responsible party for implementation of this WQMP is:

Netzer Admati
249 Warwick Ave.
South Pasadena, CA 91030
phone number:

24-Hour Emergency Contact #:

Email: admati2012@gmail.com

Required Permits

There are no permits required for the implementation, operation, and maintenance of the BMPs.

Forms to Record BMP Implementation, Maintenance, and Inspection

The owner shall be responsible for BMP implementation, maintenance, and inspection. See Table for BMP Implementation, maintenance, and inspection requirements. The form “Record of BMP Implementation, Maintenance, and Inspection attached and shall be used to record implementation, maintenance, and Inspection of BMPs. The inspection form shall include the date of the inspection, the name of person and signature of the person who performed the inspection, the BMP that was inspected/maintained, and description of the activity performed. Forms shall be regularly completed and kept with this Operations and Maintenance Plan.

Recordkeeping

All records must be maintained for at least five (5) years and must be made available for review upon request.

Employee Training Program

Staff reviewing plans, inspecting and maintaining Water Quality/Stormwater BMPs shall be appropriately trained and qualified to implement and maintain Water Quality/stormwater BMPs. New staff shall receive training within 6 months of hiring.

The Owner will develop a training program for staff that includes the use of the educational materials, training on litter patrol, contingency plans for spill clean-up, good housekeeping of the site, BMP maintenance, etc. the Owner is responsible for supply of materials at the time of initial employment training and on an annual basis (at a minimum).

Revisions to Operations & Maintenance Plan

The Owner will be responsible for revisions to the O&M Plan in the event of a substantial change to the project BMP due to construction. Modifications to the O&M Plan may be necessary if project changes result in a potential increase in pollutant discharge to storm water or if inspection and monitoring indicates that existing BMPs are ineffective. Any revisions shall

be made by the Engineer of Record or other qualified person(s) and shall obtain appropriate approvals by the local agency that has jurisdiction over the subject property.

Funding

The Owner, as listed below, will be responsible for funding the installation and on-going maintenance for the BMPs. An appropriate mechanism for the long-term operation and maintenance will be developed by the Owner or Property Owner Association, as applicable.

Owner/Responsible Party information:

Netzer Admati

249 Warwick Ave.

South Pasadena, CA 91030

RECORD OF BMP IMPLEMENTATION, MAINTENANCE, AND INSPECTION

Today's Date: _____

Name of Person Performing Activity (Printed): _____

Signature: _____

BMP Name (As Shown in O&M Plan)	Brief Description of Implementation, Maintenance, and Inspection Activity Performed

(LIST OF BMP MAINTENANCE ITEMS)
(To Be Completed by the Project Engineer)

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
StormFilter Pretreatment Unit	Property Owner	Maintenance should be done during dry weather conditions A person can open the manhole on the StormFilter and inspect the vault to determine the need for maintenance. If needed remove sediment and replace cartridge.	Before storm season, (July), or after rain event.
CMP Underground Infiltration System	Property Owner	Maintenance should be done during dry weather conditions when no flow is entering the system. A person can open the manhole on the StormFilter and inspect the vault to determine the need for maintenance. If needed remove sediment and replace cartridge.	Before storm season, (July), or after rain event.
N1 - Education	Property Owner	The Owner shall utilize the Stormwater and Water Quality BMP educational materials contained in this report for training programs.	Before storm season (July)
N2 – Activity Restriction	Property Owner	Owner shall prescribe activity restrictions to protect surface water quality.	Upon occupancy and annually thereafter (July)
N3 – Landscape Management	Property Owner	Maintain landscape weekly or as needed to comply with local City Ordinances	Weekly
N4 – BMP Maintenance	Property Owner	Inspect site and review records to make sure non-structural and structural BMPs are properly maintained as schedule. Provide records to City if requested	Monthly, after rain event
N7 – Spill Contingency	Property Owner	Owner shall prepare occupancy specific plan regarding the storage of cleanup materials, notification of responsible agencies, disposal of cleanup materials, documentation etc.	Monthly
N10 – Uniform Fire Code Implementation	Property Owner	Owner shall comply with Article 80 of the Uniform Fire Code	Monthly
N11 - Litter/Debris Control Program	Property Owner	Owner shall contract with landscaping maintenance firm to regularly empty trash receptacles, collect litter, and report tenant disposal violations. Owner shall be responsible for trash and litter control in the common areas of the facilities.	Weekly
N12 - Employee Training	Property Owner	Owner shall prepare or include a provision for an education program/manual for employees regarding the storage of hazardous materials and implementation of spill contingency plans.	Upon initial employment

N14 - Catch Basin Inspection Program	Property Owner	Owner shall inspect, clean, and maintain drainage facilities prior to start of the rainy season.	Before rainy season (July), after rain event
N15 - Vacuum Sweep Private Streets and Parking Lots	Property Owner	Dictated by waste accumulation, or as needed to comply with local ordinances.	Before rainy season (July) to limit pollution during storm event
N17 - Comply with all other applicable NPDES permits	Property Owner	Permittees shall comply with all other NPDES permits to include BMPs that are required as part of a SWPPP.	Monthly
FloGard Catch Basin Filter Inserts	Property Owner	The owner shall perform visual inspections of the Catch Basin and Filter Inserts to remove miscellaneous landscape, Debris, and Trash from inside the baskets. Filter medium shall be replaced once per year per manufacturer's recommendation or more frequently if warranted.	Before storm season (July), after rain event

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
S1 - Provide Storm Drain System Stenciling and Signage	Property Owner	Owner to maintain legibility of stencil and signs.	Should be inspected annually before rainy season (July) and be repainted/replaced as necessary.
S3 - Trash Enclosures to Reduce Pollutant	Property Owner	Property owner to maintain trash enclosure to prevent run-on and exposure to direct precipitation.	Trash Enclosures shall be inspected and cleaned weekly. Dumpster pick up shall be scheduled weekly at minimum
S4 – Use Efficient Irrigation Systems and Landscape Design	Property Owner	Property owner shall maintain and audit irrigation system and landscaping in accordance with CASQA BMP Handbook SD-12.	Weekly
S6 – Slope and Channel Protection	Property Owner	Property owner shall maintain/protect slopes and channels in accordance with CASQA BMP Handbook SD-10.	Before storm season (July), after rain event
S14 - Wash Water Control for Food Preparation Areas	Property Owner	Property owner shall provide signage where applicable stating the prohibition of discharging wash water to storm drain system.	Should be inspected annually before rainy season (July) and be repainted/replaced as necessary.

Weekly WQMP Inspection Record

Performed by:_____ Date: _____

BMP	Activity	Yes	No
Trash & Debris	Are Common Areas clean of trash & debris?		
	Are the trash receptacles clean of trash and debris?		
	Does the perimeter of the site been clear of trash & debris?		
Drainage Facilities	Are there any signs of illegal discharges or dumping down any drainage facilities?		

Quarterly WQMP Inspection Record

Performed by:_____ Date: _____

BMP	Activity	Yes	No
MS4 Signage	Does the Catch Basin label need replacing?		
Drainage Facilities	Does the Catch Basin need cleaning of debris?		
	Do any drainage facilities need repair?		
Trash & Debris	Do any trash receptacles need repair?		
	Have the trash bins been picked up on a regular basis?		
	Does the trash enclosure need cleaning?		

RECORD OF BMP IMPLEMENTATION, MAINTENANCE, AND INSPECTION

Today's Date: _____

Name of Person Performing Activity (Printed): _____

Signature: _____

BMP Name (As Shown in O&M Plan)	Brief Description of Implementation, Maintenance, and Inspection Activity Performed

List of Onsite Activity Restrictions

1. Prohibit discharges of fertilizer, pesticides, or animal wastes to streets or storm drains.

2. Prohibit blowing or sweeping of debris (leaf litter, grass clippings, litter, etc.) into streets or storm drains.

3. Prohibit connections of pool/spa drains to streets or storm drains.

4. Requirement to keep dumpster lids closed at all times.

5. Requirement to keep trash receptacles covered or sheltered by a roof overhang or canopy.

6. Prohibit discharges of paint or masonry wastes to streets or storm drains.

7. Prohibit the washing kitchen wastes or kitchen equipment (restaurant, fast food, grocery store deli, bakery, etc.) to stormwater drainage features.

