REVISED
Regular Meeting

Date: **Monday, August 11, 2025**

Time: **6:00 p.m. to 8:00 p.m.**

Place: **Ted Adcock Community Center – South Day Room**
535 Kelly Avenue, Half Moon Bay, California

*****IN-PERSON WITH REMOTE PUBLIC PARTICIPATION AVAILABLE*****

This meeting of the Agricultural Advisory Committee will be held at the Ted Adcock Community Center, South Day Room, located at 535 Kelly Avenue, Half Moon Bay, California. Members of the public will be able to participate in the meeting in person at the Ted Adcock Community Center, South Day Room, or remotely via the Zoom platform. For information regarding how to participate in the meeting, either in person or remotely, please refer to the instructions below.

Public Participation

The Agricultural Advisory Committee meeting may be accessed remotely by members of the public through Zoom online at: **https://smcgov.zoom.us/j/95364233000**. **The meeting ID is:** 953 6423 3000. The meeting may also be accessed via telephone by dialing +1 (669) 900-6833 (Local). **Enter the meeting ID:** 953 6423 3000 and then press #. Members of the public can also attend this meeting physically at the Ted Adcock Community Center – South Day Room, 535 Kelly Ave, Half Moon Bay.

*Written public comments may be emailed to oboo@smcgov.org, and such written comments should indicate the specific agenda item on which you are commenting.

*Spoken public comments will be accepted during the meeting in-person or remotely through Zoom at the option of the speaker. Public comments in-person will be taken first, followed by speakers on Zoom.

***Please see instructions for written and spoken public comments at the end of this agenda.**

ADA Requests

Individuals who require special assistance or a disability related modification or accommodation to participate in this meeting, or who have a disability and wish to request an alternative format for the meeting, should contact Olivia Boo, Planning Liaison, as early as possible but no later than 10:00

a.m. on the business day before the meeting at (650) 363-1818 and/or oboo@smcgov.org. Notification in advance of the meeting will enable the County to make reasonable arrangements to ensure accessibility to this meeting, the materials related to it, and your ability to comment.

AGENDA

1. **Call to Order**

2. **Member Roll Call**

3. **Oral Communications** to allow the public to address the Committee on any matter **not** on the agenda. If your subject is not on the agenda, the Chair will recognize you at this time. Speakers are customarily limited to 3 minutes. See instructions explained at the end of this agenda regarding instruction for public comment. *Please note that the Committee cannot discuss or act on an item not on the agenda.*

4. **Committee Member Update(s) and/or Questions** to allow Committee Members to share news and/or concerns for items **not** on the agenda.

5. **Planning and Building Department Director's Report.** *(Planning Liaison)* The next meeting is September 8, 2025.

6. **Opportunity for County support to AAC.** Presenters: Steve Monowitz, Director of Planning and Building, and Debbie Schechter, Schechter Consulting.

7. **Farm Labor Housing – proposed permit streamlining.** County of San Mateo Presenters: Steve Monowitz, Director of Planning and Building, and Kanoa Kelley, Planner III.

Consent Agenda

8. **Owner/Applicant:** Coastside County Water District
   File Number: PLN2025-00126
   Location: Pilarcitos Creek Road, unincorporated Half Moon Bay
   Assessor's Parcel No.: 056-370-080

   Consideration of a Coastal Development Permit, Planned Agricultural Development Permit and Use Permit, to drill six municipal water wells to replace existing wells in the Pilarcitos Canyon wellfield, in the unincorporated El Granada area of San Mateo County. This project is appealable to the California Coastal Commission. Project Planner: Michael Schaller, mschaller@smcgov.org.

   Action Request: That the AAC provide a recommendation to the Planning Commission on the subject application.

Regular Agenda

9. **Owner/Applicant:** Half Moon Bay Properties LLC/Jim Guan
File Number: PLN2023-00334
Location: 12761 San Mateo Road (Highway 92), unincorporated San Mateo County
Assessor's Parcel No.: 056-270-010, 056-270-030, 056-270-060, 056-270-090, and 056-270-100 (also involves work on parcels located in the City of Half Moon Bay)

Consideration of a Planned Agricultural District Permit, Coastal Development Permit, and Grading Permit, to address facility and operational violations (VIO2023-00035) at Terra Gardens, including grading of 14,050 cubic yards (c.y.) associated with site clean-up, drainage/access improvements and permitting existing work. This project is appealable to the California Coastal Commission. *This item is continued from the April 14, 2025 AAC meeting.* Project Planner: Camille Leung, cleung@smcgov.org.

Action Request: That the AAC provide a recommendation to the Planning Commission on the subject application.

10. **Adjournment**

ADDITIONAL INFORMATION FOR THE MEETING

Materials Presented for the Meeting
Applicants and members of the public may submit materials to the Agricultural Advisory Committee. All materials (including but not limited to models and pictures) submitted on any item on the agenda are considered part of the administrative record for that item and must be retained by the Committee Secretary, or other designee. If you wish to retain the original of an item, a legible copy must be left with the Committee Secretary, or other designee.

Agendas & Staff Reports
To view the agenda, please visit our website at https://planning.smcgov.org/agricultural-advisory-committee. Staff reports will be available on the website one week prior to the meeting. For further information on any item listed below, please contact the corresponding Project Planner indicated. To subscribe to the Agricultural Advisory Committee agenda mailing list, please "subscribe" to email updates at the above website link.

Correspondence to the Committee
Olivia Boo, Agricultural Advisory Committee Liaison
455 County Center, 2nd Floor
Redwood City, CA 94062
(650) 363-1818
Email: oboo@smcgov.org

Zoom
For any questions or concerns regarding Zoom, including troubleshooting, privacy, or security settings, please contact Zoom directly. See instructions below for public comment on Zoom.

Next Meeting
The next regularly scheduled Agricultural Advisory Committee meeting is on September 8, 2025.

***INSTRUCTIONS FOR PUBLIC COMMENT DURING MEETINGS**

Public comments in-person will be taken first, followed by speakers on Zoom.

In-person
If you wish to address the Members of the Agricultural Advisory Committee, please raise your hand for the Chair to acknowledge you. Once acknowledged, please start by clearly stating your first and last name for the record. If you have anything that you wish distributed to the Agricultural Advisory Committee and included in the official record, please hand it to the Committee Secretary and/or Chair, or other designee, who will distribute the information to the Agricultural Advisory Committee members and staff.

Via Zoom
1. The Agricultural Advisory Committee meeting may be accessed remotely by members of the public through Zoom online at: **https://smcgov.zoom.us/j/95364233000**. **The meeting ID is:** 953 6423 3000. The meeting may also be accessed via telephone by dialing +1 669-900-6833 (Local). **Enter the meeting ID:** 953 6423 3000 and then press #.
2. You may download the Zoom client or connect to the meeting using an internet browser. If using your browser, make sure you are using a current, up to date browser: Chrome 30+, Firefox 27+, Microsoft Edge 12+, Safari 7+. Certain functionalities may be disabled in older browsers including internet explorer.
3. You may be asked to enter an email address and name. We request that you identify yourself by name as this will be visible online and will be used to notify you that it is your turn to speak.
4. When the Committee calls for the item on which you wish to speak, click on "raise hand" or *9 if calling in on a phone. The Secretary will activate and unmute speakers in turn. Speakers will be notified shortly before they are called to speak.
5. When called, please limit your remarks to the time limit allotted.

Written Comments
Written public comments may be emailed in advance of the meeting. Please read the following instructions carefully:
1. Your written comment should be emailed to oboo@smcgov.org.
2. Your email should include the specific agenda item on which you are commenting or note that your comment concerns an item that is not on the agenda or is on the consent agenda.
3. If your emailed comment is received by 5:00 p.m. on the business day before the meeting, it will be provided to the Members of the Agricultural Advisory Committee and made publicly available on the agenda website under the specific item to which your comment pertains. If emailed comments are received after 5:00 p.m. on the business day before the meeting, the Planning Liaison will make every effort to either (i) provide such emailed comments to the Agricultural Advisory Committee and make such emails publicly available on the agenda website prior to the meeting, or (ii) read such emails

during the meeting. Whether such emailed comments are forwarded and posted, or are read during the meeting, they will still be included in the administrative record.

Public records that relate to any item on the agenda for a regular meeting are available for public inspection. Those records that are distributed less than 72 hours prior to the meeting are available for public inspection at the same time they are distributed to all members, or a majority of the members of the Agricultural Advisory Committee.

Roll Sheet – August 11, 2025
Agricultural Advisory Committee

	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug
Voting Members													
James Oku Farmer	X	X		X	X	X	X	X	X	X		X	
Natalie Sare Farmer		X	X	X	X	X	X	X	X	X	X	X	
John Vars Farmer	X	X	X	X	X		X		X	X		X	
Peter Marchi Farmer	X	X	X	X	X	X	X	X	X	X	X	X	
Ryan Casey Farmer	X		X		X	X	X		X	X	X	X	
Cole Mazariegos-Anastassiou Farmer	X	X	X		X		X	X	X	X		X	
Crystal Chaix Farmer	X	X		X		X	X	X	X	X	X	X	
Daniel Theobald Ag Business	X	X		X	X	X	X	X	X		X	X	
Erik Hagstrom Public Member										X	X		
Marilyn Johnson Public Member										X	X	X	
**Vacant Conservationist													
Non-Voting Members													
Natural Resource Conservation Staff: ***Vacant													
San Mateo Co. Agricultural Commissioner: Koren Widdel	X	X	X	X	X	X	X	X	X	X	X	X	
Farm Bureau Exec. Director: Jess Brown	X	X				X	X	X	X	X	X		
UC Co-Op Extension Rep.: Dr. Igor Lacan		X			X	X			X		X		
Planning Liaison													
San Mateo Co. Planning Liaison: Olivia Boo	X	X	X	X	X	X	X	X	X	X	X	X	

X: Present Blank Space: Absent or Excused Grey Color: No Meeting
*Special Meeting **Position Vacant

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 5

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: August 11, 2025

TO: Agricultural Advisory Committee

FROM: Planning Staff

SUBJECT: Director's Report

CONTACT INFORMATION: Olivia Boo, Planner, oboo@smcgov.org

The following is a list of Planned Agricultural District Permits and Coastal Development Exemptions for the rural area of the County that have been received by the Planning Division from June 30, 2025, to July 30, 2025

PLANNED AGRICULTURAL DISTRICT (PAD) PERMIT OUTCOMES

No PAD applications were heard or considered by the Board of Supervisors and/or Planning Commission during this time period.

UPCOMING PLANNED AGRICULTURAL DISTRICT PERMIT PROJECTS

No PAD applications were received during this time period.

COASTAL DEVELOPMENT EXEMPTIONS (CDX) FOR AGRICULTURAL PROJECTS

No CDX applications for agricultural projects were submitted during this time period.

ADDITIONAL ANNOUNCEMENTS

1. Next meeting is on September 8, 2025.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 8

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: August 11, 2025

TO: Agricultural Advisory Committee

FROM: Michael Schaller, Planning Staff, 650/363-1849

SUBJECT: Consideration of a Coastal Development Permit, Planned Agricultural Development Permit and Use Permit, to drill six municipal water wells to replace existing wells in the Pilarcitos Canyon wellfield, in the unincorporated El Granada area of San Mateo County. This project is appealable to the California Coastal Commission.

County File Number: PLN2025-00126 (Coastside County Water District)

PROPOSAL

The applicant, Coastside County Water District (CCWD), is proposing to construct six new wells, associated reinforced concrete pads, piping, valves and appurtenances, and connections to an adjacent raw water transmission pipeline. The new well field will include variable frequency drives and network connections to integrate with the District's existing Supervisory Control and Data Acquisition (SCADA) system.

A typical well site will include a new well, drilled to a depth of approximately 50-65 feet below grade, a new 6-foot by 24.5-foot concrete well pad, the well pump and piping, electrical control boxes and an antenna. The concrete pad will rise to a height of approximately 6 inches above grade. The well piping will rise to a height of about 4 feet above the well pad, the electrical boxes will rise to about 5 feet above the well pad, and the antenna will rise to about 15 feet above the well pad. The new well pads will be adjacent to or overlap the existing well pads to be demolished. The new wellbore will be located about 10 to 15 feet from the existing wellbore.

Project construction and implementation will occur over approximately 4-5 months. This construction phase includes site mobilization, initial clearing, and grading of the site; demolition of the existing wells and equipment; drilling of the well boreholes and installation of the well casing and gravel pack; installation of well pads, equipment, piping, and appurtenance; testing; and startup. Five of the existing wells will be destroyed and abandoned in accordance with County and State regulations, and the drilling permit. One of the existing wells (Well 4A) will be converted to a monitoring well. The replacement wells will be located near the existing wells where practicable and, in some cases, further away from Pilarcitos Creek. No trees or riparian vegetation are planned for removal.

CCWD provides treated water to the City of Half Moon Bay and to nearby unincorporated San Mateo County communities. The District is heavily reliant on the San Francisco Public Utilities Commission's (SFPUC) Pilarcitos Reservoir for its water supply. CCDW also relies upon its Pilarcitos Wellfield for supplemental water supply. Due to concerns for seismic safety, the SFPUC is modifying reservoir operations, which will have immediate and substantial water supply consequences for the District. Meanwhile, the District's Pilarcitos wells are nearing the end of their useful life and becoming prohibitively costly to maintain. Thus, with Pilarcitos Reservoir water supply curtailments imminent, CCWD needs to replace its Pilarcitos wells in order to maintain water supply reliability and to control costs.

DECISION MAKER

Planning Commission

QUESTIONS FOR THE AGRICULURAL ADVISORY COMMITTEE

1. Will the proposal have a negative effect on surrounding agricultural uses? If yes, can any conditions of approval be recommended to minimize the impact?

2. What decision do you recommend that the Planning Commission take with respect to this application?

BACKGROUND

Report Prepared By: Michael Schaller, Senior Planner

Applicant/Owner: Coastside County Water District

Location: Pilarcitos Creek Road, Half Moon Bay. Approximately one mile north of the intersection of Pilarcitos Creek Road and Highway 92/HMB Road.

APN(s): 056-370-080

Parcel Size: 299 acres

Existing Zoning: Planned Agricultural Development (PAD)

General Plan Designation: Agriculture

Local Coastal Plan Designation: Agriculture

Williamson Act: Not contracted

Existing Land Use: Open Space

Flood Zone: Zone X (area of minimal flooding), Community Panel 06081C0145E; effective October 16, 2012.

Environmental Evaluation: CCWD has assumed the role of lead agency. As such, they have filed a Categorical Exemption under Section 15302(c) of the California Environmental Quality Act (see Attachment E).

Setting: The Project area includes six existing shallow wells which comprise the existing wellfield along the top of bank of an approximately 0.49-mile-long reach of Pilarcitos Creek. Each existing well is set within a concrete well pad (varying between 25 and 100 square feet in size) and has a corresponding 4-inch water pipe which extends under Pilarcitos Creek Road, connecting to the District's 18-inch raw water transmission pipeline. Adjacent uses in the vicinity include Santa's Tree Farm to the south and undeveloped riparian corridor and coastal scrub habitats to the north, east and west within a one-quarter mile radius of the Project area.

Will the project be visible from a public road?

No. The existing well field is approximately .5 mile from the nearest public access point on Pilarcitos Creek Road.

Will any habitat or vegetation need to be removed for the project?

No. The existing and proposed well sites are in dirt pull out areas along Pilarcitos Creek Road.

Is there prime soil on the project site?

According to the County's GIS, the soils on site are not listed as "Prime Soils" and there are no adjacent agricultural fields.

DISCUSSION

A. KEY ISSUES

Planning staff has reviewed this proposal and has concluded the following:

1. Compliance with Planned Agricultural District (PAD) Regulations:

Section 6353 - *Uses Permitted Subject To The Issuance Of A Planned Agricultural Permit*. This policy outlines permitted used on non-prime agriculturally zoned lands. The project site is zoned Planned Agricultural Development (PAD), however, the soils on site are not listed as "Prime Soils" and there are no adjacent agricultural fields. Public infrastructure, such as the District's proposed wells, are not listed as allowed uses on

"lands suitable for agriculture". However, Chapter 24 (Use Permits) of the Zoning Regulations allows the County to issue a Use Permit for necessary public infrastructure projects when found necessary for the public health and safety.

Section 6355 - *Substantive Criteria For Issuance Of A Planned Agricultural Permit*. Each application for conversion of PAD zoned land must be found consistent with the following criteria:

a. General Criteria

(1) *The encroachment of all development upon land which is suitable for agricultural use shall be minimized*. The area within Pilarcitos Canyon that the well field is located is very narrow and bounded by Pilarcitos Creek and its riparian corridor on one side and Pilarcitos Canyon Road on the other, leaving a very narrow band of relatively flat land to utilize for agriculture. The soils in the project area are not designated as prime soils by the USDA soil survey. While the project site is classified as Agriculture on the Local Coastal Program (LCP) land use maps, it is questionable whether agriculture could be economically viable at this location. There is no history of agricultural activity at the project site since the adoption of the LCP in 1982.

(2) *All development permitted on a site shall be clustered*. The nature of the project dictates that the six wells are unevenly spaced along the fringes of Pilarcitos Creek Road in order to avoid over-drafting from each other. Each well location is in a roadside area devoid of vegetation and of limited utility to economically farm.

b. Water Supply Criteria

Adequate and sufficient water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished. The proposed replacement wells will not change the amount of groundwater that the District is allowed to pump under their permit from the State Water Resources Control Board, nor when that pumping may occur. This project does not expand or increase the amount of water that CCWD is licensed to pump from Pilarcitos Canyon.

c. Criteria for the Conversion of Lands Suitable for Agriculture and Other Land

All lands suitable for agriculture and other lands within a parcel shall not be converted to uses permitted by a Planned Agricultural Permit unless all of the following criteria are met:

(1) *All agriculturally unsuitable lands on the parcel have been developed or determined to be undevelopable*. As stated above, the locations of the existing and replacement wells are unsuitable for agriculture due to the proximity of riparian habitat immediately adjacent to each site and the limited area where each one is located. There is no evidence that agriculture has been practiced in these small roadside pullouts since the adoption of the County's LCP in 1982.

(2) *Clearly defined buffer areas are developed between agricultural and non-agricultural uses*. There are no agricultural uses near the well locations. The nearest agricultural use (Christmas tree farm) is approximately 850 feet away and separated by a ridge.

(3) *The productivity of any adjacent agricultural lands is not diminished, including the ability of the land to sustain dry farming or animal grazing*. As discussed above, there is over 850 feet of separation between the nearest replacement well location and the nearest active agriculture field. There is no evidence to suggest that construction and use of the replacement wells will diminish or inhibit adjacent agricultural operations.

(4) *Public service and facility expansions and permitted uses do not impair agricultural viability, either through increased assessment costs or degraded air and water quality*. The parcel on which the replacement wells are proposed is owned by the Coastside County Water District. All new improvements will occur on this parcel. There is no evidence to suggest that these improvements will affect the assessed value of adjacent agriculturally zoned lands. There is also no evidence to suggest that the construction and operation of the replacement wells will negatively impact water or air quality as long as the proposed conditions of approval are implemented as required by project approval.

2. Compliance with Local Coastal Program (LCP) Policies:

Staff has determined that the proposed development conforms to all applicable LCP Policies, specifically:

a. Locating and Planning New Development

Policy 1.25 (*Protection of Archaeological/Paleontological Resources*). This policy requires an archaeological reconnaissance of project sites when they are in areas of potentially high sensitivity. The applicant has retained ESA Consulting to assist them with this project submittal. An ESA archaeologist conducted both a records search and a field survey of the project area in preparation of this application. The records search indicated there are no previously recorded pre-contact Native American or historic-era archaeological resources recorded within the Project area or within 0.5 mile. The field assessment identified no cultural resources within the Project area. The consultant's assessment is that the dynamic landform, previous ground disturbance, and the distance to known archaeological resources suggest that the Project area has a relatively low potential for the presence of pre-contact archaeological resources and that the Project area's sensitivity for pre-contact and historic-era archaeological resources is low. However, the consultant acknowledged that there is always the potential for resources to be discovered during project construction. To address that potential, the consultant has proposed Conditions No. 11 and No. 12 in Attachment A.

b. Public Works Component

Policy 2.6 (*Capacity Limits*). This policy limits development or expansion of public works facilities to a capacity which does not exceed that needed to serve buildout of the Local Coastal Program. The applicant has a License for Diversion and Use of Water from the State Water Resources Control Board (Division of Water Rights) (see Attachment F) that limits the amount of water that can be pumped by the total well field:

"One and five-tenths (1.5) cubic feet per second, to be diverted from November 1 of each year to March 31 of the succeeding year. The total amount diverted under this License and under any existing rights of licensee in the sources named as of the date of issuance of this License shall not exceed 1.5 cubic feet per second. The maximum amount diverted under this License shall not exceed 360 acre-feet per year."

CCWD was granted this Diversion permit in 1976, prior to the adoption of the County's LCP. The applicant is not proposing to increase the amount of water pumped under this permit. As such, there will be no change in the current LCP certified capacity limit for this water source. This project does not expand or increase the amount of water that CCWD is licensed to pump from Pilarcitos Canyon.

c. Agriculture Component

The County Zoning Regulations are the implementing plan for the Local Coastal Program. As such, Chapter 21A of the zoning regulations mirrors this Agriculture Component of the LCP, but with greater detail. Analysis of the project against the LCP's agriculture policies will be discussed below in Section 3 of this staff report.

d. Sensitive Habitats Component

Policy 7.3 (*Protection of Sensitive Habitats)*. This policy prohibits any land use or development which would have a significant adverse impact on sensitive habitat areas. Additionally, development in areas adjacent to sensitive habitats shall be sited and designed to prevent impacts that could significantly degrade the sensitive habitats. All uses shall be compatible with the maintenance of biologic productivity of the habitats.

The proposed replacement wells will be located near the existing wells where practicable, and, in some cases, further away from Pilarcitos Creek than the existing wells. The applicant has proposed a number of best management practices and conservation measures to protect sensitive habitats, which have been included as Conditions Nos. 2-10 in Attachment A. Included is a prohibition on trimming or removal of trees and riparian vegetation associated with Pilarcitos Creek, as well as a prohibition on any project associated equipment entering the Creek. To protect water quality, the applicant shall implement Stormwater Pollution Prevention measures. With inclusion of these measures, Staff believes the project is compliant with Policy 7.3.

