

STORMWATER POLLUTION PREVENTION PLAN

for
Fire Station No. 227

Project Location:



WDID: [Number]
RISK LEVEL: 1

Legally Responsible Person (LRP):

County of San Bernardino Project & Facilities Management
385 N Arrowhead Avenue, 3rd Floor, San Bernardino, CA 92415

Donald Day
909-387-5224

Duly Authorized Representative (DAR):

County of San Bernardino
909-387-5000

Project Address:

180 W. 38th St
San Bernardino, CA 92405

Site Operating Hours:

8:00 AM – 5:00 PM

Estimated Project Dates:

Start of Construction: December 2025
Completion of Construction: November 2026

SWPPP Prepared by:

Engineering Resources of Southern California, Inc
1861 West Redlands Blvd.
Redlands, CA 92373

SWPPP Preparation Date:

December 2024

QSD Name and Signature:

Leidy Stephania Hernandez, P.E., QSD

Contact Information

Role	Name	Phone Number	License or Certification Number, if Applicable
Qualified SWPPP Developer (QSD)	Leidy Stephania Hernandez	909-890-1255	C97548
Qualified SWPPP Practitioner (QSP)	Jonathan Sachrison	949-753-7070	#83774
Qualified SWPPP Practitioner (QSP)			
QSP Delegate			
QSP Delegate			
QSP Delegate			
QSP Delegate			

Index of Appendices

Appendix	Title	Page
A	Site Maps and Drawings	A-1
B	Permit Registration Documents	B-1
C	SWPPP Amendment QSD Certifications	C-1
D	Submitted Changes of Information	D-1
E	Construction Schedule	E-1
F	Construction Activities, Materials Used, and Associated Pollutants	F-1
G	CASQA Stormwater BMP Handbook: Construction Fact Sheets	G-1
H	BMP Inspection Form	H-1
I	Training Forms	I-1
J	Responsible Parties	J-1
K	Contractors and Subcontractors	K-1
L	Calculations	L-1
M	Weather Reports	M-1
N	Monitoring Records	N-1
O	Example Storm Event Monitoring Forms	O-1
P	Field Meter Instructions	P-1

Q	Supplemental Information	Q-1
R	Active Treatment System and Passive Treatment Plans	R-1
S	Appendix S: Construction General Permit	S-1

NOT FOR BID

Table of Contents

Table of Contents	iv
Qualified SWPPP Developer	vii
Amendment Log	viii
Section 1 SWPPP Requirements	1-1
1.1 Introduction	1-1
1.2 Permit Registration Documents	1-1
1.3 SWPPP Availability and Implementation.....	1-2
1.4 SWPPP Amendments.....	1-2
1.5 Retention of Records	1-4
1.6 Reporting	1-4
1.7 Changes to Permit Coverage	1-5
1.8 Notice of Termination.....	1-5
Section 2 Project Information.....	2-1
2.1 Project and Site Description	2-1
2.1.1 Site Description.....	2-1
2.1.2 Existing Conditions.....	2-1
2.1.3 Existing Drainage.....	2-1
2.1.4 Geology and Groundwater	2-2
2.1.5 Project Description	2-2
2.1.6 Developed Condition	2-2
2.2 Permits and Governing Documents.....	2-2
2.3 Stormwater Run-On from Offsite Areas.....	2-3
2.4 Findings of the Construction Site Sediment and Receiving Water Risk Determination 2-4	
2.5 Construction Schedule	2-5
2.6 Potential Construction Activity and Pollutant Sources	2-6
2.7 TMDL Requirements	2-6
2.8 Identification of Non-Stormwater Discharges	2-6
2.9 Required Site Map Information.....	2-7
Section 3 Best Management Practices.....	3-1
3.1 Schedule for BMP Implementation	3-1
3.2 Erosion and Sediment Control	3-2
3.2.1 Erosion Control.....	3-3
3.2.2 Sediment Controls	3-5

3.3	Non-Stormwater Controls and Waste and Materials Management	3-7
3.3.1	Non-Stormwater Controls	3-7
3.3.2	Materials Management and Waste Management	3-11
3.4	TMDL-Related BMPs	3-14
3.5	Post Construction Stormwater Management Measures	3-14
Section 4	BMP Inspection and Maintenance	4-1
4.1	BMP Inspection and Maintenance	4-1
Section 5	Training.....	5-1
Section 6	Responsible Parties and Operators.....	6-1
6.1	Responsible Parties.....	6-1
6.2	Contractor List	6-3
Section 7	Construction Site Monitoring Program	7-1
7.1	Purpose	7-1
7.2	Applicability of Permit Requirements	7-1
7.3.	Weather and Precipitation Event Tracking	7-1
7.4	Monitoring Locations	7-2
7.5	Safety and Monitoring Exemptions.....	7-2
7.6	Visual Monitoring	7-3
7.7	Water Quality Sampling and Analysis	7-7
7.8	Active Treatment System Monitoring.....	7-21
7.9	Passive Treatment Monitoring	7-21
7.10	Watershed Monitoring Option	7-22
7.11	Quality Assurance and Quality Control	7-22
7.12	Records Retention	7-24
Section 8	References.....	8-1

Appendices

Appendix A:	Site Maps and Drawings
Appendix B:	Permit Registration Documents
Appendix C:	SWPPP Amendment QSD Certifications
Appendix D:	Submitted Changes of Information
Appendix E:	Construction Schedule
Appendix F:	Construction Activities, Materials Used, and Associated Pollutants
Appendix G:	CASQA Stormwater BMP Handbook: Construction Fact Sheets
Appendix H:	BMP Inspection Form
Appendix I:	Training Forms
Appendix J:	Responsible Parties
Appendix K:	Contractors and Subcontractors
Appendix L:	Calculations
Appendix M:	Weather Reports
Appendix N:	Monitoring Records
Appendix O:	Example Storm Event Monitoring Forms
Appendix P:	Field Meter Instructions
Appendix Q:	Supplemental Information
Appendix R:	Active Treatment System and Passive Treatment Plans
Appendix S:	Construction General Permit

Qualified SWPPP Developer

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name:

Fire Station 227

Project Number/ID:

[if applicable]

“This Stormwater Pollution Prevention Plan and its appendices were prepared under my direction to meet the requirements of the California Construction Stormwater General Permit (Order No. 2022-0057-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below and will maintain up to date credentials for the duration of the project.”


QSD Signature

6/30/2025

Date

Leidy Stephania Hernandez P.E., QSD

QSD Name

C97548

QSD Certificate Number

Engineer IV/ERSC Inc

Title and Affiliation

909-890-1255

Telephone Number

shernandez@erscinc.com

Email



Amendment Log

Project Name: Fire Station 227

Project Number/ID:

[if applicable]

Amendment No.	Date	Brief Description of Amendment (include section and page number)	Prepared and Approved By
			Name: QSD#
			Name: QSD#
			Name: QSD#

The SWPPP will be revised when:

- There is a 2022 CGP violation (2022 CGP Section VI.Q.1);
- There is a reduction or increase in total disturbed acreage (2022 CGP Section III.F.2. and F.4);
- BMPs are not effective and are not resulting in a reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges (2022 CGP Section VI.Q.1 and Attachment E Section III.C.5);
- There is a change in the project duration that changes the project Risk Type (2022 CGP Section III.F.1);
- Dischargers with projects where all construction activities (including passive treatment, active treatment systems, and/or active equipment) will be suspended for 30 days or more (2022 CGP Section III.G);
- There is a change in construction or operations that may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4) (2022 CGP Sections IV.O. and VI.Q.1); or

When deemed necessary by the QSD. The QSD has determined that the changes listed in Table 1-1 can be field determined by the QSP. All other changes will be made by the QSD as formal amendments to the SWPPP. Note that the 2022 CGP requires that the QSD “revise the SWPPP to address potential problems identified by visual inspections, sampling data, comments from a QSP, or their own site observations (2022 CGP Section V.C.2.).

SWPPP Amendment QSD Certifications are located in Appendix C.

Section 1 SWPPP Requirements

1.1 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) is designed to comply with California's *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (2022 CGP)*, State Water Resources Control Board (State Water Board) Order No. 2022-0057-DWQ (NPDES No. CAS000002) (Appendix S). This SWPPP has been prepared following the 2022 CGP SWPPP Template for Traditional Projects provided in the California Stormwater Quality Association (CASQA) *Stormwater Best Management Practice (BMP) Handbook: Construction (CASQA 2023)*.

This project is considered a traditional construction project.

In accordance with the 2022 CGP, Section IV.O, this SWPPP is designed to address the following:

- Identification of all pollutants, their sources, and control mechanisms, including sources of sediment associated with all construction activities (e.g., sediment, paint, cement, stucco, cleaners, site erosion);
- Pollutant source assessments, including a list of potential pollutant sources and identification of site areas where additional BMPs are necessary to reduce or prevent pollutants in stormwater and authorized non-stormwater discharges, per the minimum requirements when developing the pollutant source assessment;
- Description of site-specific BMPs implemented to reduce or eliminate stormwater pollution;
- Where not otherwise required to be under a Regional Water Quality Control Board (Regional Water Board) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard; and;
- Stabilization BMPs are installed to reduce or eliminate pollutants after construction is completed are effective and maintained; and
- Calculations and design details, as well as BMP controls, are complete and correct.

The Fire Station 227 project (Project, or Site) comprises approximately 1.82 acres, of which 1.82 acres will be disturbed. The Project is located at 180 W. 38th St in San Bernadino, California. The property is owned by the County of San Bernardino and is being developed by San Bernardino County/Project and Facilities Management Department. The project's location is shown on the Site Maps in Appendix A.

1.2 PERMIT REGISTRATION DOCUMENTS

Required Permit Registration Documents (PRDs) shall be submitted to the State Water Board via the Stormwater Multi Application and Report Tracking System (SMARTS) by the LRP or DAR. The project-specific PRDs include (2022 CGP Section III.A):

1. Notice of Intent (NOI);

2. Risk Level Determination (Construction Site Sediment and Receiving Water Risk Determination);
3. Site Drawings and Map;
4. SWPPP;
5. Applicable plans, calculations, and other supporting documentation for compliance with the Phase I or Phase II municipal separate storm sewer system (MS4) post construction requirements or the post-construction standards of the 2022 CGP:
 - Attachment or web-source containing the applicable Phase I or Phase II MS4 post construction requirements;
 - The post construction plans and calculations submitted to or approved by the applicable Phase I or Phase II MS4; and/or
 - Post-construction water balance calculation;
6. Dischargers proposing an alternate K-factor or LS-factor must submit documentation to support the site-specific factors, if applicable;
7. Active Treatment System (ATS) Plan, if applicable;
8. Passive Treatment Plan, if applicable;
9. Dewatering Plan, if applicable;
10. Annual Fee per the current 23 California Code of Regulations Chapter 9 fee schedule for National Pollutant Discharge Elimination System (NPDES) stormwater permits; and
11. Signed Certification Statement (LRP Certification is provided electronically with SMARTS PRD submittal).

Site Maps can be found in Appendix A. A copy of the submitted PRDs shall also be kept in Appendix B along with the Waste Discharge Identification (WDID) confirmation.

1.3 SWPPP AVAILABILITY AND IMPLEMENTATION

The SWPPP will be available at the construction site during working hours list on the title sheet and Section 7.5, while construction is occurring and shall be made available upon request by a federal, state, or municipal inspector. A current copy of the site-specific SWPPP and any site inspection reports required by the 2022 CGP may be kept in electronic format at the site so long as the information requested by a federal, state, or municipal inspector can be made available during an inspection. Legible maps in hard copy must be available at the site (2022 CGP Section IV.O.1.).

The SWPPP must be implemented at the appropriate level to protect water quality at all times throughout the life of the project. The SWPPP must remain on the site during construction activities, commencing with the initial mobilization and ending with the termination of coverage under the 2022 CGP.

1.4 SWPPP AMENDMENTS

SWPPP changes or amendments will be uploaded through SMARTS within 30 calendar days. The SWPPP will be revised when:

- If there is a 2022 CGP violation (2022 CGP Section VI.Q.1);

- There is a reduction or increase in total disturbed acreage (2022 CGP Section III.F.2 and F.4.);
- BMPs are not effective and are not resulting in a reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges (2022 CGP Section VI.Q.1 and Attachment D Section III.C.5);
- There is a change in the project duration that changes the project's risk level (2022 CGP Section III.F.1); or
- Dischargers with projects where all construction activities (including passive treatment, active treatment systems, and/or active equipment) will be suspended for 30 days or more (2022 CGP Section III.G.).

Additionally, the SWPPP will be amended when:

- There is a change in construction or operations that may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4) (2022 CGP Sections IV.O. and VI.Q.1); or

When deemed necessary by the QSD. The QSD has determined that the changes listed in Table 1-1 can be field determined by the QSP. All other changes will be made by the QSD as formal amendments to the SWPPP. Note that the 2022 CGP requires that the QSD revise the SWPPP to address potential problems identified by visual inspections, sampling data, comments from a QSP, or their own site observations (2022 CGP Section V.C.2.).

The following items shall be included in each amendment:

- Who requested the amendment;
- The location of proposed change;
- The reason for change;
- The original BMP(s) proposed, if any;
- The new BMP(s) proposed; and
- QSD certification.

SWPPP amendments will be logged at the front of the SWPPP and SWPPP Amendment QSD certifications will be located in Appendix C. The SWPPP text will be revised, replaced and/or hand annotated as necessary to properly convey the amendment. SWPPP amendments must be made by a QSD. The following changes have been designated by the QSD as "to be field determined" and constitute minor changes that the QSP may implement based on field conditions.

Table 1-1 List of Changes to be Field Determined

Candidate changes for field location or determination by QSP ⁽¹⁾	Check changes that can be field located or field determined by QSP
Increase quantity of an Erosion or Sediment Control Measure	Yes
Relocate/add stockpiles or stored materials	Yes
Relocate or add toilets	Yes

Table 1-1 List of Changes to be Field Determined

Candidate changes for field location or determination by QSP ⁽¹⁾	Check changes that can be field located or field determined by QSP
Relocate vehicle storage and/or fueling locations	Yes
Relocate areas for waste storage	Yes
Relocate water storage and/or water transfer location	Yes
Changes to access points (entrance/exits)	Yes
Change type or location of Erosion or Sediment Control Measure	No
Minor changes to schedule or phases	Yes
Changes in construction materials	Yes
<i>(1) Any field changes not identified for field location or field determination by the QSP must be made as an amendment by the QSD.</i>	

1.5 RETENTION OF RECORDS

Paper or electronic records of documents required by this SWPPP will be retained for a minimum of three years from the date generated or date submitted, whichever is later, for the following items:

- SWPPP;
- Visual monitoring reports;
- Sampling equipment calibration records;
- pH and turbidity sampling field sheets;
- Analytical laboratory reports; and
- Erosion Control Plans

These records will be available at the Site until construction is complete. Records assisting in the determination of compliance with the 2022 CGP will be made available within a reasonable time to the Regional Water Board, State Water Board, or U.S. Environmental Protection Agency (EPA) upon request. Requests by the Regional Water Board for retention of records for a period longer than three years will be adhered to.

1.6 REPORTING

Completed inspection checklists are not required to be submitted to the Regional Water Board. However, completed inspection checklists will be kept with the SWPPP on-site or electronically. The 2022 CGP requires that permittees prepare, certify, and electronically submit an Annual Report no later than September 1 of each year. Reporting requirements are identified in 2022 CGP Section VI.P. Annual reports will be filed in SMARTS and in accordance with information required by the online forms.

Planned changes in site construction activities that may result in non-compliance with the 2022 CGP are required to be provided in writing to the Regional Water Board and local stormwater agency in advance of the changes.

If a 2022 CGP discharge violation occurs, the QSP will immediately notify the LRP. The LRP will include information on the violation with the Annual Report. Corrective measures will be implemented immediately following identification of the discharge or written notice of non-compliance from the Regional Board. Discharges and corrective actions must be documented and include the following items:

- The date, time, location, nature of operation, and type of unauthorized discharge;
- The cause or nature of the notice or order;
- The BMPs deployed before the discharge event, or prior to receiving notice or order; and
- The date of deployment and type of BMPs deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence.

1.7 CHANGES TO PERMIT COVERAGE

The 2022 CGP allows for the reduction or increase of the total acreage covered under the 2022 CGP when: a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs will be filed electronically through a Change of Information (COI) within 30 days of a reduction or increase in total disturbed area if a change in permit-covered acreage is to be sought. The SWPPP will be modified appropriately and will be logged at the front of the SWPPP. SWPPP Amendments QSD Certifications will be located in Appendix C. COIs submitted electronically via SMARTS can be found in Appendix D.

1.8 NOTICE OF TERMINATION

A Notice of Termination (NOT) must be submitted electronically by the LRP or DAR via SMARTS to terminate coverage under the 2022 CGP.

According to the requirements of 2022 CGP Section III.H.4., the following final stabilization method will be used to satisfy final stabilization condition requirements:

70 percent final cover method supported by pre- and post-project photographs demonstrating stabilization.

RUSLE or RUSLE2 method with computation proof supported by pre- and post-project photographs demonstrating stabilization.

Custom method for which Regional Water Board approval has been obtained, supported by documentation required by the Regional Water Board and pre- and post-project photographs demonstrating stabilization.

The Regional Water Board will consider a construction site complete when the conditions of the 2022 CGP Section III.H., have been met.

The discharger is required to submit the following in SMARTS:

- NOT SMARTS Form;
- QSP-prepared final NOT inspection which includes the QSP name and valid QSP certificate number;
- Final site map with photo orientation references;

- Photos demonstrating final stabilization and the applicable post-construction BMPs and/or low impact development; and
- A long-term maintenance plan for the post-construction stormwater runoff BMPs and/or low impact development features being implemented.

According to the 2022 CGP, the NOT will be automatically approved within 30 calendar days after the date the NOT was submitted, unless, within the 30 calendar days the Regional Water Board notifies the discharger through SMARTS that the Notice of Termination has been denied, returned, or accepted for review (2022 CGP Section III.H.7).

Note: If an Annual Report has not been filed in the current reporting year, an Annual Report will need to be submitted prior to the NOT.

Section 2 Project Information

2.1 PROJECT AND SITE DESCRIPTION

2.1.1 Site Description

The Fire Station 227 project site is Risk Level 1 that comprises approximately 1.18 acres and is located at 180 W 38th St, in San Bernardino, California. The project site is located approximately 0.5 miles West of CA State Route 18. The project site is located approximately 550 feet southwest of Mt. View Storm Drain which drains to Twin Creek Channel which is 1.6 miles Southeast of the project area. The project is located at Lat 34° 15' 99" N Long 117° 28' 68" W and is identified on the Site Map in Appendix A.

2.1.2 Existing Conditions

As of the initial date of this SWPPP, the project site is undeveloped. Currently the project is used as a field for Arrowhead Elementary School. There are no known historic sources of contamination at the site.

2.1.3 Existing Drainage

The project site is relatively flat and covered with a grass field and large trees on the east, west, and south sides. The elevation of the project site ranges from 1294 to 1284 feet above mean sea level (msl). Surface drainage at the site currently flows to the south along the city of San Bernardino till it is collected by the Mt View Storm Drain and it's released onto the Twin Creek Channel which flows to Warm Creek Channel which flows the Santa Ana River Basin which flows to Prado Reservoir. Stormwater is conveyed through surface runoff, storm drain systems, etc.. Existing site topography, drainage patterns, and stormwater conveyance systems are shown on Site Maps in Appendix A.

The project discharges to Warm Creek Channel – Santa Ana River, is not listed for water quality impairment on the most recent 303(d)-list. The water quality impairments (303 (d) list and TMDLs identified in the 2022 CGP Table H-1 for the receiving waters are identified in the Table 2-1.

Table 2-1 Applicable 303(d) List Impairments and TMDLs

Receiving Water	Water Quality Impairment	
	303(d) list	TMDL (2022 CGP Table H-1)
WARM CREEK	BACTERIA	N/A

[Additional compliance actions applicable to the project are discussed in more detail in Section 7.7.]

2.1.4 Geology and Groundwater

A revised Geotechnical Engineering Report dated September 6, 2024 by Inland Foundation Engineering, Inc. The site is underlain by Hanford coarse sandy loam (HaC). Groundwater occurs beneath the site at approximately 120 feet below ground surface.

2.1.5 Project Description

Project grading will occur on approximately 1.18 acres of the project, which comprises approximately 100% percent of the total area. The limits of grading are shown on Grading Plans in Appendix A. Grading will include both cut and fill activities, with the total graded material estimated to be 1439 cubic yards. Approximately 287 cubic yards of fill material will be imported during grading activities. Graded materials are expected to be balanced onsite. Soil will be stockpiled as needed as shown on Erosion Control in Appendix A. Construction activities will be not phased.

2.1.6 Developed Condition

Post-construction surface drainage will be directed to the southeast corner of the project area as surface flow through stormwater conveyance systems toward. Any overflow conditions will discharge onto 38th and will flow along the curb and gutter system till collected by the Mt View Storm Drain which flows to the Twin Creek Channel which flows to Warm Creek Channel which flows to Santa Ana River Basin which flows to Prado Reservoir.

Post-construction drainage patterns and conveyance systems are presented on Construction Plans in Appendix A.