8. Prohibit vehicle washing, maintenance, or repair on the premises or restrict those activities to designated areas.

Appendix 10: Educational Materials

BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information

10 Ways to Save Water Outdoors

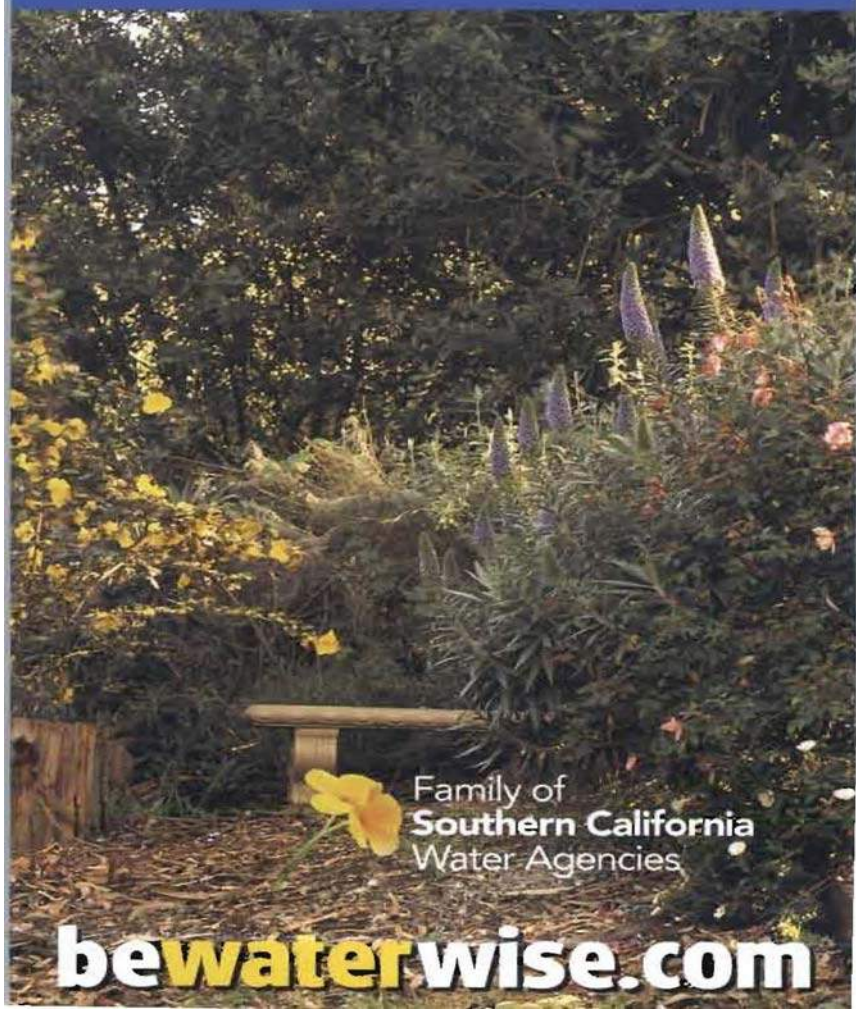


EXHIBIT 10A

TIP #1 The average homeowner uses twice the amount of water needed to keep plants healthy. Use the watering calculator and index at **bewaterwise.com** to know exactly how much water your plants need.

TIP #2 Check your sprinkler system for leaks, overspray and broken sprinkler heads. Update with drip or other more water-efficient sprinklers where appropriate.

TIP #3 This fall, plant a portion of your garden with beautiful native and California Friendly plants. Browse the plant database at **bewaterwise.com** to find just the right look for your outdoor spaces.

TIP #4 Reduce the amount of water-thirsty grass. Keep only what you need and replace the rest with less-thirsty plants or permeable paving.

TIP #5 For the grass you keep, set your lawnmower blade higher.

TIP #6 Adjust your sprinkler timer downward in September. Plants need less water when days are shorter.

TIP #7 Use a broom instead of the hose for cleaning sidewalks and patios.

TIP #8 Mulch! A layer of bark, gravel, compost, sawdust or low-growing groundcover evens out soil temperature and allows better water retention.

TIP #9 Check the list of invasive plants that hurt our environment at **caleppc.org** and remove any from your garden.

TIP #10 Share these tips with your gardener, neighbors and friends. Water conservation should be a part of every Southern Californian's lifestyle, but that doesn't mean we can't have lush and beautiful outdoor spaces.

bewaterwise.com

Central California Coast
Technical Assistance Memo (TAM)

LID Plant Guidance for Bioretention

Low Impact Development

This Technical Assistance Memo (TAM) provides plant guidance for bioretention stormwater control measures. Bioretention systems are low impact development (LID) features that use a combination of soil, plants, and other design elements to slow, treat, retain, and infiltrate stormwater runoff to mimic the natural, pre-development hydrology of a site.

While bioretention systems may look like regular landscaped areas, they are designed (engineered) to manage stormwater runoff volumes and pollutants created by urbanization. Specifying the appropriate plants and soil for a bioretention system is critical to its performance and community acceptance.

Which Bioretention Facility Type?

There are two basic bioretention design types: planter and slope-sided. The flat-bottom planter type has a level soil surface, which allows stormwater to pond across the entire area. All plants in the planter type of bioretention must be able to tolerate stormwater inundation (Figure 1, Zone A). In comparison, the slope-sided type has two landscape conditions: the area that functions for stormwater management (Figure 2, Zone A) and the area above the ponding level. Similar to the planter type, plants in Zone A of a slope-sided bioretention type must be able to survive periodic ponding conditions. Plants in Zone B, however, are not located in the stormwater management area and the plants/trees can be selected from conventional plant palettes. For each project, it is important that the landscape designer understand where the delineation between Zone A and Zone Be occurs in order to develop a proper plant design.

Source: Kevin Robert Perry

Slope-sided: This facility type has a lower area that ponds and conventional landscape on the side-slopes. Only plants in the functional, ponding area (Zone A) must be tolerant of periodic inundation.

Source: Cannon

Flat-bottom Planter: This design type has a flat surface with consistent depth of ponding across the structure. The entire area functions for stormwater management and all plants in this facility must be tolerant of periodic inundation (Zone A).

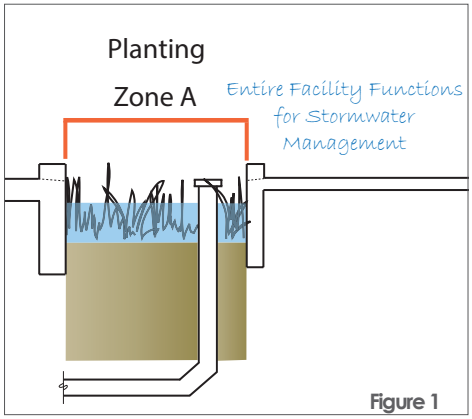


Figure 1

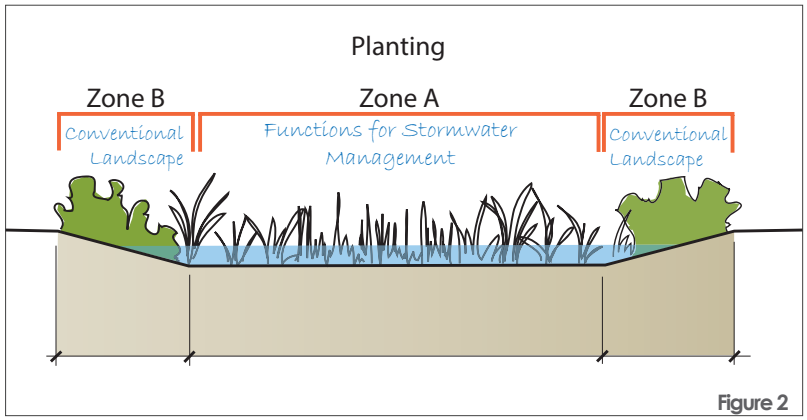


Figure 2

EXHIBIT 10B

Choosing the Plants

With the bioretention facility type known and ponding areas identified, the plants can be selected. A list of plants appropriate for Zone A conditions (periodic ponding) is available on the Central Coast Low Impact Development Initiative (LIDI) website.

The LIDI Bioretention plant list was developed using the following criteria:

- Tolerant of varied moisture conditions (wet and dry)
- Tolerant of varied soil types and growing conditions
- Low maintenance requirements
- Not invasive weeds
- Do not have aggressive/invasive root systems
- Exhibit an attractive appearance.

centralcoastlidi.org/plants

The bioretention plants provided on the LIDI website represent a basic bioretention plant palette. When selecting plants, the landscape designer should determine whether a plant species is appropriate for the site considering proximity to cars, pedestrians, height limits, and anticipated levels of maintenance. Drought tolerant native plants are strongly encouraged to support water conservation, provide wildlife habitat, and for their ability to survive in local climate conditions.

While plant selection for Zone B areas is at the discretion of the landscape designer, selection should take into account the sandy, free draining bioretention soil mix and the potentially erosive conditions where stormwater enters the facility.

Source: Las Pilitas Nursery

Plant Selection and Maintenance: Anticipating the level of maintenance a facility will receive informs plant selection and may improve long-term system function. Where irrigation levels and maintenance are expected to be low, select a tough plant palette using species with similar requirements. For example, on a road-side bioretention swale that will receive little or no irrigation and minimal maintenance after establishment, a planting of *Juncus patens*, *Achillea millefolium* and *Muhlenbergia rigens* could survive on rainfall once established. These tough plants, which look best when given supplemental water and cut back annually, will also tolerate mowing.

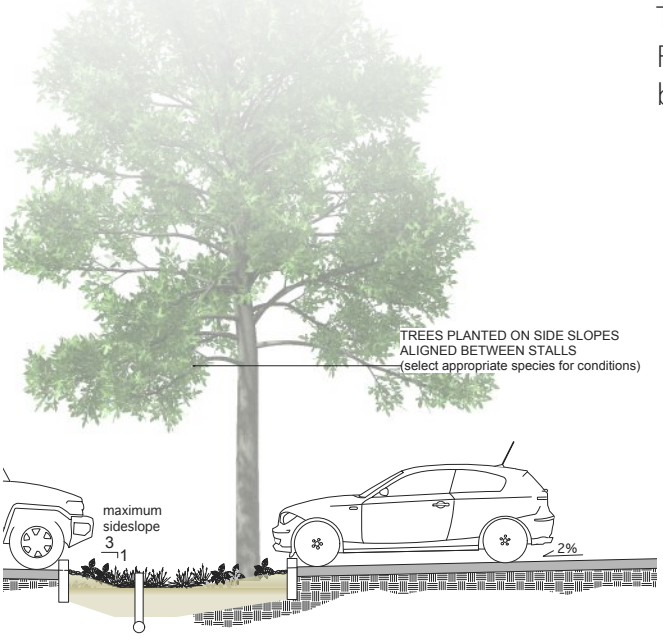
About Plant Substitutions

Selection of different plant species may be appropriate based on the specific project objectives. However, the designer must ensure that plants selected for the Zone A location of a bioretention facility can tolerate periodic stormwater inundation. During construction, designers and/or construction managers should carefully review substitution requests. In the case of substitutions sought due to supplier availability, the contractor may need to broaden their search to locate a different supplier.