Policy 7.11 (*Establishment of Buffer Zones (for Riparian Corridors))*. This policy requires a 50 feet buffer zone (from the edge of riparian vegetation) for all perennial creeks. As discussed in the settings section, there is no riparian or other sensitive habitat at either existing or proposed well locations. Each existing and proposed well location is located within disturbed roadside turnouts adjacent to but outside of the riparian corridor (defined as the limit of riparian vegetation), however, all locations are within the required buffer zone for perennial streams. Policy 7.12 outlines the permitted uses in Riparian buffer

zones, which includes necessary water supply projects. As discussed above, the District is highly dependent upon water deliveries from SFPUC. Those deliveries will be reduced for the foreseeable future while the SFPUC analyzes potential alterations to the Pilarcitos Dam. To make up for the reduction in supply, the District must rely upon their existing resources to a greater extent. Thus, the need for the replacement of the well field to ensure a continued, adequate water supply for the residents within the District's service area.

Policy 7.13 (*Performance Standards in Buffer Zones (for Riparian Corridors))*. This policy requires permitted uses in buffer zones to: (1) minimize removal of vegetation; (2) conform to natural topography to minimize erosion potential; (3) make provisions (i.e., catch basins) to keep runoff and sedimentation from exceeding pre-development levels. As discussed previously, the applicant will implement a number of preventative measures including a prohibition on trimming or removing trees and riparian vegetation and no equipment used in support of Project implementation will enter the riparian habitat or Pilarcitos Creek. Erosion control measures (e.g., silt fencing, coir wattles) will be implemented to prevent any soil or other materials from entering any nearby aquatic habitat and will be installed between the work area(s) and adjacent aquatic habitat to prevent soil from eroding or falling into the sensitive habitat area. Only natural burlap, coir, or jute wrapped fiber rolls will be used. At Project completion after approximately four months, the District will restore areas disturbed during Project construction to their approximate pre-project conditions. All exposed or disturbed soils will be re-covered by gravel or other existing non-vegetative surface cover material.

e. <u>Visual Resources Component</u>

Policy 8.6 (*Streams, Wetlands and Estuaries)*. This policy requires development to be setback from the edge of streams and other natural waterways a sufficient distance to preserve the visual character of the waterway. It also prohibits structural development which would adversely affect the visual quality of perennial streams and associated riparian habitat, except for those permitted by Sensitive Habitats Component Policies.

As discussed above, the replacement wells are a necessary water supply project which is a permitted use in riparian buffer zones. The new wells will be located near the existing wells as much as possible, and in some cases, further away from Pilarcitos Creek. It should be noted that this part of Pilarcitos Creek Road is private and not accessible, either physically or visually, to the general public. The

replacement wells and infrastructure will not result in a new visual impact visible to the public.

3. Compliance with the Williamson Act:

The project parcel is not under a Williamson Act contract.

ATTACHMENTS

A. Project Plans
B. Supplemental Application Materials
C. Application Appendices
D. CEQA Categorical Exemption
E. Water Diversion License 10598

County of San Mateo - Planning and Building Department

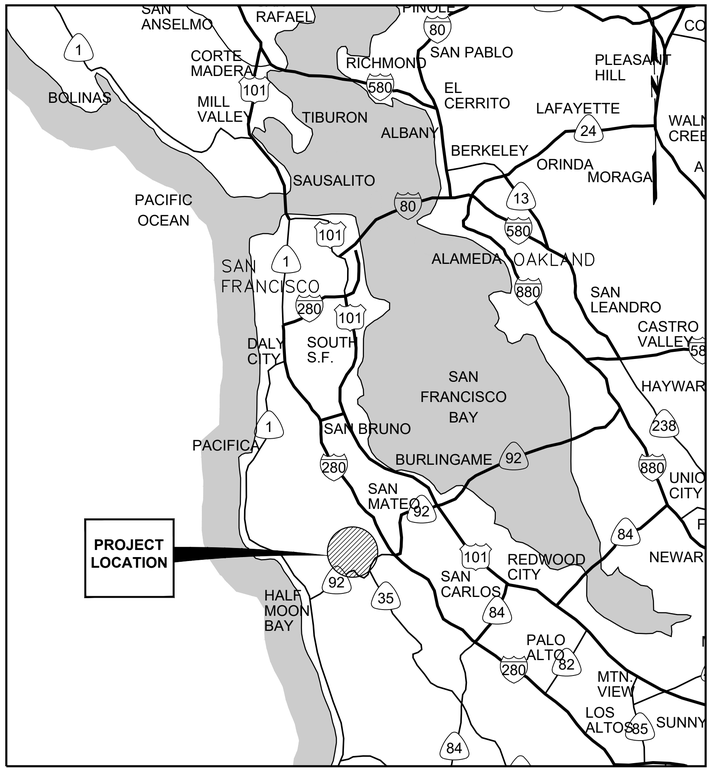
ATTACHMENT A

PILARCITOS WELLFIELD REPLACEMENT PROJECT

COASTSIDE COUNTY WATER DISTRICT

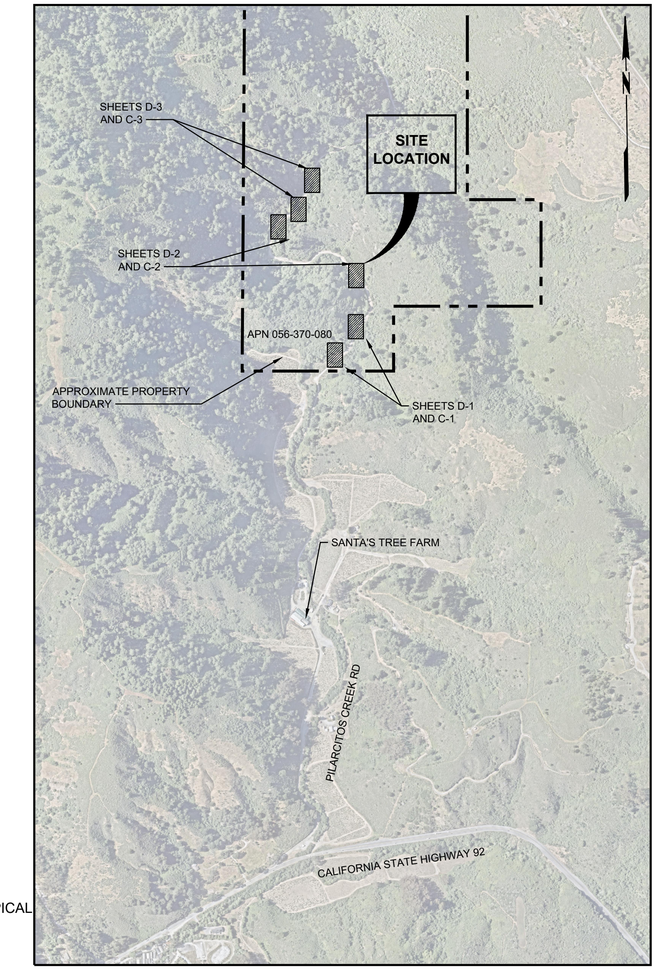
HALF MOON BAY, CA

MARCH 2025



LOCATION MAP

NO SCALE



VICINITY MAP

NO SCALE

DRAWING LIST

SHEET NUMBER	SHEET DESCRIPTION	SHEET TITLE
1	G-1	TITLE SHEET, LOCATION MAP, AND DRAWING LIST
2	G-2	GENERAL NOTES, ABBREVIATIONS, SYMBOLS, AND LEGEND
3	D-1	DEMOLITION PLAN, WELLS 1 AND 3
4	D-2	DEMOLITION PLAN, WELLS 3A AND 4A
5	D-3	DEMOLITION PLAN, WELLS 4 AND 5
6	C-1	PLAN, PILARCITOS WELLS 1 AND 3
7	C-2	PLAN, PILARCITOS WELLS 3A AND 4A
8	C-3	PLAN, PILARCITOS WELLS 4 AND 5
9	C-4	CONSTRUCTION DETAILS - 1
10	C-5	CONSTRUCTION DETAILS - 2
11	C-6	CONSTRUCTION BEST MANAGEMENT PRACTICES
12	C-7	EXCLUSION FENCING PLAN AND DETAIL
13	GS-1	STRUCTURAL GENERAL NOTES - 1
14	GS-2	STRUCTURAL GENERAL NOTES - 2
15	GS-3	STRUCTURAL STANDARD DETAILS
16	S-1	STRUCTURAL PLAN AND DETAILS
17	M-1	MECHANICAL PLAN, WELL PUMP AND PIPING
18	M-2	MECHANICAL DETAILS
19	GE-1	ELECTRICAL SYMBOLS AND ABBREVIATIONS
20	GE-2	ELECTRICAL INSTALLATION DETAILS
21	E-1	WELL SINGLE LINE DIAGRAM AND GROUNDING SCHEMATIC - TYPICAL
22	E-2	WELL POWER AND SIGNAL PLAN - TYPICAL
23	E-3	WELL PUMP VFD CONTROL SCHEMATIC
24	GI-1	INSTRUMENTATION SYMBOLS AND ABBREVIATIONS
25	GI-2	INSTRUMENTATION INSTALLATION DETAILS
26	I-1	WELL P&ID - TYPICAL
27	I-2	CONTROL PANEL ELEVATION
28	I-3	SCADA SYSTEM NETWORK DIAGRAM
29	I-4	SAMPLE WIRING DIAGRAMS

100% DESIGN / BID SET

CONTACT 811 BEFORE YOU DIG — SAFE DIGGING PARTNER

REGISTERED PROFESSIONAL ENGINEER — JONATHAN P. N. KUNG — C 80141 — CIVIL — STATE OF CALIFORNIA — 03/31/2025

100% DESIGN / BID SET

REGISTERED PROFESSIONAL ENGINEER — TYLER F. COLYER — C 80141 — CIVIL — STATE OF CALIFORNIA — 03/31/2025

100% DESIGN / BID SET

eki environment & water
2001 JUNIPERO SERRA BOULEVARD, SUITE 300
DALY CITY, CALIFORNIA 94014
(650) 292-9100 • FAX (650) 552-9012

PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA
TITLE SHEET, LOCATION MAP, AND DRAWING LIST

REV	DESCRIPTION	APPRD	DATE

DATE: MAR 2025
SCALE: AS SHOWN
DRAWN: NC
DESIGNED: TC
APPROVED: JS
JOB NO.: B80108.39

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEET NUMBER
G-1
1 OF 29

Path: G:\EKI_CONSTRUCTION_DWGS\B80108.01 (CIP PROJECTS)\B80108.39_Pilarcitos_Wells Filename: B80108.39_G-1.dwg Plot Date: April 23, 2025 - 4:31 PM CADD User: Nicole Chapman

GENERAL NOTES

1. EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED ON AVAILABLE INFORMATION AND ARE NOT GUARANTEED TO BE EITHER ACCURATE NOR COMPLETE. EXISTING UTILITY MAINS ARE SHOWN; NOT ALL LATERALS FOR EXISTING UTILITIES ARE SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY EXACT UTILITY LOCATION. THIS VERIFICATION SHALL BE COORDINATED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANY AS REQUIRED. FIELD VERIFY BY POTHOLING AND PHYSICALLY EXPOSING THE LOCATION AND ELEVATION OF ALL EXISTING UNDERGROUND UTILITY SYSTEMS AND INDIVIDUAL SERVICES CROSSING THE ALIGNMENT OF THE NEW WATER LINE AS PART OF THE POTHOLING REPORT DESCRIBED IN THE SPECIFICATIONS. CALL U.S.A. (UNDERGROUND SERVICE ALERT) FOR UTILITY LOCATION AT LEAST 48 HOURS BEFORE DIGGING. PHONE 1-800-227-2600 (OR DIAL 811).
2. THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF THE SAN MATEO COUNTY'S MUNICIPAL REGIONAL PERMIT (MRP) NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND SHALL FOLLOW STORM WATER BEST MANAGEMENT PRACTICES AS SPECIFIED IN SAN MATEO'S STANDARD SPECIFICATIONS & PROJECT SPECIFICATIONS.
3. THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN ADEQUATE DRAINAGE PATTERNS AT THE SITE. WATER SHALL NOT BE ALLOWED TO POND OR STAND DUE TO CONTRACTOR ACTIVITY.
4. PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION. DAMAGE TO EXISTING UTILITIES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR'S WORK INCLUDES ALL INCIDENTAL AND APPURTENANT WORK NECESSARY TO PROVIDE A COMPLETE AND FULLY-FUNCTIONING FACILITY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY ACTIVITIES OTHER THAN THOSE LISTED IN THE BID SCHEDULE WITHOUT AN AUTHORIZED CHANGE ORDER.
6. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, APPURTENANCES, AND APPARATUS NOT SPECIFICALLY MENTIONED ON THE PLANS OR SPECIFICATIONS, BUT WHICH ARE NECESSARY TO COMPLETE THE CONTRACTED WORK AND PROVIDE A FULLY-FUNCTIONING INSTALLATION READY FOR FULL-TIME OPERATION.
7. THE CONTRACTOR SHALL SATISFY ITSELF AS TO THE EXISTING CONDITIONS PRIOR TO BIDDING THE PROJECT.
8. ALL EXCESS EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE HANDLED, TRANSPORTED, AND DISPOSED FROM THE SITE IN ACCORDANCE WITH LAWS AND REGULATIONS AT THE CONTRACTOR'S EXPENSE. CONTRACTOR MAY ASSUME, FOR BIDDING PURPOSES ONLY, THAT EXCAVATED SOIL IS NON-HAZARDOUS. HOWEVER, SUCH ASSUMPTION DOES NOT RELIEVE CONTRACTOR'S FULL AND COMPLETE RESPONSIBILITY FOR COMPLYING WITH LAWS AND REGULATIONS, INCLUDING CHARACTERIZATION OF EXCESS MATERIAL FOR MANAGEMENT AND DISPOSAL. THE CONTRACTOR SHALL PROMPTLY NOTIFY AND CONFER WITH ENGINEER IF ANY EVIDENCE OF SOIL CONTAMINATION IS OBSERVED.
9. UNLESS OTHERWISE SHOWN ALL NEW BURIED PIPES SHALL HAVE A MINIMUM COVER OF 36 INCHES.
10. THE CONTRACTOR SHALL RESTORE ALL DAMAGED, REMOVED, OR OTHERWISE DISTURBED WALLS, FENCES, SERVICES, UTILITIES, IMPROVEMENTS, OR FEATURES OF WHATEVER NATURE DUE TO CONTRACTOR WORK AT NO ADDITIONAL COST TO THE OWNER. UNLESS OTHERWISE NOTED, ALL PAVEMENT, GUTTERS, WALKS, FENCES AND OTHER SURFACE IMPROVEMENTS THAT ARE DISTURBED OR DAMAGED BY CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITIONS BY CONTRACTOR, AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 12" VERTICAL CLEARANCE BETWEEN PROPOSED WATER MAINS AND ALL CROSSING UTILITIES.
12. THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
13. AT CONNECTIONS TO EXISTING BURIED PIPE, CONTRACTOR SHALL EXPOSE THE EXISTING PIPE AND VERIFY LOCATIONS, INVERT, MATERIALS, AND DIMENSIONS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY COUPLINGS, FITTINGS, APPURTENANCES, TOOLS, AND LABOR TO COMPLETE THE CONNECTIONS WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT, AT NO ADDITIONAL COST TO THE OWNER.
14. THRUST BLOCKS SHALL BE CONSTRUCTED AT ALL BENDS, TEES, REDUCERS, VALVES, BLIND FLANGES, CAPS, AND PLUGS PER DISTRICT STANDARDS WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE PLANS.
15. THE CONTRACTOR SHALL CONTROL DUST AT ALL TIMES AS OFTEN AS NECESSARY DURING CONSTRUCTION, AS REQUIRED BY THE OWNER REPRESENTATIVE.
16. WHEN UTILITY CONFLICTS ARE ENCOUNTERED, INSTALL WATER LINE ABOVE OR BELOW EX UTILITY PER DETAIL (3 / C-4). WATER LINE SHALL BE INSTALLED ABOVE SANITARY SEWER, UNLESS APPROVED IN ADVANCE BY ENGINEER.
17. CONTRACTOR SHALL INSTALL ANY NECESSARY FITTINGS, COUPLINGS, AND APPURTENANCES TO CONNECT DISSIMILAR PIPE MATERIALS.
18. ALL PIPING UNDER THE CONE OF INFLUENCE OF STRUCTURES OR CONCRETE SLABS SHALL BE CONCRETE ENCASED PER TYPICAL DETAIL (4 / C-5) UNLESS NOTED OTHERWISE, THE CONE OF INFLUENCE IS DEFINED WITH A 1:1 SLOPE FROM THE EXTERIOR LOWER CORNER OF THE STRUCTURAL FOOTING.
19. DIMENSIONS AND TOP ELEVATIONS OF ALL CONCRETE EQUIPMENT PADS SHOWN SHALL BE COMPARED WITH THE DIMENSIONS AND ANCHORAGE NEEDS FOR THE FAVORABLY REVIEWED EQUIPMENT PRIOR TO FORMING AND REBAR FABRICATION. CONTRACTOR SHALL INCREASE OR DECREASE EQUIPMENT PAD DIMENSIONS AS REQUIRED TO FIT EQUIPMENT PROVIDED AT NO ADDITIONAL COST TO THE CLIENT. CONFIRM LAYOUT CHANGES WITH THE ENGINEER FOR DIMENSION CHANGES GREATER THAN 6 INCHES IN ANY DIRECTION.
20. ALL COUPLINGS SHALL BE RESTRAINED UNLESS SPECIFICALLY NOTED OTHERWISE.
21. NO DRILLING OR OTHER NOISE PRODUCING ACTIVITIES (>70 DB) SHALL OCCUR AT WELL SITES 4, 4A, AND 5 BEFORE SEPTEMBER 15 (DURING THE MARBLED MURRELET NESTING SEASON). BEFORE SEPTEMBER 15, NO CONSTRUCTION ACTIVITIES SHALL OCCUR AT ANY SITE WITHIN ONE HOUR AFTER SUNRISE OR ONE HOUR BEFORE SUNSET.
22. A MINIMUM OF 3 EXISTING OR NEW WELLS SHALL BE OPERATIONAL IN-HAND AT ANY GIVEN TIME AFTER OCTOBER 15.

SURVEY CONTROL NOTES

HORIZONTAL DATUM
NORTH AMERICAN DATUM OF 1983 (NAD83).

COORDINATE SYSTEM
COORDINATES SHOWN HEREON ARE GROUND COORDINATES BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE III.

VERTICAL DATUM
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

POINT NUMBER	X	Y	ELEVATION	DESCRIPTION
1	2012978.528	6014514.333	275.7	60D NAIL
2	2013105.627	6014656.05	276.051	60D NAIL
3	2013242.662	6014751.26	279.353	60D NAIL
11	2012462.067	6015254.898	264.15	60D NAIL
12	2012248.737	6015350.391	266.53	60D NAIL
13	2012581.045	6015159.546	265.674	60D NAIL
21	2011963.059	6015196.534	259.72	60D NAIL
22	2011766.109	6015057.108	260.524	60D NAIL
23	2011810.594	6015077.113	260.333	60D NAIL

UTILITY NOTES

PHYSICAL ITEMS SHOWN ON THIS SURVEY ARE LIMITED TO THOSE SURFACE ITEMS VISIBLE AS OF THE DATE OF THIS SURVEY. SUBSURFACE OBJECTS, IF ANY, ARE NOT SHOWN, WITH THE EXCEPTION OF UNDERGROUND UTILITY LINES. NO WARRANTY IS IMPLIED AS TO THE EXACT LOCATION OF THESE LINES OR AS TO THE COMPLETENESS OF THE UTILITY INFORMATION SHOWN HEREON. SAID SUBSURFACE OBJECTS MAY INCLUDE, BUT ARE NOT LIMITED TO, CONCRETE FOOTINGS, SLABS, SHORING, STRUCTURAL PILES, UTILITY VAULTS, PIPING, UNDERGROUND TANKS, ADDITIONAL UNDERGROUND UTILITY LINES, TELECOMMUNICATION LINES, FIBER OPTIC LINES AND ANY OTHER SUBSURFACE STRUCTURES OR FACILITIES NOT REVEALED BY A SURFACE INSPECTION ON THE DATE THAT THE FIELD WORK FOR THIS SURVEY WAS PERFORMED.

MONUMENT NOTES

PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ON THIS SITE, IT IS ADVISED THAT ALL INVOLVED PARTIES REVIEW SECTION 8771 AND SECTION 8725 OF THE BUSINESS AND PROFESSIONS CODE AND SECTION 605 OF THE CALIFORNIA PENAL CODE TO ENSURE THAT MONUMENT CONSERVATION HAS BEEN PROPERLY ADDRESSED.

SURVEY NOTES

THIS SURVEY MAP WAS COMPILED FROM A TOPOGRAPHIC SURVEY DONE IN NOVEMBER, 2024. ANY CHANGES OR IMPROVEMENTS MADE TO THE PROPERTY AFTER THESE DATES MAY NOT BE SHOWN ON THIS SURVEY.