Table 2-2 Construction Site Estimates

Construction site area	<u>1.18</u>	acres
Total area of disturbance	<u>1.18</u>	acres
Percent impervious before construction	<u>0</u>	%
Runoff coefficient before construction	<u>0.791</u>	
Percent impervious after construction	<u>78</u>	%
Runoff coefficient after construction	<u>0.570</u>	

2.2 PERMITS AND GOVERNING DOCUMENTS

In addition to the 2022 CGP, the following documents have been taken into account while preparing this SWPPP:

- Regional Water Board requirements
- Basin Plan requirements
- Contract Documents
- Air Quality regulations and permits

2.3 STORMWATER RUN-ON FROM OFFSITE AREAS

The anticipated off-site run-on to the project site will be directed towards a concrete V-ditch situated along the northern boundary of the proposed Fire Station No. 227. This concrete V-ditch will effectively channel the run off from west to east, ultimately discharging the 100-year storm event flow through a proposed opening in the retaining wall over Genevieve Street right of way.

NOT FOR BID

2.4 FINDINGS OF THE CONSTRUCTION SITE SEDIMENT AND RECEIVING WATER RISK DETERMINATION

A construction site risk assessment has been performed for the project and the resultant risk level is Risk Level 1.

The risk level was determined through the use of the Risk Determination Worksheet (General Permit Appendix 1). The risk level is based on project duration, location, proximity to impaired receiving waters, and soil conditions. A copy of the Risk Level determination submitted on SMARTS with the PRDs is included in Appendix B.

Table 2-3 and Table 2-4 summarize the sediment and receiving water risk factors and document the sources of information used to derive the factors.

Table 2-3 Summary of Sediment Risk

RUSLE Factor	Value	Method for Establishing Value
R	39.16	RUSLE – See Appendix A
K	0.2	RUSLE – See Appendix A, KMZ files provided by the Water Board
LS	1.19	RUSLE – See Appendix A, KMZ files provided by the Water Board
Total Predicted Sediment Loss (tons/acre)		9.32
Overall Sediment Risk Low Sediment Risk < 15 tons/ acre Medium Sediment Risk >= 15 and < 75 tons/acre High Sediment Risk >= 75 tons/acre		☒ Low ☐ Medium ☐ High

Runoff from the project site discharges into 38th St that discharge into Warm Creek Channel which flows into Santa Ana River Basin which drains to Prado Reservoir.

Table 2-4 Summary of Receiving Water Risk

Receiving Water Name	303(d) Listed for Sediment Related Pollutant ⁽¹⁾	TMDL for Sediment Related Pollutant ⁽¹⁾	Beneficial Uses of COLD, SPAWN, and MIGRATORY ⁽¹⁾
Warm Creek	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Overall Receiving Water Risk			☒ Low ☐ High
(1) If yes is selected for any option the Receiving Water Risk is High			

Risk Level 1 sites are subject to the narrative effluent limitations specified in the 2022 CGP, and may be subject to numeric effluent limits for applicable TMDLs, dewatering activities, active treatment systems and passive treatment systems used on site. The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls,

structures, and best management practices (BMPs). This SWPPP has been prepared to address Risk Level 1 requirements (2022 CGP Attachment D).

2.5 CONSTRUCTION SCHEDULE

The site sediment risk was determined based on construction taking place between December 2025 and November 2026. Modification or extension of the schedule (start and end dates) may affect risk determination and permit requirements. The LRP shall contact the QSD if the schedule changes during construction to address potential impact to the SWPPP. The estimated schedule for planned work can be found in Appendix E.

2.6 POTENTIAL CONSTRUCTION ACTIVITY AND POLLUTANT SOURCES

Appendix F includes a list of construction activities and associated materials that are anticipated to be used onsite as well as the pollutant source assessment form that was completed for the project. These activities and associated materials will or could potentially contribute pollutants, other than sediment, to stormwater runoff.

The anticipated activities and associated pollutants were used in Section 3 to select the BMPs for the project. Locations of anticipated pollutants and associated BMPs are shown on the Site Map in Appendix A.

Additionally, proper measures will be taken to ensure that trench spoils or any other soils disturbed during construction activities that are contaminated are not discharged with stormwater or non-stormwater discharges into storm drains or water bodies (except pursuant to a separate NPDES Permit). If contaminated soils are found on site, and the responsible party cannot be identified or fails to take action, soils will be sampled to determine proper handling and protect public safety. The appropriate local, State, and federal agencies along with the appropriate Regional Water Board will be notified when contaminated soils are observed.

For sampling requirements for non-visible pollutants associated with construction activity, please refer to Section 7.7.1. For a full and complete list of onsite pollutants, refer to the Safety Data Sheets (SDS), which are retained onsite at the construction trailer or are available electronically at the site.

2.7 TMDL REQUIREMENTS

Based on the project's receiving water and the pollutant source assessment, the following TMDLs are applicable to the project (See 2022 CGP Attachment H).

Table 2-8 Project TMDLs

TMDL	Applicable Water Body/ Watershed	Pollutants	Additional TMDL- Related NAL or NEL	Compliance Actions
N/A				

These TMDLs are also identified in Section 2.1.3. The applicable NALs and NELs are also identified in Section 2.4. BMP requirements related to TMDLs are discussed in Section 3.4. Monitoring requirements related to TMDLs are discussed further in Section 7.7.

2.8 IDENTIFICATION OF NON-STORMWATER DISCHARGES

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the 2022 CGP and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited.

Non-stormwater discharges that are authorized from this project site include the following:

- Irrigation Runoff

- Street Sweeping Runoff
- Fire Hydrant Testing
- Fire Sprinkler Testing
- Emergency Firefighting Activities

These authorized non-stormwater discharges will be managed with the stormwater and non-stormwater BMPs described in Section 3 of this SWPPP and will be minimized under the direction of the QSP. Additionally, the non-stormwater discharges not applicable to this project are still allowable granted they do not contact potential pollutant sources.

Activities at this site that may result in unauthorized non-stormwater discharges include:

- Dust Control Water
- Grading Water
- Wash Water (Vehicles, Equipment, Tools, Building, etc)
- Dewatering Discharge
- Utility Line Testing & Flushing
- Vehicle & Equipment Use

Steps will be taken, including the implementation of appropriate BMPs, to ensure that unauthorized discharges are eliminated, controlled, disposed, or treated on-site.

Discharges of construction materials and wastes, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or stormwater runoff, are also prohibited.

The following discharge(s) have been authorized by (a) regional NPDES permit(s):

- None

2.9 REQUIRED SITE MAP INFORMATION

The construction project's Site Map(s) showing the project location, surface water boundaries, geographic features, construction site perimeter and general topography, locations of storm drain inlets that receive runoff from the project, and other requirements identified in 2022 CGP Sections IV.O.2. k. and l are located in Appendix A. Table 2-9 identifies Maps or Sheet Nos. where required elements are illustrated.

Table 2-9 Required Map Information

Included on Map/Plan Sheet No. ⁽¹⁾	Required Element
Pre-Earthwork Drawings	
Cover Sheet	Site and project boundaries
N/A	Areas disturbed during geotechnical or other preconstruction investigation work

Table 2-9 Required Map Information

Included on Map/Plan Sheet No. ⁽¹⁾	Required Element
Grading Plans	Existing roads and trails
N/A	Drainage areas
Grading Plans	Discharge locations
N/A	Existing storm drain system if applicable
Erosion Control Plan	Proposed locations of storage areas for waste
Erosion Control Plan	Proposed locations of construction materials
Erosion Control Plan	Proposed locations of project staging areas
Erosion Control Plan	Proposed locations of stockpiles
Erosion Control Plan	Proposed locations of vehicles, equipment staging and vehicle maintenance
Erosion Control Plan	Proposed locations of loading/unloading materials
Erosion Control Plan	Proposed locations of site access (entrance/exits)
Erosion Control Plan	Proposed locations of fueling, water storage, water transfer for dust control
Erosion Control Plan	Proposed locations of demolition
Erosion Control Plan	Proposed locations of other construction support activities
Construction and Earthwork Drawing(s)	
Grading Plans	Site layout (grading plans) including roads
Grading Plans	Site and project boundaries
Grading Plans/ WQMP	Drainage areas
Grading Plans	Discharge locations
N/A	Sampling locations
N/A	Areas of soil disturbance (temporary or permanent)
Grading Plans	Proposed active areas of soil disturbance (cut or fill)

Table 2-9 Required Map Information

Included on Map/Plan Sheet No. ⁽¹⁾	Required Element
Erosion Control Plan	Proposed locations of erosion control BMPs
Erosion Control Plan	Proposed locations of sediment control BMPs
Erosion Control Plan	Proposed locations of run-off BMPs
N/A	Temporary and/or permanent run-on conveyance (if applicable)
N/A	Proposed locations of active treatment systems(s) (if applicable)
Erosion Control Plan	Proposed locations of storage areas for waste
Erosion Control Plan	Proposed locations of construction materials
Erosion Control Plan	Proposed locations of project staging areas
Erosion Control Plan	Proposed locations of stockpiles
Erosion Control Plan	Proposed locations of vehicles, equipment and vehicle maintenance
Erosion Control Plan	Proposed locations of loading/unloading materials
Erosion Control Plan	Proposed locations of site access (entrance/exits)
Erosion Control Plan	Proposed locations of fueling, water storage, water transfer for dust control
Erosion Control Plan	Proposed locations of demolition
Erosion Control Plan	Proposed locations of other construction support activities
Erosion Control Plan	Site-specific procedures to implement final stabilization BMPs as soon as reasonably practicable

Notes: (1) Indicate maps or drawings that information is included on (e.g., Vicinity Map, Site Map, Drainage Plans, Grading Plans, Progress Maps.)

Section 3 Best Management Practices

3.1 SCHEDULE FOR BMP IMPLEMENTATION

BMPs will be implemented as per the schedule indicated in Table 3-1.

Table 3-1 BMP Implementation Schedule

	BMP	Location	Implementation	Duration
Erosion Control BMPs	EC-1, Scheduling	N/A	Prior to Construction	Entirety of Project
Sediment Control BMPs	SE-1 Silt Fence	Perimeters	Daily Construction Activity	Entirety of Project
	SE-5 Fiber Rolls	Toe of 2:1 Slopes	Daily Construction Activity	Until NOT filed
	SE-7 Street Sweeping	All Hardscapes	Prior to Construction	Until NOT filed
	SE-6 Gravel Bags	Around Temp. Stickpiles	Prior to Construction	Entirety of Project
	SE-10 Storm Drain inlet Protection	Around SD Inlets	Daily Construction Activity	Entirety of Project
Wind Erosion Control BMPs	WE-1, Wind Erosion Control	Disturbed Soil	After ground Breaking	Until NOT filed
Tracking Control BMPs	TC-1, Stabilized Construction Entrance/Exit	All Egress Locations	Prior to Construction	Until track out can be controlled without
Non-Stormwater Control BMPs	NS-1, Water Conservation Practices	N/A	Start of Construction	Entirety of Project
	NS-6, Illicit Connection/Discharge	N/A	Start of Construction	Entirety of Project

Table 3-1 BMP Implementation Schedule

	BMP	Location	Implementation	Duration
	NS-8, Vehicle and Equipment Cleaning	Equipment Cleaning areas	Start of Construction	Entirety of Project
	NS-10, Vehicle and Equipment Maintenance	Equipment Staging Areas	Start of Construction	Entirety of Project
	NS-12, Concrete Curing	Site	Start of Concrete Operations	Entirety of Project
Construction Material Control BMPs				
Waste Management Control BMPs	WM-1, Material Delivery and Storage	Contractors laydown/ storage yards	Prior to Construction	Entirety of Project
	WM-2 Material Use	Onsite	Start of Construction	Entirety of Project
	WM-3, Stockpile Management	Onsite	Start of Construction	Entirety of Project
	WM-4, Spill Prevention and Control	Onsite	Start of Construction	Entirety of Project
	WM-5, Solid Waste Management	Onsite	Start of Construction	Entirety of Project
	WM-6, Hazardous Waste Management	Onsite	Start of Construction	Entirety of Project
	WM-8, Concrete Waste Management	Onsite	Start of Construction	Entirety of Project
	WM-9, Sanitary-Septic Waste Management	Onsite	Start of Construction	Entirety of Project

3.2 EROSION AND SEDIMENT CONTROL

Erosion and sediment controls are required by the 2022 CGP to provide effective reduction or elimination of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges from the Site. Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control.

3.2.1 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles.

This construction project will implement the following practices to provide effective temporary and final erosion control during construction:

1. Preserve existing vegetation where required and when feasible.
2. The area of soil disturbing operations shall be controlled such that the Contractor is able to implement erosion control BMPs quickly and effectively.
3. Stabilize non-active areas within 14 days of cessation of construction activities or sooner if stipulated by local requirements.
4. Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding, or alternate methods.
5. Prior to the completion of construction, apply permanent erosion control to remaining disturbed soil areas.

Sufficient erosion control materials shall be maintained onsite to allow implementation in conformance with this SWPPP.

The following erosion control BMP selection table, Table 3-2 indicates the BMPs that will be implemented to control erosion on the construction site. Fact Sheets for temporary erosion control BMPs are provided in Appendix G.

These temporary erosion control BMPs shall be implemented in conformance with the following guidelines and as outlined in the BMP Factsheets provided in Appendix G. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Table 3-2 Erosion Control BMPs

CASQA Fact Sheet	BMP Name	Considered for the Project ⁽¹⁾	BMP Used		If not used, state reason and alternate BMP, if applicable
			YES	NO	
EC-1	Scheduling	✓	✓		
EC-2	Preservation of Existing Vegetation	✓		✓	Vegetation to be removed
EC-3	Hydraulic Mulch	✓ ⁽²⁾		✓	No Major Slopes, stockpiles, burn areas
EC-4	Hydroseed	✓ ⁽²⁾		✓	Project Size
EC-5	Soil Binders	✓ ⁽²⁾		✓	No existing vegetation
EC-6	Straw Mulch	✓ ⁽²⁾		✓	Project Size
EC-7	Geotextiles and Mats	✓ ⁽²⁾		✓	No major slopes
EC-8	Wood Mulching	✓ ⁽²⁾		✓	No existing vegetation
EC-9	Earth Dike and Drainage Swales	✓ ⁽³⁾		✓	Project Size
EC-10	Velocity Dissipation Devices	✓ ⁽³⁾		✓	Project Size
EC-11	Slope Drains	✓ ⁽³⁾		✓	No major slopes
EC-12	Stream Bank Stabilization			✓	N/A
EC-14	Compost Blankets	✓ ⁽²⁾		✓	N/A
EC-15	Soil Preparation-Roughening	✓		✓	N/A
EC-16	Non-Vegetated Stabilization	✓ ⁽²⁾		✓	N/A
WE-1	Wind Erosion Control	✓	✓		
⁽¹⁾ The 2022 CGP Fact Sheet Section I.R.1.d.through I.R.1.i.describes various BMPs that should be considered for use on the construction site. ⁽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⁾ All run-on and runoff from the construction site shall be managed for Risk Level 2 and 3 and Risk Level 1 if the evaluation of quantity and quality of run-on and runoff deems them necessary or visual inspections show that the site requires these controls. 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.					

Scheduling

Scheduling tactics that the Contractor monitor the weather forecast for rainfall. When rainfall is predicted, adjust the construction to allow the implementation of soil stabilization and sediment treatment controls on all disturbed areas prior to the onset of rain.

Contract shall be prepared year-round to deploy erosion control and sediment control BMPs. Erosion may be caused during dry seasons by un-seasonal rainfall, wind, and vehicle tracking. Keep the site stabilized year round and maintain rainy season sediment trapping devices in operational condition.

Wind Erosion Control

Wind erosion control consists of covering and applying water to exposed soil and stockpiles, as needed, to prevent dust nuisance. As a last resort, stockpiles may be covered in plastic to prevent wind erosion. Plastic must be secured through the use of a gravel bags, or other devices, to prevent plastic from being carried by strong gusts.

3.2.2 Sediment Controls

Sediment controls are temporary or permanent structural measures that are intended to complement the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water.

The following sediment control BMP selection table indicates the BMPs that will be implemented to control sediment on the construction site. Fact Sheets for temporary sediment control BMPs are provided in Appendix G.

These temporary sediment control BMPs will be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix G. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Table 3-3 Temporary Sediment Control BMPs

CASQA Fact Sheet	BMP Name	Considered for the Project ⁽¹⁾	BMP used		If not used, state reason and alternate BMP, if applicable
			YES	NO	
SE-1	Silt Fence	✓(2) (3)	✓		
SE-2	Sediment Basin			✓	Project Size
SE-3	Sediment Trap			✓	Project Size
SE-4	Check Dams			✓	Project Size
SE-5	Fiber Rolls	✓(2)(3)	✓	✓	
SE-6	Gravel Bag Berm	✓(3)	✓		
SE-7	Street Sweeping	✓	✓		
SE-8	Sandbag Barrier			✓	Gravel Bags used
SE-9	Straw Bale Barrier			✓	Using Fiber Rolls
SE-10	Storm Drain Inlet Protection	✓ RL2&3	✓		
SE-11	ATS			✓	Project Size
SE-12	Manufactured Linear Sediment Controls			✓	Other methods available
SE-13	Compost Sock and Berm	✓(3)		✓	Other methods available
SE-14	Biofilter Bags	✓(3)		✓	Other methods available
NA	Passive Treatment System			✓	Other methods available
TC-1	Stabilized Construction Entrance and Exit	✓	✓		
TC-2	Stabilized Construction Roadway			✓	Project Size
TC-3	Entrance Outlet Tire Wash			✓	Project Size
(1) The 2022 CGPs Fact Sheet Section I.R.1.d through I.R.1.i describes various BMPs that should be considered for use on the construction site. (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) All run-on and runoff from the construction site shall be managed. Risk Level 2 and 3 shall provide linear sediment control along toe of slope, face of slope, and at the grade breaks of exposed slope.					

Silt Fence

Silt Fence will be used and meet the minimum requirements as necessary per CASQA Reference BMP's Handbook.

Gravel Bag Berm

Gravel Bag Berm will be used and meet the minimum requirements as necessary per CASQA Reference BMP's Handbook.

Fiber Roll

Fiber Roll will be used and meet the minimum requirements as necessary per CASQA Reference BMP's Handbook.

Street Sweeping

Street sweeping and vacuuming includes use of self-propelled and walk-behind equipment to remove sediment from streets and roadways, and to clean paved surfaces in preparation for final paving. Adjacent streets are to be swept and vacuumed as needed to prevent visible sediment tracking. Sweeping and vacuuming sediment from the project site from entering storm drains or receiving waters.

Storm Drain Inlet Protection

Existing and proposed inlets shall be protected from sediment with fabric and gravel bags (or other filtration method) until construction activities are completed. Protection may be removed from inlets in instances where flooding is causing or may cause a threat to public safety. Inlet protection shall remain in place until construction is complete.

Stabilized Construction Roadway

A stabilized entrance/exit consisting of shaker plates and gravel shall be installed, and all construction should utilize this entrance/exit. Implement BMPs to prevent the off-site tracking loose construction and landscape materials.

Construction activity traffic to and from the project site shall be limited to the stabilized construction entrance/exit to prevent offsite tracking and sediment. Pollutant controls at the entrance/exit should be maintained and protected from activities that reduce their effectiveness. Inspections of the immediate access roads should be conducted on a daily basis. At a minimum, daily (when necessary) and prior to any rain event, the discharger shall be remove any sediment or other construction activity-related materials that are deposited on the roads by vacuuming or sweeping.

3.3 NON-STORMWATER CONTROLS AND WASTE AND MATERIALS MANAGEMENT

3.3.1 Non-Stormwater Controls

Non-stormwater discharges into storm drainage systems or waterways which are not authorized under the 2022 CGP are prohibited. Non-stormwater discharges for which a separate NPDES permit is required by the local Regional Water Board are prohibited unless coverage under the separate NPDES permit has been obtained for the discharge. The selection of non-stormwater BMPs is based on the list of construction activities with a potential for non-stormwater discharges identified in Section 2.7 of this SWPPP.

The following non-stormwater control BMP selection table indicates the BMPs that will be implemented to control sediment on the construction site. Fact Sheets for temporary non-stormwater control BMPs are provided in [Appendix G](#).

Non-stormwater BMPs will be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in [Appendix G](#). If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

NOT FOR BID

Table 3-4 Temporary Non-Stormwater BMPs

CASQA Fact Sheet	BMP Name	Considered for the Project ⁽¹⁾	BMP used		If not used, state reason and alternate BMP, if applicable
			YES	NO	
NS-1	Water Conservation Practices	✓	✓		
NS-2	Dewatering Operation	✓		✓	N/A
NS-3	Paving and Grinding Operation		✓		
NS-4	Temporary Stream Crossing			✓	N/A
NS-5	Clear Water Diversion			✓	N/A
NS-6	Illicit Connection/Discharge	✓	✓		
NS-7	Potable Water/Irrigation	✓		✓	N/A
NS-8	Vehicle and Equipment Cleaning	✓	✓		
NS-9	Vehicle and Equipment Fueling	✓	✓		
NS-10	Vehicle and Equipment Maintenance	✓	✓		
NS-11	Pile Driving Operation			✓	N/A
NS-12	Concrete Curing		✓		
NS-13	Concrete Finishing			✓	N/A
NS-14	Material and Equipment Use Over Water			✓	N/A
NS-15	Demolition Removal Adjacent to Water			✓	N/A
NS-16	Temporary Batch Plants			✓	N/A

⁽¹⁾ The 2022 CGP Fact Sheet Section I.R.1.d through I.R.1.i describes various BMPs that should be considered for use on the construction site.