Source: William Cullina

Bioretention Workhorse: *Juncus* is a genus of plants, commonly known as rushes. They are found across the globe and frequently on bioretention plant lists because of their tolerance for inundation. Some *Juncus* perform better than others in arid environments. *Juncus patens* is an easy to grow California native rush. It tolerates poor drainage, flooding, drought, and shade. A strong bioretention performer, it is more drought tolerant than the commonly available *Juncus effusus*. Additional *Juncus* cultivars and varieties may also be available at nurseries. Ask growers which *Juncus* will perform well with both seasonal inundation and drought.

Trees in Bioretention Areas



Trees provide additional aesthetic and performance benefits. Following these guidelines will maximize their success in bioretention areas:

- Provide sufficient facility width (a rule of thumb is 8' min.)
- Trees should be located at least five feet from facility inlets to avoid erosion of soils around the root ball
- Select trees that will tolerate seasonally wet soils and potential ponding
- Typically, locate trees on side-slopes; not at the bottom of Zone A
- Some trees may tolerate periodic shallow ponding, especially if native soils are highly infiltrative
- Do not specify trees with invasive roots
- Securely stake trees planted in bioretention areas

Soils for Bioretention

Specifying the correct soils for bioretention areas is critical in order to achieve stormwater objectives and plant health. Soils must balance three primary design objectives:

- High enough infiltration rates to meet surface water draw down requirements
- Infiltration rates that are not so high that they preclude pollutant removal function of soils
- Soil composition that supports plant establishment and long-term health

Bioretention Soil Mix: Construction documents for any LID project should include a bioretention soil specification that defines the ratio of materials in the mix (approximately 35% aged compost to 65% concrete sand), and the gradation, quality analysis, and other requirements for the materials. Specifications should also include guidelines for blending and placement of the bioretention soil mix.

Plant Installation

Landscape installation for bioretention areas is similar to that of traditional landscapes with a few added considerations:

- Conditions differ greatly between the ponding area (Zone A) and side-slopes (Zone B); plant installation must accurately follow landscape plans. After planting, an inspection should ensure correct placement.
- Plants should not block stormwater flows at inlets. The mature, full-size of plants should be estimated to determine proper setback from inlets, with adjustments made after installation, if plants are too close.
- A two-inch layer of compost may be applied to retain moisture, prevent erosion, and suppress weed growth. Use the same compost from the bioretention soil mix specification and avoid bark mulches that can float during storm events.
- Landscape installers should be aware to avoid compaction of the soil with machinery, or never working wet soils.

Plant Establishment and Care

Like traditional landscapes, bioretention planting areas require care and ongoing maintenance for optimal health. Due to their functional nature as stormwater management facilities the following guidelines should be followed:

Irrigation is typically needed for two to three years following installation. After that period, native plants will need little to no supplemental irrigation to survive, however they may enter a dormant stage and appear dried up until rejuvenated by rains or supplemental irrigation. Because bioretention soils are formulated to infiltrate, irrigation application rates must be properly designed to avoid overwatering, and for systems with an underdrain prevent potential discharges through the underdrain.

Compost Mulch (1" - 2") may be reapplied to bioretention areas annually, or as the mulch layer breaks down. Use compost mulch (the same compost used in the bioretention soil mix) and avoid bark mulches that can float during storm events. Do not apply mulch just prior to the rainy season.

Fertilizer should not be used in bioretention areas. Instead, a compost top dressing or application of compost tea can be used to introduce nutrients and beneficial microorganisms to the soil.

Synthetic herbicides and pesticides should **not be used** in bioretention areas because of their potential toxicity risk to aquatic organisms. There are a variety of natural methods and products that can be used to control weeds and pests.

Weeds compete with plants for nutrients, water, and sunlight. They should be regularly removed, with their roots, by hand pulling or with manual pincer-type weeding tools. Care should be given to avoid unnecessary compaction of soils while weeding.

Replace plants that die due to unsuitable plant conditions, disease, underwatering, or other unforeseen issues. Dead and dying plants must be removed and replaced to avoid spreading disease, establishment of weeds in bare areas, and reduced LID function. Before replacing with the same species, determine if another species may be better suited to the conditions.

Check tree staking, especially in high wind areas. Trees in bioretention areas may be more easily impacted by storms because of side-slope and saturated soil conditions. They should be inspected once or twice a year and following storm events to ensure they maintain a vertical, upright position during establishment. Stakes should be removed once they are no longer needed to encourage self supporting root systems (between one and two years).

Plant Nurseries

Check with your local nursery for availability of plants on the LIDI Bioretention plant list. Additionally, LIDI's Bioretention Vendor List, while it may not be inclusive of all suppliers, provides contact information for Central Coast nurseries that stock plants from the Bioretention plant list.

Source: Las Pilitas Nursery

For additional technical resources:
www.centralcoastlidi.org
For questions or to contact the
Central Coast Low Impact Development Initiative:
info@centralcoastlidi.org

Central Coast Water Board

central coast LIDI

UC Davis LID Initiative

Central Coast Low Impact Development Initiative
Bioretention Plant List
Plants for Zone A: Periodic inundation, area ponds following storm events (6" to 12" depth for 24 - 72 hours) and compost amended sand soil.

Scientific & Common Name	Height / Width	Light Preferences			Water Tolerances		CA Native	Sunset Climate Zones[1]	Notes
		Sun	Part	Shade	Drought	Inundation			
GRASS / GRASSLIKE									
Carex barbarae Santa Barbara Sedge/ Basket Sedge	1-2' / 1'-2'	X	X	X		X	X	4 - 9, 14 - 23	Attracts butterflies, deer resistant, good for erosion control, can spread agressively and should be sited carefully.
Carex divulsa Berkeley Sedge	1' / spreading	X	X	X	X	X		all, but 1A-3A	Attractive blue-grey leaves. Can be mowed 4 in high to keep clean look.
Carex flacca Blue Sedge	1' / spreading	X	X		X	X		3A - 9, 14 - 23	Attractive blue-grey leaves. Can be mowed 4 in high to keep clean look.
Carex praegracilis California Field Sedge	1' / spreading	X	X			X	X	all, but 1A -3A	Mounding, drought deciduous during summer months.
Carex spissa San Diego sedge	3 - 4' / 2 - 3'	X	X		X	X	X	all, but 1A-3A	Can handle foot traffic and is deer resistant.
Chondropetalum tectorum Small Cape Rush	2 - 3' / 3 - 4'	X	X	X	X	X		all, but 1A-3A and 7	Needs very little maintenance. If trimmed too much plant will loose visual integrity.
Leymus condensatus 'Canyon Prince' Canyon Prince Wild Rye	3'/3'	X	X			X	X	all, but 1A-3A	Tolerant of drought, poor soils, part shade and seasonal wet. Spreads by rhizomes, so nice planted in masses. Cut back annually in spring before new growth emerges.
Juncus effusus Common Rush	2 - 3' / clumping	X	X			X	X	all	Easy to grow & very reliable. Needs more water than *Juncus patens* .
Juncus patens 'Elk Blue' Elk Blue California Gray Rush	2' / clumping	X	X		X	X	X	all	Very little maintenance, handles dry summers and wet winters.
Muhlenbergia rigens Deer Grass	2 - 3' / 3 - 6'	X	X		X	X	X	all, but 1A-3A	Can handle no watering, will stay green year round with watering, trim annually.
Scirpus cernus Low Bulrush	1' / spreading	X	X			X		7 - 24	Grow individually or in mass, cut back once a year, very attractive.

1 Refers to Sunset Western Garden Book Zones. The Central Coast includes the following Climate Zones: 1A, 2A, 3A, 7, 9, 14-24 www.sunset.com/garden/climate-zones/

Central Coast Low Impact Development Initiative
Bioretention Plant List
Plants for Zone A: Periodic inundation, area ponds following storm events (6" to 12" depth for 24 - 72 hours) and compost amended sand soil.