100% DESIGN / BID SET

ABBREVIATIONS

(A)	ABANDON
ACI	AMERICAN CONCRETE INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
APPROX	APPROXIMATE
APN	ASSESSOR'S PARCEL NUMBER
ARV	AIR RELEASE VALVE
CIP	CAST IRON PIPE
CO	CLEANOUT
CONC	CONCRETE
CPLG	COUPLING
DB	DECIBELS
DH	DRILL HOLE
DET	DETAIL
DI	DUCTILE IRON
DIA.	DIAMETER
DIP	DUCTILE IRON PIPE
DIM	DIMENSION
DW	DRINKING (POTABLE) WATER
(E)	EXISTING
E	EASTING
EA	EACH
ELEV.	ELEVATION
ELEC	ELECTRICAL
EOP	EDGE OF PAVEMENT
FCA	FLANGED COUPLING ADAPTER
FH	FIRE HYDRANT
FIG	FIGURE
FL	FLANGE
FM	FLOW METER
FT	FEET
FT BGS	FEET BELOW GROUND SURFACE
GA	GAGE
GAL	GALLON
GALV	GALVANIZED
GCP	GROUND CONTROL POINT
GIS	GEOGRAPHIC INFORMATION SYSTEM
GPM	GALLONS PER MINUTE
GR	GRADE
GS	GALVANIZED STEEL
GV	GATE VALVE
H	HEIGHT
HORIZ	HORIZONTAL
HP	HORSE POWER
HR	HOUR
I.D.	INSIDE DIAMETER
IN.	INCHES
INV.	INVERT
JB	JUNCTION BOX
L	LEFT
MAX	MAXIMUM
MIN	MINIMUM
MJ	MECHANICAL JOINT
N	NORTHING
(N)	NEW
NTS	NOT TO SCALE
INV.A.	OUTSIDE DIAMETER
OFF	OFFSET
OH	OVERHEAD
PL	PLASTIC
PRV	PRESSURE RELIEF VALVE
PSIG	POUNDS PER SQUARE INCH, GAUGE
PT	POINT
PW	POTABLE WATER
QTY	QUANTITY
R	RIGHT
ROW	RIGHT-OF-WAY
R.C.	RELATIVE COMPACTION
RC(P)	REINFORCED CONCRETE (PIPE)
RED	REDUCER
REINF	REINFORCED(ING)
REQD	REQUIRED
RPP	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTOR
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAIN
SPEC(S)	SPECIFICATION(S)
SSMH	SANITARY SEWER MANHOLE
SS	SANITARY SEWER
SST	STAINLESS STEEL
STA.	STATION
STL	STEEL
TOP	TOP OF PIPE
TEMP	TEMPORARY
TOC	TOP OF CONCRETE
TYP.	TYPICAL
UG	UNDERGROUND
VIF	VERIFY IN FIELD
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WATER
W/	WITH
WM	WATER METER
WS	WELDED STEEL

REFERENCE SYMBOLS

GENERAL LEGEND

EARTH
CONCRETE
GRAVEL

EXISTING	PROPOSED	DESCRIPTION
140		CONTOUR LINE (EXAMPLE 140' ELEVATION)
OH		OVERHEAD ELECTRICAL
		OBJECT OUTLINE
		ROAD EDGE
		TOP OF BANK
	X X	FENCE
		CONNECTION DETAIL
E	E	UNDERGROUND ELECTRICAL
W W	W W	WATER LINE
		OVERHEAD POWER POLE
		BENCH MARK
		MISC. OBJECT
		SURVEY CONTROL POINT
		FIRE HYDRANT
		GATE VALVE
		WATER METER
		WATER LINE CAP
		CHECK VALVE
		COUPLING
		REDUCER

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(650) 292-9100 • FAX (650) 552-9012

PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

GENERAL NOTES, ABBREVIATIONS, SYMBOLS, AND LEGEND

	DATE	APPRD	DESCRIPTION	REV

DATE: MAR 2025
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VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
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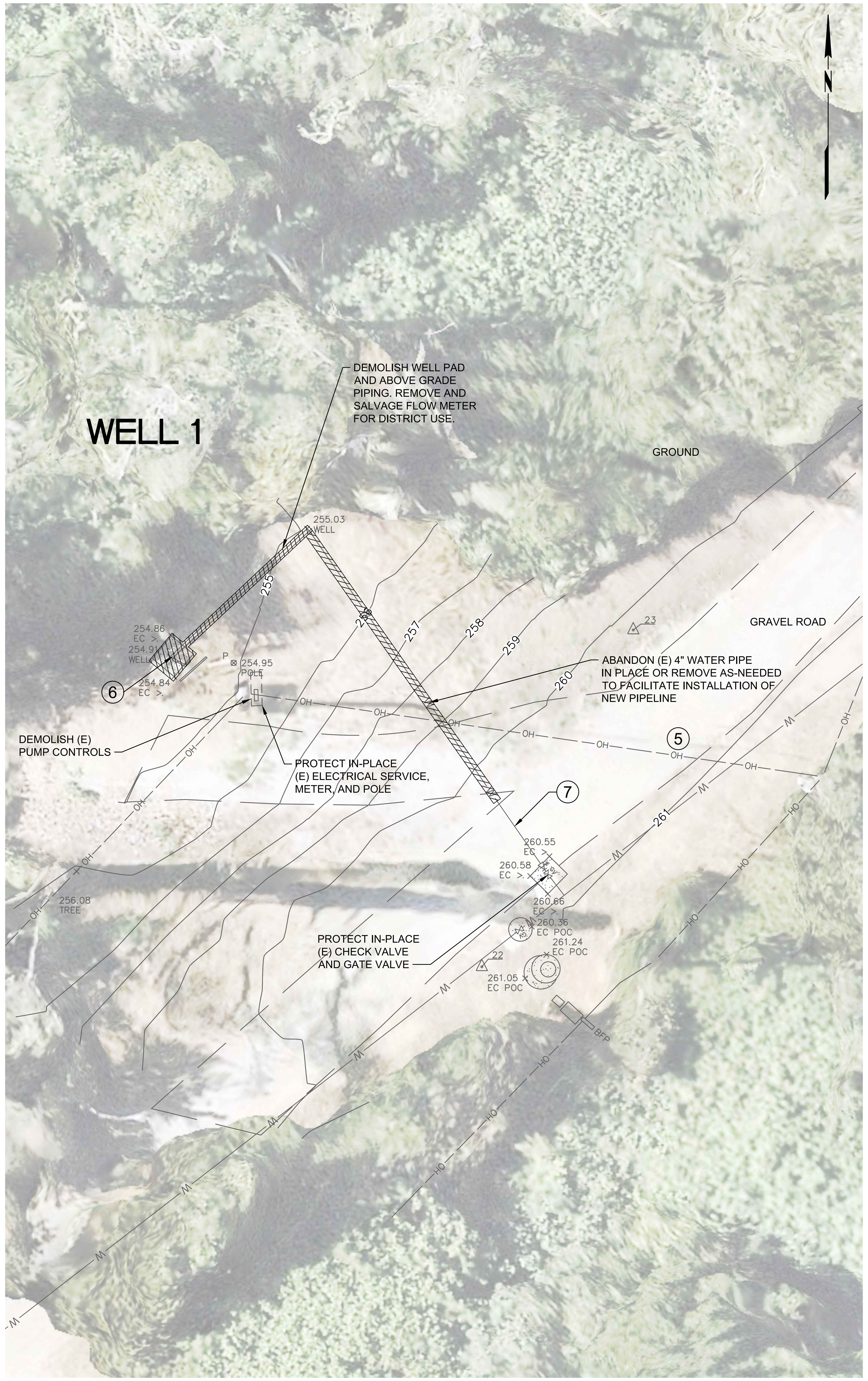
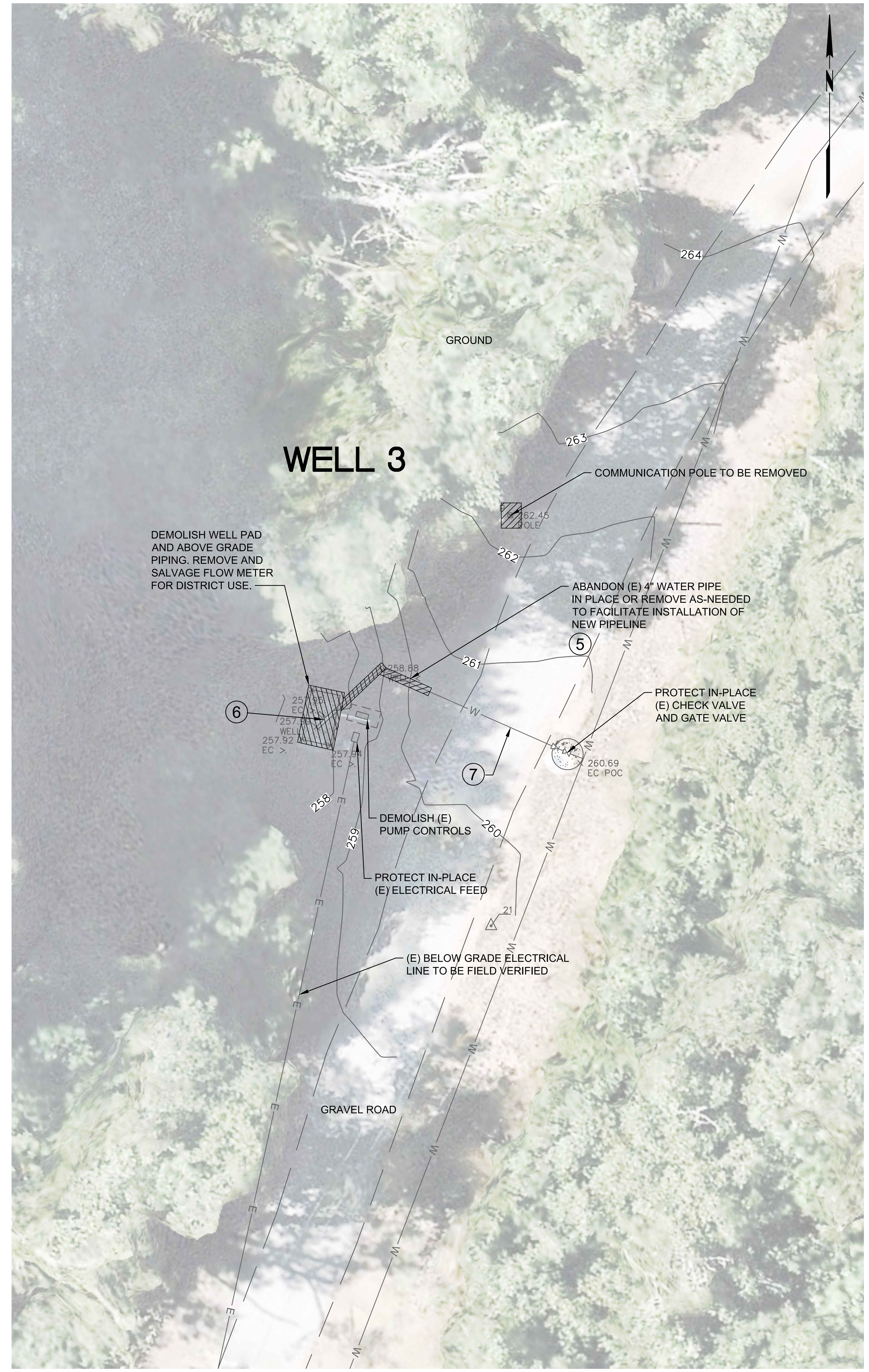
REGISTERED PROFESSIONAL ENGINEER — JONATHAN P. H. SUN — C 80108 — CIVIL — STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

REGISTERED PROFESSIONAL ENGINEER — TYLER F. COLVER — C 80141 — CIVIL — STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

SHEET NUMBER
G-2
2 OF 29



PLAN, WELL 1



PLAN, WELL 3

0 5 10 20 30
SCALE: 1"=10'

100% DESIGN / BID SET

CONSTRUCTION NOTES:

1. LOCATIONS OF ALL UNDERGROUND PIPING AND ELECTRICAL CONDUITS TO BE FIELD VERIFIED BY CONTRACTOR.
2. PROTECT ALL ELECTRICAL CONDUITS UP TO EXISTING METER IN PLACE.
3. SCHEDULE SHUTDOWN OF UTILITIES, INCLUDING DE-ENERGIZING ELECTRICAL, WITH OWNER PRIOR TO PROCEEDING WITH DEMOLITION.
4. REMOVE AND PROPERLY DISPOSE OF DEMOLITION DEBRIS, TRASH, RUBBISH, AND ANY MISCELLANEOUS MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS.
5. CAP AND PLUG EACH END OF INACTIVE WATER PIPES TO BE ABANDONED IN PLACE PER DETAIL 1/C-4.
6. DEMOLISH (E) WELL PER SPECIFICATION 33 11 13.
7. INSTALL TEMPORARY CAP AND PROTECT IN-PLACE (E) 4" WATER PIPE. CONNECT TO (N) 4" WATER PIPE AS DETAILED ON SHEETS C-1, C-2, AND C-3.

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PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

DEMOLITION PLAN, WELLS 1 AND 3

REV	DESCRIPTION	APPR'D	DATE

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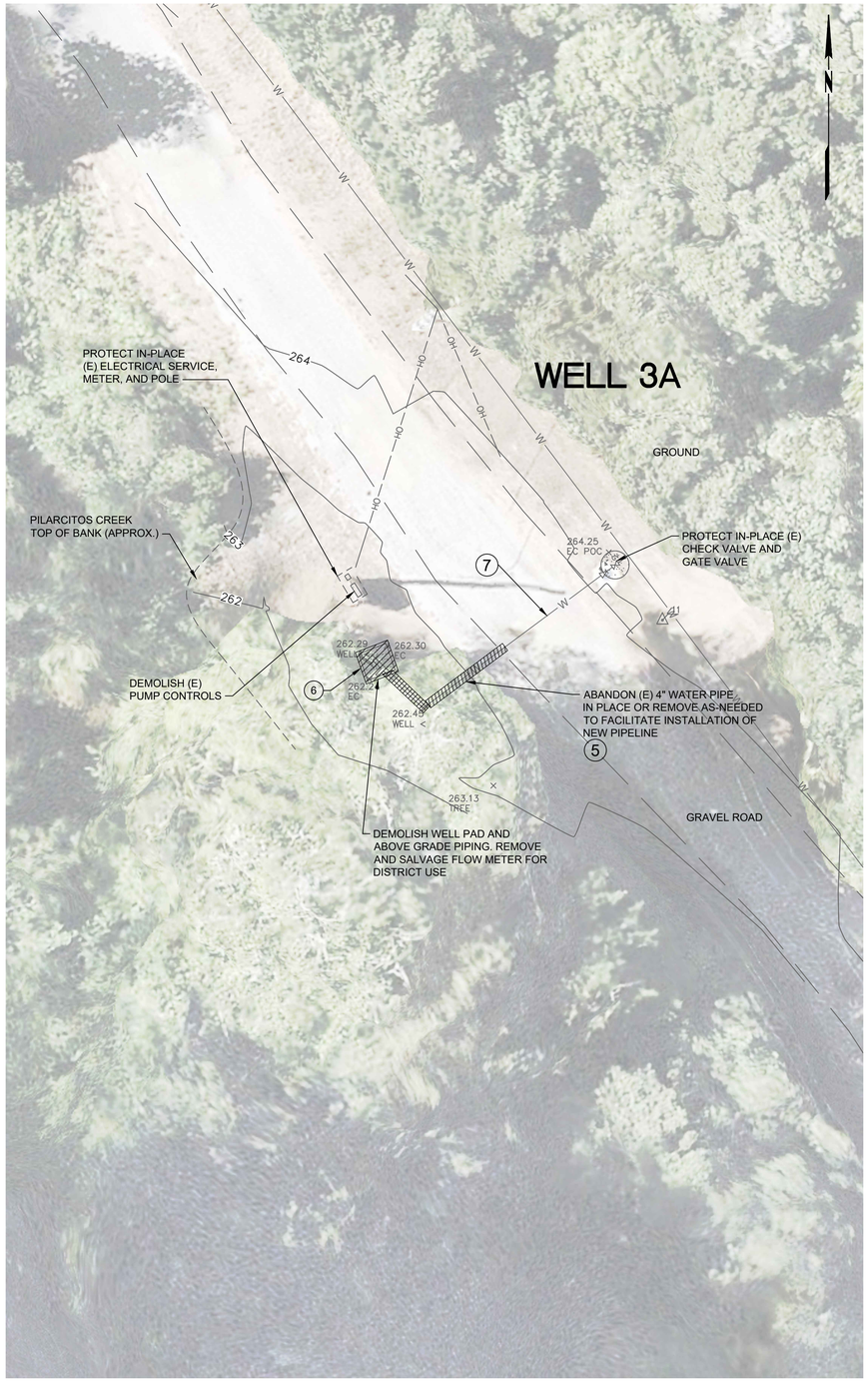
100% DESIGN / BID SET

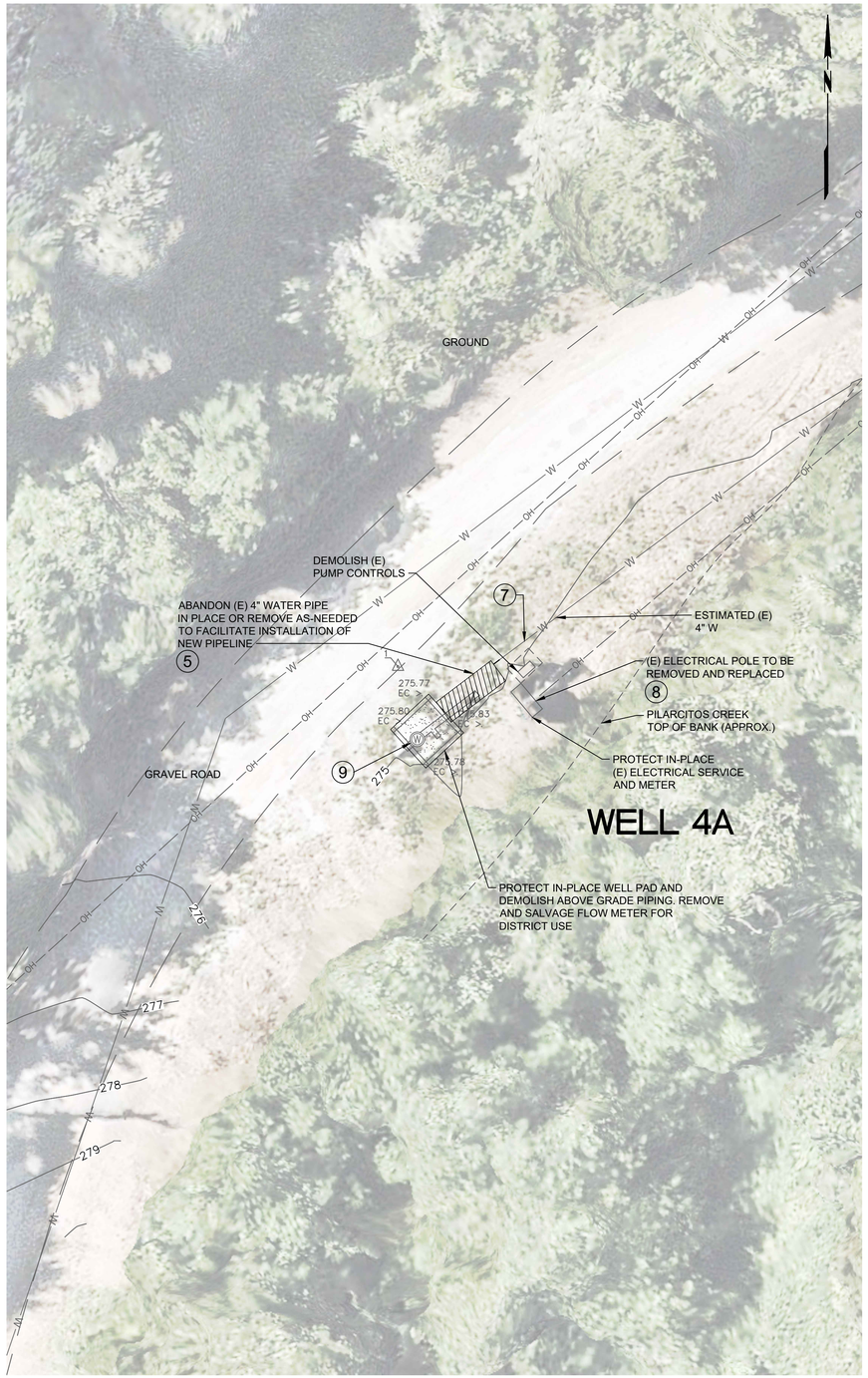
REGISTERED PROFESSIONAL ENGINEER TYLER F. COLYER C 80141 CIVIL STATE OF CALIFORNIA 03/31/2025
100% DESIGN / BID SET

SHEET NUMBER
D-1
3 OF 29

Path: G:\EKI_CONSTRUCTION_DWGS\B80108.01 (CIP PROJECTS)\B80108.39_Pilarcitos_Wells Filename: B80108.39_Demolition_V2.dwg Plot Date: March 31, 2025 - 11:50 AM CADD User: Nicole Chapman



PLAN, WELL 3A



PLAN, WELL 4A

0 5 10 20 30
SCALE: 1"=10'

100% DESIGN / BID SET

CONSTRUCTION NOTES:

1. LOCATIONS OF ALL UNDERGROUND PIPING AND ELECTRICAL CONDUITS TO BE FIELD VERIFIED BY CONTRACTOR.
2. PROTECT ALL ELECTRICAL CONDUITS UP TO EXISTING METER IN PLACE.
3. SCHEDULE SHUTDOWN OF UTILITIES, INCLUDING DE-ENERGIZING ELECTRICAL, WITH OWNER PRIOR TO PROCEEDING WITH DEMOLITION.
4. REMOVE AND PROPERLY DISPOSE OF DEMOLITION DEBRIS, TRASH, RUBBISH, AND ANY MISCELLANEOUS MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS.
5. CAP AND PLUG EACH END OF INACTIVE WATER PIPES TO BE ABANDONED IN PLACE PER DETAIL 1/C-4.
6. DEMOLISH (E) WELL PER SPECIFICATION 33 11 13.
7. INSTALL TEMPORARY CAP AND PROTECT IN-PLACE (E) 4" WATER PIPE. CONNECT TO (N) 4" WATER PIPE AS DETAILED ON SHEETS C-1, C-2, AND C-3.
8. COORDINATE WITH DISTRICT AND PG&E FOR DE-ENERGIZATION OF (E) ELECTRICAL SERVICE AT WELL 4A PRIOR TO PERFORMING WORK RELATED TO POLE REPLACEMENT.
9. CONVERT (E) WELL TO MONITORING WELL BY PLACING PVC ACCESS CAP ON WELL WITH 2" PORTS FOR MANUAL MEASUREMENTS.
10. AT WELL 4A, REFERENCE TIME RESTRICTIONS LOCATED ON SHEET G-2, NOTE 21, AS WELL AS SPECIFICATION 01 41 00 (ENVIRONMENTAL REQUIREMENTS).