Water Conservation Practices

Water conservation practices are activities that use water during the construction of a project in a manner that avoids causing erosion and the transport of pollutants offsite. Water conservation is suitable for all construction sites where water is used, including piped water, metered water, trucked water, and water from a reservoir

Paving and Grinding Operation

Paving and grinding operations shall be carried out in such a manner that prevents materials from being discharged off-site. If possible, paving, digging, or grinding should not occur during rainy periods. Residue from grinding operations should be picked up by means of a vacuum attachment to the grinding machine, should not be allowed to flow across the pavement, and should not be left on the surface of the pavement. Paving activities or painting and striping activities shall not take place when the 5-day rain forecast exceeds 50%.

Illicit Connection/Discharge

The Contractor shall enact procedures and practices designed to recognize illicit connections or illegally dumped or discharged materials on a construction site and report incidents

Vehicle and Equipment Cleaning

Vehicle and equipment cleaning procedures and practices eliminate or reduce the discharge of pollutants to storm water from vehicle and equipment cleaning operations. The best option would be to perform cleanings at an offsite facility. If this option is not available, then work should be performed in designated areas only. Procedures and practices include but are not limited to using offsite facilities; washing in designated, contained areas only; eliminating discharges to the storm drain by infiltrating the wash water; and training employees and subcontractors in proper cleaning procedures. Dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

Vehicle and Equipment Fueling

Vehicle equipment fueling procedures and practices are designed to prevent fuel spills and leaks and reduce or eliminate contamination of storm water. This can be accomplished by using offsite facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors in proper fueling procedures. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs

Vehicle and Equipment Maintenance

Prevent or reduce the contamination of stormwater resulting from vehicle and equipment maintenance by running a “dry and clean site”. The best option would be to perform maintenance activities at an offsite facility. If this option is not available then work should be performed in designated areas only, while providing cover for materials stored outside, checking for leaks and spills, and containing and cleaning up spills immediately. Employees and subcontractors must be trained in proper procedures. Prevent oil, grease, or fuel to leak into the ground, storm drains or surface waters. Clean leaks immediately and dispose of leaked materials properly.

Concrete Curing

Concrete curing is used in the construction of certain structures on-site. Concrete curing includes the uses of both chemical and water methods. Discharges of stormwater and non-

stormwater exposed to concrete during curing may have a high pH and may contain chemicals, metals, and fines. Proper procedures reduce or eliminate the contamination of stormwater runoff during concrete curing.

3.3.2 Materials Management and Waste Management

Materials management control practices consist of implementing procedural and structural BMPs for handling, storing, and using construction materials to prevent the release of those materials into stormwater discharges. The amount and type of construction materials to be utilized at the Site will depend upon the type of construction and the length of the construction period. The materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as soil binders for temporary stabilization.

Waste management consist of implementing procedural and structural BMPs for handling, storing, and ensuring proper disposal of wastes to prevent the release of those wastes into stormwater discharges. [If applicable to the project site, waste management should be conducted in accordance with the Project's Construction Waste Management Plan.]

Materials and waste management pollution control BMPs will be implemented to minimize stormwater contact with construction materials, wastes, and service areas; and to prevent materials and wastes from being discharged off-site. The primary mechanisms for stormwater contact that shall be addressed include:

- Direct contact with precipitation
- Contact with stormwater run-on and runoff
- Wind dispersion of loose materials
- Direct discharge to the storm drain system through spills or dumping
- Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

A list of construction activities is provided in Section 2.6. The following Materials and Waste Management BMP selection table, Table 3-5, indicates the BMPs that shall be implemented to handle materials and control construction site wastes associated with these construction activities. Fact Sheets for Materials and Waste Management BMPs are provided in Appendix G.

Material management BMPs will be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix G. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Table 3-5 Temporary Materials Management BMPs

CASQA Fact Sheet	BMP Name	Considered for Project ⁽¹⁾	BMP used		If not used, state reason and alternate BMP, if applicable
			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			✓	N/A
WM-08	Concrete Waste Management	✓	✓		
WM-09	Sanitary-Septic Waste Management	✓	✓		
WM-10	Liquid Waste Management	✓		✓	N/A
⁽¹⁾ The 2022 CGP Fact Sheet Section I.R.1.d through I.R.1.i describes various BMPs that should be considered for use on the construction site.					

Material Delivery and Storage

Prevent, reduce, or eliminate the discharge of pollutants from material delivery and storage to the storm water system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in a designated area, installing secondary containment, conducting regular inspections, and training employees and subcontractors. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.). Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed). Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

Material Use

Prevent or reduce the discharge of pollutants to the storm drain system or watercourses from material use by using alternative products, minimizing hazardous material use onsite, and training employees and subcontractors. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

Stockpile Management

Stockpiles of all materials shall have at the minimum a gravel bag barrier around the perimeter of the pile to contain run-off generated from a storm event. Stockpiles shall be covered when they will be idle for 14 days or more. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.). Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

Spill Prevention and Control

Spill Prevention and Control will be used and meet the minimum requirements as necessary per CASQA Reference BMP's Handbook.

Solid Waste Management

All wastes shall be placed in the appropriate trash receptacles and littering on the project site shall be strictly prohibited. Any litter within the project site shall be collected and placed in watertight dumpsters on a weekly basis, regardless of whether the trash is generated by the contractor or the public. Liquid wastes, such as used oils, solvents, paints, and chemicals, such as acids, pesticides, and curing compounds, shall not be disposed of in dumpsters designated for construction debris. An appropriate disposal schedule shall be determined with trash hauling contractors to ensure that full dumpsters are not left onsite for more than a few days. Cover waste disposal containers at the end of every business day and during a rain event. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

Hazardous Waste Management

The contractor is responsible for ensuring compliance with all federal, state, and local laws regarding storage, handling, transportation, and disposal of hazardous wastes. Wastes shall be

stored in sealed and labeled containers, which are kept in temporary containment facilities at the staging area designated on the ESCD located at the jobsite. The containment facility shall provide a spill containment volume equal to 1.5 times the volume of all containers and shall be impervious to the materials contained for a minimum contact time of 72 hours. Wastes shall be disposed of by a licensed hazardous waste transporter at an authorized and licensed disposal facility or recycling facility utilizing properly completed Waste Manifest forms within 90 days of being generated. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed). Implement procedures that effectively address hazardous and non-hazardous spills. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. This SWPPP requires that:

- i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and
- ii. Appropriate spill response personnel are assigned and trained.

Concrete Waste Management

Concrete Waste Management will be used and meet the minimum requirements as necessary per CASQA Reference BMP's Handbook.

Sanitary-Septic Waste Management

Sanitary-Septic Waste Management will be used and meet the minimum requirements as necessary per CASQA Reference BMP's Handbook.

3.4 TMDL-RELATED BMPS

N/A

3.5 POST CONSTRUCTION STORMWATER MANAGEMENT MEASURES

Post construction BMPs are permanent measures installed during construction, designed to reduce or eliminate pollutant discharges from the site after construction is completed.

This site is subject to the post-construction requirements of an existing NPDES Phase I or Phase II MS4. ☒ Yes ☐ No

The post construction runoff reduction requirements have been satisfied through the MS4 program, this project is exempt from 2022 CGP Provision IV.N.3. The MS4's post construction requirements and the post-construction plans and WQMP prepared by ERSC and approved by San Bernardino County on March 30, 2025, the MS4 were uploaded as part of the PRDs as required by 2022 CGP Provision IV.N.2. The approved Long-Term Maintenance Plan will be uploaded with the NOT.

Section 4 BMP Inspection and Maintenance

4.1 BMP INSPECTION AND MAINTENANCE

The 2022 CGP requires routine weekly inspections of BMPs, along with inspections before, during, and after qualifying precipitation events. A BMP inspection checklist must be filled out for inspections and maintained on-site with the SWPPP. The inspection checklist must include the necessary information covered in Section 7.6. A blank BMP Inspection Form can be found in Appendix H. Completed forms will be kept in Appendix N.

Maintenance, repair, or design and implementation of new BMPs alternatives will be begin within 72 hours of the identification of failures or other shortcomings. Corrections will be completed as soon as possible, prior to the next forecasted precipitation event (2022 CGP Appendix D Section II.J).

The QSP will verify that all BMP maintenance and repairs were appropriately implemented during the next visual inspection following completion.

The QSP may delegate BMP maintenance and repair verification to an appropriately trained QSP Delegate.

Specific details for maintenance, inspection, and repair of Construction Site BMPs can be found in the BMP Factsheets in Appendix G.

Section 5 Training

Appendix J identifies the QSPs and QSP Delegates for the project. To promote stormwater management awareness specific for this project, periodic training of job-site personnel will be included as part of routine project meetings (e.g., daily/weekly tailgate safety meetings), or task specific training as needed. Refresher training will be provided as necessary.

The QSP will be responsible for providing this information at the meetings, and subsequently completing the Training Reporting Form shown in Appendix I, which identify the site-specific stormwater topics covered as well as the names of site personnel who attended the meeting.

The QSP may delegate specific tasks to trained QSP Delegates who have received the following training based on the guidelines developed by the Construction General Permit Training Team.

1. **Foundational training** for all QSP Delegate(s) regarding stormwater compliance roles and responsibilities, forecast information, and documentation and reporting procedures; and
2. **Site-specific training** regarding visual inspections, sampling procedures, and/or SWPPP and BMP implementation activities relevant to the responsibilities assigned to the QSP Delegate(s).

The delegate cannot perform the QSD and QSP inspections required in Section V.C.4 or Section V.D.2, respectively.

Documentation of training activities will be retained in Appendix I.

Section 6 Responsible Parties and Operators

6.1 RESPONSIBLE PARTIES

DAR(s) who are responsible for SWPPP implementation and have authority to sign permit-related documents [is/are] listed below. The DAR(s) assigned to this project [is/are]:

Name	Title	Phone Number
Donald Day	LRP	909-387-5224
Leidy Stephania Hernandez	QSD	909-890-1255
Jonathan Sachrison	QSP	949-7537070

QSD(s) identified for the project are identified in Appendix J. The QSD will have primary responsibility for assessing how construction activities will affect sediment transport, erosion, and other discharges of pollutants in stormwater runoff throughout the project. The QSD is required to revise the SWPPP to address potential problems identified by visual inspections, sampling data, comments from a QSP, or their own site observations. The QSD is required to perform the following on-site visual inspections:

- Within 30 days of construction activities commencing on site;
- Within 30 days when a new QSD is assigned to the project;
- Twice annually, once August through October and once January through March;
- Within 14 calendar days after a numeric action level exceedance; and
- Within the time period requested in writing from Regional Water Board staff.

QSPs and QSP Delegates identified for the project are identified in Appendix J. The QSP will have primary responsibility and significant authority for the implementation, maintenance, and inspection/monitoring of SWPPP requirements. The QSP will be available at all times throughout the duration of the project.

Duties of the QSP include but are not limited to:

- Implementing all elements of the 2022 CGP and SWPPP, including, but not limited to:
 - o Performing the following on-site visual inspections:
 - One inspection per calendar month; other weekly inspections in the month can be delegated to a trained QSP Delegate under the specific direction of the QSP.
 - Within 72 hours prior to a forecasted qualifying precipitation event, to inspect any areas of concern and to verify the status of any deficient BMPs, or other identified issues at the site. If extended forecast precipitation data (greater than 72 hours) is available from the *National Weather Service*, then the Pre-Precipitation Event inspection may be done up to 120 hours in advance.
 - Within 14 days after a NAL exceedance, the QSP shall visually inspect the drainage area for exceedance and document any areas of concern.
 - Prior to the submittal for the NOT or COI (for acreage changes) for all or part of the site.

- o Ensuring that all BMPs are implemented, inspected, and properly maintained;
- o Ensure that the SMARTS generated WDID Number Notification form is posted on-site, in a location viewable by the public or readily available upon request, and the dates are correct and match the dates listed in SMARTS.
- Implementing non-stormwater management, and materials and waste management activities such as: monitoring discharges; general Site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than stormwater are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems, etc.;
- Ensuring elimination of unauthorized discharges.
- The QSPs shall be assigned authority by the LRP to mobilize crews in order to make immediate repairs to the control measures.
- Coordinate with the Contractor(s) to assure the necessary corrections/repairs are made immediately and that the project complies with the SWPPP, the 2022 CGP, and approved plans at all times.
- Notifying the LRP or Duly Authorized Representative immediately of off-site discharges or other non-compliance events.
- Providing foundation and site-specific training to QSP Delegates and overseeing QSP Delegate work. Tasks that may be delegated to appropriately trained QSP-delegates include:
 - o Performing non-stormwater and stormwater visual observations and inspections;
 - o Performing stormwater sampling and analysis, as required; and
 - o Performing routine inspections and observations.

Table 6-1. QSP and QSP Delegate Authorized Inspections

	Weekly BMP and NSW	Pre-QPE	Daily-QPE Visual Inspections	Post-QPE Visual Inspections	Post NAL Exceedances	Monthly BMP and NSW	NOT
QSP	X	X	X	X	X	X	X
QSP Delegate	X		X	X			

6.2 CONTRACTOR LIST

Contractor Name:	TBD
Title:	
Contractor Company:	
Address	
Phone Number:	
Phone Number (24/7)	
[Add additional rows, if needed]	

Section 7 Construction Site Monitoring Program

7.1 Purpose

This Construction Site Monitoring Program was developed to address the following objectives:

1. To demonstrate that the site is in compliance with the Discharge Prohibitions [and Numeric Action Levels (NALs)];
2. To demonstrate that the site is in compliance with TMDL NALs and Numeric Effluent Limitations (NELs);
3. To determine whether non-visible pollutants discharged from the construction site and are causing or contributing to exceedances of water quality objectives;
4. To determine whether immediate corrective actions, additional BMP implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges;
5. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges.

7.2 Applicability of Permit Requirements

This project has been determined to be a Risk Level 1 project. The 2022 CGP identifies the following types of monitoring as being applicable for a Risk Level 1 project.

Risk Level 1

- Visual inspections of BMPs;
- Visual monitoring of the site related to qualifying precipitation events;
- Visual monitoring of the site for non-stormwater discharges;
- Sampling and analysis of construction site runoff for non-visible pollutants [including TMDL pollutants] identified during the pollutant source assessments when applicable; and
- Sampling and analysis of construction site runoff as required by the Regional Water Board when applicable.

7.3. Weather and Precipitation Event Tracking

Visual monitoring and inspections requirements of the 2022 CGP are triggered by a Qualifying Precipitation Event. The 2022 CGP defines a Qualifying Precipitation Event as any weather pattern that is forecast to have a 50 percent or greater Probability of Precipitation (PoP) and a Quantitative Precipitation Forecast (QPF) of 0.5 inches or more within a 24-hour period. The event begins with the 24-hour period when 0.5 inches has been forecast and continues on subsequent 24-hour periods when 0.25 inches of precipitation or more is forecast.

7.3.1 Weather Tracking

The QSP should daily consult the National Oceanographic and Atmospheric Administration (NOAA) for the Forecast Weather Table Interface. These forecasts can be obtained at <http://forecast.weather.gov>. Weather reports should be printed and maintained with the SWPPP in Appendix M. Record the date and time the forecast was printed.

7.3.2 Rain Gauges

The QSP shall install 1 rain gauge(s) on the project site. Locate the gauge in an open area away from obstructions such as trees or overhangs. Mount the gauge on a post at a height of 3 to 5 feet with the gauge extending several inches beyond the post. Make sure that the top of the gauge is level. Make sure the post is not in an area where rainwater can indirectly splash from sheds, equipment, trailers, etc.

The rain gauge(s) shall be read daily during normal site scheduled hours. The rain gauge should be read at approximately the same time every day and the date and time of each reading recorded. An example rain gauge log sheet is provided in Appendix O. Retain rain gauge readings in Appendix N. Follow the rain gauge instructions to obtain accurate measurements.

Once the rain gauge reading has been recorded, accumulated rain shall be emptied, and the gauge reset.

For comparison with the site rain gauge, the nearest appropriate governmental rain gauge(s) is located at FW0494 San Bernardino CSU SB (F0494)

<https://forecast.weather.gov/MapClick.php?lon=-117.291&lat=34.159>.

7.4 Monitoring Locations

Monitoring locations are shown on the Site Maps in Appendix A. Monitoring locations are described in the Sections 7.6 and 7.7.

Whenever changes in the construction site might affect the appropriateness of sampling locations, the sampling locations shall be revised accordingly. All such revisions shall be implemented as soon as feasible and the SWPPP amended. Temporary changes that result in a one-time additional sampling location do not require a SWPPP amendment.

7.5 Safety and Monitoring Exemptions

Safety practices for sample collection will be in accordance with the CONTRACTOR'S HEALTH AND SAFETY PLAN. A summary of the safety requirements that apply to sampling personnel is provided below.

- During dangerous weather conditions such as flooding and electrical storms.
- Outside of scheduled site business hours

This project is not required to collect samples or conduct visual observations (inspections) under the following conditions (see Section III.B of the 2022 CGP):

- During dangerous weather conditions such as electrical storms, flooding, and high winds above 40 miles per hour;
- Outside of scheduled site operating hours; or

When the site is not accessible to personnel. Scheduled site business hours are: Monday – Friday 7am – 3:30pm.

If monitoring (visual monitoring or sample collection) of the site is unsafe because of the dangerous conditions noted above, then the QSP shall document the conditions for why an exception to performing the monitoring was necessary. The exemption documentation will be filed in Appendix N and must be included in the Annual Report.

7.6 Visual Monitoring

Per Section III.B.2. of Attachment D in the 2022 CGP, “For inactive projects, dischargers may reduce the visual inspection frequency and suspend sampling per Section III.G of the 2022 CGP. Dischargers shall provide an explanation with supporting information for all missed visual inspections or sampling required by this Attachment, to be included in the Annual Report.”

Visual monitoring includes observations and inspections. Inspections of BMPs are required to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Visual observations of the site are required to observe storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources.

Table 7-1 identifies the required frequency of visual observations and inspections. Inspections and observations will be conducted at the locations identified in Section 7.6.3.

Table 7-1 Summary of Visual Monitoring and Inspections

Type of Inspection	Frequency
<i>Routine Inspections¹</i>	
BMP Inspections	Weekly ²
BMP Inspections – Tracking Control	Daily
Silt Fence	Weekly
Fiber Roll	Weekly
Street Sweeping	Daily
Wind Erosion Control	Daily
Non-Stormwater Discharge	Quarterly during daylight hours
<i>Qualifying Precipitation Event Triggered Inspections</i>	
Site Inspections Prior to a Qualifying Precipitation Event	Within 72 hours of a qualifying precipitation event or up to 120 hours prior if supported with forecast ²
BMP Inspections During an Extended Qualifying Precipitation Event	Once every 24-hour period of a qualifying precipitation event ³
Site Inspections Following a Qualifying Precipitation Event	Within 96 hours of a qualifying precipitation event ²
¹ Inspections are required during scheduled site operating hours.	
² Most BMPs must be inspected weekly; those identified below must be inspected more frequently.	
³ Inspections are required during scheduled site operating hours on days that the forecast predicts at least 0.25 inches of precipitation once the qualifying precipitation event commences.	

7.6.1 Routine Observations and Inspections

Routine site inspections and visual monitoring are necessary to confirm that the project is in compliance with the requirements of the 2022 CGP.

7.6.1.1 *Routine BMP Inspections*

Inspections of BMPs are conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

7.6.1.2 *Non-Stormwater Discharge Observations*

Each drainage area will be inspected for the presence of or indications of prior unauthorized and authorized non-stormwater discharges. Inspections will record:

- Presence or evidence of any non-stormwater discharge (authorized or unauthorized);
- Identification and elimination of unauthorized non-stormwater discharges
- Pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.); and
- Source of discharge.

7.6.2 ***Qualifying Precipitation Event Triggered Observations and Inspections***

Visual observations of the site and inspections of BMPs are required prior to a qualifying precipitation event; following a qualifying precipitation event, and every 24-hour period during a qualifying precipitation event. Pre-Qualifying Precipitation Event inspections will be conducted after consulting NOAA and determining that a precipitation event with a 50 percent or greater PoP and a QPF of 0.5 inches or more precipitation within a 24-hour period has been predicted by the National Weather Service Forecast Office.

7.6.2.1 *Visual Observations Prior to a Forecasted Qualifying Precipitation Event*

Within 72 hours prior to a qualifying precipitation event or up to 120 hours prior if extended forecast precipitation data is available, a stormwater visual monitoring site inspection will include observations of the following locations:

- All stormwater drainage areas to identify leaks, spills, or uncontrolled pollutant sources and when necessary, implement appropriate corrective actions.
- All BMPs to identify whether they have been properly implemented per the SWPPP and implement appropriate corrective actions, as necessary.
- All stormwater storage and containment areas to detect leaks and check for available capacity to prevent overflow.

The QSP must conduct the inspection prior to the qualifying precipitation event. Consistent with the requirements for a qualifying precipitation event, pre-rain BMP inspections and visual monitoring will be triggered by a NOAA forecast that indicates a 50 percent or greater probability of 0.5 inches of precipitation or more in a 24-hour period in the project area.

7.6.2.2 *BMP Inspections During a Qualifying Precipitation Event*

During an extended qualifying precipitation event BMP inspections will be conducted at least once every 24 hours. Qualifying precipitation events are extended for each subsequent 24-hour period forecast to have at least 0.25 inches of precipitation. The BMP inspections are to identify and record:

- If BMPs were adequately designed, implemented and effective.
- BMPs that require repair or replacement due to damage.
- Additional BMPs that need to be implemented and revise the SWPPP accordingly.

If the construction site is not accessible during the rain event, the visual inspections shall be performed at all relevant outfalls, discharge points, downstream locations. The inspections should record any projected maintenance activities.