Scientific & Common Name	Height / Width	Light Preferences			Water Tolerances		CA Native	Sunset Climate Zones[1]	Notes
		Sun	Part	Shade	Drought	Inundation			
PERENNIALS									
Achillea millefolium californica Yarrow	1 - 3' / 2'	X	X		X	X	X	all	Tolerates regular to no watering, foot traffic, attracts butterflies, stress deciduous.
Anemopsis californica Yerba Mansa	1 - 2'/ spreading	X	X			X	X	all, but 1A-3A	Mat forming ground cover, interesting white flowers, prune back in late summer, likes moist conditions.
Bidens laevis Joaquin Sunflower	2 - 3' / 1 - 2'	X				X	X	all but 1A	Attracts beneficial insects, stress deciduous in summer, likes water but will survive drought if pruned back.
Calliandra eriophylla Fairy Duster	1 - 3' / 1 - 3'	X			X	X	X	10 - 24	Very attractive 1 - 2 inch pink flowers , little water after established, semi-evergreen, attracts butterflies and hummingbirds.
Epipactis gigantea Stream Orchid	1 - 2' / 2 - 3'	X	X			X	X	all	Will go dormant during drought, interesting muted pink and yellow flowers.
Eschscholzia californica California Poppy	1 - 3 ' / 1 - 3"	X			X	X	X	all	Can handle periodic inundation, cut back yearly to prevent it from becoming weedy.
Iris douglasiana Douglas Iris	1 - 2' / spreading	X	X			X	X	all, but 1A-3A	Needs moisture or shade inland, does well on coast, evergreen leaves, attractive lanvendar-blue flowers in Spring.
Lilium pardalinum Leopard Lily	3 - 8' / 6"	X	X			X	X	2-7, 14-17	Attractive red-orange spotted blossoms in spring, needs regular water, will get large in moist, partial shade conditions.
Lobelia cardinalis Cardinal Flower	2 - 3' / 2'	X	X	X		X	X	1-7, 14-17	A bog plant, attracts hummingbirds, showy scarlet flowers.
Mimulus cardinalis Scarlet Monkey Flower	1 - 3' / 1 - 3'	X	X	X		X	X	all but 1A	Year round red color with regular water, attracts hummingbirds, reseeds itself & should not be used for small spaces.
Mimulus guttatus Seep Monkey Flower	1 - 3' / 1 - 3'	X	X			X	X	all but 1A	Yellow flowers are abundant in spring-summer, attracts butterflies, will die back in drought and come back following year.
Rudbeckia californica California Coneflower	2 - 5' / 1 - 2'		X		X	X	X	all	Yellow showy flowers late summer and fall, cut back in winter, can get large under ideal conditions and may require pruning.
Salvia spathacea Hummingbird Sage	1 - 3' / spreading		X	X	X	X	X	all, but 1A-3A	Very attractive foliage and flowers, fragrant, attracts hummingbirds, deer resistant, likes to grow in understory of trees.
Sisyrinchium bellum Blue-Eyed Grass	6" - 1' / 6'' - 1	X			X	X	X	all, but 1A-3A	Requires little to no maintenance. Summer dormant, will come back during wetter months on it's own. Can irrigate to prolong flowering.
Solidago californica California Goldenrod	1 - 3' / 2 - 3'	X	X	X	X	X	X	all, but 24	Attracts beneficial insects and butterflies. Attractive yellow flowering inflorescents in summer and fall. Dormant in winter, cut back to ground.

1 Refers to Sunset Western Garden Book Zones. The Central Coast includes the following Climate Zones: 1A, 2A, 3A, 7, 9, 14-24 www.sunset.com/garden/climate-zones/

Central Coast Low Impact Development Initiative
Bioretention Plant List
Plants for Zone A: Periodic inundation, area ponds following storm events (6" to 12" depth for 24 - 72 hours) and compost amended sand soil.

Scientific & Common Name	Height / Width	Light Preferences			Water Tolerances		CA Native	Sunset Climate Zones[1]	Notes
		Sun	Part	Shade	Drought	Inundation			
 **SHRUBS/SUBSHRUBS**									
Baccharis pilularis Coyote Brush	wide variation	X			X	X	X	all, but 1A-3A	Adaptable evergreen shrub, provides quick cover and bank stabilization, tolerant of coastal conditions, alkaline soil, sand, clay and seasonal wet, dwarf (low growing) varieties available.
Zauschneria californica 'Catalina' Island California Fuchsia	1 - 3' / 2 - 3'	X	X		X	X	X	All but 1A	Likes moisture but will survive through drought, attractive red flowers that hummingbirds like. This species is hardier and flowers last longer.
Zauschneria californica 'Uvas Canyon' San Jose California Fuchsia	2 - 3' / spreading	X	X		X	X	X	All but 1A	Grey foliage, attractive red- orange flowers, very showy in late fall. Full sun with regular watering or along coast. Can be mowed to look like lawn.
 **LARGE SHRUBS / TREES**									
Aesculus californica California Buckeye	15'	X	X		X	X	X	all but 1A-2A	Small tree that has fragrant white panicles April - May.. Needs regular water for the first 2 years. Interesting form throughout all seasons. Good for native bee population.
Amorpha californica California False Indigo Bush	6' / spreading		X	X	X	X	X	all, but 1A -3A	Large shrub, with fragrant purple flowers. Needs no water after established. Provides larval food for California State butterfly.
Cercis occidentalis Western Redbud	3 - 16' / 3 - 16'	X	X		X	X	X	all but 1A	Needs winter chill to set flowers properly. Abundant amount of flowering purple-pink flowers in spring. Can be pruned to tree or left as shrub.
Cornus californica California Dogwood	3 - 10'/ 3 - 10'		X		X	X	X	all, but 1A -3A	Attractive red branching stems with red deciduous leaves in winter. Good for erosion control. Showy white blooms in spring.
Garrya elliptica 'James Roof' Silk Tassel	10 - 15'	X	X		X	X	X	all, but 1A -3A	Drought tolerant where rainfall exceeds 20." Evergreen shrub - tree with hanging white catkins.
Sambucus mexicana Tapiro, Blue Elderberry	6 - 15'	X	X		X	X	X	all but 1A	Deciduous shub that can be pruned to a tree. Can handle extreme drought after first years. Needs maintenance to upkeep appearance. Attractive yellow flowers and edible blue berries. Great for ecosystem rehabilitation.
Spiraea douglasii Western Spiraea	4 - 5'	X	X		X	X	X	all	Deciduous shrub, fast growing. Attractive pink clustered flowers summer to early fall. Drought tolerant once established. Very adaptable.

1 Refers to Sunset Western Garden Book Zones. The Central Coast includes the following Climate Zones: 1A, 2A, 3A, 7, 9, 14-24 www.sunset.com/garden/climate-zones/

Stormwater and the Construction Industry

Protect Natural Features

Bad

Good

- Minimize clearing.
- Minimize the amount of exposed soil.
- Identify and protect areas where existing vegetation, such as trees, will not be disturbed by construction activity.
- Protect streams, stream buffers, wild woodlands, wetlands, or other sensitive areas from any disturbance or construction activity by fencing or otherwise clearly marking these areas.

Construction Phasing

- Sequence construction activities so that the soil is not exposed for long periods of time.
- Schedule or limit grading to small areas.
- Install key sediment control practices before site grading begins.
- Schedule site stabilization activities, such as landscaping, to be completed immediately after the land has been graded to its final contour.

Vegetative Buffers

Bad

Good

- Protect and install vegetative buffers along waterbodies to slow and filter stormwater runoff.
- Maintain buffers by mowing or replanting periodically to ensure their effectiveness.

Silt Fencing

Bad

Good

- Inspect and maintain silt fences after each rainstorm.
- Make sure the bottom of the silt fence is buried in the ground.
- Securely attach the material to the stakes.
- Don't place silt fences in the middle of a waterway or use them as a check dam.
- Make sure stormwater is not flowing around the silt fence.

Maintain your BMPs!

IN RIVERSIDE COUNTY....Call 1-800-506-2555

TO REPORT ILLEGAL STORMDRAIN DISPOSAL

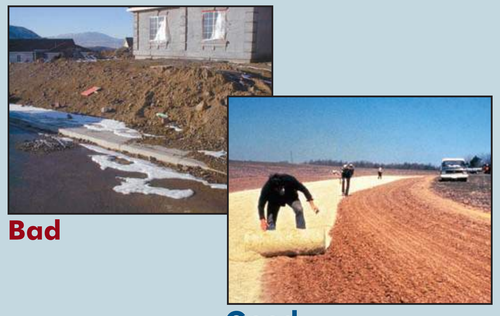
E-mail: Flood.fcnpdes@co.riverside.ca.us

Visit our website: www.floodcontrol.co.riverside.ca.us

Brought to you by the Storm Water/Clean Water Pollution Protection Program.....

REMEMBER, ONLY RAIN IN THE STORMDRAIN!

Site Stabilization



Bad

Good

- Vegetate, mulch, or otherwise stabilize all exposed areas as soon as land alterations have been completed.

Construction Entrances

Bad

Good

- Remove mud and dirt from the tires of construction vehicles before they enter a paved roadway.
- Properly size entrance BMPs for all anticipated vehicles.
- Make sure that the construction entrance does not become buried in soil.

Slopes

Bad

Good

- Rough grade or terrace slopes.
- Break up long slopes with sediment barriers, or under drain, or divert stormwater away from slopes.

Dirt Stockpiles

Bad

Good

- Cover or seed all dirt stockpiles.

Storm Drain Inlet Protection

Bad

Good

- Use rock or other appropriate material to cover the storm drain inlet to filter out trash and debris.
- Make sure the rock size is appropriate (usually 1 to 2 inches in diameter).
- If you use inlet filters, maintain them regularly.

www.epa.gov/npdes/menuofbmps

EXHIBIT 10C

Stormwater and the Construction Industry

Planning and Implementing Erosion and Sediment Control Practices

The construction industry is a critical participant in the nation's efforts to protect streams, rivers, lakes, wetlands, and oceans. Through the use of best management practices (BMPs), construction site operators are the key defense against erosion and sedimentation.

As stormwater flows over a construction site, it picks up pollutants like sediment, debris, and chemicals. High volumes of stormwater can also cause stream bank erosion, and destroy downstream aquatic habitat. Preventing soil erosion and sedimentation is an important responsibility at all construction sites.

In addition to the environmental impact, uncontrolled erosion can have a significant financial impact on a construction project. It costs money and time to repair gullies, replace vegetation, clean sediment-clogged storm drains, replace poorly installed BMPs, and mitigate damage to other people's property or to natural resources.

Best Management Practice (BMP)
A BMP is a method used to prevent or control stormwater runoff and the discharge of pollutants, including sediment, into local waterbodies. Silt fences, inlet protection, and site-stabilization techniques are typical BMPs on a construction site.