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PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

DEMOLITION PLAN, WELLS 3A AND 4A

REV	DESCRIPTION	APPR'D	DATE

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No. C80108
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STATE OF CALIFORNIA
03/31/2025
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REGISTERED PROFESSIONAL ENGINEER
TYLER F. COLYER
C 80141
CIVIL
STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

SHEET NUMBER
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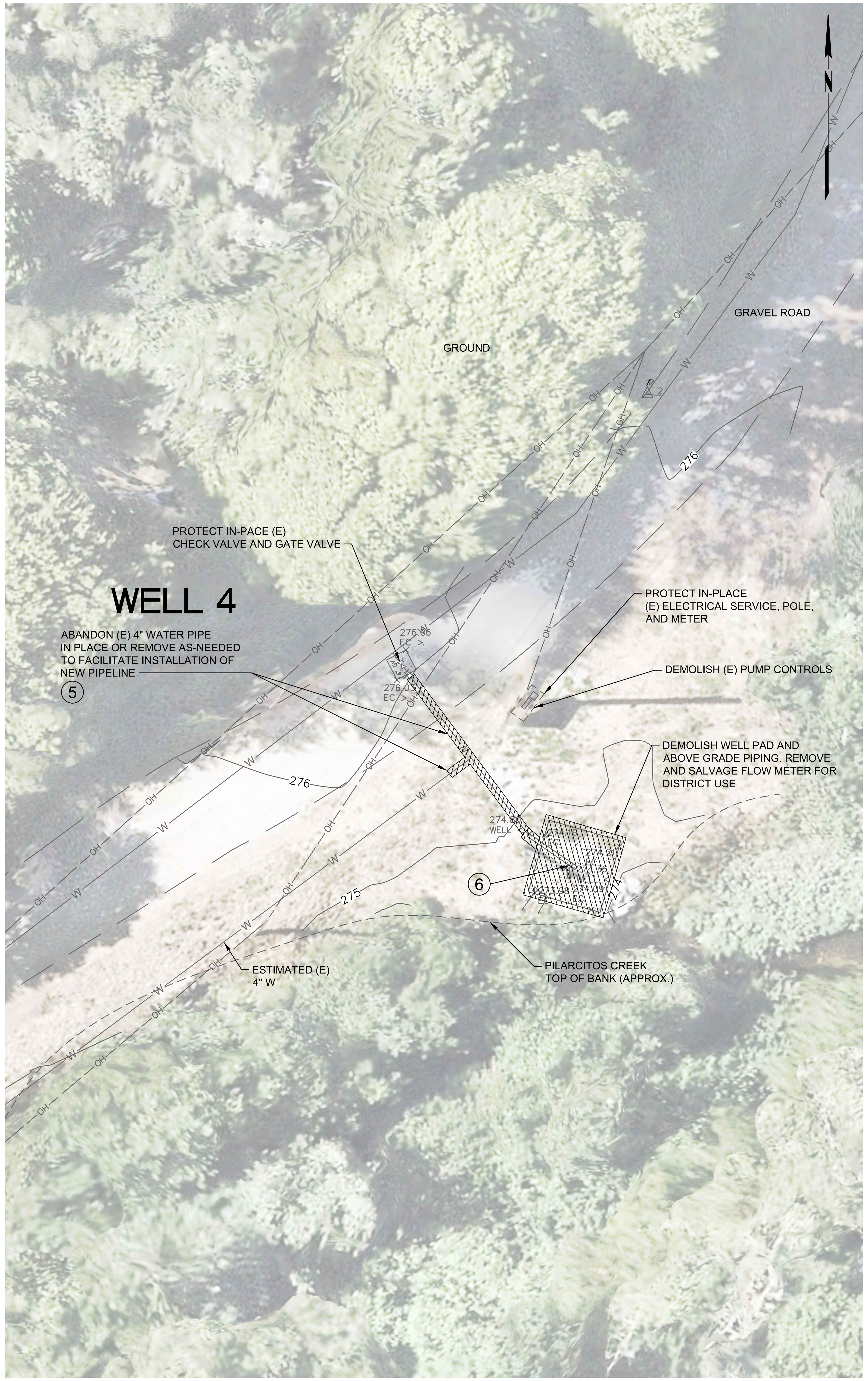
4 OF 29



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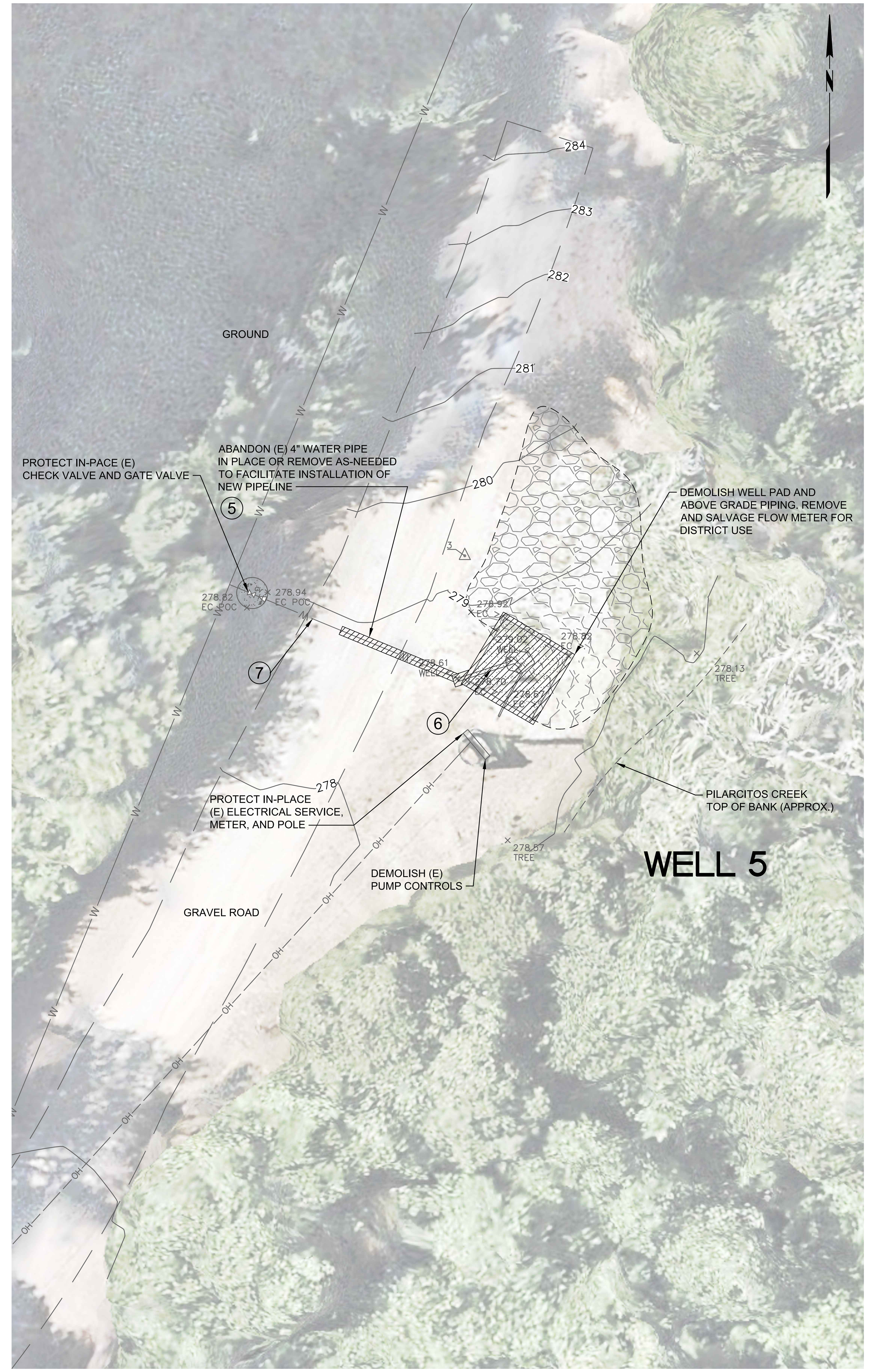

PLAN, WELL 5

0 5 10 20 30
SCALE: 1"=10'

100% DESIGN / BID SET

CONSTRUCTION NOTES:

1. LOCATIONS OF ALL UNDERGROUND PIPING AND ELECTRICAL CONDUITS TO BE FIELD VERIFIED BY CONTRACTOR.
2. PROTECT ALL ELECTRICAL CONDUITS UP TO EXISTING METER IN PLACE.
3. SCHEDULE SHUTDOWN OF UTILITIES, INCLUDING DE-ENERGIZING ELECTRICAL, WITH OWNER PRIOR TO PROCEEDING WITH DEMOLITION.
4. REMOVE AND PROPERLY DISPOSE OF DEMOLITION DEBRIS, TRASH, RUBBISH, AND ANY MISCELLANEOUS MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS.
5. CAP AND PLUG EACH END OF INACTIVE WATER PIPES TO BE ABANDONED IN PLACE PER DETAIL 1/C-4.
6. DEMOLISH (E) WELL PER SPECIFICATION 33 11 13.
7. INSTALL TEMPORARY CAP AND PROTECT IN-PLACE (E) 4" WATER PIPE. CONNECT TO (N) 4" WATER PIPE AS DETAILED ON SHEETS C-1, C-2, AND C-3.
8. AT WELLS 4 AND 5, REFERENCE TIME RESTRICTIONS LOCATED ON SHEET G-2, NOTE 21, AS WELL AS SPECIFICATION 01 41 00 (ENVIRONMENTAL REQUIREMENTS).

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DEMOLITION PLAN, WELLS 4 AND 5

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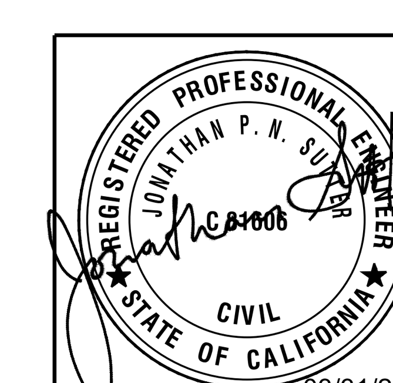

03/31/2025
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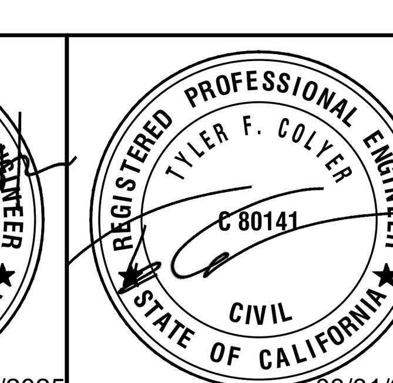

03/31/2025
100% DESIGN / BID SET

SHEET NUMBER
D-3

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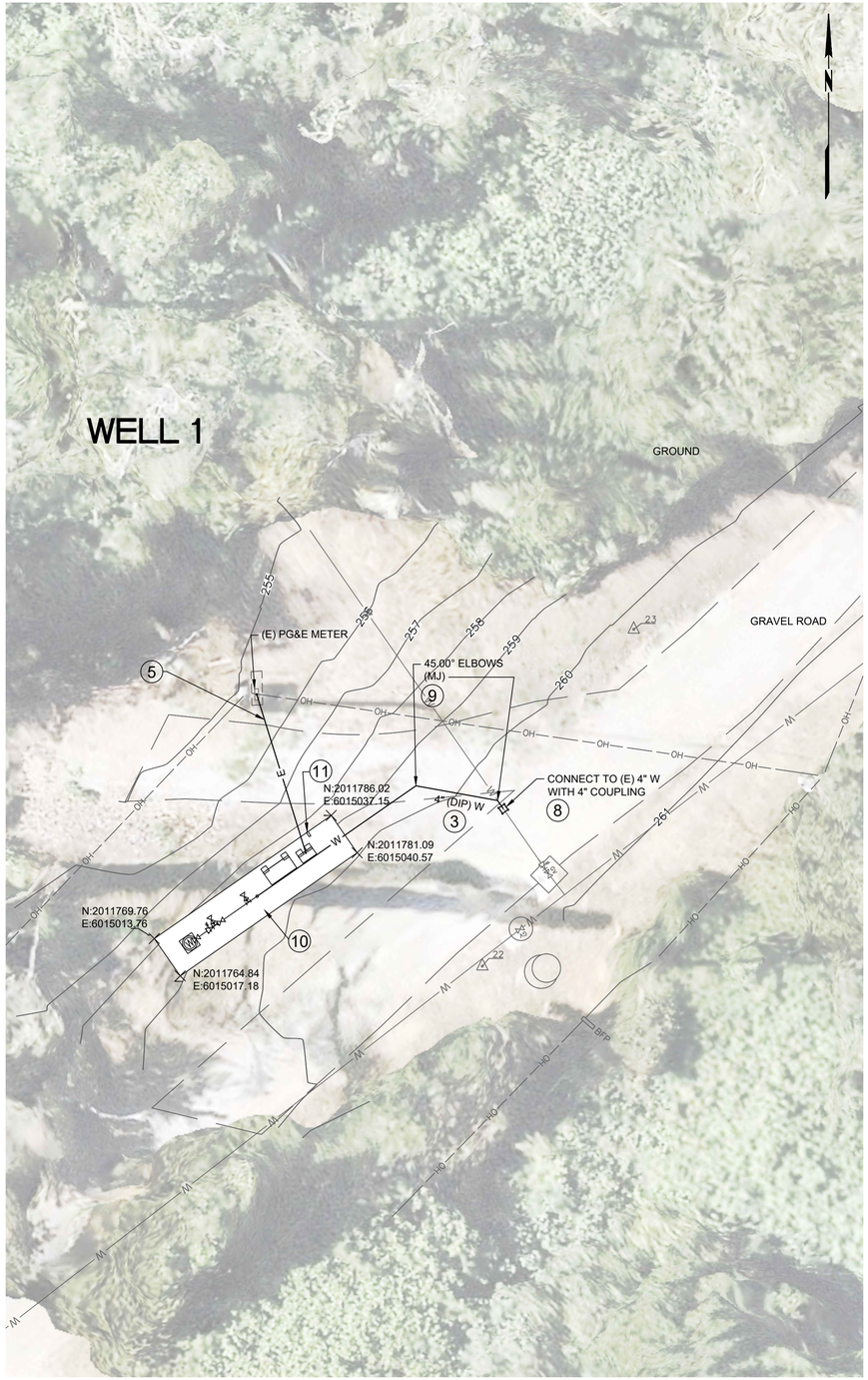
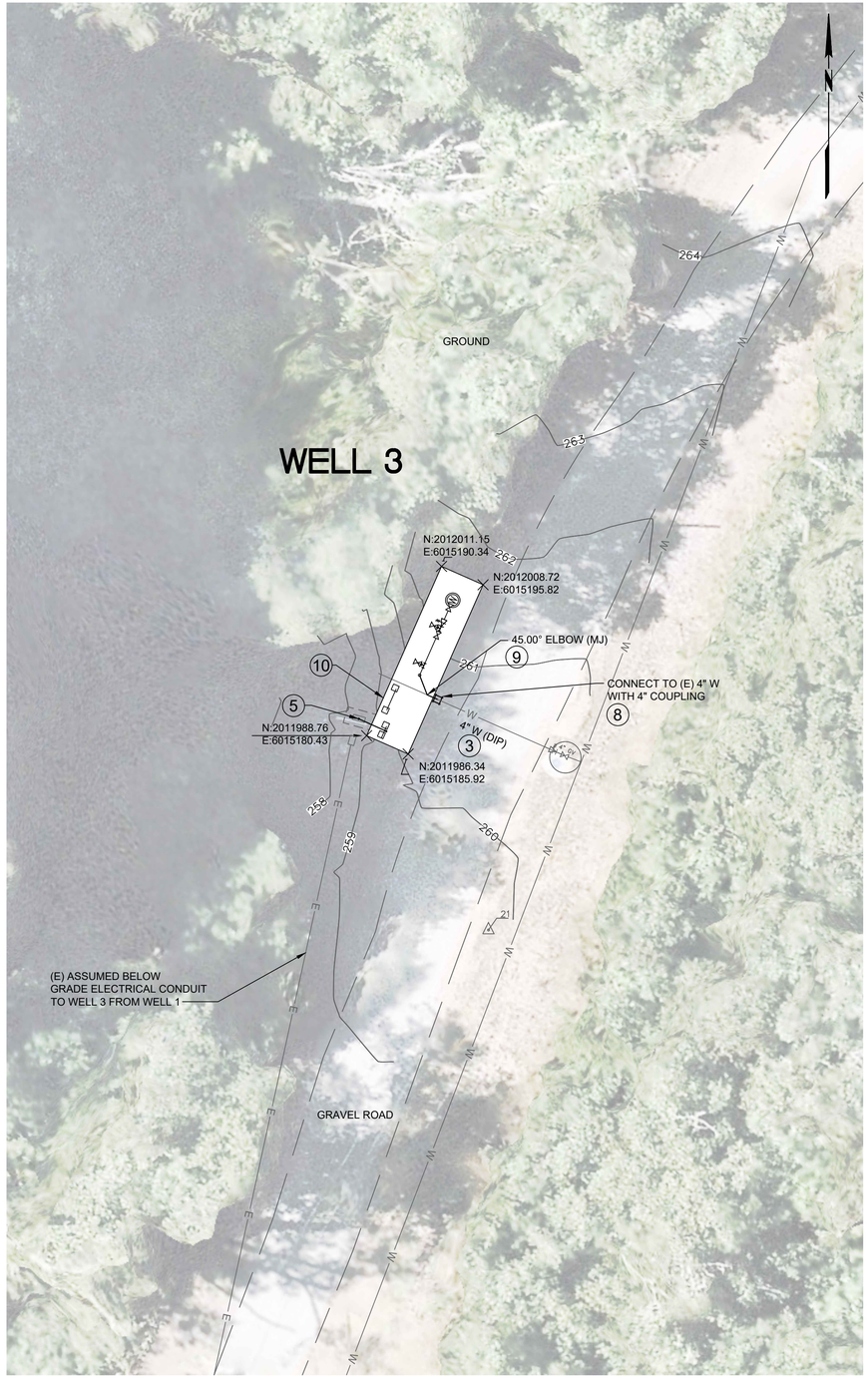


PLAN, WELL 1



PLAN, WELL 3

0 5 10 20 30
SCALE: 1"=10'

100% DESIGN / BID SET

CONSTRUCTION NOTES:

1. ALL LOCATIONS AND DEPTHS OF (E) UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING SIZES, DEPTHS, AND LOCATIONS OF ALL UTILITIES. ANY CHANGES TO THESE PLANS AND SPECIFICATIONS SHALL BE APPROVED BY THE ENGINEER OR OWNER REPRESENTATIVE.
2. CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES LOCATED OUTSIDE OF LIMITS OF WORK.
3. INSTALL (N) WATER LINE BY OPEN TRENCH PER DETAIL CC-01/C-4, CC-02/C-4, OR CC-03/C-4.

   IF THERE ARE UTILITY CONFLICTS, INSTALL (N) WATER LINE PER DETAIL 3/C-4
4. ALL DUCTILE IRON PIPE JOINTS SHALL BE RESTRAINED. IN ADDITION, DUCTILE IRON PIPE JOINTS SHALL BE RESTRAINED MECHANICAL JOINTS WITHIN 3-FEET OF ALL CONCRETE ENCASEMENTS.
5. BURIED ELECTRICAL CONDUIT PER DETAIL 26023/GE-2. CONDUIT STUB UPS PER DETAIL 26107/GE-2
6. AT CONNECTIONS TO EXISTING BURIED PIPE, CONTRACTOR SHALL EXPOSE THE EXISTING PIPE AND VERIFY LOCATIONS, DEPTH, MATERIALS, AND DIMENSIONS OF EXISTING PIPE. THE CONTRACTOR SHALL FURNISH ALL NECESSARY COUPLINGS, FITTINGS, APPURTENANCES, TOOLS, AND LABOR TO COMPLETE THE CONNECTIONS WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT, AT NO ADDITIONAL COST TO THE OWNER.
7. UNLESS SHOWN OTHERWISE, MINIMUM PIPE COVER SHALL BE 3-FEET. INSTALL PIPE AND VALVES PER OWNER STANDARD DETAILS. SEE SHEETS C-4 AND C-5.
8. TIE-INS TO EXISTING SYSTEMS SHALL BE MADE WITHOUT INTERRUPTION OF EXISTING SERVICE UNLESS NOTED OTHERWISE IN THE DRAWINGS OR SPECIFICATIONS. IF REQUIRED, CONTRACTOR SHALL SUBMIT A SCHEDULE OF INTERRUPTION OF SERVICE IN ACCORDANCE WITH THE SPECIFICATIONS.
9. INSTALL THRUST BLOCKS ON ALL FITTINGS PER DETAIL CC-22/C-4
10. AT EACH WELL SITE, CONTRACTOR SHALL SMOOTH GRADE BETWEEN EDGE OF CONCRETE PAD AND THE EXISTING SITE ELEVATIONS. GRADE TO DRAIN AWAY FROM THE CONCRETE PADS.
11. INSTALL 120V RECEPTACLE IN PROTECTED LOCATION ON CONCRETE PAD. SEE ELECTRICAL DRAWINGS.