7.6.2.3 *Visual Observations Following a Qualifying Precipitation Event*

Within 96 hours following the end of a qualifying precipitation event a stormwater visual monitoring site inspection is required to observe:

- If BMPs were adequately designed, implemented and effective.
- BMPs that require repair or replacement due to damage.
- Additional BMPs that need to be implemented and revise the SWPPP accordingly.

7.6.3 *Visual Monitoring Procedures*

Visual monitoring shall be conducted by the QSP or QSP Delegates.

The name(s) and contact number(s) of the QSPs or QSP Delegates assigned to conduct visual observations are listed below and their training qualifications are provided in Appendix J.

Assigned QSP: Jonathan Sachrison Contact phone: 949-753-7070

Assigned QSP Delegate: Contact phone:

Assigned QSP Delegate: Contact phone:

Stormwater observations shall be documented on the *Visual Inspection Field Log Sheet* (see Appendix O). BMP inspections shall be documented on the site-specific BMP inspection checklist and include photographs of areas of concern along with the QSP's description of the problem.

The QSP shall within 3 days of the inspection submit copies of the completed inspection report to Site Superintended and LRP/Project Manager.

The completed reports will be kept in Appendix N. Results of visual monitoring must be summarized and reported in the Annual Report.

7.6.4 *Visual Monitoring Follow-Up and Reporting*

Maintenance, repairs, and correction of deficiencies, including design changes to BMPs, identified by the observations or inspections, including required repairs or maintenance of BMPs, shall be initiated within 72 hours of identification and completed as soon as possible, prior to the next forecasted precipitation event.

When design changes to BMPs are required, the SWPPP shall be amended to reflect the changes.

Deficiencies identified in site inspection reports and correction of deficiencies will be tracked on the *Inspection Field Log Sheet* or *BMP Inspection Report* shall be kept in Appendix N. QSP Delegates shall report issues identified during inspections that require corrective action to the QSP within 24 hours of the observation.

The QSP shall within 5 days of the inspection submit copies of the completed *Inspection Field Log Sheet* or *BMP Inspection Report* with the corrective actions to Site Superintended and LRP/Project Manager.

Results of visual monitoring must be summarized and reported in the Annual Report.

7.6.5 Visual Monitoring Locations

The inspections and observations identified in Sections 7.6.1 and 7.6.2 will be conducted at the locations identified in this section.

BMP locations are shown on the Site Maps in Appendix A.

There are 5 drainage area(s) on the project site and the contractor's yard, staging areas, and storage areas. Drainage area(s) are shown on the Site Maps in Appendix A and Table 7-2 identifies each drainage area by location.

Table 7-2 Site Drainage Areas

Location No.	Location
DA-1	Project Site

There are 0 stormwater storage or containment area(s) are on the project site from which stormwater will be dewatered. Stormwater storage or containment area(s) are shown on the Site Maps in Appendix A and Table 7-3 identifies each stormwater storage or containment area by location.

Table 7-3 Stormwater Storage and Containment Areas (Dewatering Locations)

Location No.	Location
N/A	

There are 1 discharge location(s) on the project site. Site stormwater discharge location(s) are shown on the Site Maps in Appendix A and Table 7-4 identifies each stormwater discharge location.

Table 7-4 Site Stormwater Discharge Locations

Location No.	Location
N/A	

7.7 Water Quality Sampling and Analysis

7.7.1 Sampling and Analysis Plan for Non-Visible Pollutants in Stormwater Runoff Discharges

This Sampling and Analysis Plan for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in stormwater runoff discharges from the project site.

Sampling for non-visible pollutants, including those associated with TMDLs will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

Table 7-4 summarizes the potential non-visible pollutants identified in the pollutant source assessment Sections 2.6 and 2.7 and the water quality constituent or indicator for that pollutant. Drainage areas where the source is present are shown on the Site Maps in Appendix A.

Table 7-5 Potential Non-Visible Pollutants and Water Quality Indicator Constituents Based on the Pollutant Source Assessment

Pollutant	Water Quality Indicator or Constituent	Source/Reason from Pollutant Source Assessment	TMDL Pollutant	Site Drainage Area
Adhesives	COD, Phenols, SVOCs	General construction materials	No	N/A
Acids	pH	Cleaning	No	N/A
Bleaches	Residual Chlorine	Cleaning	No	N/A
TSP	Phosphate	Cleaning	No	N/A
Solvents	VOCs, SVOCs	Cleaning	No	N/A
Detergents	MBAS	Cleaning	No	N/A
Concrete			No	N/A
Sealant (Methyl methacrylate)	SVOC	Concrete	No	N/A
Curing Compounds	VOCs, SVOCs, pH	Concrete	No	N/A
Ash, Slag, Sand	pH, Al, Ca, Va, Zn	Concrete	Yes	Site
Drywall	Cu, Al, General Minerals		No	N/A
Treated Wood	Cu, Cr, As, Zn	Framing/ Carpentry	Yes	Site
Particle Board	Formaldehyde	Framing/ Carpentry	No	N/A

Table 7-5 Potential Non-Visible Pollutants and Water Quality Indicator Constituents Based on the Pollutant Source Assessment

Pollutant	Water Quality Indicator or Constituent	Source/Reason from Pollutant Source Assessment	TMDL Pollutant	Site Drainage Area
Untreated Wood	BOD	Framing/ Carpentry	No	N/A
Gypsum/Lime amendments	pH	Framing/ Carpentry	No	N/A
Contaminated Soil	Constituents specific known contaminants, check with Laboratory	Grading/ Earthworks	No	N/A
Pesticides/Herbicides	Product dependent, see label and check with Laboratory	Landscaping	No	N/A
Fertilizers	TKN, NO3, BOD, COD, DOC, Sulfate, NH3, Phosphate, Potassium	Landscaping	Yes	Site
Aluminum Sulfate	Al, TDS, Sulfate	Landscaping	Yes	Site
Resins	COD, SVOCs	Painting	No	N/A
Thinners	COD, VOCs	Painting	No	N/A
Paint Strippers	VOCs, SVOCs, metals	Painting	No	N/A
Lacquers, Varnishes, Enamels	COD, VOCs, SVOCs	Painting	No	N/A
Sealants	COD	Painting	No	N/A
Adhesives	Phenols, SVOCs	Painting	No	N/A
Plumbing			No	N/A
Solder, flux, pipe fitting	Cu, Pb, Sn, Zn	Plumbing	Yes	N/A
Roofing	Cu, Pb, VOCs	Roofing construction	Yes	Site
Polymer/Co-Polymers	TKN, NO3, BOD, COD,	Soil preparation/ Amendments/ Dust Control	No	N/A

Table 7-5 Potential Non-Visible Pollutants and Water Quality Indicator Constituents Based on the Pollutant Source Assessment

Pollutant	Water Quality Indicator or Constituent	Source/Reason from Pollutant Source Assessment	TMDL Pollutant	Site Drainage Area
	DOC, Sulfate, Ni			
Lignin Sulfate	TDS, alkalinity	Soil preparation/ Amendments/ Dust Control	No	N/A
Psyllium	COD, TOC	Soil preparation/ Amendments/ Dust Control	No	N/A
Guar/ Plant Gums	COD, TOC, Ni	Soil preparation/ Amendments/ Dust Control	No	N/A
Solid Waste (leakage)	BOD	Waste Bins	Yes	N/A
Utility Line Testing and Flushing	Residual Chlorine, chloramines	Utility Construction	No	N/A
Batteries	Sulfuric Acid; Pb, pH	Onsite Vehicles	Yes	N/A

The project has the potential to receive stormwater run-on from the following locations with the potential to contribute non-visible pollutants to stormwater discharges from the project. Locations of such run-on to the project site are shown on the Site Maps in Appendix A.

- None

7.7.1.1 Sampling Schedule

Samples for the potential non-visible pollutant(s) and a sufficiently large unaffected background sample shall be collected during the first eight hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during the site's scheduled hours and shall be collected regardless of the time of year and phase of the construction.

Collection of discharge samples for non-visible pollutant monitoring will be triggered only when any of the following conditions are observed during site inspections conducted prior to or during a rain event.

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight

container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents stormwater contact and runoff from the storage area.

- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- A construction activity, including but not limited to those in Section 2.6, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

7.7.1.2 Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use, accessibility for sampling, and personnel safety. Planned non-visible pollutant sampling locations are shown on the Site Maps in Appendix A and include the locations identified in Table 7-6.

[Enter Number] sampling location(s) on the project site and the contractor's yard have been identified for the collection of samples of runoff from planned material and waste storage areas and areas where non-visible pollutant producing construction activities are planned.

[If applicable]

[Enter Number of locations] sampling locations have been identified for the collection of samples of runoff from drainage areas where soil amendments will be applied that have the potential to affect water quality.

[If applicable]

[Enter Number of locations] sampling locations have been identified for the collection of samples of runoff from drainage areas contaminated by historical usage of the site.

[If applicable]

[Enter Number] sampling location(s) has been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location(s) was selected such that the sample will not have come in contact with the operations, activities, or areas identified in Section 7.7.1 or with disturbed soils areas.

[If applicable]

[Enter Number of locations] sampling locations have been identified for the collection of samples of run-on to the project site. Run-on from these locations has the potential to combine

with discharges from the site being sampled for non-visible pollutants. These samples are intended to identify potential sources of non-visible pollutants that originate off the project site.

[If applicable]

Table 7-6 Non-Visible Pollutant Sample Locations

Sample Location Identifier	Sample Location Description	Sample Location Latitude and Longitude (Decimal Degrees)	Runoff or Run-on
[Enter Number]	[Enter location]	[Enter Latitude] [Enter Longitude]	
[Enter Number]	[Enter location]	[Enter Latitude] [Enter Longitude]	

If a stormwater visual monitoring site inspection conducted prior to or during a storm event identifies the presence of a material storage, waste storage, operations area with spills, or the potential for the discharge of non-visible pollutants to surface waters or a storm drain system that is at a location not listed above and has not been identified on the Site Maps, sampling locations will be selected by the QSP using the same rationale as that used to identify planned locations. Non-visible pollutant sampling locations shall be documented by the QSP on the pre-rain event inspection form prior to a forecasted qualifying precipitation event and the *Effluent Sampling Field Log Sheet*, which are provided in Appendix O.

7.7.1.3 Monitoring Preparation

Non-visible pollutant samples will be collected by:

QSP ☒ Yes ☐ No

QSP Delegate ☒ Yes ☐ No

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. The QSP or QSP Delegates responsible for sampling will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, clean powder-free nitrile gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, and *Effluent Sampling Field Log Sheets* and Chain of Custody (CoC) forms, which are provided in Appendix O.

7.7.1.4 Analytical Constituents

Table 7-7 lists the specific sources and types of potential non-visible pollutants based on the project pollutant source assessment and the water quality indicator constituent(s) for that pollutant. Table 7-7 provides the specific analytical methods and reporting limits for the potential non-visible pollutants. Analytical methods were selected in compliance with U.S. EPA

sufficiently sensitive method requirements in 40 Code of Federal Regulations Part 136, as evidenced by the method detection limit and minimum level.

7.7.1.5 *Sample Collection*

Samples of discharge shall be collected at the designated non-visible pollutant sampling locations identified in Table 7-6 and shown on the Site Maps in Appendix A or in the locations determined by observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples shall be collected and preserved in accordance with the methods identified in the Table 7-7, “Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants” provided in Section 7.7.1.6. Only the QSP, or QSP Delegates trained on sample collection identified in Section 7.7.1.3 shall collect samples.

Sample collection and handling requirements are described in Section 7.7.7.

Table 7-7 Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants

Constituent	Analytical Method	Minimum Sample Volume	Sample Containers	Sample Preservation	Minimum Level	Method Detection Limit	Maximum Holding Time
VOCs-Solvents	EPA 8260B	3x40 mL	VOA-glass	Store at 4°C, HCl to pH<2	1 ug/L		14 days
SVOCs	EPA 8270C	1x1 L	Glass-Amber	Store at 4°C	10 ug/L		7 days
Pesticides/PCBs	EPA 8081A/8082	1x1 L	Glass-Amber	Store at 4°C	0.1 ug/L		7 days
Herbicides	EPA 8151 A	1x1 L	Glass-Amber	Store at 4°C	Check Lab		7 days
BOD	EPA 405.1	1x500 mL	Polypropylene	Store at 4°C	1 mg/L		48 hours
COD	EPA 410.4	1x250 mL	Glass-Amber	Store at 4°C, H2SO4 to pH<2	5 mg/L		28 days
DO	SM 4500-O.G.	1x250 mL	Glass-Amber	Store at 4°C	Check Lab		8 hours
pH	EPA 150.1	1x100 mL	Polypropylene	None	Unitless		Immediate
Alkalinity	SM 2320B	1x250 mL	Polypropylene	Store at 4°C	1 mg/L		14 days
Metals (Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, Se, Na, Th, Va, Zn)	EPA 6010B/7470A	1x250 mL	Polypropylene	Store at 4°C, HNO3 to pH<2	0.1 mg/L		6 months

Table 7-7 Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants

Constituent	Analytical Method	Minimum Sample Volume	Sample Containers	Sample Preservation	Minimum Level	Method Detection Limit	Maximum Holding Time
Anuibs (Sulfate, Nitrate, Bromide, Chloride, Flouride, Nitrite, O-Phosphorus)	EPA 300.0	1x125 mL	Polypropylene	None			28 days
Potassium	EPA 7610	1x250 mL	Polypropylene	Store at 4 °C, HNO ₃ to pH<2			6 months
Calcium	EPA 6010B	1x250 mL	Polypropylene	Store at 4 °C, HNO ₃ to pH<2			6 months
Acidity	EPA 305.1	1x125 mL	Polypropylene	Store at 4 °C			14 days
TDS	EPA 160.1	1x100 mL	Polypropylene	Store at 4 °C			7 days
Sulfate	EPA 375.4	1x125 mL	Polypropylene	Store at 4 °C			28 days
Nitrate	EPA 300.0	1x100 mL	Polypropylene	Store at 4 °C, H ₂ SO ₄ to pH<2			48 hours
Total Phosphorus	EPA 300.0	1x100 mL	Polypropylene	Store at 4 °C			28 days
TKN	EPA 351.3	1x100 mL	Polypropylene	Store at 4 °C, H ₂ SO ₄ to pH<2			28 days

Table 7-7 Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants

Constituent	Analytical Method	Minimum Sample Volume	Sample Containers	Sample Preservation	Minimum Level	Method Detection Limit	Maximum Holding Time
TOC	EPA 415.1	1x100 mL	Polypropylene	Store at 4°C, H ₂ SO ₄ to pH<2			28 days
Total Residual Chlorine	SM 4500	1x500 mL	Polypropylene	Do not expose to light			immediate
Total Phenolics	EPA 420.1/9065	1x1000 mL	Polypropylene	Store at 4°C, H ₂ SO ₄ to pH<2			28 days
Metals (Chromium VI)	EPA 7199	1x500 mL	Polypropylene	Store at 4°C	1 ug/L		24 hours
Notes: Analytical laboratories may use the term Reporting Level in lieu of Minimum Level							

7.7.1.6 Sample Analysis

Samples shall be analyzed using the analytical methods identified in the **Table 7-7**.

Samples will be analyzed by:

Laboratory Name: Babcock Laboratories
Street Address: 6100 Quail Valley Court
City, State Zip: Riverside, Ca, 92507
Telephone Number: 951-653-3351
Point of Contact: Cindy Waddell
ELAP Certification Number: #2698 & 2698-S1

Samples will be delivered to the laboratory by:

Driven by QSP/QSP Delegate/Contractor	☒ Yes	☐ No
Picked up by Laboratory Courier	☐ Yes	☒ No
Shipped	☐ Yes	☒ No

7.7.1.7 Data Evaluation and Reporting

The QSP shall complete an evaluation of the water quality sample analytical results based on a comparison of the results to the unaffected sample [and to the TMDL NALs or NELs].

Runoff/downgradient results shall be compared with the associated upgradient/unaffected results and any associated run-on results. Should the runoff/downgradient sample show an increased level of the tested analyte relative to the unaffected background sample, which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

Analytical results of non-visible pollutant monitoring shall be submitted to SMARTS within 30 days of obtaining the analytical results. [Results demonstrating an exceedance of an applicable TMDL-related NAL or NEL or Basin Plan parameter shall be submitted to SMARTS within 30 days of obtaining the analytical results.]

The 2022 CGP prohibits the storm water discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the Regional Water Board and other agencies as required by 40 C.F.R. §§ 117.3 and 302.4.

The QSP shall compare the runoff sample results to the applicable TMDL [NALs and NELs] to determine whether the TMDL [NALs and NELs] have been exceeded, see **Table 7-8**.

Table 7-8 TMDL NAL and NEL Exceedances

Standard	Exceedance Evaluation
TMDL NAL	An exceedance occurs on the second, and each subsequent, analytical result for samples taken from any and all discharge location(s) within the same drainage area, during the same reporting year and taken in accordance with Attachment D Section III.D.3, that is above the concentration set forth in an applicable NAL.
TMDL NEL	An exceedance occurs on the second, and each subsequent, analytical result for samples taken from any and all discharge location(s) within the same drainage area, during the same reporting year and taken in accordance with Attachment D Section III.D.3, that is above the concentration set forth in an applicable NEL.

In the event that the TMDL NAL or NEL is exceeded, the QSP shall immediately notify Site Superintended and LRP/Project Manager and investigate the cause of the exceedance and identify corrective actions.

The LRP or DAR shall electronically report all analytical results to the State Water Board by the through SMARTS within 30 days of receiving the results. Exceedances of TMDL [NALs and NELs] shall be electronically reported to the State Water Board by the LRP or DAR through SMARTS within 10 days of receiving the results.

If requested by the Regional Water Board in writing, a TMDL NAL Exceedance report will be submitted within 30 days of the request. The TMDL NAL Exceedance Report must contain the following information:

- Analytical method(s), method reporting unit(s), and Method Detection Limit(s) of each parameter;
- Date, place, time of sampling, visual observation, and/or measurements, including precipitation; and
- Description of the current BMPs associated with the sample that exceeded the TMDL NAL, a description of each corrective action taken including photographs, and date of implementation.

In the event of a TMDL NEL exceedance, by the end of each reporting year, project shall implement the following water quality based corrective actions:

- Conducting a site assessment to identify pollutant source(s) within the site that are associated with construction activity and whether the BMPs described in the SWPPP have been properly implemented;
- Evaluating the SWPPP and its implementation to determine whether additional BMPs or SWPPP implementation measures are necessary to reduce or prevent pollutants in all regulated discharges to comply applicable NELs, and
- Certifying and submitting through SMARTS a report of the above site assessment and SWPPP evaluation that:
 - o Additional BMPs or SWPPP implementation measures have been identified and included in the SWPPP, or
 - o No additional BMPs or SWPPP implementation measures are required to reduce or prevent pollutants in all regulated discharges to comply with applicable NELs.

7.7.2 Sampling and Analysis Plan for pH and Turbidity in Stormwater Runoff Discharges

Sampling and analysis of runoff for pH and turbidity is not required for Risk Level 1 projects.

7.7.3 Sampling and Analysis Plan for pH and Turbidity in Receiving Water

This project is not subject to Receiving Water Monitoring.

7.7.4 Sampling and Analysis Plan for Dewatering Discharges

- ☒ No dewatering activities are planned for this project.
- ☐ Dewatering activities planned for this project will be conducted and monitored according to the requirements of the following NPDES Permit: [insert name and order number of the permit.]
- ☐ Dewatering activities planned for this project will be conducted and monitored according to the requirements of the 2022 CGP Attachment J.

7.7.5 *Sampling and Analysis Plan for Other Pollutants Required by the Regional Water Board*

The Regional Water Board has not specified monitoring for additional pollutants.

7.7.6 *Training of Sampling Personnel*

QSP Delegates assigned to conduct sampling shall be trained by the QSP to collect, maintain, and ship samples in accordance with the 2022 CGP Sample Collection and Handling Instructions and supplemental information as needed. Training records of QSP Delegates assigned to sample are provided in **Appendix I**.

The QSP and QSP Delegates have received the following stormwater sampling training:

Name	Training
Jonathan Sachrison	Qualified SWPPP Practitioner QSP INSERT LIST OF TRAINING COURSES

The QSP and QSP Delegates have the following stormwater sampling experience:

Name	Experience
	INSERT LIST OF STORMWATER SAMPLING EXPERIENCE

7.7.7 *Sample Collection and Handling*

7.7.7.1 *Sample Collection*

Samples shall be collected at the designated sampling locations shown on the Site Maps and listed in the preceding sections. Samples shall be collected, maintained and shipped in accordance with the 2022 CGP Sample Collection and Handling Instructions.

Grab samples shall be collected and preserved in accordance with the methods identified in preceding sections.

To maintain sample integrity and prevent cross-contamination, sample collection personnel shall follow the protocols below.

- Collect samples (for laboratory analysis) in analytical laboratory-provided or specified sample containers;
 - Use of any other type of containers could cause sample contamination and may result in NAL or NEL exceedances.
- Wear clean, powder-free nitrile gloves when collecting samples;
- Change gloves whenever something not known to be clean has been touched;
- Change gloves between sampling locations;
- Decontaminate all equipment (e.g., bucket, tubing) prior to sample collection;
 - using a trisodium phosphate water wash, distilled water rinse, and final rinse with distilled water..

- o Dispose of wash and rinse water appropriately (i.e., do not discharge to storm drain or receiving water).
- o Do not decontaminate laboratory provided sample containers;
- Do not smoke during sampling events;
- Never sample near a running vehicle;
- Do not park vehicles in the immediate sample collection area (even non-running vehicles);
- Do not eat or drink during sample collection; and
- Do not breathe, sneeze, or cough in the direction of an open sample container.