Operator
An operator is someone who has control over and the ability to modify construction plans and specifications (e.g. owner, general contractor)

or

Someone who has control over the day-to-day operations at a site (e.g., owner, general contractor) that are necessary to ensure compliance with the permit requirements. It is the responsibility of a construction site owner or operator to contain stormwater runoff and prevent erosion during **all** stages of a project.

There may be more than one person at a site who meets these definitions and must apply for permit coverage. (States may have different definitions of the term "operator.")

So what's being done about polluted runoff?

The Clean Water Act includes the National Pollutant Discharge Elimination System (NPDES) permitting program. As of January 2003, 44 states and territories are authorized to issue NPDES stormwater permits. If your state isn't authorized to operate the NPDES stormwater permit program, EPA issues the permits. Permits vary from state to state, so contact your state or EPA for specific information. Your permitting authority has specific information on your state's NPDES stormwater permit program. In general, construction permits require construction operators to do all of the following:

- Develop and implement a stormwater pollution prevention plan
- Submit a permit application or notice of intent (NOI)
- Comply with the permit, including maintaining BMPs and inspecting the site

Under the NPDES program, construction activities that disturb 1 or more acres are required to obtain stormwater permit coverage. States have different names for the plans that construction operators must develop, such as

- Stormwater pollution prevention plan
- Erosion and sediment control plan
- Erosion control and stormwater management plan
- Stormwater management plan
- Water pollution control plan
- Pollution prevention plan

This document uses the term "*Plan*."

I think I need a permit... Where do I start?

All land-disturbing activities, including clearing, grading, and excavation, that disturb **1 or more acres** are required to be covered under a state or EPA-issued NPDES construction stormwater permit **prior to land disturbance**. Permit requirements vary by state. Begin by researching the specific requirements in your state. You might already be subject to local erosion and sediment control requirements, but that doesn't release you from the requirements of the NPDES program at the state or EPA level. Although you must comply with both sets of requirements, in most cases they have been designed to be complementary. Contact your permitting authority to find out exactly what you need to do. A good place to start your search is the Construction Industry Compliance Assistance web site at http://www.envcap.org/cica.

The NPDES permit requirements include small construction activities that are part of a larger common plan of development or sale, such as a single lot within a larger subdivision. For developments with multiple operators, all operators must have permit coverage for their individual parts of the larger development, no matter how large or small each operation happens to be. When there are multiple operators at one site, they're encouraged to develop and share one comprehensive Plan and obtain permit coverage as co-permitees.

The **owner or operator** of the construction site is responsible for complying with the requirements of the permit. Responsibilities include developing a Plan, obtaining permit coverage, implementing BMPs, and stabilizing the site at the end of the construction activity.

Construction sites that discharge unpermitted stormwater are in violation of the Clean Water Act and may be subject to fines of up to $27,500 a day per violation.

Determine your eligibility

All construction activity that disturbs 1 or more acres of land, as well as activity that disturbs less than 1 acre but is part of a larger common plan of development, must obtain permit coverage.

Read and understand your stormwater permit requirements

Get a copy of the permit for construction activities and a permit application (or notice of intent form) from your state or EPA permitting authority.

Develop a Plan

Most states do not require you to submit your Plan. However, you do need to keep the Plan on site. If that's impractical, you may post a notice that tells where the Plan is kept so it can be accessed by the permitting authority and other interested parties.

You'll need to post a copy of your completed application on site. Put it in a place where the public can see it so they'll know your site is covered by an NPDES permit!

Apply for permit coverage

Once you understand your permit requirements and have developed a Plan, you can submit a stormwater permit application (or notice of intent) to your permitting authority. This must be done before beginning any land disturbance on the site. Some states require a few days of lead time, so check with your permitting authority. Once you've submitted the application, you must satisfy the conditions of the permit.

Implement the Plan

Be prepared to implement the BMPs in your Plan before construction begins. Ensure that BMPs are properly maintained, and upgrade and repair them as necessary.

Developing and Implementing a Plan

You must have a Plan that includes erosion and sediment control and pollution prevention BMPs. These Plans require

- Advance planning and training to ensure proper implementation of the BMPs
- Erosion and sediment control BMPs in place until the area is permanently stabilized
- Pollution prevention BMPs to keep the construction site "clean"
- Regular inspection of the construction site to ensure proper installation and maintenance of BMPs

Fortunately, the practices and measures that must be included in your Plan are already part of the standard operating procedures at many construction sites.

Six steps are associated with developing and implementing a stormwater Plan. There's a wealth of information available on developing pollution prevention plans. Please contact your permitting authority for help in finding additional guidance materials, or visit www.epa.gov/npdes/stormwater. A sample construction plan is available at www.epa.gov/npdes/pubs/sample_swppp.pdf.

1. *Site Evaluation and Design Development*

- **Collect site information**
- **Develop site plan design**
- **Prepare pollution prevention site map**

The first step in preparing a Plan is to define the characteristics of the site and the type of construction that will occur. This involves collecting site information, identifying natural features that should be protected, developing a site plan design, describing the nature of the construction activity, and preparing a pollution prevention site map.

2. *Assessment*

- **Measure the site area**
- **Determine the drainage areas**
- **Calculate the runoff coefficient**

The next step is assessing the impact the project will have on stormwater runoff. Determine the drainage areas and estimate the runoff amounts and velocities. For more information on calculatng the runoff coefficient, go to www.epa.gov/npdes/pubs/chap02_conguide.pdf, page 11.

3. *Control Selection and Plan Design*

- **Review and incorporate state or local requirements**
- **Select erosion and sediment controls**
- **Select other controls**
- **Select stormwater management controls**
- **Indicate the location of controls on the site map**
- **Prepare an inspection and maintenance plan**
- **Coordinate controls with construction activity**
- **Prepare sequence of major activities**

In the third step you'll actually document your procedures to prevent and control polluted stormwater runoff. You must delineate areas that will not be disturbed, including critical natural areas like streamside areas, floodplains, and trees. You must also identify the measures (or BMPs) you'll use to protect these areas.

Phasing your project to minimize the amount of exposed soil at any given time is a highly effective way to prevent erosion. Erosion control measures designed to prevent soil from being mobilized include diversions to route stormwater away from exposed soils and stabilization with vegetation, mulch, and geotextiles. Sedimentation control measures designed to remove sediment from stormwater or prevent it from leaving the site include silt fences, sediment traps, and diversions.

You'll need to select erosion and sediment controls—including stabilization measures for protecting disturbed areas and structural controls for diverting run-off and removing sediment—that are appropriate for your particular site. The appropriateness of the control measures will depend on several factors, but will be influenced most directly by the site characteristics. Some stabilization measures you might consider are temporary seeding, permanent seeding, and mulching. Structural control measures include earth dikes, silt fences, and sediment traps. No single BMP will meet all of the erosion and sedimentation control needs of a construction site. A combination of BMPs is necessary. For more information on the types of BMPs appropriate for your construction site, see the BMP fact sheet series available at www.epa.gov/npdes/menuofbmps.

Soil erosion control tips...

- Design the site to infiltrate stormwater into the ground and to keep it out of storm drains. Eliminate or minimize the use of stormwater collection and conveyance systems while maximizing the use of stormwater infiltration and bioretention techniques.
- Minimize the amount of exposed soil on site.
  - To the extent possible, plan the project in stages to minimize the amount of area that is bare and subject to erosion. The less soil exposed, the easier and cheaper it will be to control erosion.
  - Vegetate disturbed areas with permanent or temporary seeding immediately upon reaching final grade.
  - Vegetate or cover stockpiles that will not be used immediately.
- Reduce the velocity of stormwater both onto and away from the project area.
  - Interceptors, diversions, vegetated buffers, and check dams are a few of the BMPs that can be used to slow down stormwater as it travels across and away from the project site.
  - Diversion measures can also be used to direct flow away from exposed areas toward stable portions of the site.
  - Silt fences and other types of perimeter filters should never be used to reduce the velocity of runoff.
- Protect defined channels immediately with measures adequate to handle the storm flows expected.
  - Sod, geotextile, natural fiber, riprap, or other stabilization measures should be used to allow the channels to carry water without causing erosion. Use softer measures like geotextile or vegetation where possible to prevent downstream impacts.
- Keep sediment on site.
  - Place aggregate or stone at construction site vehicle exits to accommodate at least two tire revolutions of large construction vehicles. Much of the dirt on the tires will fall off before the vehicle gets to the street.
  - Regular street sweeping at the construction entrance will prevent dirt from entering storm drains. Do not hose paved areas.
  - Sediment traps and basins are temporary structures and should be used in conjunction with other measures to reduce the amount of erosion.
- Maintaining all BMPs is critical to ensure their effectiveness during the life of the project.
  - Regularly remove collected sediment from silt fences, berms, traps, and other BMPs.
  - Ensure that geotextiles and mulch remain in place until vegetation is well established.
  - Maintain fences that protect sensitive areas, silt fences, diversion structures, and other BMPs.

Other BMPs and Activities to Control Polluted Runoff

You'll need to select other controls to address potential pollutant sources on your site. Construction materials, debris, trash, fuel, paint, and stockpiles become pollution sources when it rains. Basic pollution prevention practices can significantly reduce the amount of pollution leaving construction sites. The following are some simple practices that should be included in the Plan and implemented on site:

- Keep potential sources of pollution out of the rain as practicable (e.g., inside a building, covered with plastic or tarps, or sealed tightly in a leak-proof container).
- Clearly identify a protected, lined area for concrete truck washouts. This area should be located away from streams, storm drain inlets, or ditches and should be cleaned out periodically.
- Park, refuel, and maintain vehicles and equipment in one area of the site to minimize the area exposed to possible spills and fuel storage. This area should be well away from streams, storm drain inlets, or ditches. Keep spill kits close by and clean up any spills or leaks immediately, including spills on pavement or earthen surfaces.
- Practice good housekeeping. Keep the construction site free of litter, construction debris, and leaking containers. Keep all waste in one area to minimize cleaning.
- Never hose down paved surfaces to clean dust, debris, or trash. This water could wash directly into storm drains or streams. Sweep up materials and dispose of them in the trash. Never bury trash or debris!
- Dispose of hazardous materials properly.