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DALY CITY, CALIFORNIA 94014
(650) 292-9100 • FAX (650) 552-9012

PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

PLAN, PILARCITOS WELLS 1 AND 3

REV	DESCRIPTION	APPRD	DATE

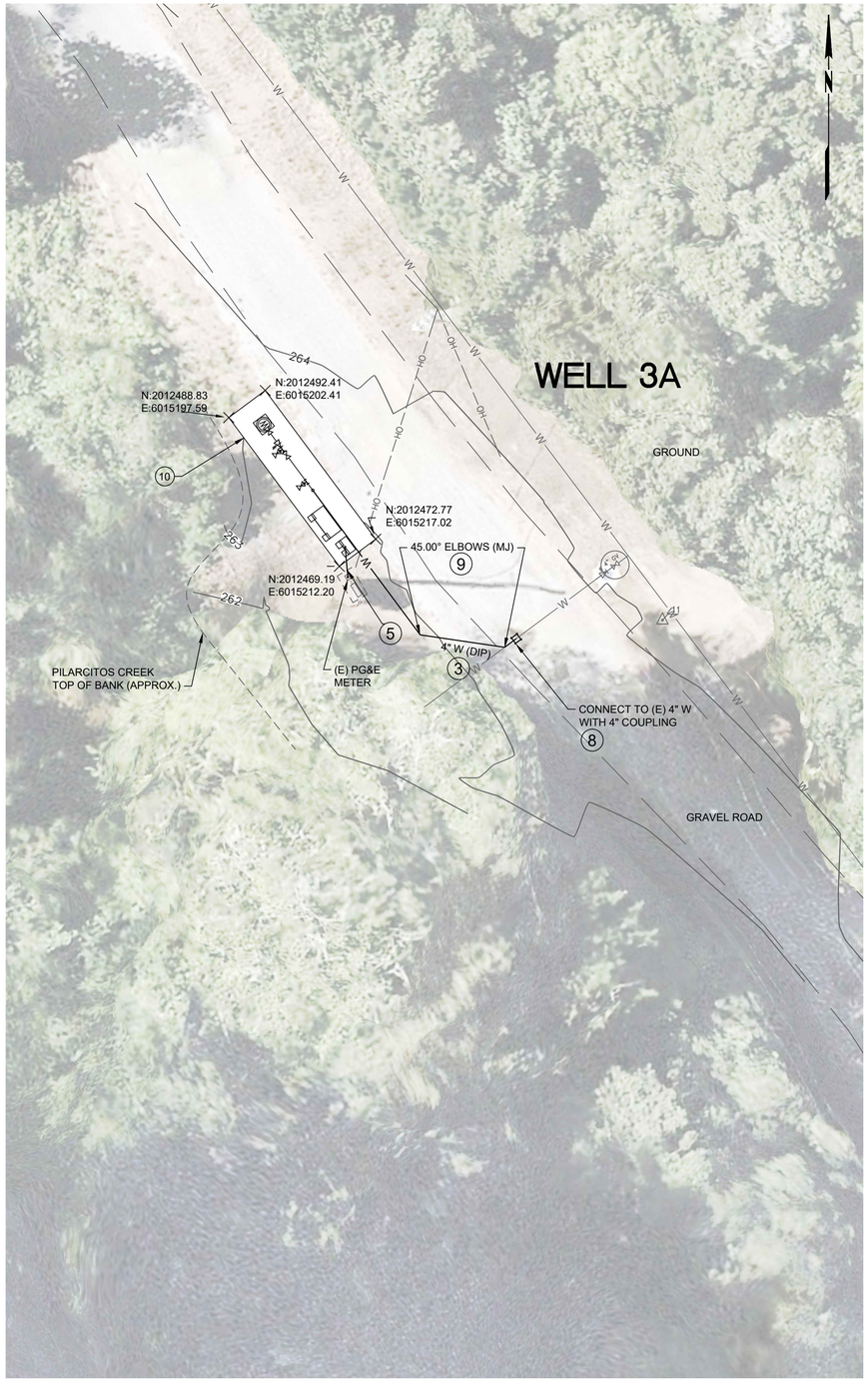
DATE: MAR 2025
SCALE: AS SHOWN
DRAWN: NC
DESIGNED: TC
APPROVED: JS
JOB NO.: B80108.39

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
0 1"

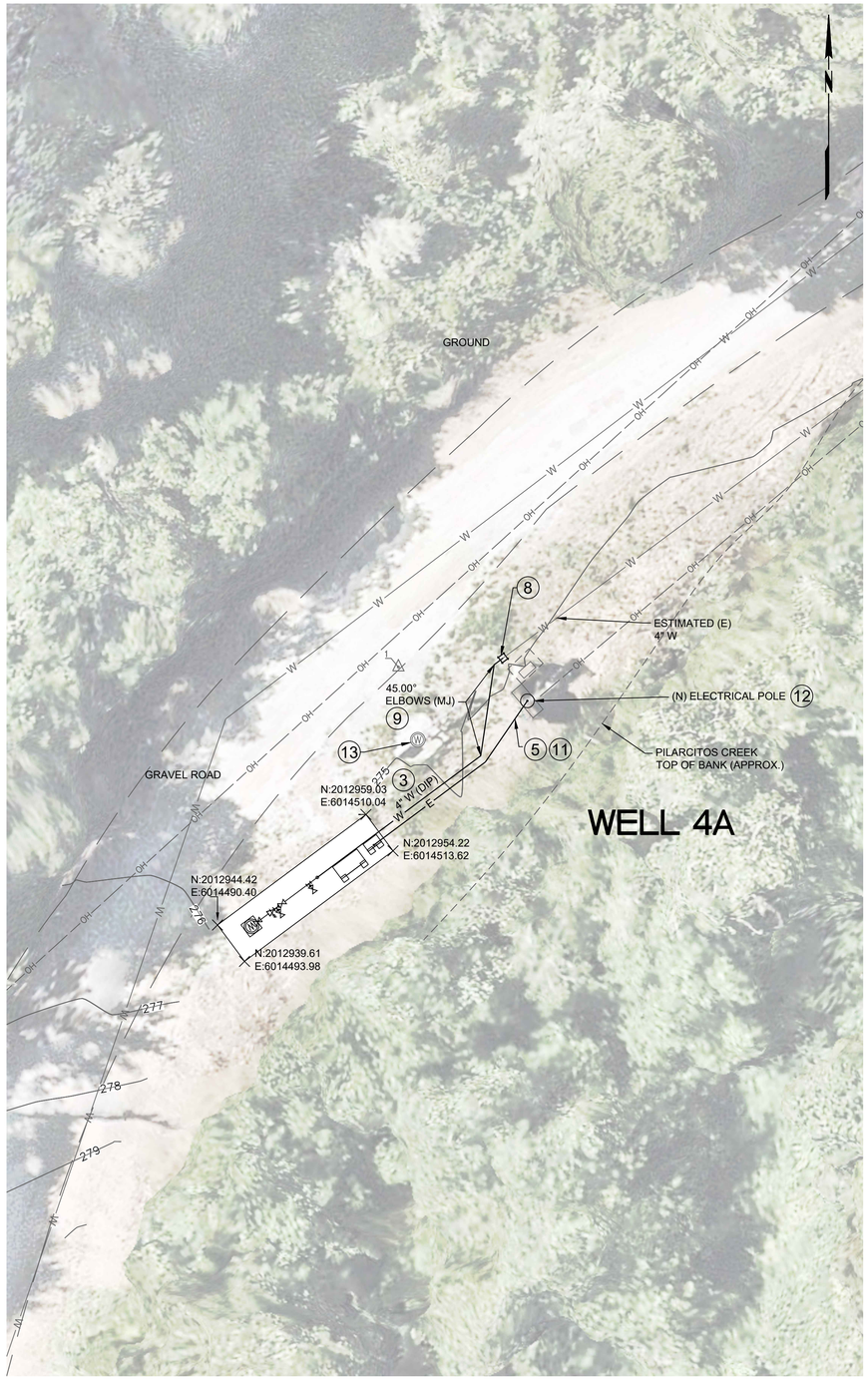
REGISTERED PROFESSIONAL ENGINEER — JONATHAN P. N. JUE — C 80008 — CIVIL — STATE OF CALIFORNIA — 03/31/2025
100% DESIGN / BID SET

REGISTERED PROFESSIONAL ENGINEER — TYLER F. COLYER — C 80141 — CIVIL — STATE OF CALIFORNIA — 03/31/2025
100% DESIGN / BID SET

SHEET NUMBER
C-1
6 OF 29



PLAN, WELL 3A



PLAN, WELL 4A

0 5 10 20 30
SCALE: 1"=10'

100% DESIGN / BID SET

CONSTRUCTION NOTES:

1. ALL LOCATIONS AND DEPTHS OF (E) UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING SIZES, DEPTHS, AND LOCATIONS OF ALL UTILITIES. ANY CHANGES TO THESE PLANS AND SPECIFICATIONS SHALL BE APPROVED BY THE ENGINEER OR OWNER REPRESENTATIVE.
2. CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES LOCATED OUTSIDE OF LIMITS OF WORK.
3. INSTALL (N) WATER LINE BY OPEN TRENCH PER DETAIL CC-01/C-4, CC-02/C-4, OR CC-03/C-4.

   IF THERE ARE UTILITY CONFLICTS, INSTALL (N) WATER LINE PER DETAIL 3/C-4
4. ALL DUCTILE IRON PIPE JOINTS SHALL BE RESTRAINED. IN ADDITION, DUCTILE IRON PIPE JOINTS SHALL BE RESTRAINED MECHANICAL JOINTS WITHIN 3-FEET OF ALL CONCRETE ENCASEMENTS.
5. BURIED ELECTRICAL CONDUIT PER DETAIL 26023/GE-2. CONDUIT STUB UPS PER DETAIL 26107/GE-2
6. AT CONNECTIONS TO EXISTING BURIED PIPE, CONTRACTOR SHALL EXPOSE THE EXISTING PIPE AND VERIFY LOCATIONS, DEPTH, MATERIALS, AND DIMENSIONS OF EXISTING PIPE. THE CONTRACTOR SHALL FURNISH ALL NECESSARY COUPLINGS, FITTINGS, APPURTENANCES, TOOLS, AND LABOR TO COMPLETE THE CONNECTIONS WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT, AT NO ADDITIONAL COST TO THE OWNER.
7. UNLESS SHOWN OTHERWISE, MINIMUM PIPE COVER SHALL BE 3-FEET. INSTALL PIPE AND VALVES PER OWNER STANDARD DETAILS. SEE SHEETS C-4 AND C-5.
8. TIE-INS TO EXISTING SYSTEMS SHALL BE MADE WITHOUT INTERRUPTION OF EXISTING SERVICE UNLESS NOTED OTHERWISE IN THE DRAWINGS OR SPECIFICATIONS. IF REQUIRED, CONTRACTOR SHALL SUBMIT A SCHEDULE OF INTERRUPTION OF SERVICE IN ACCORDANCE WITH THE SPECIFICATIONS.
9. INSTALL THRUST BLOCKS ON ALL FITTINGS PER DETAIL CC-22/C-4.
10. AT EACH WELL SITE, CONTRACTOR SHALL SMOOTH GRADE BETWEEN EDGE OF CONCRETE PAD AND THE EXISTING SITE ELEVATIONS. GRADE TO DRAIN AWAY FROM THE CONCRETE PADS.
11. RADIO ANTENNA TO BE INSTALLED 15 FEET UP (N) ELECTRICAL POLE AND CONNECTED TO (N) CONDUIT RUN. SEE ELECTRICAL SHEETS.
12. (E) PG&E METER TO BE REMOVED FROM (E) ELECTRICAL POLE AND INSTALLED ON (N) REPLACEMENT POLE. (N) ANTENNA TO BE INSTALLED 15 FEET ABOVE GRADE ON (N) POLE.
13. (E) WELL 4A TO BE CONVERTED TO MONITORING WELL AND BE PROTECTED IN PLACE DURING CONSTRUCTION. PLACE PVC ACCESS CAP WITH 2" PORTS FOR MANUAL MEASUREMENTS ON (E) WELL.
14. AT WELL 4A, REFERENCE TIME RESTRICTIONS LOCATED ON SHEET G-2, NOTE 21, AS WELL AS SPECIFICATION 01 41 00 (ENVIRONMENTAL REQUIREMENTS).

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PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

PLAN, PILARCITOS WELLS 3A AND 4A

REV	DESCRIPTION	APPRD	DATE

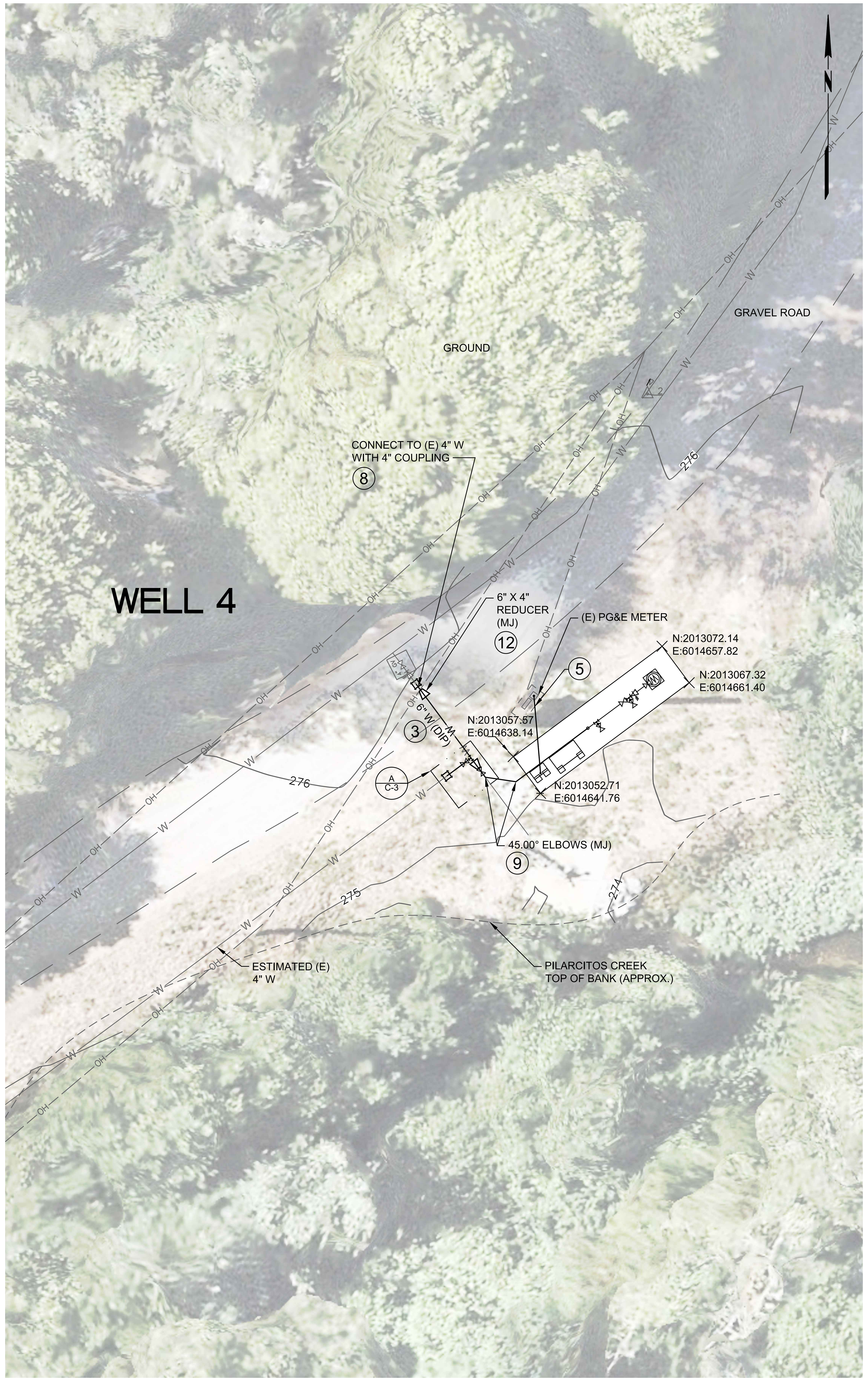
DATE: MAR 2025
SCALE: AS SHOWN
DRAWN: NC
DESIGNED: TC
APPROVED: JS
JOB NO.: B80108.39

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

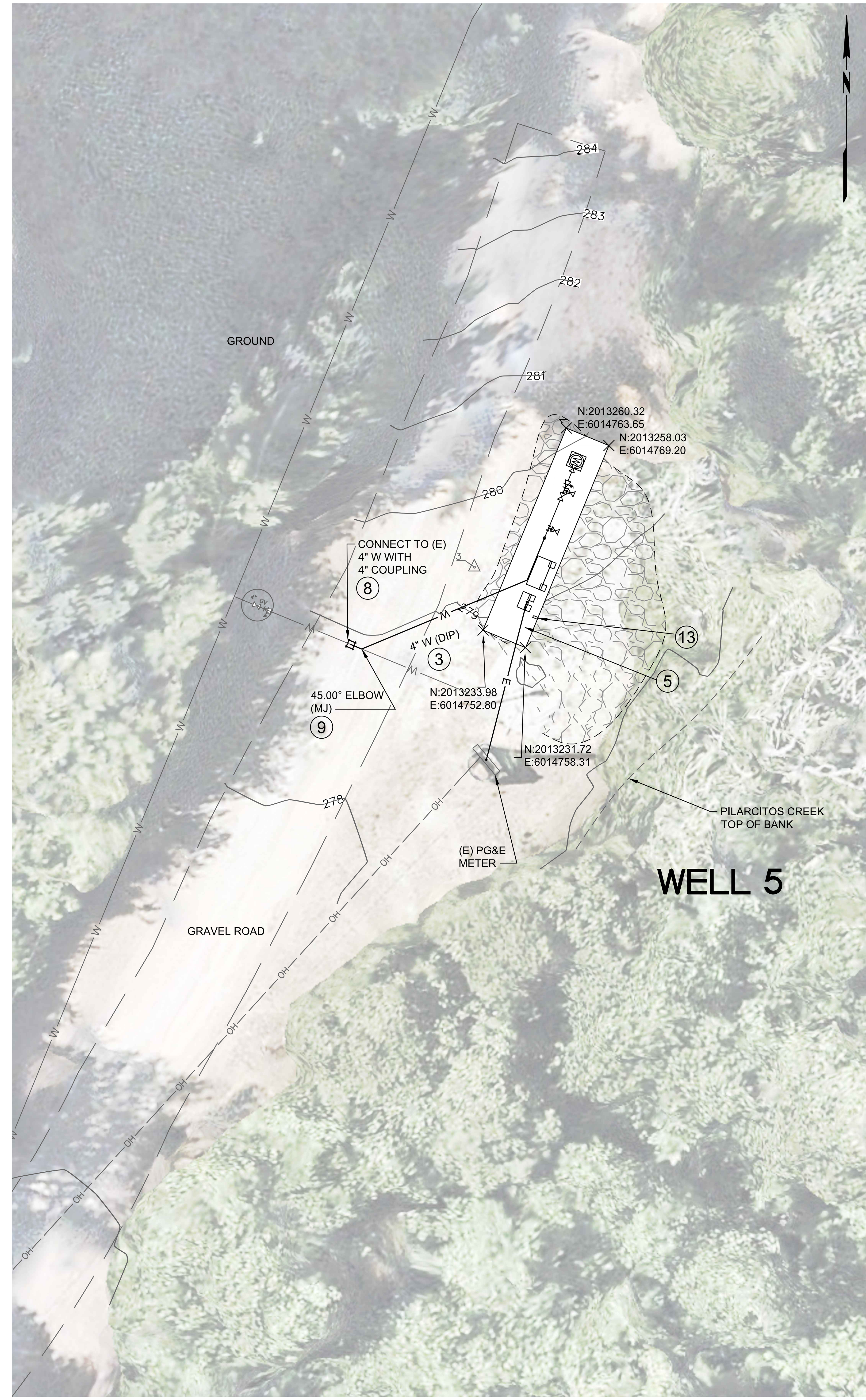
REGISTERED PROFESSIONAL ENGINEER — JONATHAN P. N. HUI — C 84008 — CIVIL — STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

REGISTERED PROFESSIONAL ENGINEER — TYLER F. COLYER — C 80141 — CIVIL — STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

SHEET NUMBER
C-2
7 OF 29



PLAN, WELL 4



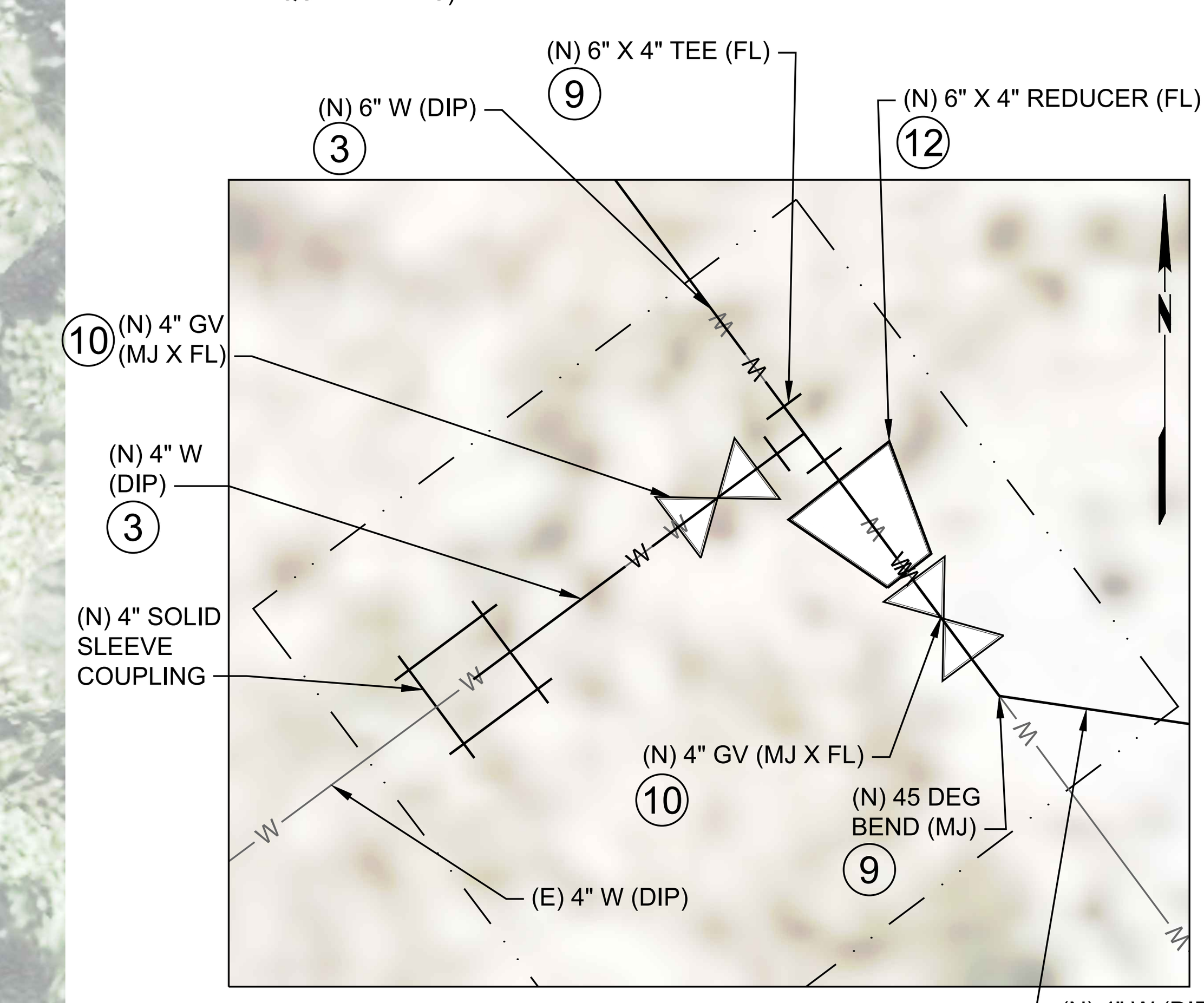
PLAN, WELL 5

SCALE: 1"=10' (0, 5, 10, 20, 30)

CONSTRUCTION NOTES:

1. ALL LOCATIONS AND DEPTHS OF (E) UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING SIZES, DEPTHS, AND LOCATIONS OF ALL UTILITIES. ANY CHANGES TO THESE PLANS AND SPECIFICATIONS SHALL BE APPROVED BY THE ENGINEER OR OWNER REPRESENTATIVE.
2. CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES LOCATED OUTSIDE OF LIMITS OF WORK.
3. INSTALL (N) WATER LINE BY OPEN TRENCH PER DETAIL CC-01/C-4, CC-02/C-4, OR CC-03/C-4.