The most important aspect of grab sampling is to collect a sample that represents the entire runoff stream. Typically, samples are collected by dipping the collection container in the runoff flow paths and streams as noted below.

- i. For small streams and flow paths, simply dip the bottle facing upstream until full.
- ii. For larger stream that can be safely accessed, collect a sample in the middle of the flow stream by directly dipping the mouth of the bottle. Once again making sure that the opening of the bottle is facing upstream as to avoid any contamination by the sampler.
- iii. For larger streams that cannot be safely waded, pole-samplers may be needed to safely access the representative flow.
- iv. Avoid collecting samples from ponded, sluggish or stagnant water.
- v. Avoid collecting samples directly downstream from a bridge as the samples can be affected by the bridge structure or runoff from the road surface.

Note, that depending upon the specific analytical test, some containers may contain preservatives. These containers should **never** be dipped into the stream but filled indirectly from the collection container.

7.7.7.2 Sample Handling

Turbidity and pH measurements must be conducted immediately. Do not store turbidity or pH samples for later measurement.

Samples for laboratory analysis must be handled as follows. Immediately following sample collection:

- Cap sample containers;
- Complete sample container labels;
- Place sealed containers in a re-sealable storage bag;
- Place sample containers into an ice-chilled cooler;
- Document sample information on the *Effluent Sampling Field Log Sheet* (Appendix O); and
- Complete the CoC.

All samples for laboratory analysis must be maintained between 0-6 degrees Celsius during delivery to the laboratory. Samples must be kept on ice, or refrigerated, from sample collection through delivery to the laboratory. Place samples to be shipped inside coolers with ice. Make sure the sample bottles are well packaged to prevent breakage and secure cooler lids with packaging tape.

Ship samples that will be laboratory analyzed to the analytical laboratory right away. Hold times are measured from the time the sample is collected to the time the sample is analyzed. The

2022 CGP requires that samples be received by the analytical laboratory within 48 hours of the physical sampling (unless required sooner by the analytical laboratory to meet all hold times).

Laboratory Name: Babcock Laboratories
Street Address: 6100 Quail Valley Court
City, State Zip: Riverside, Ca, 92507
Telephone Number: 951-653-3351
Point of Contact: Cindy Waddell
ELAP Certification Number: #2698 & 2698-S1

7.7.7.3 Sample Documentation Procedures

All original data documented on sample container identification labels, *Effluent Sampling Field Log Sheet* (Appendix O), and CoCs shall be recorded using waterproof ink. These shall be considered accountable documents. If an error is made on an accountable document, the individual shall make corrections by lining through the error and entering the correct information. The erroneous information shall not be obliterated. All corrections shall be initialed and dated.

Duplicate samples shall be identified consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples shall be identified in the *Effluent Sampling Field Log Sheet*.

Sample documentation procedures include the following:

Sample Bottle Identification Labels: Sampling personnel shall attach an identification label to each sample bottle. Sample identification shall uniquely identify each sample location. (These location identifiers should be listed in the tables in the SWPPP.)

Field Log Sheets: Sampling personnel shall complete the *Effluent Sampling Field Log Sheet* and *Receiving Water Sampling Field Log Sheet* (Appendix O) for each sampling event, as appropriate.

Chain of Custody: Sampling personnel shall complete the CoC for each sampling event for which samples are collected for laboratory analysis. The sampler will sign the CoC (Appendix O) when the sample(s) is turned over to the testing laboratory or courier.

7.8 Active Treatment System Monitoring

Will an Active Treatment System (ATS) be deployed on the site?

☐ Yes ☒ No

This project does not require a project specific Sampling and Analysis Plan for an ATS because deployment of an ATS is not planned.

7.9 Passive Treatment Monitoring

Will passive treatment technologies be deployed on the site?

☐ Yes ☒ No

This project does not require a project specific Sampling and Analysis Plan for passive treatment because deployment of passive treatment is not planned.

7.10 Watershed Monitoring Option

This project is not participating in a watershed monitoring option.

7.11 Quality Assurance and Quality Control

An effective Quality Assurance and Quality Control (QA/QC) plan shall be implemented as part of the CSMP to ensure that analytical data can be used with confidence. QA/QC procedures to be initiated include the following:

- Field logs;
- Clean sampling techniques;
- CoCs;
- QA/QC Samples; and
- Data verification.

Each of these procedures is discussed in more detail in the following sections.

7.11.1 Field Logs

The purpose of field logs is to record sampling information and field observations during monitoring that may explain any uncharacteristic analytical results. Sampling information to be included in the field log include the date and time of water quality sample collection, sampling personnel, sample container identification numbers, and types of samples that were collected. Field observations should be noted in the field log for any abnormalities at the sampling location (color, odor, BMPs, etc.). Field measurements for pH and turbidity should also be recorded in the field log. A Visual Inspection Field Log, an Effluent Sampling Field Log Sheet, are included in Appendix O.

7.11.2 Clean Sampling Techniques

Clean sampling techniques involve the use of certified clean containers for sample collection and clean powder-free nitrile gloves during sample collection and handling. As discussed in Section 7.7.7, adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

7.11.3 Chain of Custody

The sample CoC is an important documentation step that tracks samples from collection through analysis to ensure the validity of the sample. Sample CoC procedures include the following:

- Proper labeling of samples;
- Use of CoC forms for all samples; and
- Prompt sample delivery to the analytical laboratory.

Analytical laboratories usually provide CoC forms to be filled out for sample containers. An example CoC is included in Appendix O.

7.11.4 QA/QC Samples

QA/QC samples provide an indication of the accuracy and precision of the sample collection; sample handling; field measurements; and analytical laboratory methods. The following types of QA/QC will be conducted for this project:

- ☒ Field Duplicates at a frequency of [5 percent or 1 duplicate minimum per sampling event]
(Required for all sampling plans with field measurements or laboratory analysis)
- ☐ Equipment Blanks at a frequency of [Insert frequency required by method]
(Only needed if the equipment used to collect samples could add the pollutants to sample)
- ☐ Field Blanks at a frequency of [Insert frequency required by method]
(Only required if sampling method calls for field blanks)
- ☐ Travel Blanks at a frequency of [Insert frequency required by method]
(Required for sampling plans that include VOC laboratory analysis)

7.11.4.1 Field Duplicates

Field duplicates provide verification of laboratory or field analysis and sample collection. Duplicate samples shall be collected, handled, and analyzed using the same protocols as primary samples. The sample location where field duplicates are collected shall be randomly selected from the discharge locations. Duplicate samples shall be collected immediately after the primary sample has been collected. Duplicate samples must be collected in the same manner and as close in time as possible to the original sample. Duplicate samples shall not influence any evaluations or conclusion.

7.11.4.2 Equipment Blanks

Equipment blanks provide verification that equipment has not introduced a pollutant into the sample. Equipment blanks are typically collected when:

- New equipment is used;
- Equipment that has been cleaned after use at a contaminated site;
- Equipment that is not dedicated for surface water sampling is used; or
- Whenever a new lot of filters is used when sampling metals.

7.11.4.3 Field Blanks

Field blanks assess potential sample contamination levels that occur during field sampling activities. De-ionized water field blanks are taken to the field, transferred to the appropriate container, and treated the same as the corresponding sample type during the course of a sampling event.

7.11.4.4 Travel Blanks

Travel blanks assess the potential for cross-contamination of volatile constituents between sample containers during shipment from the field to the laboratory. De-ionized water blanks are taken along for the trip and held unopened in the same cooler with the VOC samples.

7.11.5 Data Verification

After results are received from the analytical laboratory, the QSP or QSP Delegates shall verify the data to ensure that it is complete, accurate, and the appropriate QA/QC requirements were

met. Data must be verified as soon as the data reports are received. Data verification shall include:

- Check the CoC and laboratory reports.
Make sure all requested analyses were performed and all samples are accounted for in the reports.
- Check laboratory reports to make sure hold times were met and that the reporting levels meet or are lower than the reporting levels agreed to in the contract.
- Check data for outlier values and follow up with the laboratory.
Occasionally typographical errors, unit reporting errors, or incomplete results are reported and should be easily detected. These errors need to be identified, clarified, and corrected quickly by the laboratory. The QSP or QSP Delegates should especially note data that is an order of magnitude or more different than similar locations or is inconsistent with previous data from the same location.
- Check laboratory QA/QC results.
EPA establishes QA/QC checks and acceptable criteria for laboratory analyses. These data are typically reported along with the sample results. The QSP or QSP Delegates shall evaluate the reported QA/QC data to check for contamination (method, field, and equipment blanks), precision (laboratory matrix spike duplicates), and accuracy (matrix spikes and laboratory control samples). When QA/QC checks are outside acceptable ranges, the laboratory must flag the data, and usually provides an explanation of the potential impact to the sample results.
- Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate.
Sample re-analysis should only be undertaken when it appears that some part of the QA/QC resulted in a value out of the accepted range. Sample results may not be discounted unless the analytical laboratory identifies the required QA/QC criteria were not met and confirms this in writing.

Field data including inspections and observations must be verified as soon as the field logs are received, typically at the end of the sampling event. Field data verification shall include:

- Check field logs to make sure all required measurements were completed and appropriately documented;
- Check reported values that appear out of the typical range or inconsistent; Follow-up immediately to identify potential reporting or equipment problems, if appropriate, recalibrate equipment after sampling;
- Verify equipment calibrations;
- Review observations noted on the field logs; and
- Review notations of any errors and actions taken to correct the equipment or recording errors.

7.12 Records Retention

All records of stormwater monitoring information and copies of reports (including Annual Reports) must be retained for a period of at least three years from date of submittal or longer if required by the Regional Water Board.

Results of visual monitoring, field measurements, and laboratory analyses must be kept in the SWPPP along with CoCs, and other documentation related to the monitoring.

Records are to be kept onsite while construction is ongoing. Records to be retained include:

- The date, place, and time of inspections, sampling, visual observations, and/or measurements, including precipitation;
- The individual(s) who performed the inspections, sampling, visual observation, and/or field measurements;
- The date and approximate time of field measurements and laboratory analyses;
- The individual(s) who performed the laboratory analyses;
- A summary of all analytical results, the method detection limits and reporting limits, and the analytical techniques or methods used;
- Rain gauge readings from site inspections;
- QA/QC records and results;
- Calibration records;
- Visual observation and sample collection exception records;
- The records of any corrective actions and follow-up activities that resulted from analytical results, visual observations, or inspections;

Section 8 References

Project Specifications CIP No. 22-105 dated May 2025, prepared by STK Architecture, INC.

Project Plans CIP No. 22-105 dated December 2024, prepared by Engineering Resources of Southern California.

SWRCB (State Water Resources Control Board). (2022). Order 2022-0057-DWQ, NPDES General Permit No. CAS000002: Stormwater Discharges Associated with Construction and Land Disturbing Activities. Available online at:
https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/general_permit_reissuance.html.

CASQA 2023. *Stormwater BMP Handbook: Construction*. Available online at: www.casqa.org

Appendix A: Site Maps and Drawings

NOT FOR BID

SAN BERNARDINO COUNTY

FIRE STATION NO.227

GRADING NOTES:

- ALL GRADING SHALL CONFORM TO THE LATEST CALIFORNIA BUILDING CODE (CBC) CHAPTERS 17, 18, APPENDIX-J AND ALL APPLICABLE SECTIONS.
- A GRADING PERMIT SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF ANY WORK ON THE SITE.
- ISSUANCE OF A GRADING PERMIT DOES NOT ELIMINATE THE NEED FOR PERMITS FROM OTHER REGULATORY AGENCIES WITH REGULATORY RESPONSIBILITIES FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE WORK AUTHORIZED IN THIS PLAN.
- ALL WORK UNDER THIS PERMIT SHALL BE LIMITED TO WORK WITHIN THE PROPERTY LINES. A SEPARATE CONSTRUCTION, EXCAVATION OR ENCROACHMENT PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS MAY BE REQUIRED FOR ANY WORK WITHIN THE COUNTY RIGHT-OF-WAY.
- APPROVAL OF THESE PLANS DOES NOT AUTHORIZE ANY WORK OR GRADING TO BE PERFORMED UNTIL THE EFFECTIVE PROPERTY OWNER'S PERMISSION HAS BEEN OBTAINED AND VALID GRADING PERMIT HAS BEEN ISSUED.
- THIS PLAN IS FOR GRADING PURPOSES ONLY AND IS NOT TO BE USED FOR THE PURPOSE OF CONSTRUCTING ONSITE OR OFFSITE IMPROVEMENTS. ISSUANCE OF A PERMIT BASED ON THIS PLAN DOES NOT CONSTITUTE APPROVAL OF DRIVEWAY LOCATIONS OR SIZES, PARKING LOT STRUCTURAL SECTIONS OR LAYOUT, ADA-RELATED REQUIREMENTS, BUILDING LOCATIONS OR FOUNDATIONS, WALLS, CURBING, OFFSITE DRAINAGE FACILITIES OR OTHER ITEMS NOT RELATED DIRECTLY TO THE BASIC GRADING OPERATION. ONSITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE APPROVED BUILDING PERMIT PLANS. OFFSITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE TO PLANS APPROVED FOR THIS PURPOSE BY THE PUBLIC WORKS DEPARTMENT.
- MAXIMUM CUT AND FILL SLOPE = 2:1 (HORIZONTAL TO VERTICAL) AND MAXIMUM VERTICAL HEIGHT = 30 FEET, UNLESS AN APPROVED GEOTECHNICAL REPORT CAN JUSTIFY A STEEPER AND TALLER SLOPE.
- NO FILL SHALL BE PLACED ON EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL AND OTHER DELETERIOUS MATERIAL.
- FILL SLOPES SHALL NOT HAVE LESS THAN 90% RELATIVE COMPACTION, OR AS RECOMMENDED ON THE APPROVED GEOTECHNICAL REPORT.
- IT IS THE GRADING CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ADEQUATE COMPACTION HAS BEEN ATTAINED ON THE ENTIRE GRADING SITE, INCLUDING FILL AREAS OUTSIDE THE BUILDING PADS AND ON ALL FILL SLOPES.
- UNLESS OTHERWISE RECOMMENDED IN AN APPROVED GEOTECHNICAL REPORT, OVER-EXCAVATION SHALL BE AT LEAST 60" (5') MINIMUM BELOW THE BOTTOM OF FOOTINGS OR TO COMPETENT NATIVE SOIL OR BEDROCK MATERIALS, WHICHEVER IS DEEPER, AS APPROVED BY THE PROJECT'S GEOTECHNICAL ENGINEER OR GEOLOGIST.
- EARTHWORK VOLUMES:
CUT 1,311 (CY), FILL 129 (CY), TOTAL DISTURBED AREA 50,966 (SF)
- EARTHWORK QUANTITIES ARE SHOWN FOR GRADING PERMIT PURPOSES ONLY, AND SAN BERNARDINO COUNTY IS NOT RESPONSIBLE FOR THEIR ACCURACY.
- A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.
- ANY ONSITE RETAINING WALLS SHOWN ON THE GRADING PLANS THAT ARE OVER 4' IN HEIGHT, MEASURED FROM TOP OF WALL TO BOTTOM OF FOOTING, ARE FOR REFERENCE ONLY. RETAINING WALLS OVER 4' IN HEIGHT ARE NOT CHECKED, PERMITTED, OR INSPECTED PER THE GRADING PERMIT. A SEPARATE RETAINING WALL PERMIT IS REQUIRED FOR ALL RETAINING WALLS OVER 4' IN HEIGHT.
- ANY WALLS, FENCES, STRUCTURES AND/OR APPURTENANCES ADJACENT TO THIS PROJECT ARE TO BE PROTECTED IN PLACE. IF GRADING OPERATIONS DAMAGE OR ADVERSELY AFFECT SAID ITEMS IN ANY WAY, THE CONTRACTOR AND/OR DEVELOPER IS RESPONSIBLE FOR WORKING OUT AN ACCEPTABLE SOLUTION TO THE SATISFACTION OF THE AFFECTED PROPERTY OWNER(S).
- FOR SITES WITH PROTECTED SPECIES OR TREES, THE PROPOSED GRADING MAY BE SUBJECT TO A SEPARATE PERMIT.
- ADEQUATE FIRE ACCESS AROUND BUILDINGS (INCLUDING GARAGES) SHOULD BE PROVIDED AS APPROVED BY COUNTY FIRE.
- EXISTING DRAINAGE COURSES SHALL NOT BE OBSTRUCTED, ALTERED, OR DIVERTED WITHOUT PRIOR APPROVAL FROM THE COUNTY OF SAN BERNARDINO, LAND DEVELOPMENT DIVISION. A STREAMBED ALTERATION AGREEMENT MAY ALSO BE REQUIRED FROM THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE.
- DRAINAGE EASEMENTS SHALL NOT BE OBSTRUCTED, ALTERED OR DIVERTED WITHOUT PRIOR APPROVAL OF THE COUNTY OF SAN BERNARDINO, LAND DEVELOPMENT DIVISION.
- SETBACKS AND BUILDING LOCATIONS SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND MUST BE REVIEWED AND APPROVED UNDER A SEPARATE BUILDING PERMIT.
- UTILITY AND SEPTIC IMPROVEMENTS SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND MUST BE REVIEWED AND APPROVED UNDER A SEPARATE BUILDING PERMIT.
- A NOTICE OF INTENT (NOI) HAS BEEN, OR WILL BE FILED WITH THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) AND A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN OR WILL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (PERMIT NO. CAS000002) FOR ALL OPERATIONS ASSOCIATED WITH THESE PLANS. THE PERMITTEE SHALL KEEP A COPY OF THE SWPPP ON SITE AND AVAILABLE FOR REVIEW BY COUNTY.
- IN CONJUNCTION WITH THE CALIFORNIA GENERAL PERMIT FOR PROPOSED DISTURBANCE OVER ONE ACRE, AN ACTIVE WASTEWATER DISCHARGE ID # (WQID) _____ MUST BE INCLUDED ON THE FINAL GRADING PLAN.
- A FINAL GRADING CERTIFICATION WILL BE COLLECTED BY THE BUILDING INSPECTOR AT THE FINAL BUILDING INSPECTION OR PRIOR A GRADING FINAL STATUS ON THE PERMIT. THE FINAL GRADING CERTIFICATION IS TO BE COMPLETED BY THE ENGINEER OF RECORD ON THE APPROVED GRADING PLANS.
- THE SOILS ENGINEER SHALL PROVIDE A FINAL SOIL GRADING REPORT INCLUDING LOCATIONS AND ELEVATIONS OF FIELD DENSITY TESTS, SUMMARIES OF FIELD AND LABORATORY TESTS AND OTHER SUBSTANTIATING DATA AND COMMENTS ON ANY CHANGES MADE DURING GRADING AND THEIR EFFECT ON THE RECOMMENDATIONS MADE IN THE SOIL ENGINEERING INVESTIGATION REPORT. IT SHALL ALSO PROVIDE INFORMATION AS TO LOCATION AND NATURE OF TESTS, STATEMENTS RELATIVE TO THE EXPANSIVE NATURE OF SOIL AND/OR ROCK MATERIAL, LIMITS OF COMPACTED FILL SHOWN ON THE AS-GRADED PLAN AND CERTIFICATION AS TO THE ADEQUACY AND STABILITY OF THE SITE FOR THE INTENDED USE.
- IF APPLICABLE, THE ENGINEERING GEOLOGIST SHALL PROVIDE A GEOLOGIC GRADING REPORT INCLUDING A FINAL DESCRIPTION OF THE GEOLOGY OF THE SITE INCLUDING ANY NEW INFORMATION DISCLOSED DURING THE GRADING AND THE EFFECT OF SAME ON RECOMMENDATIONS INCORPORATED IN THE APPROVED GRADING PLAN. THE ENGINEERING GEOLOGIST SHALL PROVIDE CERTIFICATION AS TO THE ADEQUACY OF THE SITE FOR THE INTENDED USE AS AFFECTED BY GEOLOGIC FACTORS. WHERE NECESSARY, A REVISED GEOLOGIC MAP AND CROSS-SECTIONS, AND ANY RECOMMENDATIONS REGARDING SPECIAL BUILDING RESTRICTIONS OR FOUNDATION SETBACKS SHALL BE INCLUDED.
- SHOULD THE EXCAVATION DISCLOSE SOIL AND/OR ROCK CONDITIONS WHERE CUT SLOPES ARE UNSTABLE, THE ENGINEERING GEOLOGIST AND/OR THE SOILS ENGINEER SHALL RECOMMEND NECESSARY TREATMENT TO THE BUILDING OFFICIAL FOR APPROVAL.
- GEOLOGICAL AND SOILS ENGINEERING REPORTS BY INLAND FOUNDATION ENGINEERING, INC. DATED 09/06/2024 AND ALL SOILS REPORT ADDENDUM(S) SHALL BE INCORPORATED HEREWITH AND MADE PART OF THIS GRADING PLAN.
- THE CONTRACTOR SHALL IMPLEMENT PREVENTIVE MEASURES TO ASSURE THAT NO ROCKS, SOIL, DUST, OR DEBRIS OF ANY FORM SHALL FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES OR PUBLIC WAYS. ALL VEHICLE LOADS SHALL BE TRIMMED AND WATERED OR OTHERWISE SECURED TO PREVENT SPILLAGE FROM THE EQUIPMENT.
- ALL EXPORT AND IMPORT OF MATERIAL OVER DEDICATED AND IMPROVED STREETS SHALL BE UNDERTAKEN OR CONDUCTED BY EQUIPMENT THAT COMPLIES IN ALL RESPECTS TO THE STATE VEHICLE CODE. REPAIR TO ANY DAMAGED DEDICATED OR IMPROVED STREETS SHALL BE MADE TO THE SATISFACTION OF THE BUILDING OFFICIAL AND IS THE RESPONSIBILITY OF THE OWNER, PERMITTEE, AND THE GRADING CONTRACTOR.
- ALL FLOOD ZONE REQUIREMENTS MUST BE REFLECTED OR ACCOUNTED FOR ON THE GRADING PLANS. ELEVATIONS OR CONSTRUCTION NOTES MUST BE INCLUDED IN THE PLANS TO ENSURE COMPLIANCE WITH ALL APPLICABLE FIRST FLOOR ELEVATION REQUIREMENTS PER FEMA AND SAN BERNARDINO COUNTY DEVELOPMENT CODE GUIDELINES.
- ALL GRADING SHALL COMPLY WITH SBC DEVELOPMENT CODE SECTION 82.14.050.C; IF FILL IS PLACED TO ELEVATE PADS ABOVE BASE ELEVATION, IT MUST BE DEMONSTRATED THAT FILL WILL NOT SETTLE AND IS PROTECTED FROM EROSION, SCOUR, OR DIFFERENTIAL SETTLEMENT, AS FOLLOWS:
 - THE PAD ELEVATION SHALL BE CERTIFIED TO MEET OR EXCEED THE ELEVATION REQUIRED BY THE APPLICABLE FLOODPLAIN SAFETY REVIEW AREA, AND IT MUST BE DEMONSTRATED THAT THE CUMULATIVE EFFECT OF THE PROPOSED DEVELOPMENT WHEN COMBINED WITH ALL OTHER EXISTING AND ANTICIPATED DEVELOPMENT WILL NOT INCREASE THE WATER SURFACE ELEVATION OF THE BASE FLOOD AT ANY POINT WITHIN THE COMMUNITY.
 - FILL SHALL BE COMPACTED TO 95 PERCENT PER ASTM (AMERICAN SOCIETY OF TESTING MATERIALS) STANDARD D-698.
 - FILL SLOPES SHALL BE NO STEEPER THAN TWO FEET HORIZONTAL TO ONE FOOT VERTICAL RATIO UNLESS SUBSTANTIATING DATA FOR STEEPER SLOPES IS PROVIDED, AND THE SLOPES ARE APPROVED BY THE COUNTY.
 - FILL SLOPES ADJACENT TO A WATER COURSE MAY BE REQUIRED TO BE ARMORED WITH STONE, ROCK OR APPROVED EQUAL PROTECTION.
- FOR NONRESIDENTIAL PROJECTS, PROVIDE FOLLOWING NOTE ON PLANS:
CALIFORNIA GREEN BUILDING STANDARDS CODE
5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS
100 PERCENT OF TREES, STUMPS, ROCKS AND ASSOCIATED VEGETATION AND SOILS RESULTING PRIMARILY FROM LAND CLEARING SHALL BE REUSED OR RECYCLED. FOR A PHASED PROJECT, SUCH MATERIAL MAY BE STOCKPILED ON SITE UNTIL THE STORAGE SITE IS DEVELOPED.
EXCEPTION: REUSE, EITHER ON-OR OFF-SITE, OF VEGETATION OR SOIL CONTAMINATED BY DISEASE OR PEST INFESTATION.
- CONTRACTOR SHALL ACQUIRE ENCROACHMENT PERMITS, CONSTRUCTION PERMITS OR ACCEPTANCE CORRESPONDENCE IN KIND PRIOR TO EXCAVATION ON THE STREET FOR UTILITIES.
- CONTRACTOR SHALL FOLLOW MONUMENT PRESERVATION PER BUSINESS AND PROFESSIONS CODE § 8776