4. *Certification and Notification*

- **Certify the Plan**
- **Submit permit application or notice of intent**

Once the Plan has been developed, an authorized representative must sign it. Now is the time to submit the permit application or notice of intent. Your permit might require that the Plan be kept on site, so be sure to keep it available for the staff implementing the Plan.

Erosion and sedimentation control practices are only as good as their installation and maintenance.

5. *Implementing and Maintaining a Plan*

- **Implement controls**
- **Inspect and maintain controls**
- **Update/change the Plan**
- **Report releases of hazardous materials**

A Plan describes the practices and activities you'll use to prevent stormwater contamination and meet the NPDES permit requirements. Make sure that the Plan is implemented and that the Plan is updated as necessary to reflect changes on the site.

Erosion and sedimentation control practices are only as good as their installation and maintenance. Train the contractors that will install the BMPs and inspect immediately to ensure that the BMPs have been installed correctly.

Regularly inspect the BMPs (especially before and after rain events) and perform any necessary repairs or maintenance immediately. Many BMPs are designed to handle a limited amount of sediment. If not maintained, they'll become ineffective and a source of sediment pollution.

It's also important to keep records of BMP installation, implementation, and maintenance. Keep track of major grading activities that occur on the site, when construction activities cease (temporarily or permanently), and when a site is temporarily or permanently stabilized.

If construction plans change at any time, or if more appropriate BMPs are chosen for the site, update the Plan accordingly.

6. *Completing the Project: Final Stabilization and Termination of the Permit*

- **Final stabilization**
- **Notice of Termination**
- **Record retention**

Many states and EPA require a Notice of Termination (NOT) or other notification signifying that the construction activity is completed. An NOT is required when

- Final stabilization has been achieved on all portions of the site for which the permittee is responsible.
- Another operator has assumed control over all areas of the site that have not been finally stabilized. That operator would need to submit a new permit application to the permitting authority.
- For residential construction only, temporary stabilization of a lot has been completed prior to transference of ownership to the homeowner, with the homeowner being made aware of the need to perform final stabilization.

Permittees must keep a copy of their permit application and their Plan for at least 3 years following final stabilization. This period may be longer depending on state and local requirements.

Preconstruction Checklist

- A site description, including
  - Nature of the activity
  - Intended sequence of major construction activities
  - Total area of the site
  - Existing soil type and rainfall runoff data
  - A site map with:
    - Drainage patterns
    - Approximate slopes after major grading
    - Area of soil disturbance
    - Outline of areas which will not be disturbed
    - Location of major structural and nonstructural soil erosion controls
    - Areas where stabilization practices are expected to occur
    - Surface waters
    - Stormwater discharge locations
  - Name of the receiving water(s)
- A description of controls:
  - Erosion and sediment controls, including
    - Stabilization practices for all areas disturbed by construction
    - Structural practices for all drainage/discharge locations
  - Stormwater management controls, including
    - Measures used to control pollutants occurring in stormwater discharges after construction activities are complete
    - Velocity dissipation devices to provide nonerosive flow conditions from the discharge point along the length of any outfall channel
  - Other controls, including
    - Waste disposal practices that prevent discharge of solid materials
    - Measures to minimize offset tracking of sediments by construction vehicles
    - Measures to ensure compliance with state or local waste disposal, sanitary sewer, or septic system regulations
  - Description of the timing during the construction when measures will be implemented
- State or local requirements incorporated into the Plan
- Inspection and maintenance procedures for control measures identified in the Plan
- Contractor certification and Plan certification

Implementation Checklist

- Maintain records of construction activities, including
  - Dates when major grading activities occur
  - Dates when construction activities temporarily cease on the site or a portion of the site
  - Dates when construction activities permanently cease on the site or a portion of the site
  - Dates when stabilization measures are completed on the site
- Prepare inspection reports summarizing
  - Name of person conducting BMP inspections
  - Qualifications of person conducting BMP inspections
  - BMPs/areas inspected
  - Observed conditions
  - Necessary changes to the Plan
- Report releases of reportable quantities of oil or hazardous materials
  - Notify the National Response Center at 800-424-8802 immediately
  - Report releases to your permitting authority immediately, or as specified in your permit. You must also provide a written report within 14 days.
  - Modify the Plan to include
    - The date of release
    - Circumstances leading to the release
    - Steps taken to prevent reoccurrence of the release
- Modify Plan as necessary
  - Incorporate requests of the permitting authority to bring the Plan into compliance
  - Address changes in design, construction operation, or maintenance that affect the potential for discharge of pollutants

An ounce of prevention is worth a pound of cure! It's far more efficient and cost-effective to prevent pollution than it is to try to correct problems later. Installing and maintaining simple BMPs and pollution prevention techniques on site can greatly reduce the potential for stormwater pollution and can also save you money!

Visit www.epa.gov/npdes/stormwater for more information.

StormWater CleanWater PROTECTION PROGRAM

Why is stormwater runoff a problem?

Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

What is stormwater runoff?

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.

The effects of pollution

Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

After the Storm

For more information contact:

or visit
www.epa.gov/npdes/stormwater
www.epa.gov/nps

EPA United States Environmental Protection Agency

EPA 833-B-03-002

January 2003

Internet Address (URL) • HTTP://www.epa.gov
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THE YEAR OF CLEAN WATER
Celebration of Recommitment

A Citizen's Guide to Understanding Stormwater

WHEN IT RAINS IT DRAINS

Stormwater Pollution Solutions

Residential

Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Lawn care

Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

- Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- Cover piles of dirt or mulch being used in landscaping projects.

Septic systems

Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

- Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- Don't dispose of household hazardous waste in sinks or toilets.

Auto care

Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Pet waste

Pet waste can be a major source of bacteria and excess nutrients in local waters.

- When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

Education is essential to changing people's behavior. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through, decreasing stormwater runoff.

Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas.

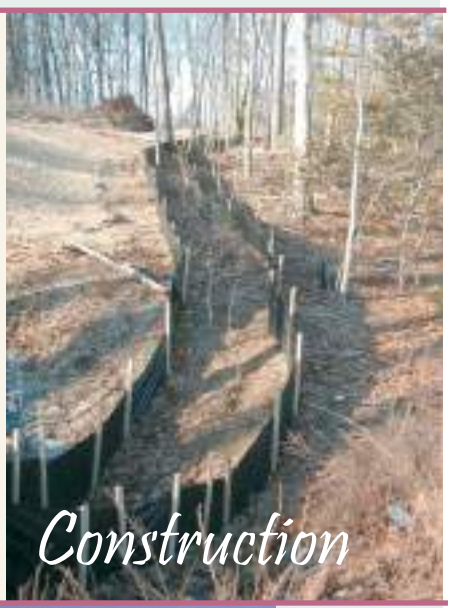
Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains.

Vegetated Filter Strips—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.

Commercial

Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local waterbodies.

- Sweep up litter and debris from sidewalks, driveways and parking lots, especially around storm drains.
- Cover grease storage and dumpsters and keep them clean to avoid leaks.
- Report any chemical spill to the local hazardous waste cleanup team. They'll know the best way to keep spills from harming the environment.



Construction

Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

- Divert stormwater away from disturbed or exposed areas of the construction site.
- Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls and properly maintain them, especially after rainstorms.
- Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.

Agriculture

Lack of vegetation on streambanks can lead to erosion. Overgrazed pastures can also contribute excessive amounts of sediment to local waterbodies. Excess fertilizers and pesticides can poison aquatic animals and lead to destructive algae blooms. Livestock in streams can contaminate waterways with bacteria, making them unsafe for human contact.

- Keep livestock away from streambanks and provide them a water source away from waterbodies.
- Store and apply manure away from waterbodies and in accordance with a nutrient management plan.
- Vegetate riparian areas along waterways.
- Rotate animal grazing to prevent soil erosion in fields.
- Apply fertilizers and pesticides according to label instructions to save money and minimize pollution.

Forestry

Improperly managed logging operations can result in erosion and sedimentation.

- Conduct preharvest planning to prevent erosion and lower costs.
- Use logging methods and equipment that minimize soil disturbance.
- Plan and design skid trails, yard areas, and truck access roads to minimize stream crossings and avoid disturbing the forest floor.
- Construct stream crossings so that they minimize erosion and physical changes to streams.
- Expedite revegetation of cleared areas.

Automotive Facilities

Uncovered fueling stations allow spills to be washed into storm drains. Cars waiting to be repaired can leak fuel, oil, and other harmful fluids that can be picked up by stormwater.

- Clean up spills immediately and properly dispose of cleanup materials.
- Provide cover over fueling stations and design or retrofit facilities for spill containment.
- Properly maintain fleet vehicles to prevent oil, gas, and other discharges from being washed into local waterbodies.
- Install and maintain oil/water separators.

Landscaping and garden maintenance activities can be major contributors to water pollution. Soils, yard wastes, over-watering and garden chemicals become part of the urban runoff mix that winds its way through streets, gutters and storm drains before entering lakes, rivers, streams, etc. Urban runoff pollution contaminates water and harms aquatic life!