   IF THERE ARE UTILITY CONFLICTS, INSTALL (N) WATER LINE PER DETAIL 3/C-4.
4. ALL DUCTILE IRON PIPE JOINTS SHALL BE RESTRAINED. IN ADDITION, DUCTILE IRON PIPE JOINTS SHALL BE RESTRAINED MECHANICAL JOINTS WITHIN 3-FEET OF ALL CONCRETE ENCASEMENTS.
5. BURIED ELECTRICAL CONDUIT PER DETAIL 26023/GE-2. CONDUIT STUB UPS PER DETAIL 26107/GE-2.
6. AT CONNECTIONS TO EXISTING BURIED PIPE, CONTRACTOR SHALL EXPOSE THE EXISTING PIPE AND VERIFY LOCATIONS, DEPTH, MATERIALS, AND DIMENSIONS OF EXISTING PIPE. THE CONTRACTOR SHALL FURNISH ALL NECESSARY COUPLINGS, FITTINGS, APPURTENANCES, TOOLS, AND LABOR TO COMPLETE THE CONNECTIONS WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT, AT NO ADDITIONAL COST TO THE OWNER.
7. UNLESS SHOWN OTHERWISE, MINIMUM PIPE COVER SHALL BE 3-FEET. INSTALL PIPE AND VALVES PER OWNER STANDARD DETAILS. SEE SHEETS C-4 AND C-5.
8. TIE-INS TO EXISTING SYSTEMS SHALL BE MADE WITHOUT INTERRUPTION OF EXISTING SERVICE UNLESS NOTED OTHERWISE IN THE DRAWINGS OR SPECIFICATIONS. IF REQUIRED, CONTRACTOR SHALL SUBMIT A SCHEDULE OF INTERRUPTION OF SERVICE IN ACCORDANCE WITH THE SPECIFICATIONS.
9. INSTALL THRUST BLOCKS ON ALL FITTINGS PER DETAIL CC-22/C-4.
10. INSTALL GATE VALVE PER DETAIL CC-09/C-4.
11. AT EACH WELL SITE, CONTRACTOR SHALL SMOOTH GRADE BETWEEN EDGE OF CONCRETE PAD AND THE EXISTING SITE ELEVATIONS. GRADE TO DRAIN AWAY FROM THE CONCRETE PADS.
12. INSTALL REDUCER ANCHOR BLOCK PER DETAIL 4/C-5.
13. INSTALL 120V RECEPTACLE IN PROTECTED LOCATION ON CONCRETE PAD. SEE ELECTRICAL DRAWINGS.
14. AT WELL 4 AND 5, REFERENCE TIME RESTRICTIONS LOCATED ON SHEET G-2, NOTE 21, AS WELL AS SPECIFICATION 01 41 00 (ENVIRONMENTAL REQUIREMENTS).



CONNECTION DETAIL A/C-3
NOT TO SCALE

100% DESIGN / BID SET

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DALY CITY, CALIFORNIA 94014
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PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

PLAN, PILARCITOS WELLS 4 AND 5

REV	DESCRIPTION	APPR'D	DATE

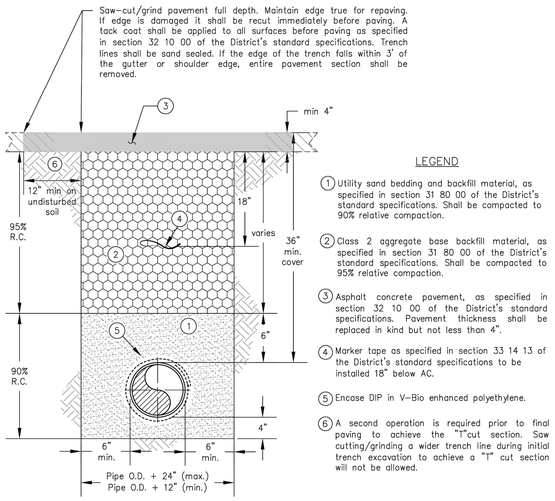
DATE:	MAR 2025
SCALE:	AS SHOWN
DRAWN:	NC
DESIGNED:	TC
APPROVED:	JS
JOB NO.:	B80108.39

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REGISTERED PROFESSIONAL ENGINEER — JONATHAN P. N. SUTTER — C 81006 — CIVIL — STATE OF CALIFORNIA — 03/31/2025
100% DESIGN / BID SET

REGISTERED PROFESSIONAL ENGINEER — TYLER F. COLYER — C 80141 — CIVIL — STATE OF CALIFORNIA — 03/31/2025
100% DESIGN / BID SET

SHEET NUMBER
C-3



LEGEND

1. Utility sand bedding and backfill material, as specified in section 31 80 00 of the District's standard specifications. Shall be compacted to 90% relative compaction.
2. Class 2 aggregate base backfill material, as specified in section 31 80 00 of the District's standard specifications. Shall be compacted to 95% relative compaction.
3. Asphalt concrete pavement, as specified in section 32 10 00 of the District's standard specifications. Pavement thickness shall be replaced in kind but not less than 4".
4. Marker tape as specified in section 33 14 13 of the District's standard specifications to be installed 18" below AC.
5. Encase DIP in V-Bio enhanced polyethylene.
6. A second operation is required prior to final paving to achieve the "T"cut section. Saw cutting/grinding a wider trench line during initial trench excavation to achieve a "T" cut section will not be allowed.

Note:
Replace existing tracer wire if damaged during trenching operation.

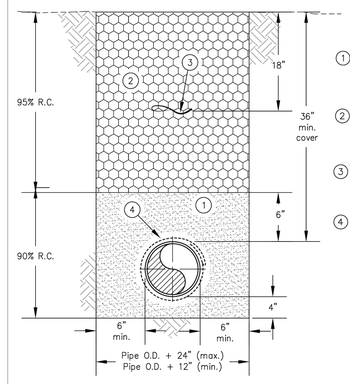
TRENCH SECTION - TYPE A
PAVED SURFACES

REV. 05/2018

COASTSIDE COUNTY WATER DISTRICT
766 MAIN STREET
HALF MOON BAY, CA

Approved by:
David Dickson, General Manager

STD. NO. CC-01



LEGEND

1. Utility sand bedding and backfill material, as specified in section 31 80 00 of the District's standard specifications. Shall be compacted to 90% relative compaction.
2. Class 2 aggregate base backfill material, as specified in section 31 80 00 of the District's standard specifications. Shall be compacted to 95% relative compaction.
3. Marker tape as specified in section 33 14 13 of the District's standard specifications to be installed 18" below AC.
4. Encase DIP with V-Bio enhanced polyethylene.

Note:
Replace existing tracer wire if damaged during trenching operation.

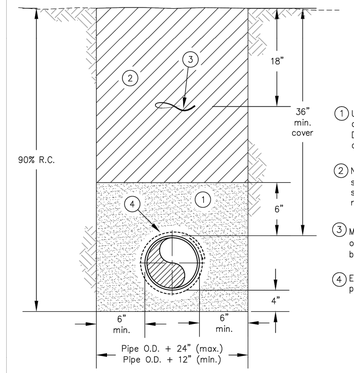
TRENCH SECTION - TYPE B
GRAVELED AREAS / ROAD SHOULDERS

REV. 05/2018

COASTSIDE COUNTY WATER DISTRICT
766 MAIN STREET
HALF MOON BAY, CA

Approved by:
David Dickson, General Manager

STD. NO. CC-02



LEGEND

1. Utility sand bedding and backfill material, as specified in section 31 80 00 of the District's standard specifications. Shall be compacted to 90% relative compaction.
2. Native backfill material, as specified in section 31 80 00 of the District's standard specifications. Shall be compacted to 95% relative compaction.
3. Marker tape as specified in section 33 14 13 of the District's standard specifications to be installed 18" below AC.
4. Encase DIP with V-Bio enhanced polyethylene.

Note:
Replace existing tracer wire if damaged during trenching operation.

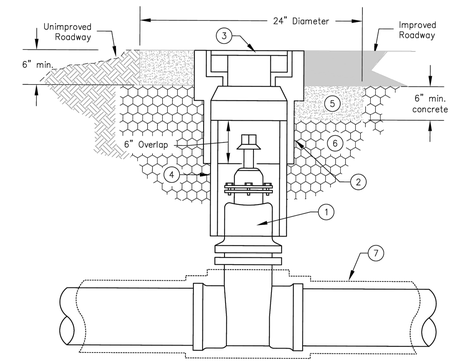
TRENCH SECTION - TYPE C
UNIMPROVED AREA

REV. 05/2018

COASTSIDE COUNTY WATER DISTRICT
766 MAIN STREET
HALF MOON BAY, CA

Approved by:
David Dickson, General Manager

STD. NO. CC-03



LEGEND

1. Gate valve, Mueller No. A-2362 with Type 316 SS bolts and nuts, and 2" square bronze operation nut. Steam seal shall be O-ring type. Valve stem shall be made of ASTM B98-C66100/H02 (Everdur) bar stock material; EPDM rubber; machined release groove below operating nut; and stuffing box aligned with the direction of the pipe. If coating on gate valve is damaged during the installation, it should be repaired using Mueller Epoxy Kit No. 280089 to the satisfaction of the District. Valve shall be set plumb.
2. Traffic valve box, Christy Concrete No. G05TBOX.
3. Cast iron traffic cover inscribed "WATER", Christy Concrete No. G05CT.
4. SDR 35 PVC pipe riser – 8" minimum diameter.
5. 2,000 psi high early strength. Asphalt shall be placed on top of concrete collar, same day.
6. Backfill material, aggregate base per road surface, see Detail CC-01.
7. Encase DIP in V-Bio enhanced polyethylene. Wrap excess film with 10-mil pipe tape.

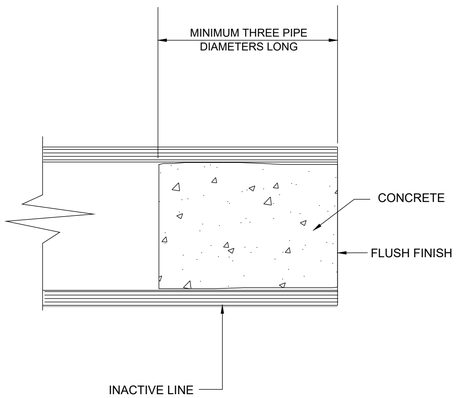
GATE VALVE ASSEMBLY

REV. 05/2018

COASTSIDE COUNTY WATER DISTRICT
766 MAIN STREET
HALF MOON BAY, CA

Approved by:
David Dickson, General Manager

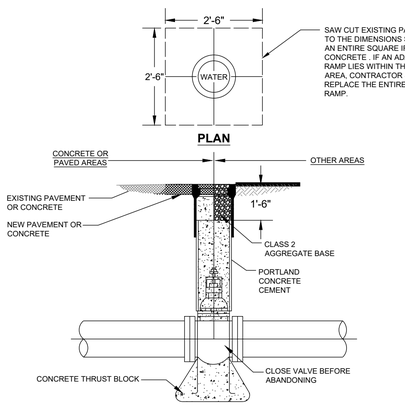
STD. NO. CC-09



CUT AND PLUG INACTIVE LINE

1 / C-4

NOT TO SCALE



NOTES:

1. REMOVE VALVE BOX AND LID. CUT AND REMOVE PORTION OF RISER LOCATED ABOVE 18" BELOW GRADE.
2. FILL RISER WITH 1.5 SACK CONTROL DENSITY FILL TO 18" BELOW GRADE FOR UNIMPROVED AREAS, TO THE BOTTOM OF EXISTING PAVEMENT FOR PAVED AREAS, AND TO THE SURFACE FOR CONCRETE AREAS.
3. REPAIR SURFACE IN KIND FOR PAVED OR CONCRETE AREAS. REPLACE TOPSOIL IN UNPAVED AREAS.

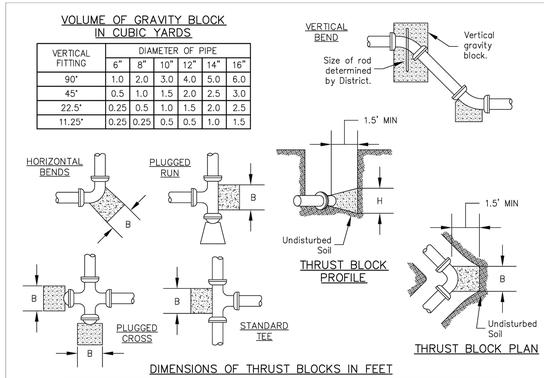
VALVE ABANDONMENT

2 / C-4

NOT TO SCALE

VOLUME OF GRAVITY BLOCK IN CUBIC YARDS

VERTICAL FITTING	DIAMETER OF PIPE					
	6"	8"	10"	12"	14"	16"
90°	1.0	2.0	3.0	4.0	5.0	6.0
45°	0.5	1.0	1.5	2.0	2.5	3.0
22.5°	0.25	0.5	1.0	1.5	2.0	2.5
11.25°	0.25	0.25	0.5	0.5	1.0	1.5



DIMENSIONS OF THRUST BLOCKS IN FEET

HORIZONTAL FITTING	DIAMETER OF PIPE											
	6"		8"		10"		12"		14"		16"	
	B	H	B	H	B	H	B	H	B	H	B	H
90°	1'-9"	1'-9"	2'-3"	2'-3"	2'-9"	2'-9"	3'-3"	3'-3"	3'-9"	3'-9"	4'-3"	4'-3"
45°	1'-0"	1'-0"	1'-6"	1'-6"	2'-0"	2'-0"	2'-6"	2'-6"	3'-0"	3'-0"	3'-6"	3'-6"
22.5°	1'-0"	0'-6"	1'-0"	0'-8"	1'-6"	0'-8"	1'-6"	1'-0"	1'-6"	1'-6"	2'-0"	1'-6"
11.25°	1'-0"	0'-6"	1'-0"	0'-6"	1'-0"	0'-6"	1'-0"	0'-8"	1'-8"	0'-8"	1'-5"	1'-0"
PLUG/TEE	1'-3"	1'-3"	1'-9"	1'-9"	2'-3"	2'-3"	2'-9"	2'-9"	3'-3"	3'-3"	3'-9"	3'-9"

NOTES:

1. Use 2,000 psi high early strength concrete.
2. All thrust blocks and gravity blocks shall bear against undisturbed earth.
3. Encased DI pipe in 8 mil. linear low-density polyethylene film.
4. Maintain a minimum clearance of 2" between the thrust block reinforcing steel and pipe.
5. Concrete not to extend beyond the face of the bell.
6. Thrust block shall encompass at least one-half of the outside diameter of the pipe.
7. Flanges, bolts, and nuts shall be kept clear of concrete.
8. Dimensions above include use of mechanical restraints on pipe.
9. If groundwater is presented, thrust block dimensions shall be determined by the District.
10. Thrust block dimensions shall be doubled if used on non-restrained connections.

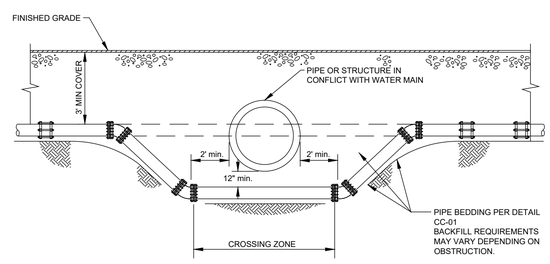
THRUST RESTRAINT - THRUST BLOCK DETAILS

REV. 05/2018

COASTSIDE COUNTY WATER DISTRICT
766 MAIN STREET
HALF MOON BAY, CA

Approved by:
David Dickson, General Manager

STD. NO. CC-22



NOTES:

1. ALL BENDS SHALL BE 45° OR 22-1/2° FITTINGS, AS REQUIRED FOR PROPER HORIZONTAL SEPARATION.
2. ALL MECHANICAL JOINTS SHALL BE PROVIDED WITH APPROVED JOINT RESTRAINT DEVICES, "MEGALUGS" BY EBBA, OR EQUAL.
3. THRUST BLOCKS ARE REQUIRED AT ALL BENDS, TEES AND VALVES IN ACCORDANCE WITH STANDARD DETAIL CC-22
4. NEW WATER MAINS SHALL NOT BE INSTALLED IN THE SAME TRENCH AS, AND SHALL BE AT LEAST 10 FT. HORIZONTALLY FROM AND ONE FOOT VERTICALLY ABOVE, ANY PARALLEL SANITARY SEWER LINE. WATER MAIN SHALL BE ENCAPSOLATED WITH CONCRETE OR CDF IF CROSSING UNDER SANITARY SEWER LINE.
5. NEW WATER MAINS SHALL BE INSTALLED AT LEAST 4 FEET HORIZONTALLY FROM, AND ONE FOOT VERTICALLY ABOVE, ANY PARALLEL STORM DRAINAGE PIPELINE. WATER MAIN SHALL BE ENCAPSOLATED WITH CONCRETE OR CDF IF CROSSING UNDER STORM DRAINAGE PIPELINE.
6. IF CROSSING A SANITARY OR STORM DRAINAGE PIPELINE, A NEW WATER MAIN SHALL BE CONSTRUCTED NO LESS THAN 45 DEGREES TO AND AT LEAST ONE FOOT ABOVE THAT PIPELINE. NO CONNECTION JOINTS SHALL BE MADE IN THE WATER MAIN WITHIN EIGHT HORIZONTAL FEET OF THE SANITARY OR STORM DRAINAGE PIPELINE.
7. NEW WATER MAINS SHALL NOT BE INSTALLED WITHIN 100 HORIZONTAL FEET OF THE NEAREST EDGE OF ANY SANITARY LANDFILL, WASTEWATER DISPOSAL POND, OR HAZARDOUS WASTE DISPOSAL SITE, OR WITHIN 25 FEET OF THE NEAREST EDGE OF ANY CESSPOOL, SEPTIC TANK, SEWAGE LEACH FIELD, SEEPAGE PIT, UNDERGROUND HAZARDOUS MATERIALS.

UTILITY CROSSING

3 / C-4

NOT TO SCALE

100% DESIGN / BID SET

ekI environment & water
2001 JUNIPERO SERRA BOULEVARD, SUITE 300
DALY CITY, CALIFORNIA 94014
(650) 292-9100 • FAX (650) 552-9012

PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

CONSTRUCTION DETAILS - 1

DESCRIPTION	DATE	APPRD

DATE: MAR 2025
SCALE: AS SHOWN
DRAWN: NC
DESIGNED: TC
APPROVED: JS
JOB NO.: B80108.39
REV

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
0 1"

REGISTERED PROFESSIONAL ENGINEER JONATHAN P.N. SUTTER C 80008 CIVIL STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

REGISTERED PROFESSIONAL ENGINEER TYLER F. COLYER C 80141 CIVIL STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

SHEET NUMBER
C-4
9 OF 29

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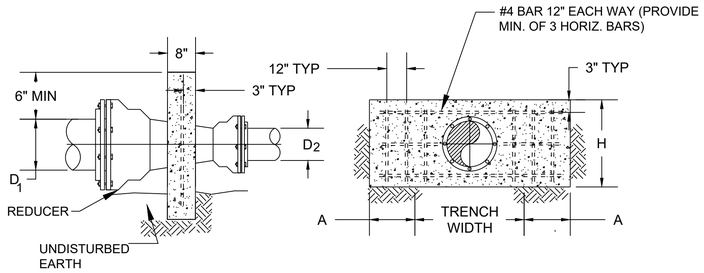


ANCHOR BLOCK FOR REDUCERS

REDUCER SIZE D_1 X D_2	H (FT.)	A (FT.)
20" X 16"	3.0	3.5
16" X 12"	2.5	3.0
16" X 10"	3.0	3.5
16" X 8"	4.0	3.5
16" X 6"	4.5	3.5
12" X 10"	1.5	2.0
12" X 8"	2.0	2.5
12" X 6"	2.0	3.5
10" X 8"	1.5	2.0
8" X 6"	1.0	2.0
8" X 4"	1.0	3.0
6" X 4"	1.0	1.5

REDUCER ANCHOR BLOCK

NOT TO SCALE

4
C-5

100% DESIGN / BID SET

ekl environment & water
2001 JUNIPERO SERRA BOULEVARD, SUITE 300
DALY CITY, CALIFORNIA 94014
(650) 292-9100 • FAX (650) 552-9012

PILARCITOS WELLFIELD REPLACEMENT PROJECT

HALF MOON BAY, CALIFORNIA

CONSTRUCTION DETAILS - 2

DATE	DESCRIPTION	APPRD	DATE

DATE: MAR 2025
SCALE: AS SHOWN
DRAWN: NC
DESIGNED: TC
APPROVED: JS
JOB NO.: B80108.39
REV

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEET NUMBER
C-5
10 **OF** 29

REGISTERED PROFESSIONAL ENGINEER
JONATHAN P. N. SUN
C 80108
CIVIL
STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

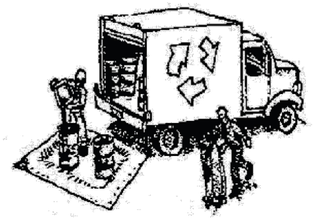
REGISTERED PROFESSIONAL ENGINEER
TYLER F. COLYER
C 80141
CIVIL
STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control

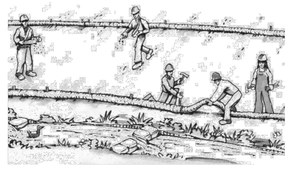
Maintenance and Parking

- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control

- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving

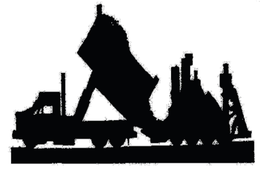


- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.

Paving/Asphalt Work

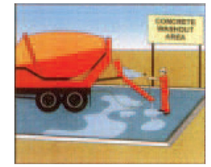


- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

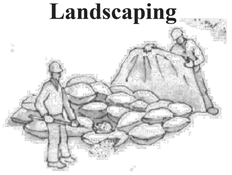
- ❑ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, abosorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

Concrete, Grout & Mortar Application



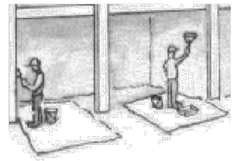
- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

Landscaping



- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

Painting & Paint Removal



Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- ❑ Chemical paint stripping residue and chip and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state certified contractor.

Dewatering

- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call you local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

Storm drain polluters may be liable for fines of up to $10,000 per day!