CIVIL ENGINEER'S STATEMENT:

"I CERTIFY THAT I WILL BE RESPONSIBLE FOR THIS GRADING IN ACCORDANCE WITH SECTION 7014(C) OF THE BUILDING CODE TO INCLUDE INCORPORATING ALL RECOMMENDATIONS OF THE SOILS ENGINEER, REPORT AND BE RESPONSIBLE FOR PROFESSIONAL INSPECTION AND APPROVAL OF THE GRADING. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, INSPECTION AND APPROVAL AS TO THE ESTABLISHMENT OF LINE GRADE AND DRAINAGE OF DEVELOPMENT AREA. I WILL ALSO BE RESPONSIBLE FOR THE PREPARATION OF REVISED PLANS AND THE SUBMISSION OF 'AS GRADED' GRADING PLANS UPON THE COMPLETION OF THE WORK.

LEIDY STEPHANIA HERNANDEZ, P.E. 97548 05/12/2025
SUPERVISING CIVIL ENGINEER R.C.E. NUMBER SIGNATURE DATE

SOILS ENGINEER'S STATEMENT:

"I SHALL PROVIDE PROFESSIONAL INSPECTION AND APPROVAL CONCERNING THE PREPARATION OF GROUND TO RECEIVE FILLS, TESTING FOR REQUIRED COMPACTION STABILITY OF ALL FINISHED SLOPES AND INCORPORATING THE DATE SUPPLIED BY THE ENGINEERING GEOLOGIST AND THE PREPARATION OF THE SOILS GRADING REPORT."

ALLEN D. EVANS, P.E., G.E. 2060
SUPERVISING CIVIL ENGINEER R.C.E. NUMBER SIGNATURE DATE

NO GRADING IN EXCESS OF 5000 CU. YDS. SHALL BE STARTED WITHOUT FIRST NOTIFYING THE ENGINEER. A PRE-GRADING MEETING AT THE SITE IS REQUIRED BEFORE START OF FOLLOING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, SUPERVISING CIVIL ENGINEER, SOILS ENGINEER AND/OR GEOLOGIST, CITY CONSTRUCTION INSPECTORS OR THEIR REPRESENTATIVES.

THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE CITY OF SAN BERNARDINO WHEN THE GRADING OPERATION (EXCEEDING 5000 CU. YDS.) IS READY FOR REQUIRED INSPECTIONS AS SHOWN IN THE TESTING AND INSPECTION REQUIREMENTS OF DIVISION V.

WATER, SEWER AND PLUMBING ELEMENTS PER SEPARATE PERMIT.

LEGEND:

PROPOSED RIGHT OF WAY	--- R/W ---	POWER POLE	⚡
PROPOSED IMPROVEMENTS	---	STREET LIGHT	☀
PROPOSED DRAINAGE FLOW LINE	---	FIRE HYDRANT	⚡
EXISTING IMPROVEMENTS	---	UTILITY VALVE	⚡
EXISTING OVERHEAD LINE	--- OH/L ---	PALM TREE	🌴
EXISTING GAS LINE	--- G ---	TREE	🌳
EXISTING SEWER LINE	--- S ---	EXISTING SIGN	⚡
EXISTING STORM DRAIN LINE	--- SD ---	UTILITY PULL BOX	⚡
EXISTING TELECOMM.	--- FO ---	STORM DRAIN MANHOLE	⚡
EXISTING WATER LINE	--- W ---	TELEPHONE MANHOLE	⚡
℄/CENTER LINE	---	ELECTRICAL MANHOLE	⚡
PROPOSED ELEVATION CONTOUR	--- 12XX.XX ---	SEWER MANHOLE	⚡
EXISTING ELEVATION CONTOUR	--- (12XX.XX) ---	WATER MANHOLE	⚡
SIDE SLOPE	---	WATER METER	⚡
		ELECTRICAL PULLBOX	⚡
		BENCH MARK	⚡
		SPOT ELEVATION	⚡
		FENCE	⚡

HATCH LEGEND:

CONSTRUCT PCC SIDEWALK

CONSTRUCT PCC IMPROVEMENTS

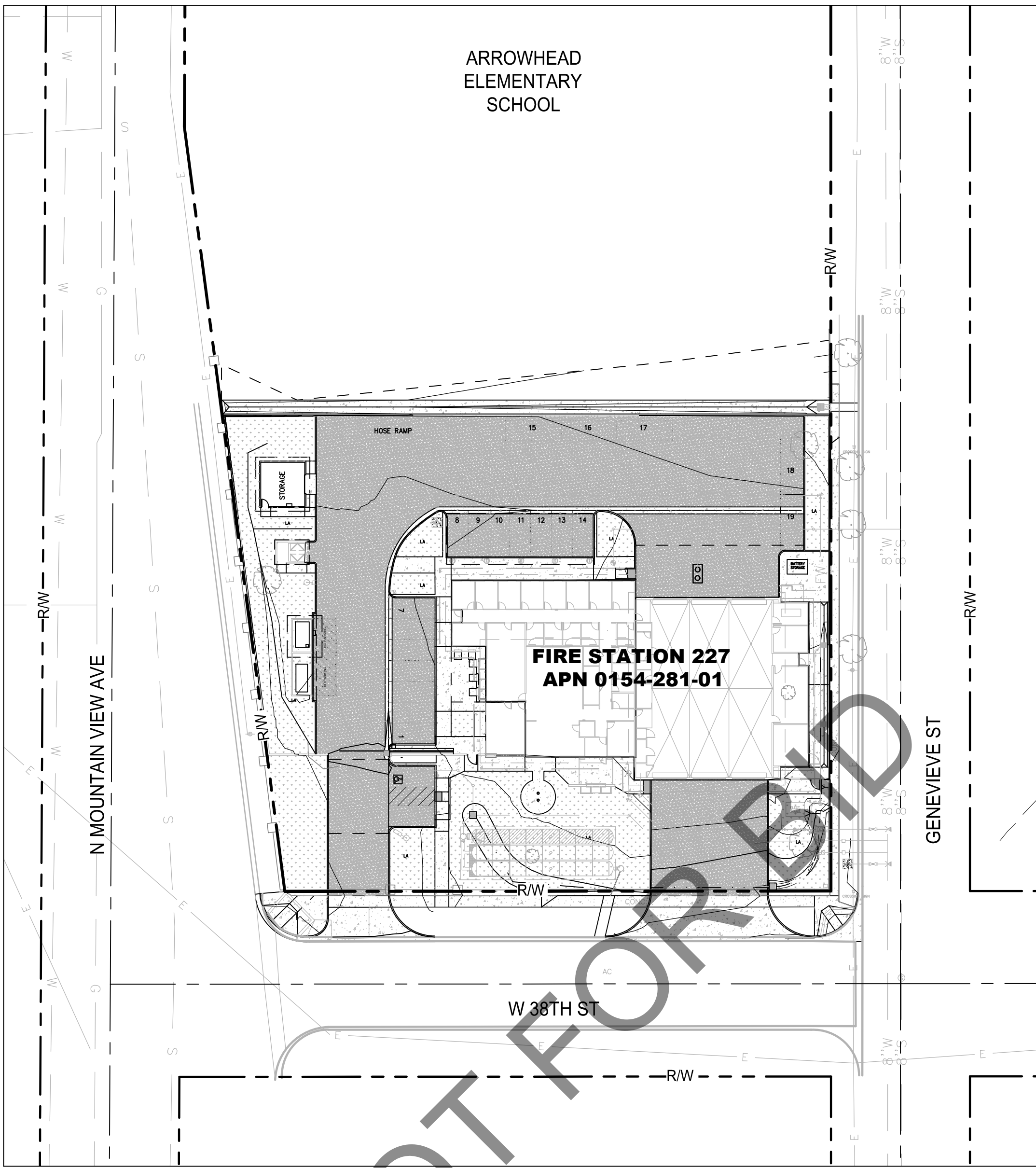
SHEET NO.

C-1	TITLE SHEET
C-2	DETAILS SHEET
C-3	DETAILS SHEET
C-4	GRADING PLAN
C-5	ON-SITE UTILITIES
C-6	EROSION CONTROL

EARTHWORK QUANTITIES

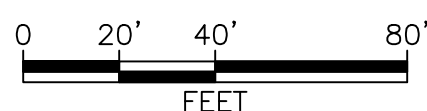
CUT= 1,311 C.Y.
FILL= 129 C.Y.
TOTAL EXPORT = 1182 C.Y.

"EARTHWORK NOTE:
EARTHWORK VOLUMES SHOWN HERE ARE FOR FEE PURPOSES ONLY NOT FOR BIDDING. CONTRACTOR SHALL PERFORM INDEPENDENT EARTHWORK CALCULATIONS AND BID A COMPLETE JOB.
THE SOURCE OF FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER OF RECORD AND THE BUILDING DEPARTMENT BEFORE IMPORT OF THE MATERIAL.



LOCATION MAP

SCALE 1"=40'



LEGEND

AC	ASPHALT CONCRETE
C&G	CURB AND GUTTER
FF	FINISHED FLOOR
FL	FLOW LINE
FS	FINISHED SURFACE
GB	GRADE BREAK
NTS	NOT TO SCALE
PL	PROPERTY LINE
RL	RIDGE LINE
R/W	RIGHT OF WAY
SWR	SEWER
TC	TOP OF CURB
TD	TOP OF DITCH
TF	TOP OF FOOTING
TG	TOP OF GRATE
TW	TOP OF WALL
TYP.	TYPICAL

UTILITIES CONTACT

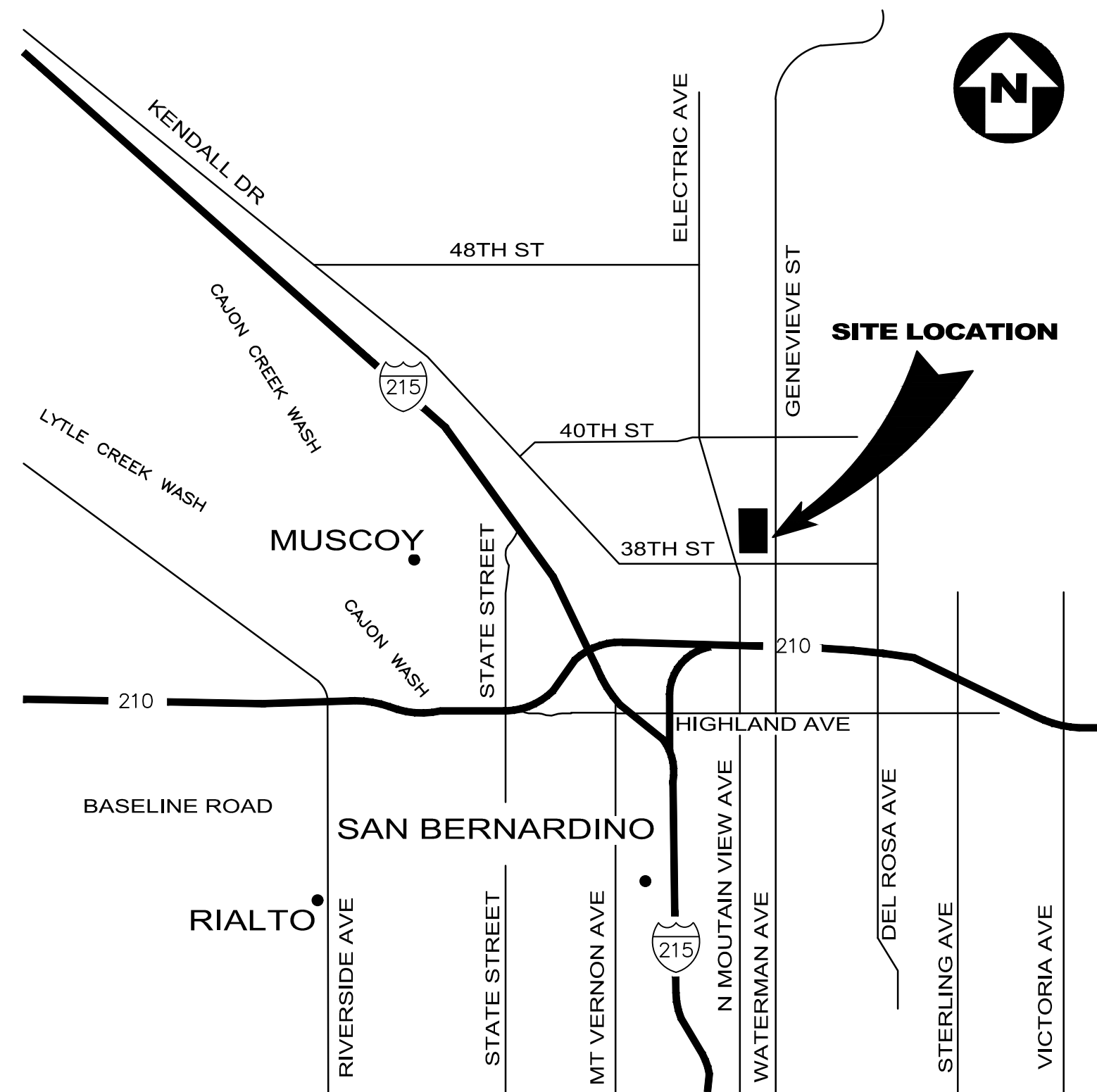
SOUTHERN CALIFORNIA EDISON
1-800-990-7788

SOUTHERN CALIFORNIA GAS
1-800-427-2000

FRONTIER
(877) 599-1870

SPECTRUM
(833) 267-6094

SAN BERNARDINO MUNICIPAL WATER DISTRICT
1350 SOUTH E STREET
SAN BERNARDINO, CA 92408
(909) 384-5141



VICINITY MAP

NTS

OWNER/APPLICANT

SAN BERNARDINO COUNTY PROJECT & FACILITIES MANAGMENT DEPARTMENT
385 N. ARROWHEAD AVE., SAN BERNARDINO, CA, 92415
(909) 387-5000

TOPOGRAPHY SOURCE

ERSC INC., DATED 07/26/2024
1810 W. REDLANDS AVE., REDLANDS, CALIFORNIA 92373
(909) 890-1255

ROBERT OLLERTON

SUPERVISING LAND SURVEYOR R.C.E. NUMBER 7731

SITE ADDRESS

180 W. 38TH STREET, SAN BERNARDINO CA 92405

BENCH MARK

VERTICAL CONTROL FOR THIS SURVEY IS A NGS: BENCHMARK A-6-11

DESCRIPTION: "A-6-11" DESCRIBED BY METRO WATER DISTR SO. CALIFORNIA 1993
SAN BERNARDINO, AT THE NORTHWEST CORNER OF 48TH ST. AND H STREET (AKA 42ND ST AND E ST.),
42 FEET (12.8 M) NORTH OF 48TH ST AND 46 FEET (14.0 M) WEST OF H ST., IN TOP OF A CONCRETE
POST 0.4 FOOT (12.2CM) BELOW CONCRETE SIDEWALK AND 10 FEET NORTHWEST OF CURB FACE.

ELEVATION:1364.63' (NAVD88)

TOTAL DISTURBED AREA

1.18 ACRES

WDID

TBA

GRADING PERMIT

GRAD-2025-000008

ASSESSOR PARCEL NUMBER

0154-281-01

GEOTECHNICAL ENGINEER'S

GEOLOGIC HAZARDS EVALUATION/GEOTECHNICAL INVESTIGATION, DATED 09/06/2024
INLAND FOUNDATION ENGINEERING, INC. 1310 S. SANTA FE AVENUE, SAN JACINTO, CALIFORNIA 92581
(951) 654-1555

FEMA FLOOD ZONE INFORMATION

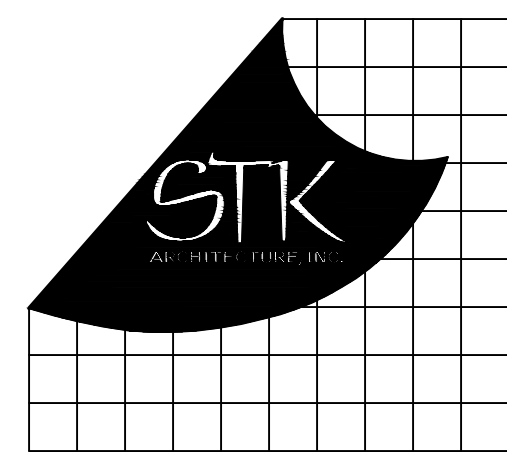
THIS PROJECT IS LOCATED IN FLOOD ZONE X, AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1%ANNUAL CHANCE FLOOD PER FEMA FLOOD INSURANCE RATE MAP NUMBER 06071C7945H EFFECTIVE AUGUST 28, 2008.