In Riverside County, report illegal discharges into the storm drain, call
1-800-506-2555
"Only Rain Down the Storm Drain"

Important Links:

Riverside County Household Hazardous Waste Collection Information
1-800-304-2226 or www.rivcowm.org

Riverside County Backyard Composting Program
1-800-366-SAVE

Integrated Pest Management (IPM) Solutions
www.ipm.ucdavis.edu

California Master Gardener Programs
www.mastergardeners.org
www.camastergardeners.ucdavis.edu

California Native Plant Society
www.cnps.org

The Riverside County "Only Rain Down the Storm Drain" Pollution Prevention Program gratefully acknowledges Orange County's Storm Water Program for their contribution to this brochure.

...Only Rain Down ...the Storm Drain

What you should know for... Landscape and Gardening

Best Management tips for:

- Professionals
- Novices
- Landscapers
- Gardeners
- Cultivators

EXHIBIT 10D

Tips for Landscape & Gardening

This brochure will help you to get the most of your lawn and gardening efforts and keep our waterways clean. Clean waterways provide recreation, establish thriving fish habitats, secure safe sanctuaries for wildlife, and add beauty to our communities. NEVER allow gardening products or waste water to enter the street, gutter or storm drain.

General Landscaping Tips

- Protect stockpiles and materials from wind and rain by storing them under tarps or secured plastic sheeting.
- Prevent erosion of slopes by planting fast-growing, dense ground covering plants. These will shield and bind the soil.

- Plant native vegetation to reduce the amount of water, fertilizers and pesticides applied to the landscape.
- Never apply pesticides or fertilizers when rain is predicted within the next 48 hours.

Garden & Lawn Maintenance

- Do not overwater. Use irrigation practices such as drip irrigation, soaker hoses or micro-spray systems. Periodically inspect and fix leaks and misdirected sprinklers.
- Do not rake or blow leaves, clippings or pruning waste into the street, gutter or storm drain. Instead, dispose of green waste by composting, hauling it to a permitted landfill, or recycling it through your city's program.

- Consider recycling your green waste and adding "nature's own fertilizer" to your lawn or garden.
- Read labels and use only as directed. Do not over-apply pesticides or fertilizers. Apply to spots as needed, rather than blanketing an entire area.
- Store pesticides, fertilizers and other chemicals in a dry covered area to prevent exposure that may result in the deterioration of containers and packaging.
- Rinse empty pesticide containers and re-use rinse water as you would use the product. Do not dump rinse water down storm drains or sewers. Dispose of empty containers in the trash.
- When available, use non-toxic alternatives to traditional pesticides, and use pesticides specifically designed to control the pest you are targeting.
- Try natural long-term common sense solutions first. Integrated Pest Management (IPM) can provide landscaping guidance and solutions, such as:
  - **Physical Controls** - Try hand picking, barriers, traps or caulking holes to control weeds and pests.
  - **Biological Controls** - Use predatory insects to control harmful pests.
  - **Chemical Controls** - Check out www.ipm.ucdavis.edu before using chemicals. Remember, all chemicals should be used cautiously and in moderation.
- If fertilizer is spilled, sweep up the spill before irrigating. If the spill is liquid, apply an absorbent material such as cat litter, and then sweep it up and dispose of it in the trash.
- Take unwanted pesticides to a Household Waste Collection Center to be recycled.
- *Dumping toxics into the street, gutter or storm drain is illegal!*

www.bewaterwise.com Great water conservation tips and drought tolerant garden designs.

www.ourwaterourworld.com Learn how to safely manage home and garden pests.

Additional information can also be found on the back of this brochure.

Helpful telephone numbers and links:

Riverside County Stormwater Protection Partners

Flood Control District	(951) 955-1200
County of Riverside	(951) 955-1000
City of Banning	(951) 922-3105
City of Beaumont	(951) 769-8520
City of Calimesa	(909) 795-9801
City of Canyon Lake	(951) 244-2955
Cathedral City	(760) 770-0327
City of Coachella	(760) 398-4978
City of Corona	(951) 736-2447
City of Desert Hot Springs	(760) 329-6411
City of Eastvale	(951) 361-0900
City of Hemet	(951) 765-2300
City of Indian Wells	(760) 346-2489
City of Indio	(760) 391-4000
City of Lake Elsinore	(951) 674-3124
City of La Quinta	(760) 777-7000
City of Menifee	(951) 672-6777
City of Moreno Valley	(951) 413-3000
City of Murrieta	(951) 304-2489
City of Norco	(951) 270-5607
City of Palm Desert	(760) 346-0611
City of Palm Springs	(760) 323-8299
City of Perris	(951) 943-6100
City of Rancho Mirage	(760) 324-4511
City of Riverside	(951) 361-0900
City of San Jacinto	(951) 654-7337
City of Temecula	(951) 694-6444
City of Wildomar	(951) 677-7751

REPORT ILLEGAL STORM DRAIN DISPOSAL
1-800-506-2555 or e-mail us at
fcnpdes@rcflood.org

- Riverside County Flood Control and Water Conservation District
  www.rcflood.org

Online resources include:

- California Storm Water Quality Association
  www.casqa.org
- State Water Resources Control Board
  www.waterboards.ca.gov
- Power Washers of North America
  www.thepwna.org

Stormwater Pollution

What you should know for...

Outdoor Cleaning Activities and Professional Mobile Service Providers

Storm drain pollution prevention information for:

- Car Washing / Mobile Detailers
- Window and Carpet Cleaners
- Power Washers
- Waterproofers / Street Sweepers
- Equipment cleaners or degreasers and all mobile service providers

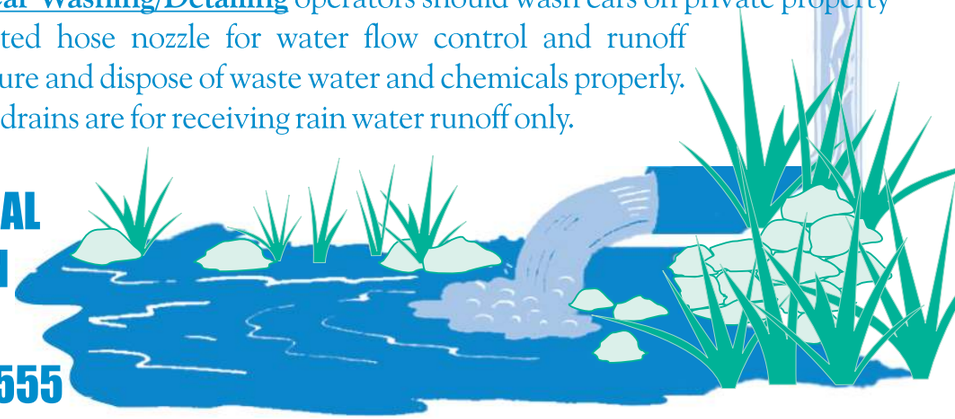
Do you know where street flows actually go?

Storm drains are NOT connected to sanitary sewer systems and treatment plants!

The primary purpose of storm drains is to carry *rain* water away from developed areas to prevent flooding. Pollutants discharged to storm drains are transported directly into rivers, lakes and streams. Soaps, degreasers, automotive fluids, litter and a host of materials are washed off buildings, sidewalks, plazas and parking areas. Vehicles and equipment must be properly managed to prevent the pollution of local waterways.

Unintentional spills by mobile service operators can flow into storm drains and pollute our waterways. **Avoid mishaps.** *Always* have a **Spill Response Kit** on hand to clean up unintentional spills. Only emergency **Mechanical** repairs should be done in City streets, using drip pans for spills. **Plumbing** should be done on private property. Always store chemicals in a leak-proof container and keep covered when not in use. **Window/Power Washing** waste water shouldn't be released into the streets, but should be disposed of in a sanitary sewer, landscaped area or in the soil. Soiled **Carpet Cleaning** wash water should be filtered before being discharged into the sanitary sewer. Dispose of all filter debris properly. **Car Washing/Detailing** operators should wash cars on private property and use a regulated hose nozzle for water flow control and runoff prevention. Capture and dispose of waste water and chemicals properly. Remember, storm drains are for receiving rain water runoff only.

REPORT ILLEGAL STORM DRAIN DISPOSAL 1-800-506-2555



Help Protect Our Waterways!

Use these guidelines for Outdoor Cleaning Activities and Wash Water Disposal

Did you know that disposing of pollutants into the street, gutter, storm drain or body of water is *PROHIBITED* by law and can result in stiff penalties?

Best Management Practices

Waste wash water from Mechanics, Plumbers, Window/Power Washers, Carpet Cleaners, Car Washing and Mobile Detailing activities may contain significant quantities of motor oil, grease, chemicals, dirt, detergents, brake pad dust, litter and other materials.

Best Management Practices, or BMPs as they are known, are guides to prevent pollutants from entering the storm drains. ***Each of us*** can do our part to keep stormwater clean by using the suggested BMPs below:

Simple solutions for both light and heavy duty jobs:

Do...consider dry cleaning methods first such as a mop, broom, rag or wire brush. Always keep a spill response kit on site.

Do...prepare the work area before power cleaning by using sand bags, rubber mats, vacuum booms, containment pads or temporary berms to keep wash water away from the gutters and storm drains.

Do...use vacuums or other machines to remove and collect loose debris or litter before applying water.

Do...obtain the property owner's permission to dispose of ***small amounts*** of power washing waste water on to landscaped, gravel or unpaved surfaces.

Do...check your local sanitary sewer agency's policies on wash water disposal regulations before disposing of wash water into the sewer. (See list on reverse side)

Do...be aware that if discharging to landscape areas, soapy wash water may damage landscaping. Residual wash water may remain on paved surfaces to evaporate. Sweep up solid residuals and dispose of properly. Vacuum booms are another option for capturing and collecting wash water.