100% DESIGN / BID SET

ekl environment & water
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PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

CONSTRUCTION BEST MANAGEMENT PRACTICES

REV	DESCRIPTION	APPRD	DATE

DATE: MAR 2025
SCALE: AS SHOWN
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JOB NO.: B80108.39

VERIFY SCALE
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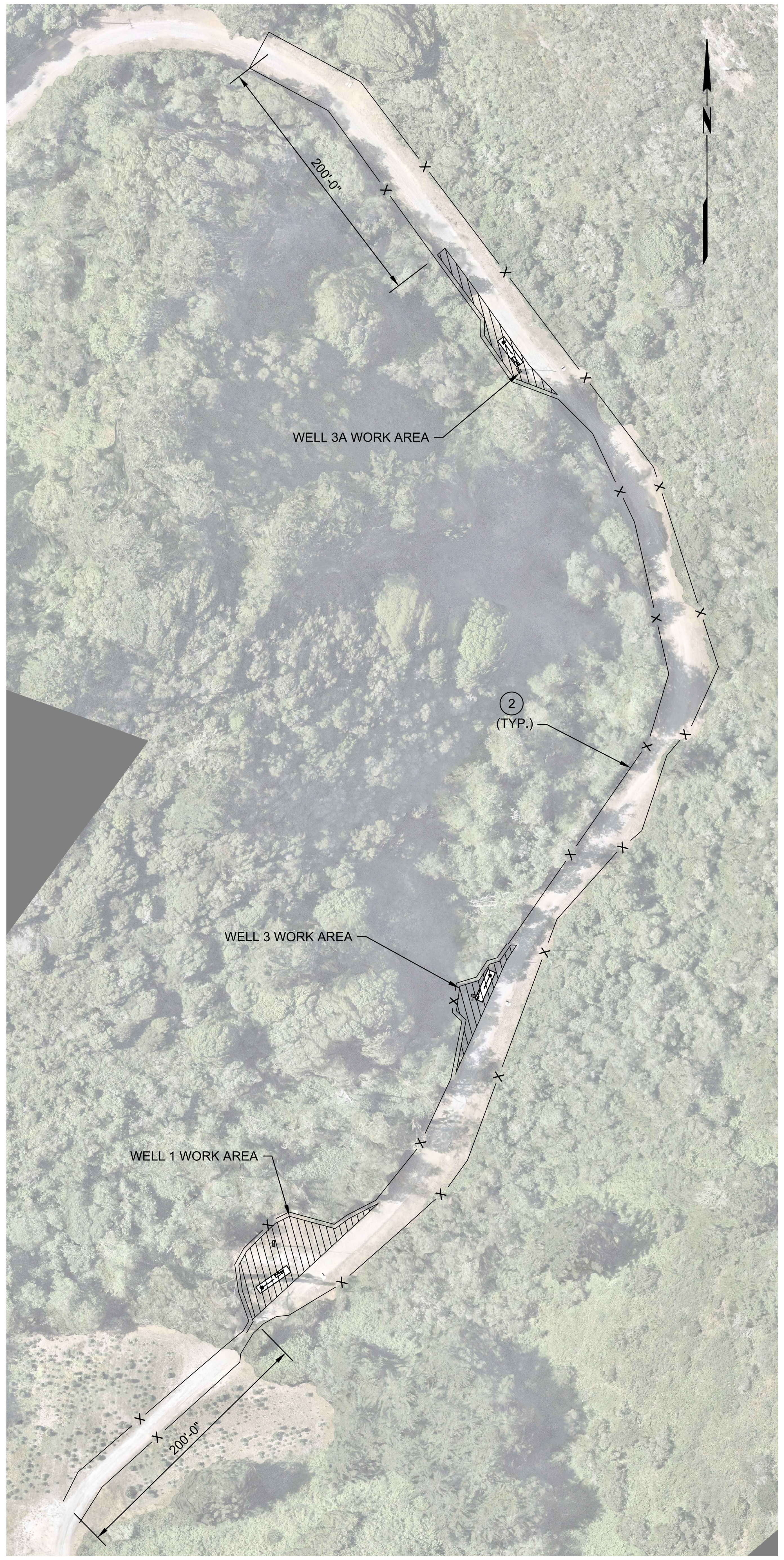
REGISTERED PROFESSIONAL ENGINEER
JONATHAN P. N. JOE
CIVIL
STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

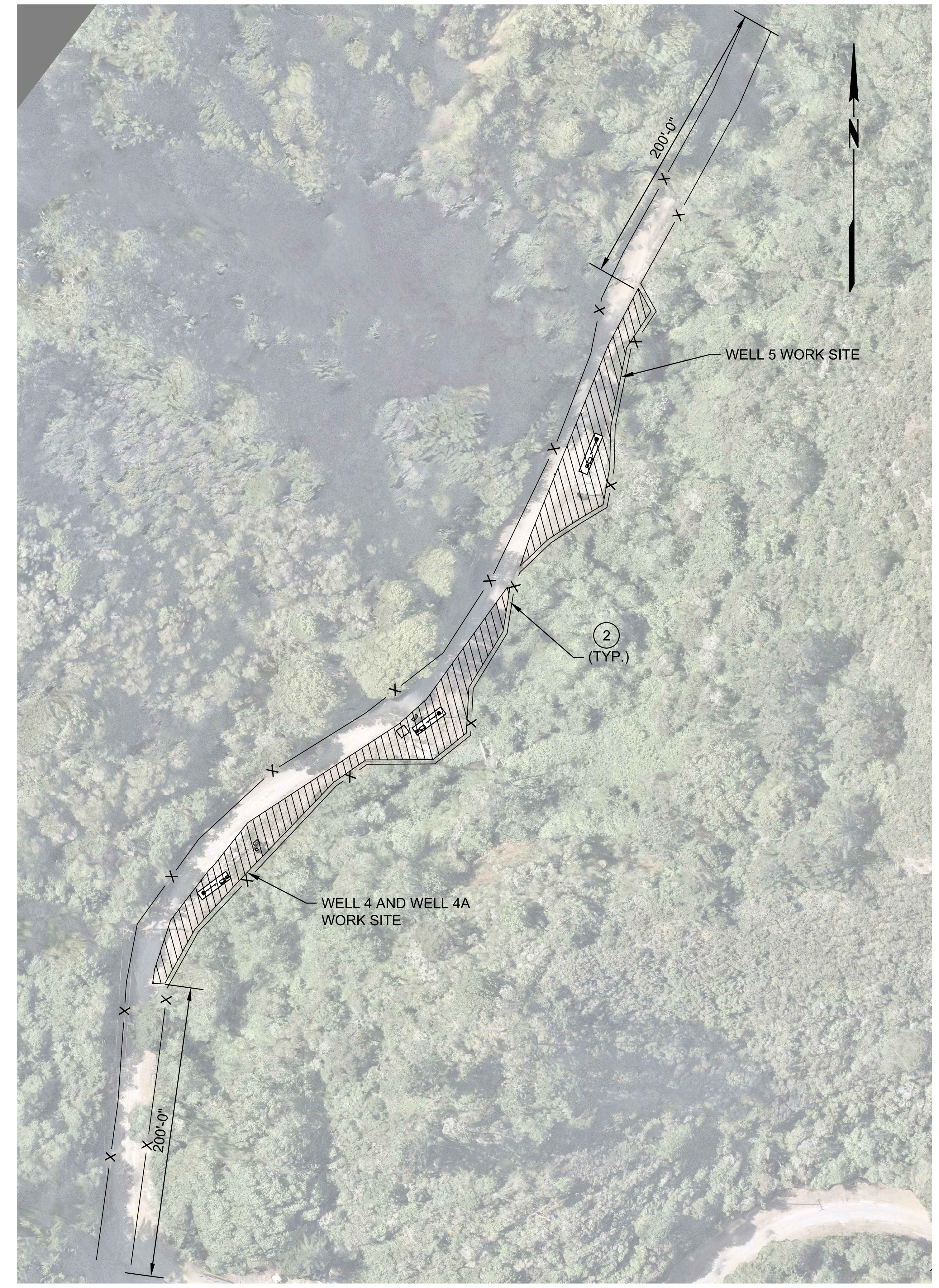
REGISTERED PROFESSIONAL ENGINEER
TYLER F. COLYER
C 80141
CIVIL
STATE OF CALIFORNIA
03/31/2025
100% DESIGN / BID SET

SHEET NUMBER
C-6
11 OF 29



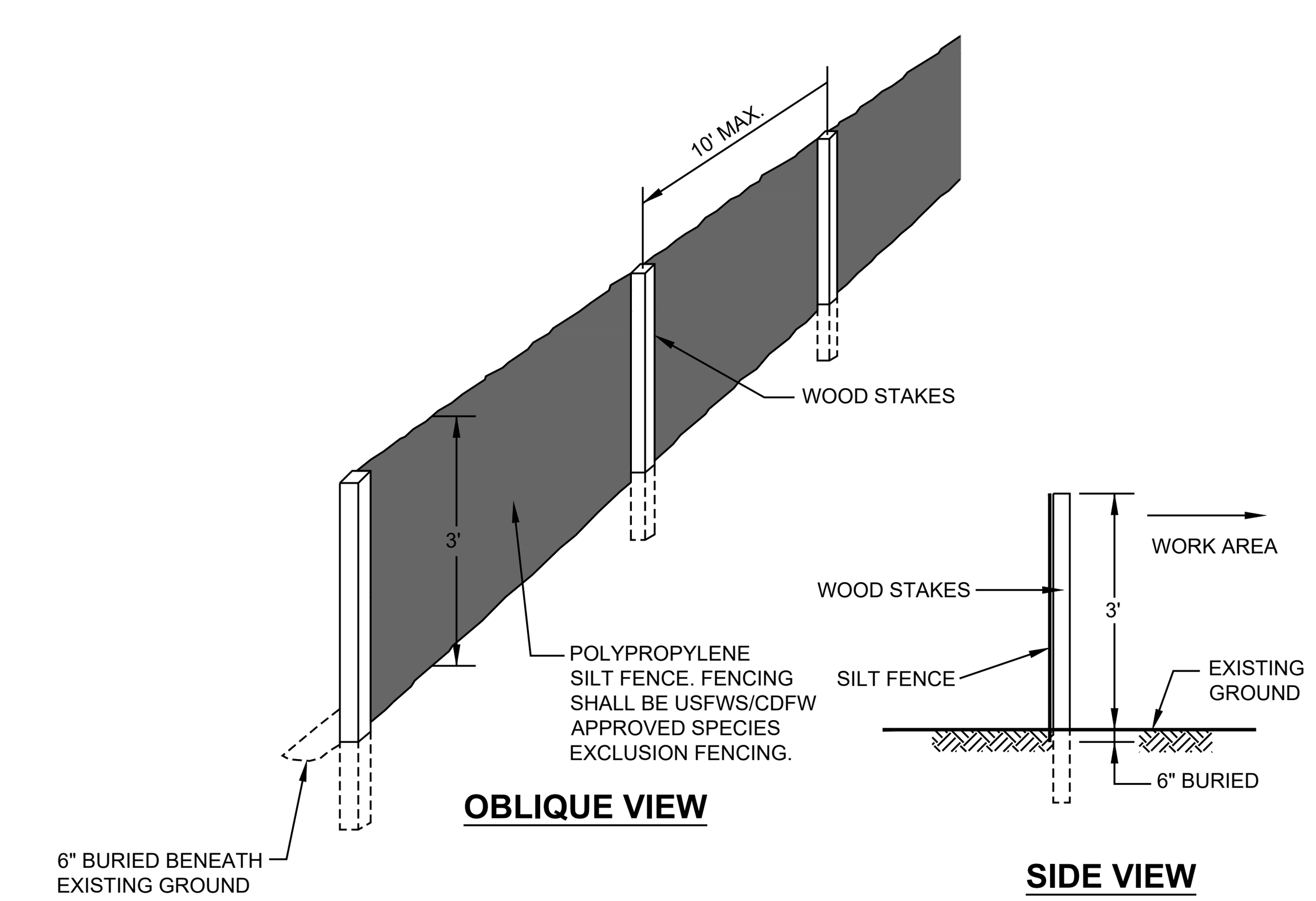
PLAN, WELLS 1, 3, AND 3A

0 35 70 140 210
SCALE: 1"=70'



PLAN, WELLS 4A, 4, AND 5

0 35 70 140 210
SCALE: 1"=70'



TEMPORARY WILDLIFE EXCLUSION FENCING

NOT TO SCALE

5 / C-7

CONSTRUCTION NOTES:

1. ALL LOCATIONS ARE APPROXIMATE.
2. TEMPORARY WILDLIFE EXCLUSION FENCING SHALL BE INSTALLED PER SPECIFICATION 01410 ENVIRONMENTAL REQUIREMENTS AND PER DETAIL 5/C-7 AS DIRECTED BY A QUALIFIED BIOLOGIST PROVIDED BY THE DISTRICT.
3. WILDLIFE EXCLUSION FENCING SHALL EXTEND 200 FEET BEYOND ANY WORK OR STAGING AREAS ON BOTH SIDES OF THE ROAD.
4. WORK AREAS ARE APPROXIMATE. CONTRACTOR SHALL WORK WITH THE DISTRICT TO DETERMINE STAGING AREAS FOR WELL DRILLING. CONTRACTOR SHALL PROVIDE ACCESS FOR VEHICULAR TRAFFIC ON ROAD WITHIN 1 HOUR OF REQUEST BY THE DISTRICT. A MINIMUM 10-FOOT WIDE ROAD LAND SHALL BE RESTORED AT THE END OF EACH WORK DAY.

100% DESIGN / BID SET

eki environment & water
2001 JUNIPERO SERRA BOULEVARD, SUITE 300
DALY CITY, CALIFORNIA 94014
(650) 292-9100 • FAX (650) 552-9012

PILARCITOS WELLFIELD REPLACEMENT PROJECT

HALF MOON BAY, CALIFORNIA

EXCLUSION FENCING PLAN AND DETAIL

REV	DESCRIPTION	APPR'D	DATE

DATE: MAR 2025
SCALE: AS SHOWN
DRAWN: NC
DESIGNED: TC
APPROVED: JS
JOB NO.: B80108.39

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REGISTERED PROFESSIONAL ENGINEER — JONATHAN P. H. SUTTER — C 81908 — CIVIL — STATE OF CALIFORNIA — 03/31/2025

100% DESIGN / BID SET

REGISTERED PROFESSIONAL ENGINEER — TYLER F. COLYER — C 80141 — CIVIL — STATE OF CALIFORNIA — 03/31/2025

100% DESIGN / BID SET

SHEET NUMBER
C-7
12 OF 29

Path: G:\EKI_CONSTRUCTION_DWGS\B80108.01 (CIP PROJECTS)\B80108.39_Pilarcitos_Wells Filename: B80108.39_Exclusion_Fencing.dwg Plot Date: March 31, 2025 - 11:54 AM CADD User: Nicole Chapman

STRUCTURAL NOTES

GENERAL

1. ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND SHOP DRAWINGS AND THE PROJECT SPECIFICATIONS (IF ANY).
2. CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE 2022 EDITION CALIFORNIA BUILDING CODE (CBC). THE CBC SHALL GOVERN EXCEPT WHERE OTHER APPLICABLE CODES OR THESE DOCUMENTS ARE MORE RESTRICTIVE.
3. NOTHING SHOWN OR OMITTED FROM THESE DOCUMENTS SHALL RELIEVE THE CONTRACTOR FROM FULL COMPLIANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
4. THE CONTRACTOR ALONE IS RESPONSIBLE FOR JOB SITE SAFETY. SITE REVIEW OF THE CONSTRUCTION BY THE ENGINEER IS TO DETERMINE CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. IT DOES NOT ENCOMPASS SAFETY PROCEDURES OR OPERATIONS.
5. WITHOUT EXCLUSION OF ANY REFERENCE IN THE CONSTRUCTION DOCUMENTS TO ANY RULE OR REGULATION, THE ENGINEER IS NOT ASSUMING ANY PROVISIONS OF SUPERVISION OF CONSTRUCTION METHODS OR PROCESSES.
6. STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURES. DURING CONSTRUCTION, BRACING OR SHORING SHALL SUPPORT STRUCTURES WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR.
7. WRITTEN DIMENSIONS SHALL BE USED FOR CONSTRUCTION. DO NOT SCALE DRAWINGS.
8. STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO MECHANICAL AND/OR ELECTRICAL EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
9. DIMENSIONS INDICATED WITH AN * SHALL BE COORDINATED WITH MECHANICAL AND/OR ELECTRICAL DRAWINGS AND EQUIPMENT SUPPLIED.
10. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. SHOULD CONFLICTS OR INTERFERENCE OCCUR, THEY SHALL BE RESOLVED WITH THE ENGINEER. EXISTING FIELD CONDITIONS AT VARIANCE WITH THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ANY WORK IS PERFORMED.
11. USE PERTINENT STANDARD DETAILS SHOWN, EVEN THOUGH THEY MAY NOT BE CALLED OUT AT LOCATIONS WHERE THEY APPLY.
12. CONDITIONS NOT SPECIFICALLY SHOWN OR INDICATED SHALL BE CONSTRUCTED SIMILAR TO DETAILS SHOWN FOR THE RESPECTIVE MATERIALS OR CONDITIONS AFTER PRIOR APPROVAL FROM THE ENGINEER OF RECORD.

DEFERRED SUBMITTALS

1. THE FOLLOWING PORTIONS OF THE PROJECT ARE DEFERRED SUBMITTAL ITEMS. DEFERRED SUBMITTALS LISTED BELOW ARE THE RESPONSIBILITY OF THE CONTRACTOR. DEFERRED SUBMITTAL ITEMS HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD. REFER TO CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION.

   a) ANTENNA AND ANTENNA SUPPORT
   b) EQUIPMENT ANCHORAGE, NOT SPECIFICALLY DETAILED
   c) PIPE SUPPORTS
   d) CONDUIT SUPPORTS
2. UNLESS OTHERWISE NOTED, DEFERRED SUBMITTAL ITEMS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
3. DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL DURING THE CONSTRUCTION PHASE OF THE PROJECT.
4. DEFERRED SUBMITTAL ITEMS SHALL NOT BE FABRICATED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS.
5. DEFERRED SUBMITTAL ITEMS SHALL NOT BE FABRICATED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN FAVORABLY REVIEWED BY THE DISTRICT.

DESIGN LOADS

APPLICABLE TO PILARCITOS WELLS 1, 3, 3A, 4, 4A, AND 5

1. LIVE LOADS:

USE OR OCCUPANCY	UNIFORM LOAD (psf)
EXTERIOR CONCRETE PAD	250

2. WIND:

BASIC WIND SPEED V_{ult} (3-SECOND GUST):	98 MPH
RISK CATEGORY:	III
WIND EXPOSURE CATEGORY:	C
INTERNAL PRESSURE COEFFICIENT	N/A
C&C PRESSURES FOR DEFERRED SUBMITTALS	N/A

3. SEISMIC:

SEISMIC IMPORTANCE FACTOR (I_E)	1.25
RISK CATEGORY:	III
MAPPED SPECTRAL RESPONSE ACCELERATIONS:	S_S = 2.273g, S_1 = 0.242g
SITE CLASS	D = DEFAULT
SPECTRAL RESPONSE COEFFICIENTS:	S_{DS} = 0.949g, S_{D1} = SEE NOTE (1)
SEISMIC DESIGN CATEGORY:	F

(1) SEE ASCE/SEI 7-16, SECTION 11.4.8

4. SNOW:

GROUND SNOW LOAD (P_g):	0 PSF

SPECIAL INSPECTION

1. SPECIAL INSPECTION SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN CHAPTER 17 OF THE CBC. UNLESS OTHERWISE NOTED IN THE PROJECT SPECIFICATIONS, SPECIAL INSPECTION SHALL BE PROVIDED BY AND PAID FOR BY THE DISTRICT. THE FOLLOWING ITEMS, AS A MINIMUM, SHALL RECEIVE SPECIAL INSPECTION:

ITEM	STRUCTURAL STEEL INSPECTIONS AND VERIFICATION	FREQUENCY	
		CONTINUOUS	PERIODIC
1.	MATERIAL VERIFICATION OF STRUCTURAL STEEL:	---	---
	A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.		X
	B. MANUFACTURERS' CERTIFIED MILL TEST REPORTS.		X
2.	MATERIAL VERIFICATION OF WELD FILLER MATERIALS:	---	---
	A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.		X
	B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.		X
3.	INSPECTION OF WELDING:	---	---
	A. STRUCTURAL STEEL:	---	---
	1) SINGLE-PASS FILLET WELDS ≤ 5/16"		X

ITEM	CONCRETE INSPECTIONS AND VERIFICATION	FREQUENCY	
		CONTINUOUS	PERIODIC
1.	INSPECTION OF REINFORCING STEEL AND PLACEMENT.		X
2.	INSPECTION OF ANCHORS CAST IN CONCRETE.		X
3.	INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	X	
4.	VERIFYING USE OF REQUIRED DESIGN MIX.		X
5.	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	
6.	INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	
7.	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X
8.	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		X

ITEM	FOUNDATION INSPECTIONS AND VERIFICATION	FREQUENCY	
		CONTINUOUS	PERIODIC
	SOILS		
1.	VERIFY MATERIALS USED, LAYERED THICKNESSES AND COMPACTION OF BACK FILLS.	X	

SPECIAL INSPECTION NOTATION:

"X" DENOTES EITHER CONTINUOUS OR PERIODIC INSPECTIONS.
"---" DENOTES AN ACTIVITY THAT IS EITHER A ONE TIME ACTIVITY OR ONE WHOSE FREQUENCY IS DEFINED IN SOME OTHER MANNER

DEFINITIONS:
CONTINUOUS - SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED (CBC, SECTION 202)

PERIODIC - SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED (CBC, SECTION 202)

SPECIAL INSPECTOR - A QUALIFIED PERSON EMPLOYED OR RETAINED BY THE DISTRICT AND APPROVED BY THE AUTHORITY HAVING JURISDICTION AS HAVING THE COMPETENCE NECESSARY TO INSPECT A PARTICULAR TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION.

CONCRETE REINFORCING

1. REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF ASTM SPECIFICATION A706 OR A615, GRADE 60.
2. REINFORCING STEEL FABRICATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CRSI MANUAL OF STANDARD PRACTICE.
3. REINFORCING SHALL HAVE THE FOLLOWING CLEAR CONCRETE COVER, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

CONDITION	COVER (INCHES)
UNFORMED SURFACES IN CONTACT WITH EARTH	3
FORMED SURFACES EXPOSED TO EARTH, WATER AND/OR WEATHER	2
OTHER LOCATIONS	2

4. SPLICED BARS SHALL HAVE A MINIMUM CLASS B CONTACT LAP AS SPECIFIED IN THE LATEST EDITION OF ACI 315 DETAILING MANUAL AND ACI 318 UNLESS OTHERWISE NOTED ON THE DRAWINGS. WHERE SHOWN ON THE DRAWINGS, ld = DEVELOPMENT LENGTH AS DEFINED IN THE STANDARD DETAILS OF THESE DRAWINGS. HOOKS OF REINFORCING STEEL SHALL COMPLY WITH ACI 318.
5. WRITTEN SPACING AND LOCATION OF REINFORCING SHALL TAKE PRECEDENCE OVER DEPICTED SPACING AND LOCATION.
6. UNLESS OTHERWISE NOTED ON THE DRAWINGS, REINFORCING BARS SHOWN TERMINATING WITH A HOOK SHALL BE FABRICATED WITH A STANDARD HOOK AS DEFINED WITHIN ACI 318. WHERE SECTION THICKNESS DOES NOT ALLOW FOR FULL HOOK EXTENSION, TILT HOOK UNTIL HOOK FITS. ALTERNATIVELY CONTRACTOR MAY USE 180° HOOK OR TWO SMALLER HOOKED BARS OF EQUIVALENT AREA OF STEEL.
7. IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS FAR AS REQUIRED DUE TO THE LIMITED EXTENT OF THE ADJACENT CONCRETE STRUCTURE, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND BE TERMINATED WITH A STANDARD HOOK.