LEGAL DESCRIPTION

PTN W 1/2 NE 1/4 SEC 22 TP 1N R 4W COM ON E LI MT VIEW AVE S 00 DEG 17 1/2 MIN W 480 FT FROM SW COR LOT 15 TR 1948 TH S 00 DEG 17 1/2 MIN W 794.51 FT TH S 89 DEG 34 1/2 MIN E 274.13 FT TH N 00 DEG 17 1/2 MIN E 794.51 FT TH N 89 DEG 34 1/2 MIN W 274.13 FT TO BEG EX STREET

EROSION CONTROL NOTES:

- IN CASE OF EMERGENCY, CALL ERNESTO GONZALEZ AT 909 387-5000
- POLLUTION AND EROSION PREVENTION MEASURES, ALSO KNOWN AS BEST MANAGEMENT PRACTICES (BMPs), MUST BE INSTALLED PRIOR TO GRADING. THESE MEASURES, INCLUDING THE PREVENTION OF SEDIMENTATION OR FLOOD DAMAGE, TO OFFSITE PROPERTY SHALL BE ADEQUATE WHETHER OR NOT AN EROSION CONTROL PERMIT IS REQUIRED.
- ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ONSITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND.
- EROSION CONTROL DEVICES SHALL BE FUNCTIONING AT ALL TIMES. IN CASE OF FAILURE, RAPID CONSTRUCTION OF EMERGENCY DEVICES SHALL BE IMPLEMENTED.
- STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
- 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.
- EXCESS OR WASTE CONCRETE MUST BE CONTAINED ONSITE. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ONSITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
- DEVELOPERS/CONTRACTORS ARE RESPONSIBLE TO ENSURE ALL EROSION CONTROL DEVICES AND BMPs ARE INSTALLED AND FUNCTIONING PROPERLY PER PLAN. PROPER PRECAUTION SHALL BE CONSIDERED WHEN 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.
- TRASH AND CONSTRUCTION-RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
- 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 SWEEP UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
- ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
- ALL SILT AND DEBRIS SHALL BE REMOVED FROM ALL DEVICES WITHIN 24 HOURS AFTER EACH RAINSTORM AND BE DISPOSED OF PROPERLY.
- ALL STORM WATER CAPTURE DEVICES SHALL BE PROTECTED AT ALL TIMES.
- EROSION AND SEDIMENT CONTROL PRACTICES SHOULD BE IN CONFORMANCE WITH STANDARD PRACTICE. THE MOST COMMON EROSION CONTROL MEASURES ARE:
 - SCHEDULING
 - PRESERVATION OF EXISTING VEGETATION
 - STOCKPILE MANAGEMENT
 - SILT FENCE
 - FIBER ROLLS
 - SANDBAG BARRIER
 - STRAW BALE BARRIER
 - STORM DRAIN INLET PROTECTION
 - CONCRETE WASTE MANAGEMENT
 - VEHICLE AND EQUIPMENT MAINTENANCE
 - STABILIZED CONSTRUCTION ENTRANCE/EXIT
 - ENTRANCE/EXIT TIRE WASH
 - WIND EROSION CONTROL
 - DUST SHALL BE CONTROLLED BY WATERING.



CONSULTANT:



PROJECT ADMINISTERED BY:

SAN BERNARDINO COUNTY
PROJECT & FACILITIES
MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE.
SAN BERNARDINO, CA 92415

PROJECT NAME:

SAN BERNARDINO
COUNTY FIRE
DEPARTMENT:
FIRE STATION 227

PROJECT # 10.10.1202

CIP #22-105

APN: 0154-281-01

180 W. 38TH STREET
SAN BERNARDINO,
CA 92405

ISSUE INFORMATION:

DATE:	INFORMATION:
03-14-25	Plan Check, 1
05-13-25	Plan Check, 2
06-20-25	Plan Check, 3

SHEET INFORMATION:

STK PROJECT NO.: 374-193-24
SCALE: AS NOTED
DATE: DECEMBER 2024
PLOT DATE: -
DRAWING NAME:

SEAL:

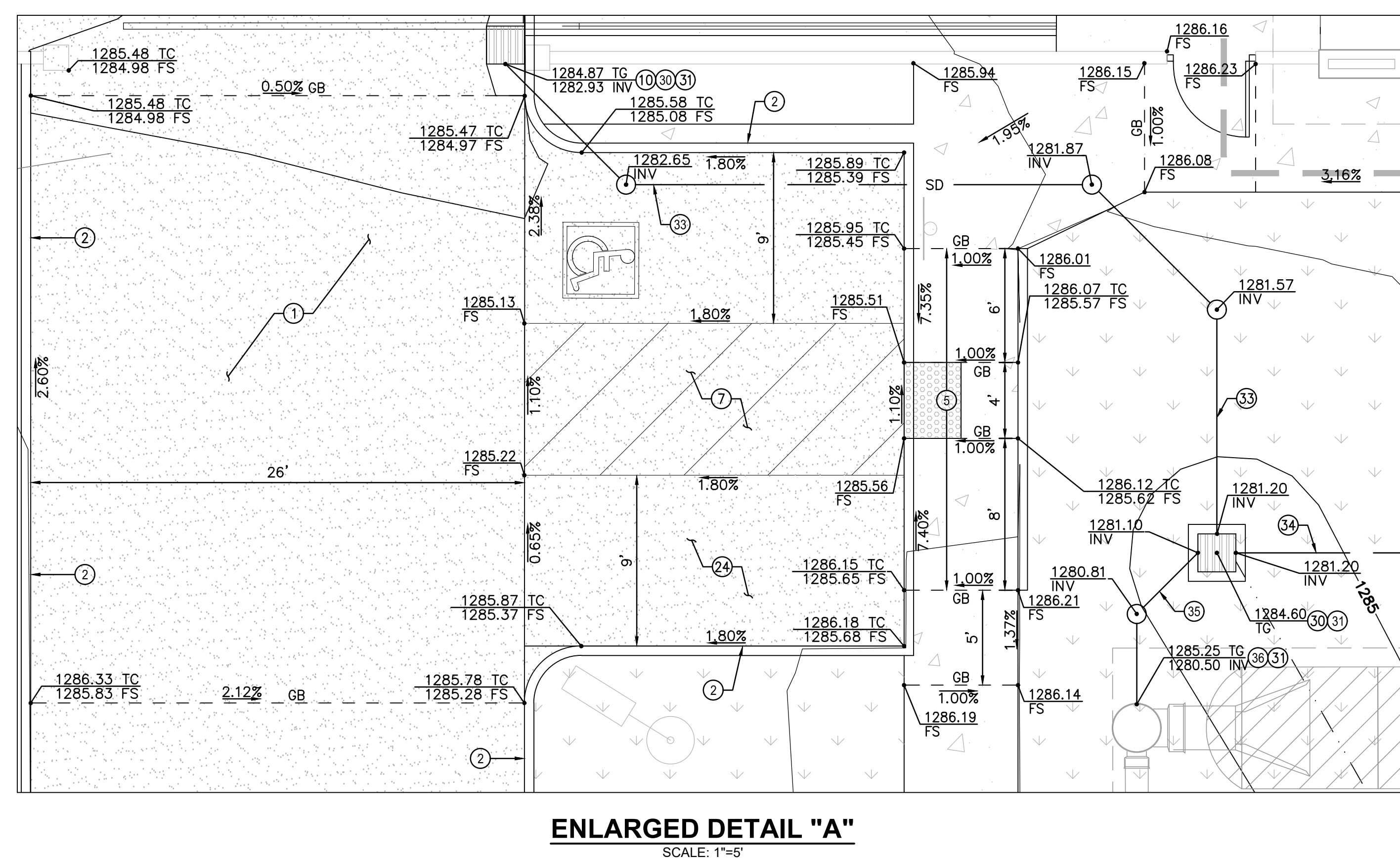
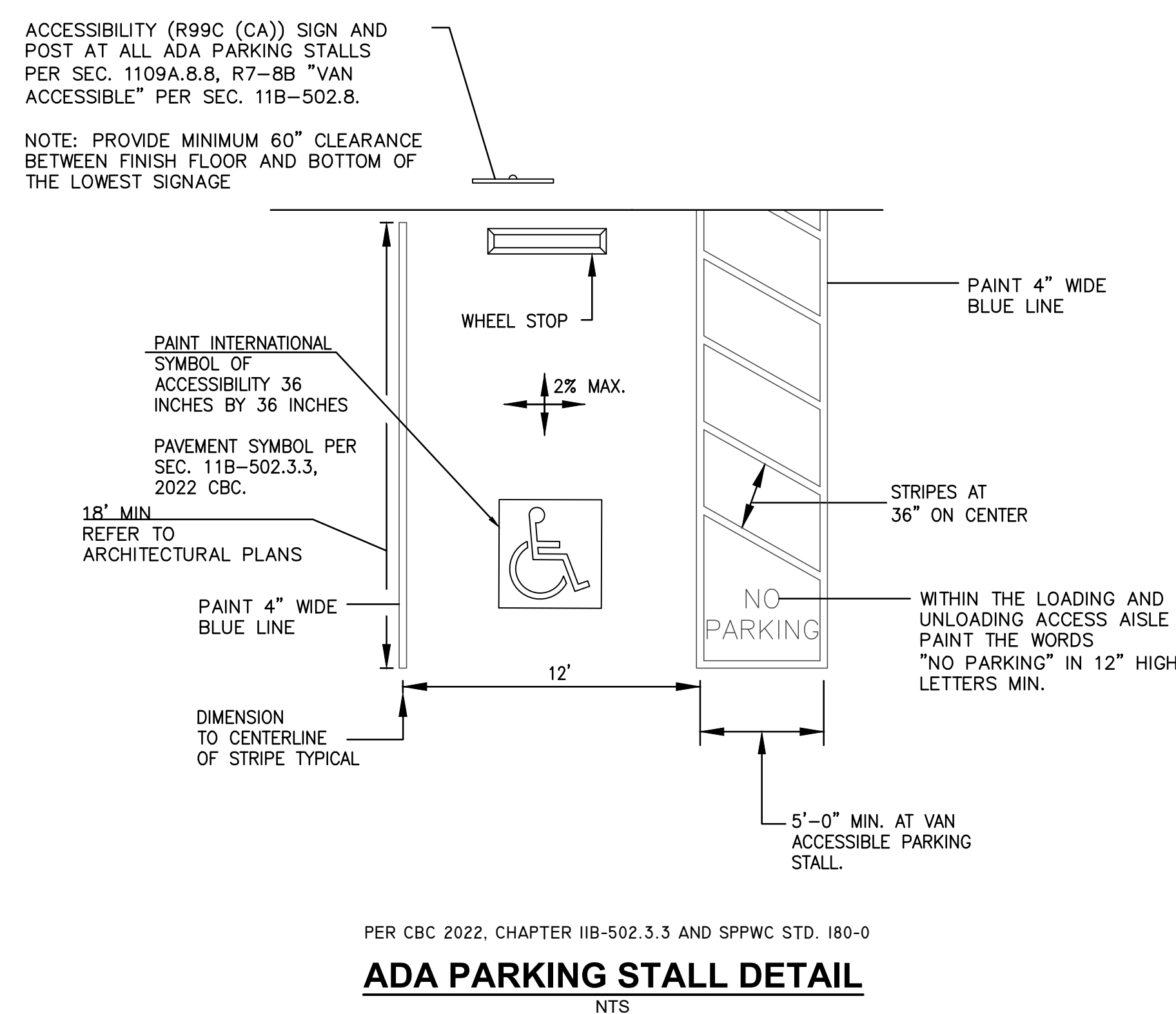
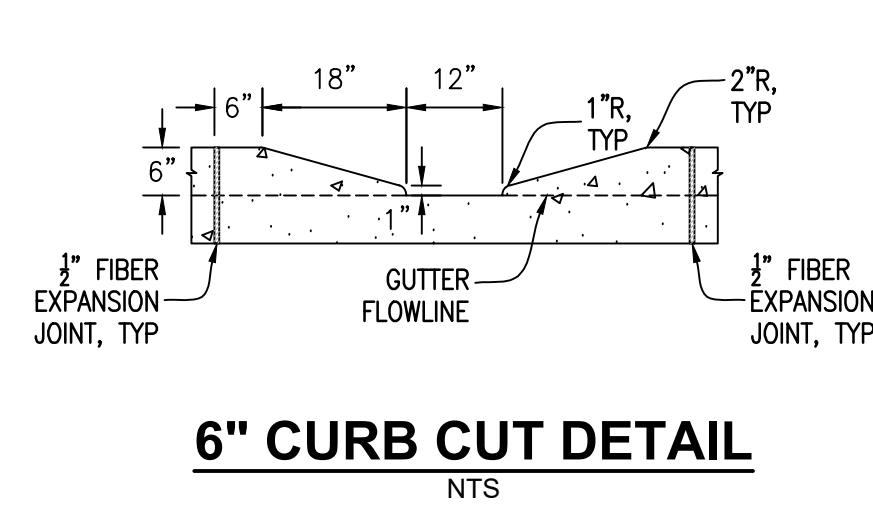
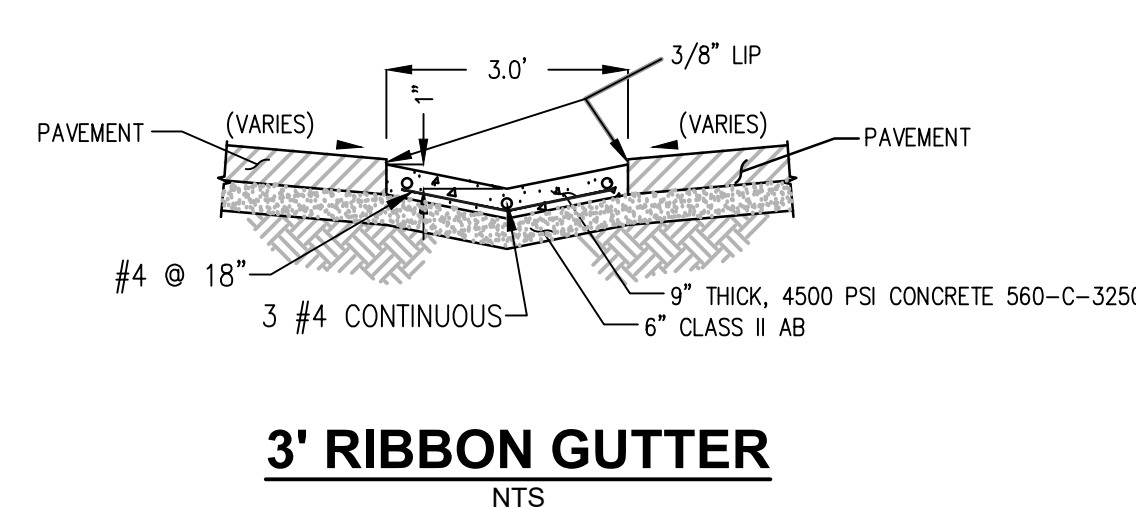
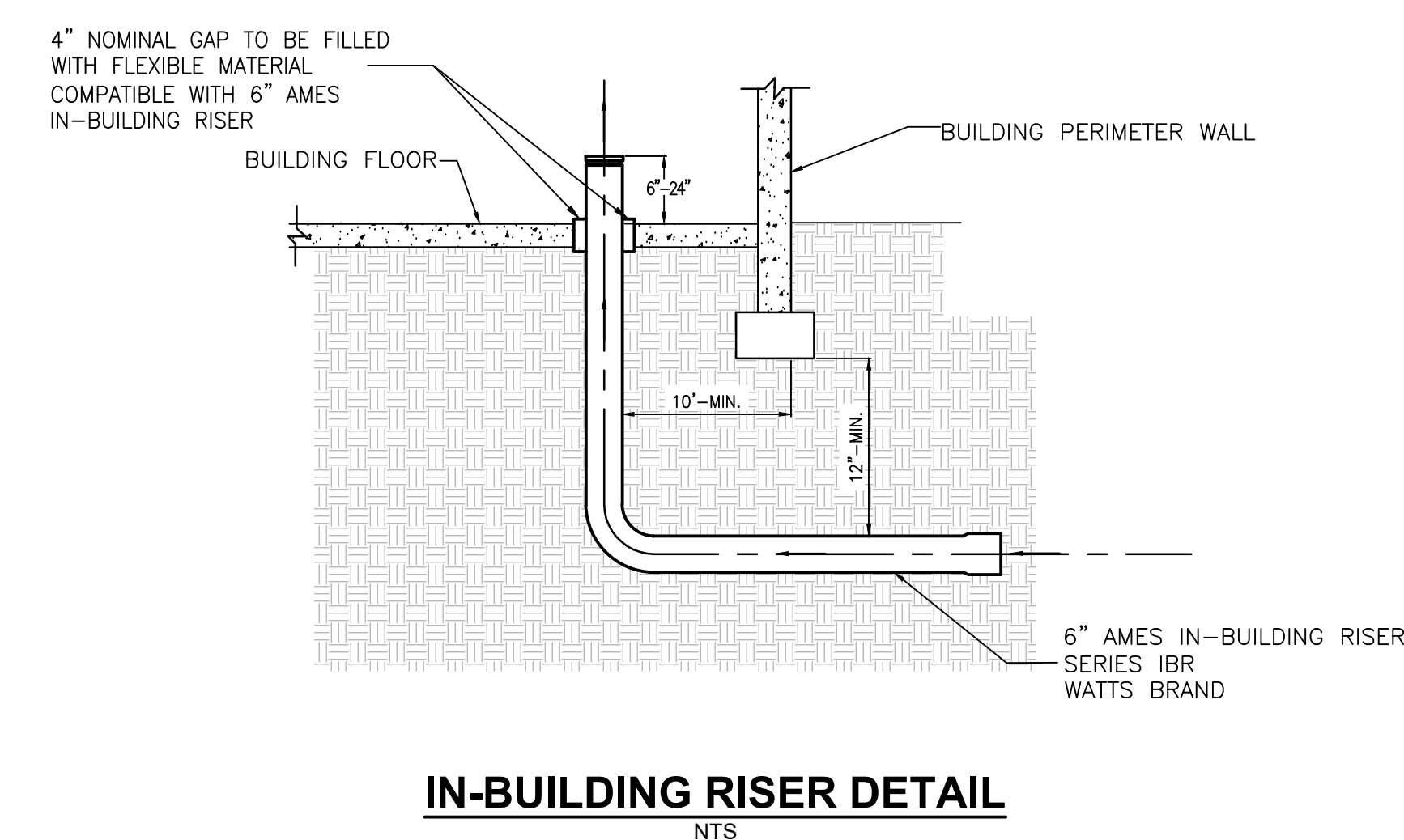
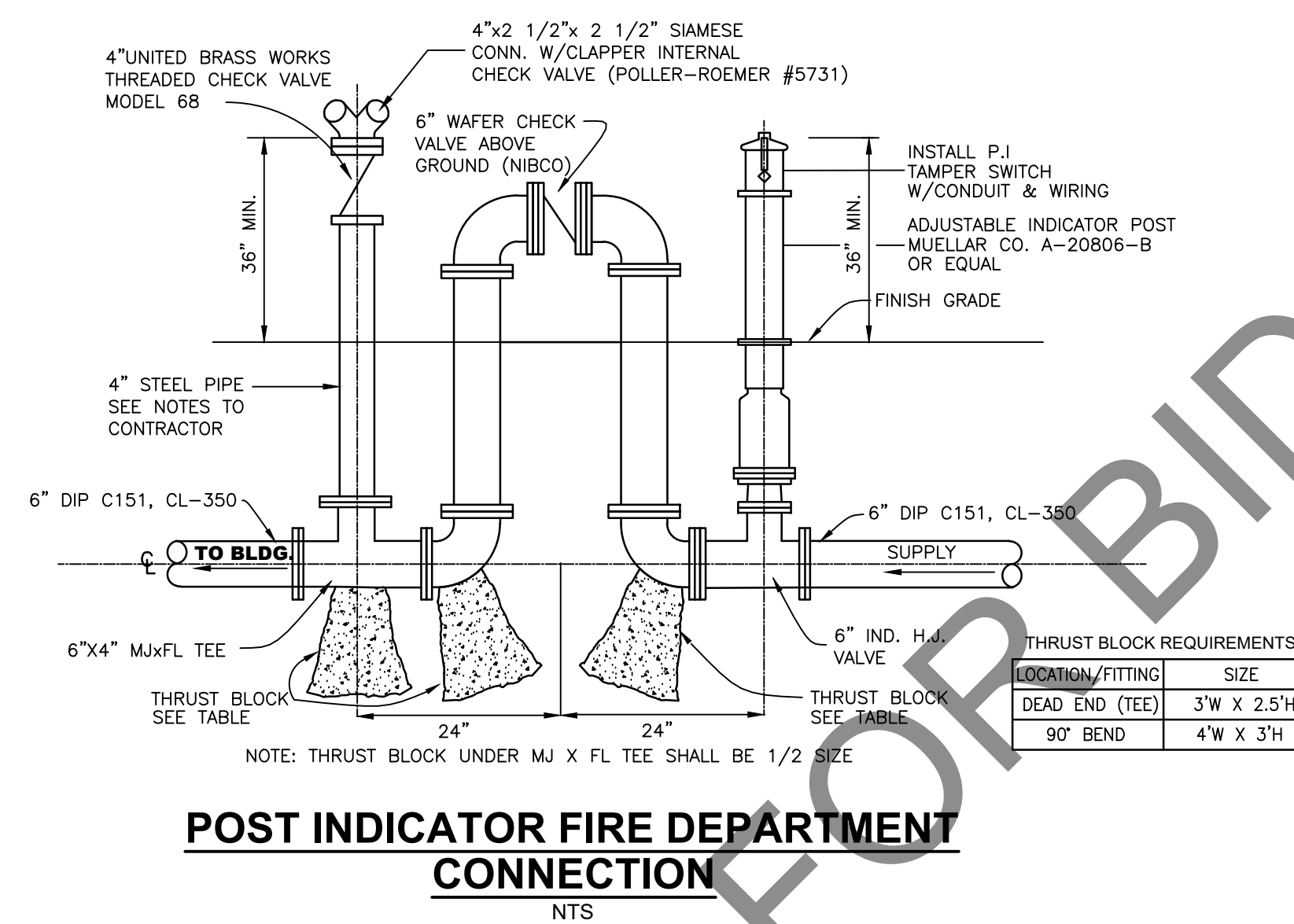
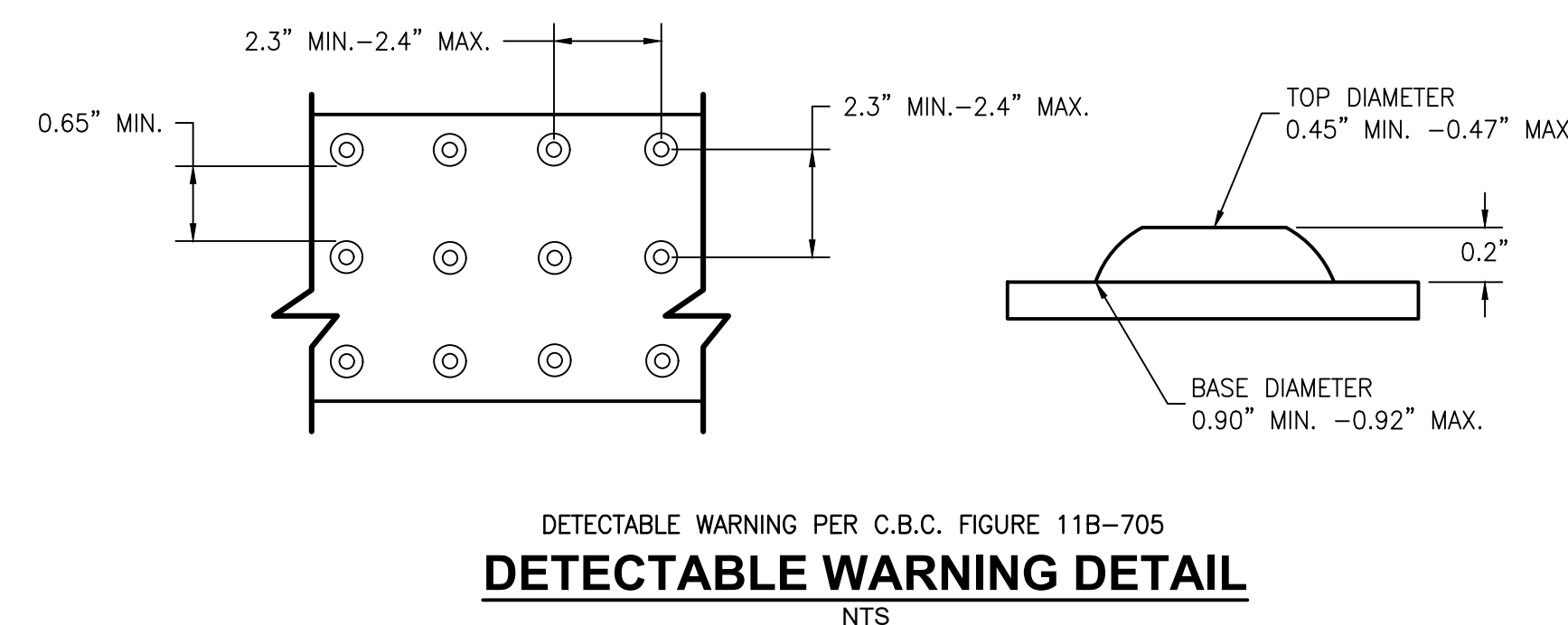
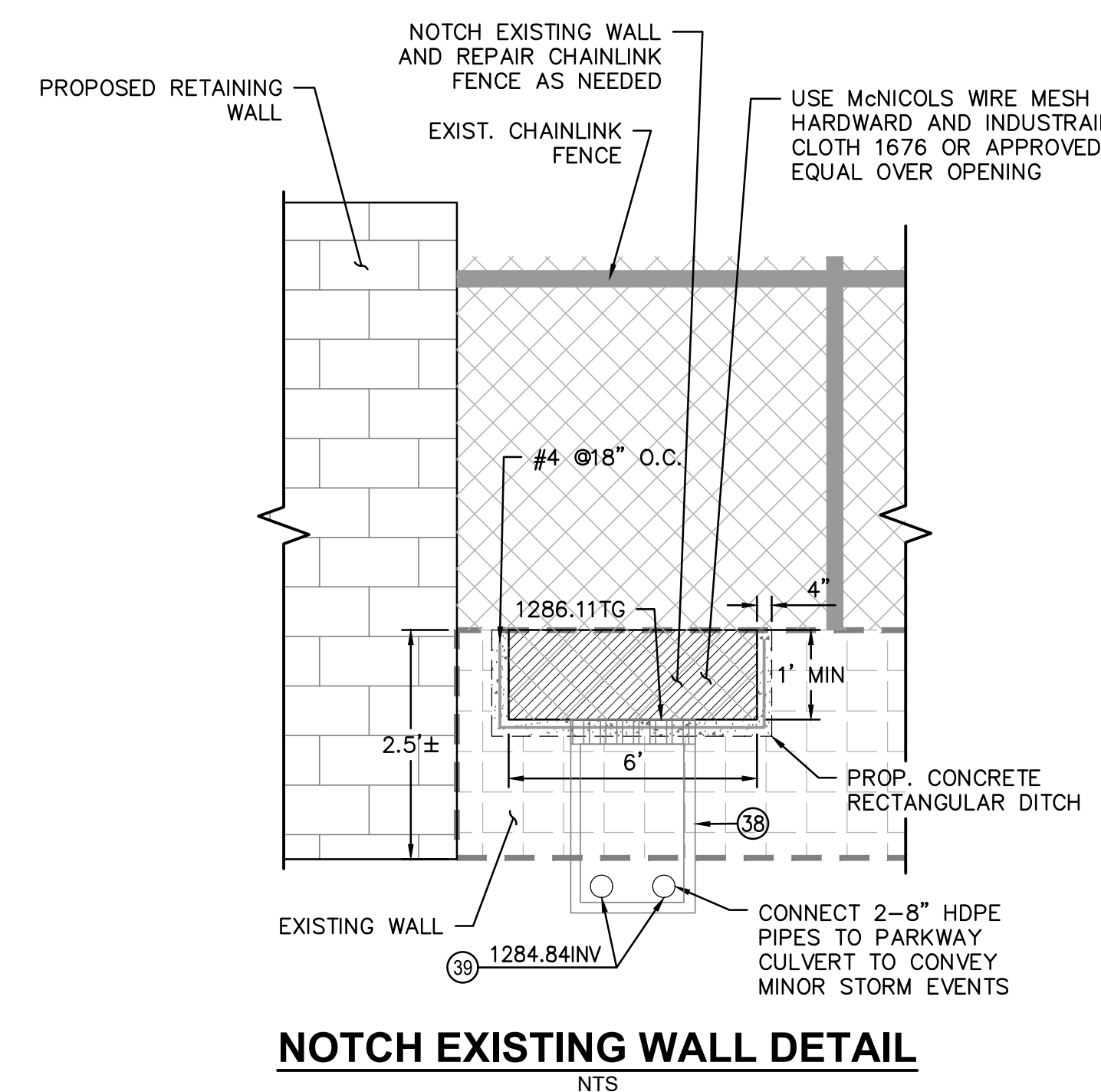
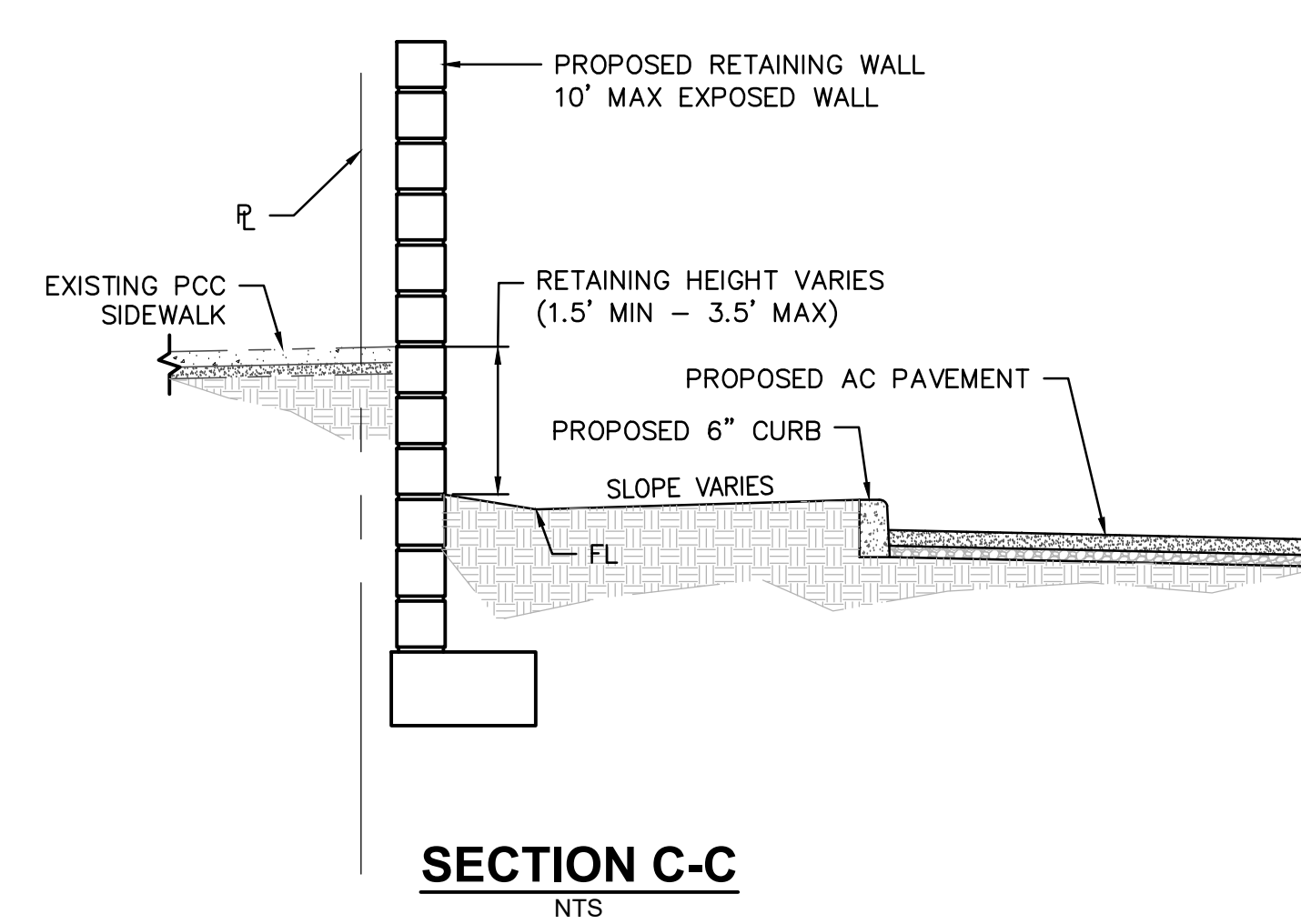
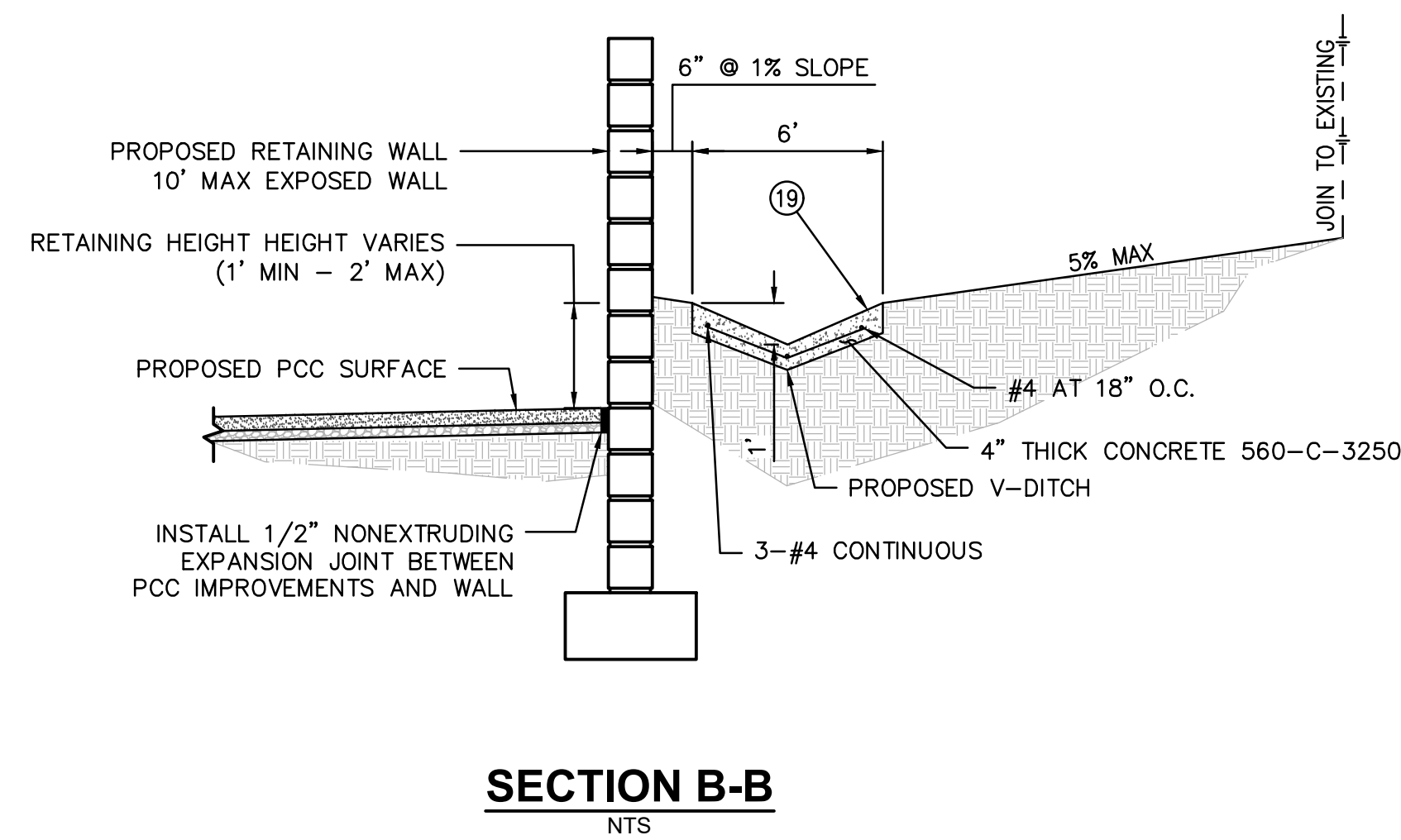
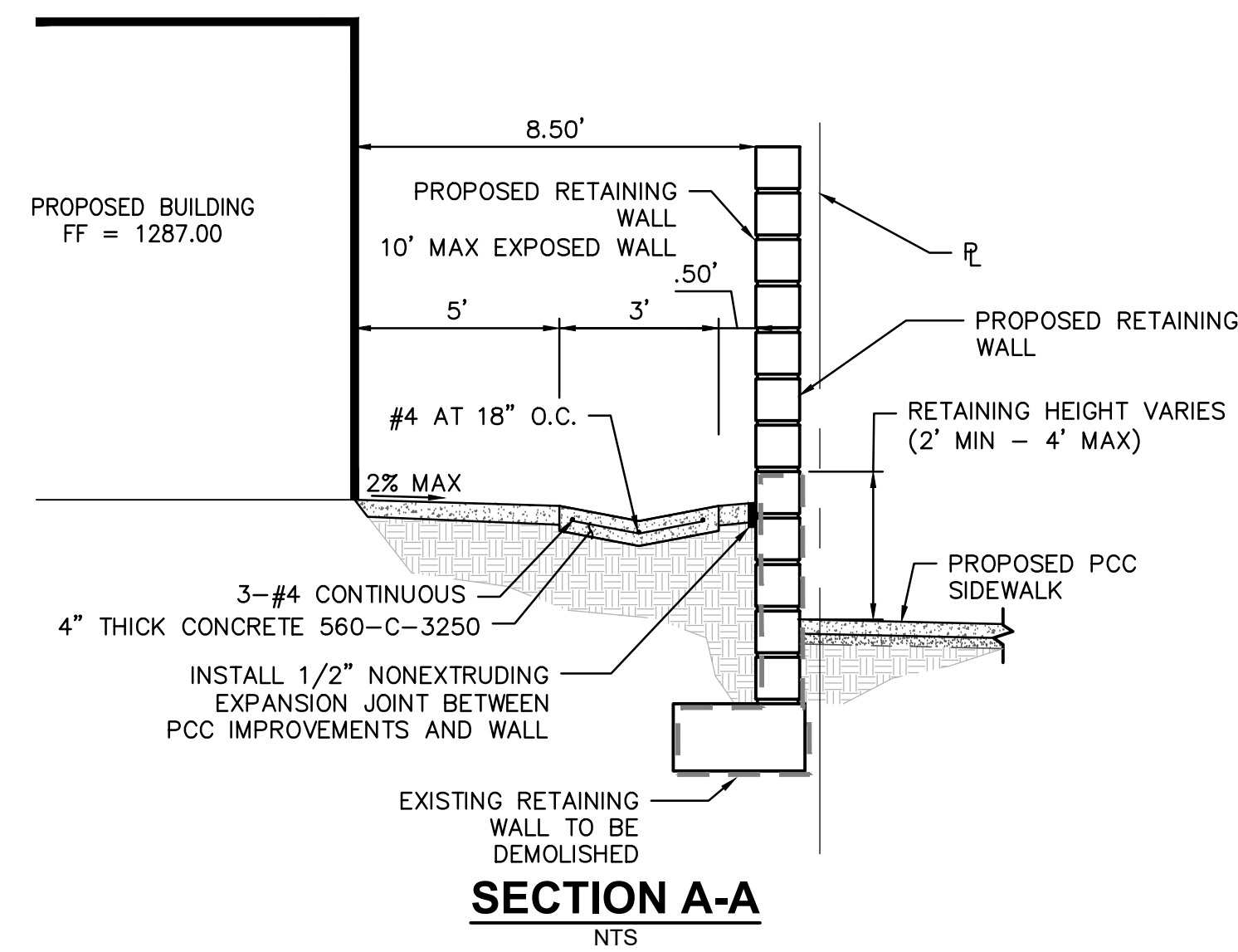