Do...check to see if local ordinances prevent certain activities.

Do not let...wash or waste water from sidewalk, plaza or building cleaning go into a street or storm drain.

Report illegal storm drain disposal
Call Toll Free
1-800-506-2555

Using Cleaning Agents

Try using biodegradable/phosphate-free products. They are easier on the environment, but don't confuse them with being toxic free. Soapy water entering the storm drain system can impact the delicate aquatic environment.

When cleaning surfaces with a ***high-pressure washer*** or ***steam cleaner***, additional precautions should be taken to prevent the discharge of pollutants into the storm drain system. These two methods of surface cleaning can loosen additional material that can contaminate local waterways.

Think Water Conservation

Minimize water use by using high pressure, low volume nozzles. Be sure to check all hoses for leaks. Water is a precious resource, don't let it flow freely and be sure to shut it off in between uses.

Screening Wash Water

Conduct thorough dry cleanup before washing exterior surfaces, such as buildings and decks ***with loose paint***, sidewalks or plaza areas. Keep debris from entering the storm drain after cleaning by first passing the wash water through a "20 mesh" or finer screen to catch the solid materials, then dispose of the mesh in a refuse container. Do not let the remaining wash water enter a street, gutter or storm drain.

Drain Inlet Protection & Collection of Wash Water

- Prior to any washing, block all storm drains with an impervious barrier such as sandbags or berms, or seal the storm drain with plugs or other appropriate materials.
- Create a containment area with berms and traps or take advantage of a low spot to keep wash water contained.
- Wash vehicles and equipment on grassy or gravel areas so that the wash water can seep into the ground.
- Pump or vacuum up all wash water in the contained area.

Concrete/Coring/Saw Cutting and Drilling Projects

Protect any down-gradient inlets by using dry activity techniques whenever possible. If water is used, minimize the amount of water used during the coring/drilling or saw cutting process. Place a barrier of sandbags and/or absorbent berms to protect the storm drain inlet or watercourse. Use a shovel or wet vacuum to remove the residue from the pavement. Do not wash residue or particulate matter into a storm drain inlet or watercourse.

Saltwater Pools

- Salt water pools, although different from regular pools, are in fact, sanitized using chlorine. A salt-chlorine generator separates the chlorine and sodium molecules in salt and reintroduces them into the pool water. The same harmful effects of chlorine still apply.
- A salt water pool is still maintained with chemicals such as Muriatic acid, soda ash and sodium carbonate to help keep a proper pH, total Alkalinity, Calcium Hardness and Stabilizer levels.

- It may be illegal to discharge salt water to land. The salt may kill plants and the build-up of salt in soil puts animals, plants, and groundwater at risk. Consult your city representatives to determine local requirements regarding salt water drainage.

NEVER put unused chemicals into the trash, onto the ground or down a storm drain.

IMPORTANT: The discharge of pollutants into the street, gutter, storm drain system or waterways - without a permit or waiver - is strictly prohibited by local ordinances, state and federal law. Violations may result in monetary fines and enforcement actions.

Helpful telephone numbers and links

Riverside County Water Agencies:

City of Banning	(951) 922-3130
City of Beaumont/Cherry Valley	(951) 845-9581
City of Blythe	(760) 922-6161
City of Coachella	(760) 398-3502
City of Corona	(951) 736-2263
City of Hemet	(951) 765-3710
City of Norco	(951) 270 5607
City of Riverside Public Works	(951) 351-6140
City of San Jacinto	(951) 654-4041
Coachella Valley Water District	(760) 398-2651
Desert Water Agency (Palm Springs)	(760) 323-4971
Eastern Municipal Water District	(951) 928-3777
Elsinore Valley Municipal Water District	(951) 674 3146
Elsinore Water District	(951) 674-2168
Farm Mutual Water Company	(951) 244-4198
Idyllwild Water District	(951) 659-2143
Indio Water Authority	(760) 391-4129
Jurupa Community Services District	(951) 685-7434
Lee Lake Water	(951) 658-3241
Mission Springs Water	(760) 329-6448
Rancho California Water District	(951) 296-6900
Ripley, CSA #62	(760) 922-4951
Riverside Co. Service Area #51	(760) 227-3203
Rubidoux Community Services District	(951) 684-7580
Valley Sanitary District	(760) 347-2356
Western Municipal Water District	(951) 789-5000
Yucaipa Valley Water District	(909) 797-5117

CALL 1-800-506-2555 to:

- Report clogged storm drains or illegal storm drain disposal from residential, industrial, construction and commercial sites into public streets, storm drains and/or water bodies.
- Find out about our various storm drain pollution prevention materials.
- Locate the dates and times of Household Hazardous Waste (HHW) Collection Events.
- Request adult, neighborhood, or classroom presentations.
- Locate other County environmental services.
- Receive grasscycling information and composting workshop information.

Or visit our
Riverside County Flood Control and Water Conservation District
website at: www.rcflood.org

Other links to additional storm drain pollution information:

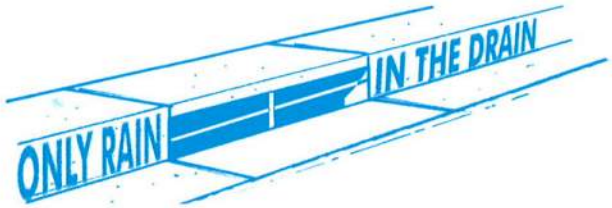
- County of Riverside Environmental Health: www.rivcoeh.org
- State Water Resources Control Board: www.waterboards.ca.gov
- California Stormwater Quality Association: www.casqa.org
- United States Environmental Protection Agency (EPA): www.epa.gov/compliance/assistance (compliance assistance information)

Riverside County's, "Only Rain Down the Storm Drain" Pollution Prevention Program gratefully acknowledges the Bay Area Stormwater Management Agencies Association and the Cleaning Equipment Trade Association for information provided in this brochure.

Guidelines for Maintaining your...

Swimming Pool, Jacuzzi and Garden Fountain

Where does the water go?



Pool, Jacuzzi and Fountain wastewater and rain water runoff (also called stormwater) that reach streets can enter the storm drain and be conveyed directly into local streams, rivers and lakes.

A storm drain's purpose is to prevent flooding by carrying rain water away from developed areas. Storm drains are not connected to sanitary sewers systems and treatment plants!

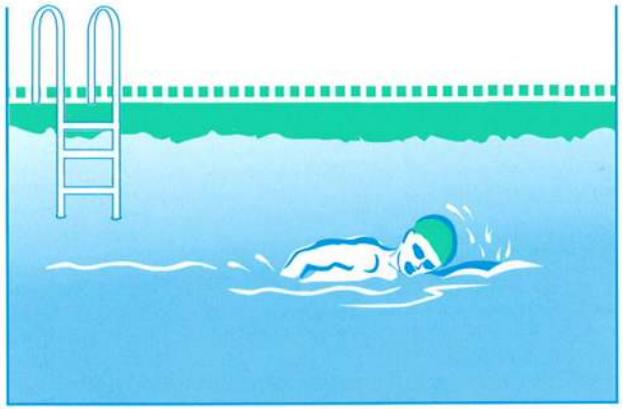
Wastewater, from residential swimming pools, Jacuzzis, fishponds and fountains, often contains chemicals used for sanitizing or cleansing purposes. Toxic chemicals (such as chlorine or copper-based algaecides) may pollute the environment when discharged into a storm drain system.

The Cities and County of Riverside have adopted ordinances that prohibit the discharge of wastewater to the street and storm drain system.

Discharge Regulations

Regulatory requirements for discharging wastewater from your pool may differ from city to city. Chlorinated water should not be discharged into the street, storm drain or surface waters. Check with your water agency to see if disposal to the sanitary sewer line is allowed for pool discharges (see reverse for Riverside County sewer agencies).

If allowed, a hose can be run from the pool Jacuzzi, or fountain to the private sewer cleanout, washing machine drain or a sink or bathtub.



If you cannot discharge to the sewer, you may drain your fountain, pool, or jacuzzi to your landscaping by following these guidelines:

First, reduce or eliminate solids (e.g. debris, leaves or dirt) in the pool water and allow the chemicals in the pool water to dissipate before draining the pool (this could take up to 7 days, verify using a home pool test kit).

Second, slowly drain to a landscaped area away from buildings or structures. Control the flow to prevent soil erosion; it may take more than one day to empty. Do not allow sediment to enter the street, gutter or storm drain.

Maintenance & Chemicals

Cleaning Filters

Filter rinse water and backwash must be discharged to the sanitary sewer, on-site septic tank and drain field system (if properly designed and adequately sized), or a seepage pit. Alternatively, rinse water or backwash may be diverted to landscaped or dirt areas. Filter media and other non-hazardous solids should be picked up and disposed of in the trash.

Algaecides

Avoid using copper-based algaecides unless absolutely necessary. Control algae with chlorine, organic polymers or other alternatives to copper-based pool chemicals. Copper is a heavy metal that can be toxic to aquatic life when you drain your pool.

Chemical Storage and Handling

- Use only the amount indicated on product labels
- Store chlorine and other chemicals in a covered area to prevent runoff. Keep out of reach of children and pets.
- Chlorine kits, available at retail swimming pool equipment and supply stores, should be used to monitor the chlorine and pH levels before draining your pool.
- Chlorine and other pool chemicals should never be allowed to flow into the gutter or storm drain system.

Take unwanted chemicals to a Household Hazardous Waste (HHW) Collection Event. There's no cost for taking HHW items to collection events – it's FREE! Call **1-800-506-2555** for a schedule of HHW events in your community.