SHEET TITLE:

TITLE SHEET

SHEET NO.:

C-1

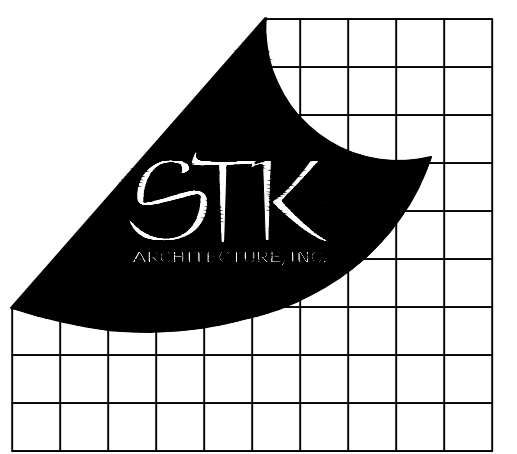


- CONSTRUCTION NOTES

- ① CONSTRUCT 9" PCC WITH REBAR OVER 6" OF CLASS II AGGREGATE BASE MATERIAL.
- ② CONSTRUCT 6" PCC CURB PER PER CITY OF SAN BERNARDINO STD. DWG. 200
- ⑤ CONSTRUCT CURB RAMP CASE B, TYPE 1 PER SPWPC STD. 111-5
- ⑦ CONSTRUCT HANDICAP STALL PER DETAIL ON SHEET C-2
- ⑩ CONSTRUCT MODIFIED PER PLAN LOCAL DEPRESSION TYPE F PER SPWPC STD. DWG. 313-4
- ⑬ CONSTRUCT CONCRETE V-DITCH PER SECTION B-B ON SHEET C-2
- ⑭ CONSTRUCT 5" PCC OVER 4" CLASS II AGGREGATE BASE

- STORM DRAIN NOTES

- 50 INSTALL 24"x24" JENSEN PRECAST DROP INLET BASIN MODEL 2424 WITH GRATE, OR APPROVED EQUAL
- 51 INSTALL ADD FLEXFORM PURE INLET FILTER PER DETAIL ON SHEET C-3, OR APPROVED EQUAL
- 52 INSTALL 12" HDPE PIPE OR APPROVED EQUAL
- 53 INSTALL 15" HDPE PIPE OR APPROVED EQUAL
- 54 INSTALL 18" HDPE PIPE OR APPROVED EQUAL
- 55 INSTALL 30" DIAMETER NYLOPLAST INLINE DRAIN BASIN
- 56 INSTALL 12"x12" JENSEN PRECAST DROP INLET BASIN MODEL 1212 WITH GRATE, OR APPROVED EQUAL
- 57 INSTALL 36"x36" JENSEN PRECAST DROP INLET BASIN MODEL 3636 WITH GRATE, OR APPROVED EQUAL
- 58 INSTALL 8" HDPE PIPE OR APPROVED EQUAL



CONSULTANT:



1861 W. Redlands Blvd, Bldg 7B
Redlands, Ca. 92373
P: (909) 890-1255
F: (909) 890-0995

PROJECT ADMINISTERED BY:
SAN BERNARDINO COUNTY
PROJECT & FACILITIES
MANAGEMENT DEPARTMENT

385 N. ARROWHEAD AVE.
SAN BERNARDINO, CA 92415

PROJECT NAME:
SAN BERNARDINO
COUNTY FIRE
DEPARTMENT:
FIRE STATION 227

PROJECT # 10.10.1202

CIP #22-105

APN: 0154-281-01

180 W. 38TH STREET
SAN BERNADINO,
CA 92405

ISSUE INFORMATION:

DATE:	INFORMATION:
03-14-25	Plan Check 
05-13-25	Plan Check 
06-20-25	Plan Check 

SHEET INFORMATION:

STK PROJECT NO.: 374-193-24
SCALE: AS NOTED
DATE: DECEMBER 2024
PLOT DATE: -
DRAWING NAME:

SEAL:



SHEET TITLE:

DETAILS SHEET

SHEET NO.:

C-2

SHT 2 OF 6