CONCRETE

1. REINFORCED CONCRETE SHALL CONFORM TO ACI 318.
2. PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE II. ONE BRAND OF CEMENT SHALL BE USED THROUGHOUT THE WORK.
3. USE OF UP TO 25% POZZOLAN (FLY, ASH, CLASS F) CONTENT OF TOTAL CEMENTITIOUS MATERIAL IS PERMITTED.
4. USE OF GRANULATED GROUND BLAST FURACE SLAG (GGBFS) IN THE CONCRETE IS NOT PERMISSIBLE.
5. ALL AGGREGATES SHALL CONFORM TO ASTM C33. THE MAXIMUM SIZE AGGREGATE SHALL BE 1 INCH. USE OF RECYCLED CONCRETE, AGGREGATE OR OTHER RECYCLABLE MATERIALS IS NOT PERMISSIBLE.
6. MIXING WATER SHALL BE POTABLE WATER FREE FROM INJURIOUS AMOUNTS OF ACID, ALKALI, OR OTHER HARMFUL SUBSTANCES. WATER SHALL BE OBTAINED FROM LOCAL UTILITY COMPANY MAINS UNLESS THE ENGINEER APPROVES ANOTHER SOURCE.
7. AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260.
8. CURING COMPOUNDS SHALL CONFORM TO ASTM C309.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE MINIMUM REQUIREMENTS LISTED BELOW. CEMENT CONTENT SHALL BE INCREASED OVER THAT LISTED IF REQUIRED TO OBTAIN THE LISTED COMPRESSIVE STRENGTH.

LOCATION	MIN 28 DAY STRENGTH (psi)	MIN CEMENT CONTENT (lbs)	SLUMP (in)
STRUCTURAL CONCRETE	4,000	560	3-5

10. ALL CONCRETE SHALL BE TRANSIT MIXED IN ACCORDANCE WITH ASTM C194, EXCEPT THAT SMALL BATCHES OF 1/2 CUBIC YARD OR LESS MAY BE MIXED ON THE SITE.
11. TRANSIT MIXED CONCRETE SHALL BE MIXED FOR NOT LESS THAN 10 MINUTES TOTAL, OF WHICH NOT LESS THAN 3 MINUTES SHALL BE ON THE SITE JUST PRIOR TO PLACEMENT. MIXING SHALL BE CONTINUOUS WITH NO INTERRUPTIONS FROM THE TIME THE TRUCK IS FILLED UNTIL THE TIME IT IS EMPTIED. CONCRETE SHALL BE PLACED WITHIN ONE HOUR OF THE TIME WATER IS FIRST ADDED. TRANSIT MIXED CONCRETE SHALL NOT EXCEED A TEMPERATURE OF 90 DEGREES FAHRENHEIT WITHOUT APPROVAL OF THE ENGINEER.
12. CONSTRUCTION JOINTS SHALL NOT BE PLACED AT LOCATIONS OTHER THAN THOSE SHOWN ON THE DRAWINGS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
13. ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE 3/4" MINIMUM CHAMFER, UNLESS NOTED OTHERWISE.
14. BEFORE PLACING CONCRETE, MIXING, CONVEYING, FINISHING EQUIPMENT, FORMS AND REINFORCING SHALL BE WELL CLEANED.
15. CONCRETE SHALL BE CONVEYED FROM MIXER TO FINAL LOCATION AS RAPIDLY AS POSSIBLE BY METHODS PREVENTING SEPARATION OF THE INGREDIENTS. DEPOSIT CONCRETE AS NEARLY AS POSSIBLE IN FINAL POSITION TO AVOID REHANDLING.
16. WHEN REDESIGN OF THE CONCRETE MIX IS REQUIRED FOR PUMPING, SUCH REDESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
17. VIBRATION SHALL BE BY MEANS OF MECHANICAL VIBRATORS IN DIRECT CONTACT WITH THE CONCRETE, AND NOT BY VIBRATING THE FORMS OR REINFORCING. VIBRATION SHALL CONTINUE UNTIL WATER SHOWS THE FIRST SIGNS OF RISING.

100% DESIGN / BID SET

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TJC and ASSOCIATES, INC.

PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

STRUCTURAL GENERAL NOTES I

	DATE	APPRVD	DESCRIPTION	REV

DATE: MARCH 2025
SCALE: NTS
DRAWN: BV
DESIGNED: RJM
APPROVED: -
JOB NO.: B80108.39

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REGISTERED PROFESSIONAL ENGINEER
Richard J. Mayfield
S 4439
Exp. 12/31/25
STRUCTURAL
STATE OF CALIFORNIA
3/11/25

100% DESIGN SUBMITTAL

SHEET NUMBER
GS1
13 OF 29

SOIL PARAMETERS (ALL)

1. ALLOWABLE SOIL BEARING CAPACITY:

FOUNDATION TYPE	ALLOWABLE BEARING CAPACITY (1) FOR DL + LL
MAT FOUNDATION	1,500 psf

(1) ALLOWABLE BEARING VALUES MAY BE INCREASED BY 1/3 FOR LOAD CASES INCLUDING WIND AND/OR SEISMIC.
(2) PRESUMPTIVE LOAD BEARING VALUES, CBC TABLE 1806.2; USCS "CL".

2. LATERAL EARTH PRESSURES:

SOIL CONDITION	AT REST (1) (pcf)		ACTIVE (1) (pcf)		PASSIVE (1) (pcf)	
	w/o GW (2)	w/ GW (2)	w/o GW (2)	w/ GW (2)	w/o GW (2)	w/ GW (2)
CLASS 2 AGG. BASE	55	93	35	83	300	210
USCS "CL" MATERIAL	100	145	--	--	100	70

(1) EQUIVALENT FLUID DENSITY
(2) GROUNDWATER (GW) TABLE AT GRADE.

3. COEFFICIENT OF COHESION:

AS LIMITED BY SECTION 1806.3.2 OF 130PSF MAY BE ADDED TO PASSIVE RESISTANCE COHESION VALUE.

CONCRETE FINISHING, CURING AND PATCHING

1. FINAL TROWELING OF THE WALL PANELS SHALL BE DONE WITH A STEEL TROWEL EXCEPT WHERE DRAWINGS SPECIFICALLY CALL FOR ANOTHER TYPE OF FINISH.
2. FINISHED SURFACES OF ALL PANELS SHALL BE TRUE AND FLAT IN ACCORDANCE WITH ELEVATIONS AND SLOPES SHOWN ON THE DRAWINGS. THE MAXIMUM VARIATION ALLOWED FROM THE SPECIFIED SLOPES AND SURFACES SHALL BE 1/8 INCH WITH NOT MORE THAN 1/8-INCH VARIATION IN ANY 10-FOOT LENGTH.
3. CONCRETE PANELS SHALL BE CURED BY MEANS OF AN APPROVED CURING COMPOUND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
4. AT CAST-IN-PLACE WALLS, FORMS SHALL NOT BE REMOVED UNTIL CONCRETE HAS SET ADEQUATELY TO PREVENT DAMAGE DURING AND AFTER REMOVAL.
5. IMMEDIATELY AFTER FORM REMOVAL, FORM TIES SHALL BE REMOVED FROM EXPOSED SURFACES AND HOLES AND OTHER VOIDS SHALL BE POINTED FLUSH WITH MORTAR COMPOSED OF ONE PART PORTLAND CEMENT AND TWO PARTS SAND. FINS, BURRS, ETC. SHALL BE REMOVED WHILE THE CONCRETE IS STILL GREEN. VOIDS, POCKETS, AND HONEYCOMBS WHICH WOULD EITHER WEAKEN CONCRETE OR DISFIGURE EXPOSED SURFACES SHALL BE SIMILARLY PATCHED. IF, IN THE ENGINEER'S OPINION, HONEYCOMBING IS SUCH THAT THE STRENGTH OF THE STRUCTURE IS IMPAIRED, WHOLE SECTIONS OF THE WORK MAY BE REQUIRED BY THE ENGINEER TO BE REMOVED AND REPLACED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.

SITE WORK

1. EXCAVATION FOR PADS AS SHOWN ON THE DRAWINGS:
THE BOTTOMS OF ALL EXCAVATIONS SHALL BE LEVEL, TAMPED FIRM, CLEAN AND FREE FROM ALL DEBRIS OR FOREIGN MATTER.
2. OVER-EXCAVATION SHALL EXTEND LATERALLY BEYOND THE OUTSIDE EDGE OF FOOTINGS BY A MINIMUM OF 1/2 THE DEPTH OF OVER-EXCAVATION BELOW THE FOOTING OR 12-INCHES.
3. WHERE PRACTICABLE, SIDES OF FOOTINGS SHALL BE CUT NEAT AND CONCRETE POURED DIRECTLY AGAINST THE EXCAVATION. IF FORMING IS REQUIRED, THE TRENCHES SHALL BE EXCAVATED WIDE ENOUGH TO PERMIT THE ERECTION AND REMOVAL OF FORMS.
4. THE BOTTOM OF ALL EXCAVATIONS SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES, MOISTURE CONDITIONED TO WITHIN 5 PERCENT (±1 PERCENT) OVER THE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO A LEAST 89 PERCENT (±1 PERCENT) RELATIVE COMPACTION.
5. CLASS 2 AGGREGATE BASEROCK SHALL CONSIST OF MATERIAL FREE FROM DEBRIS AND ORGANIC OR OTHER DELETERIOUS MATERIALS. BACKFILL MATERIAL SHALL BE PLACED IN 8-INCH LAYERS, LEVELED, RAMMED AND TAMPED IN PLACE. COMPACTION OF ALL LAYERS SHALL BE A MINIMUM OF 95 PERCENT MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557.

CONCRETE ANCHORS

1. POST-INSTALLED CONCRETE ANCHORS, INCLUDING ADHESIVE AND EXPANSION ANCHORS, SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS AND THE APPROPRIATE EVALUATION REPORT. ANCHORS WITHOUT A CURRENT ICC-ES ESR, IAPMO-UES ER OR EQUAL SHALL NOT BE USED.
2. UNLESS OTHERWISE INDICATED, ALL ADHESIVE AND EXPANSION ANCHORS FOR INSTALLATION IN CONCRETE SHALL HAVE SATISFIED THE REQUIREMENTS OF THE SIMULATED SEISMIC TESTS OF ACI 355.4 OR ACI 355.2, NO SUBSTITUTION SHALL BE ALLOWED.
3. CONTRACTOR SHALL LOCATE EXISTING REBAR USING NON-DESTRUCTIVE METHODS PRIOR TO DRILLING HOLES FOR POST-INSTALLED ANCHORS. ADJUST SPACING OF ANCHORS TO MISS EXISTING REINFORCING. TOTAL NUMBER OF ANCHORS PROVIDED SHALL BE EQUAL TO THAT SHOWN ON THE DRAWINGS.
4. ADHESIVE ANCHORS SHALL CONSIST OF A TWO-COMPONENT RESIN ADHESIVE. THE PACKAGES CONTAINING EACH COMPONENT SHALL BE ATTACHED TO A DISPENSING MANIFOLD. AN AUGER STYLE NOZZLE SHALL BE ATTACHED FOR PROPER MIXING OF THE ADHESIVE COMPONENTS. WHERE THREADED RODS ARE REQUIRED, RODS SHALL CONFORM TO ASTM A193 GRADE B7. WHERE STAINLESS STEEL IS CALLED FOR ON THE DRAWINGS, STAINLESS STEEL SHALL BE TYPE 316.

STRUCTURAL AND MISCELLANEOUS STEEL

1. STRUCTURAL SHAPES, PLATES AND BARS SHALL CONFORM TO ASTM A36, UNLESS OTHERWISE NOTED.
2. STRUCTURAL W-SHAPES SHALL CONFORM TO ASTM A992, GRADE 50.
3. STRUCTURAL STEEL TUBES SHALL CONFORM TO ASTM A500, GRADE B.
4. STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE S, GRADE B.
5. MACHINE BOLTS (MB) SHALL CONFORM TO ASTM A307.
6. NUTS SHALL BE HEAVY HEX IN ACCORDANCE WITH ANSI B8.2.1.1.
7. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED AND CONNECTED IN COMPLIANCE WITH THE LATEST AISC MANUAL.
8. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE 3/4 INCH DIAMETER MEETING THE REQUIREMENTS OF ASTM A325. BOLTS SHALL BE TIGHTENED USING THE TURN-OF-THE-NUT METHOD.
9. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STRUCTURAL WELDING CODE, AWS (D1.1). ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS.
10. WELDING ELECTRODES SHALL MEET THE MINIMUM REQUIREMENTS OF E70XX.
11. ALL METAL FABRICATIONS SHALL RECEIVE A SHOP COAT OF RUST INHIBITIVE PAINT MEETING FEDERAL SPECIFICATION TT-P-86, TYPE III.
12. WHERE BUTT WELDS ARE SHOWN, MATERIAL SHALL BE GROUND TO A BEVEL AND WELD SHALL BE FULL PENETRATION.
13. ALL BOLT HOLES SHALL BE PUNCHED OR DRILLED (REAMED). BURNING OF HOLES IS NOT ACCEPTABLE.
14. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION.

GALVANIZING

1. UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL PLATES, BARS, AND FABRICATED ASSEMBLIES SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 EXCEPT THAT THE WEIGHT OF ZINC COATING SHALL AVERAGE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF ACTUAL SURFACE AREA WITH NO INDIVIDUAL SPECIMEN HAVING A COATING WEIGHT LESS THAN 1.0 OUNCES PER SQUARE FOOT.
2. THE GALVANIZING PROCESS SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF ASTM A384. ANY GALVANIZED PART(S) THAT BECOME WARPED AS A RESULT OF THE GALVANIZING PROCESS AND/OR HANDLING SHALL BE STRAIGHTENED OR REPLACED AT NO ADDITIONAL EXPENSE TO THE DISTRICT.
3. ALL MEMBERS TO BE GALVANIZED SHALL BE THOROUGHLY CLEANED OF RUST AND SCALE PRIOR TO GALVANIZING.
4. CARBON STEEL BOLTS, ANCHOR BOLTS, NUTS AND SIMILAR THREADED FASTENERS, AFTER BEING PROPERLY CLEANED, SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM F2329.
5. UNLESS OTHERWISE NOTED, ALL BOLTED CONNECTIONS FOR GALVANIZED MEMBERS SHALL BE GALVANIZED.
6. GALVANIZED BOLTS SHALL NOT BE REUSED. RETIGHTENING BOLTS THAT MAY HAVE BEEN LOOSENED FOR THE INSTALLATION OF ADJACENT BOLT(S) SHALL NOT BE CONSIDERED TO BE A REUSE AND SHALL BE RETIGHTENED.
7. REPAIR TO DAMAGED COATING:
   a) THE MAXIMUM AREA THAT SHALL BE REPAIRED SHALL COMPLY WITH APPLICABLE SECTIONS OF ASTM A123.
   b) REPAIR AREAS BY ONE OF THE APPROVED METHODS IN ACCORDANCE WITH ASTM A780 WHENEVER DAMAGE WIDTH EXCEEDS 1/16 INCH. MINIMUM THICKNESS REQUIREMENTS FOR THE REPAIR SHALL BE AS DESCRIBED IN ASTM A123.
   c) FIELD REPAIRS TO GALVANIZING SHALL BE MADE USING "ZRC GALVILITE," "GLAVA-GUARD," OR APPROVED EQUAL. REPAIR MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ABBREVIATIONS:

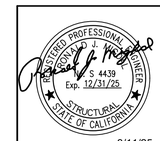
Ø	DIAMETER	f'c	CONCRETE COMPRESSIVE STRENGTH	PCF	POUNDS PER CUBIC FOOT
°F	DEGREES - FAHRENHEIT			PJF	PREMOLDED JOINT FILLER
°C	DEGREES - CELSIUS	f'm	MASONRY PRISM STRENGTH	PL	PLATE
		FAB	FABRICATE (OR, ED)	PLYWD	PLYWOOD
AB	ANCHOR BOLT	FD	FLOOR DRAIN	PM	PRESSED METAL
ACI	AMERICAN CONCRETE INSTITUTE	FDN	FOUNDATION	PRCST	PRECAST
		FHMS	FLATHEAD MACHINE SCREW	PREFAB	PRE-FABRICATED
ADDL	ADDITIONAL	FHWS	FLATHEAD WOOD SCREW	PSF	POUNDS PER SQUARE FOOT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FIG	FIGURE	PSI	POUNDS PER SQUARE INCH
		FIN	FINISH (ED)	PT	POINT
AISI	AMERICAN IRON AND STEEL INSTITUTE	FL	FLOOR	PT	PRESSURE TREATED
		FLEX	FLEXIBLE	PVC	POLYVINYL CHLORIDE
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	FO	FACE OF	PVMT	PAVEMENT
		FRP	FIBERGLASS REINFORCED PLASTIC	PWT	PREFABRICATED WOOD TRUSS
AL	ALUMINUM				
ALT	ALTERNATE(ING)	FTG	FOOTING	R	RISER
APPROX	APPROXIMATE(LY)	FURN	FURNISHED	RAD	RADIUS
AR	ANCHOR ROD			RC	REINFORCED CONCRETE
ARND	AROUND			RD	ROOF DRAIN
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	GA	GAGE	REF	REFERENCE / REFER
		GALV	GALVANIZED	REINF	REINFORCE (D, ING)
ASTM	ASTM INTERNATIONAL	GALVS	GALVANIZED STEEL	REQD	REQUIRED
ATR	ALL-THREADED ROD	GLB	GLUE LAMINATED BEAM	REV	REVISION
AWS	AMERICAN WELDING SOCIETY	GR	GUARD RAIL	RM	ROOM
		GRTG	GRATING	RO	ROUGH OPENING
				RT	RIGHT
B TO B	BACK TO BACK	H.A.S.	HEADED ANCHOR STUD		
BLDG	BUILDING	HD	HAND	SB	SOLID BLOCKING
BLK	BLOCK(ING)	HDR	HEADER	SCHED	SCHEDULE
BM	BEAM	HDWD	HARDWOOD	SECT	SECTION
BN	BOUNDARY NAILING	HGR	HANGER	SHT	SHEET
B.O.	BOTTOM OF	HGT	HEIGHT	SIM	SIMILAR
BOT	BOTTOM	HM	HOLLOW METAL	SL	SLOPE
BRG	BEARING	HOR	HORIZONTAL	SLNT	SEALANT
BTWN	BETWEEN	HP	HIGH POINT	SP	SPACE (S, ED)
		HR	HANDRAIL	SPEC	SPECIFICATION, SPECIFIED
CBC	CALIFORNIA BUILDING CODE	HS	HIGH STRENGTH	SQ	SQUARE
		IAMPO	INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICALS	SQ-FT	SQUARE-FEET
C/C	CENTER TO CENTER			SS	STAINLESS STEEL
CHKD	CHECKERED			SSMH	SANITARY SEWER MANHOLE
CIRC	CIRCUMFERENTIAL			STD	STANDARD
CJ	CONSTRUCTION JOINT	ICC	INTERNATIONAL CODE COUNCIL	STIF	STIFFENER
CL	CENTERLINE			STIR.	STIRRUP (S)
CLG	CEILING	ID	INSIDE DIAMETER	STL	STEEL
CLKG	CAULKING	IE	INVERT ELEVATION	STRUC	STRUCTURE (S, URAL)
CLR	CLEAR	I.F.	INSIDE FACE	STWY	STAIRWAY
CMU	CONCRETE MASONRY UNIT	INT	INTERIOR	SYM	SYMMETRICAL
COL	COLUMN	I.P.S.	IRON PIPE SIZE		
CONC	CONCRETE			T	TREAD (S)
CONN	CONNECTION	JB	JUNCTION BAR	T&B	TOP AND BOTTOM
CONST	CONSTRUCTION	JT	JOINT	T&G	TONGUE AND GROOVE
CONT	CONTINUOUS	JT FLR	JOINT FILLER	TD	TRENCH DRAIN
CRS	COURSE(S)			THD	THREADED
CRSI	CONCRETE REINFORCING STEEL INSTITUTE	LBS	POUNDS	THK	THICK (NESS)
		Ld	DEVELOPMENT LENGTH	TJ	TOOLED JOINT
CSK	COUNTERSINK	Ldh	DEVELOPMENT LENGTH STANDARD HOOK	T.O.	TOP OF
CTJ	CONTROL JOINT			TOC	TOP OF CONCRETE
CTR	CENTER (ED)	LG	LONG	TOS	TOP OF STEEL
		LL	LIVE LOAD	T.O.W.	TOP OF WALL
D	DEEP, DEPTH	LLH	LONG LEG HORIZONTAL	TPER	THERMOPLASTIC ELASTOMERIC RUBBER
d	PENNY	LLV	LONG LEG VERTICAL		
d_b	BAR DIAMETER	LNTL	LINTEL	TRNSV	TRANSVERSE
DBL	DOUBLE	LONG.	LONGITUDINAL	TYP	TYPICAL
DEMO	DEMOLITION	LP	LOW POINT		
DET	DETAIL	Ls	CLASS B TENSION CONTACT LAP SPLICE	UES	UNIFORM EVALUATION SERVICES
DF	DOUGLAS FIR			UON	UNLESS OTHERWISE NOTED
DIA	DIAMETER	LT	LEFT		
DIAG	DIAGONAL	LW	LIGHTWEIGHT	VERT	VERTICAL
DIM	DIMENSION			VIF	VERIFY IN FIELD
DL	DEAD LOAD	MAS	MASONRY	VR	VAPOR RETARDER
DN	DOWN	MATL	MATERIAL		
DO.	DITTO	MAX	MAXIMUM	W	WIDE
DP	DAMPROOFING	MB	MACHINE BOLT	W/	WITH
DR	DRAIN	MCJ	MASONRY CONTROL JOINT	WF	WIDE FLANGE
DWG(S)	DRAWING(S)	MFR	MANUFACTURER	W/O	WITHOUT
DWL(S)	DOWEL(S)	MIN	MINIMUM	WD	WIDTH / WOOD
		MO	MASONRY OPENING	WP	WORKING POINT
(E)	EXISTING	MTL	METAL	WPG	WATERPROOFING
EA	EACH			WS	WATERSTOP
EB	EXPANSION BOLT	NAAMM	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS	WT	WEIGHT
ECC	ECCENTRIC			WWF	WELDED WIRE FABRIC
ED	EQUIPMENT DRAIN				
EF	EACH FACE	NIC	NOT IN CONTRACT		
EL	ELEVATION	NOM	NOMINAL		
EMBED	EMBEDMENT	NSG	NON-SHRINK GROUT		
EN	EDGE NAILING	NTS	NOT TO SCALE		
EOR	ENGINEER OF RECORD				
EQ	EQUAL (LY)	O/E	OR EQUAL		
EQUIP	EQUIPMENT	OC	ON CENTER		
EQUIV	EQUIVALENT	OD	OUTSIDE DIAMETER		
ES	EACH SIDE	O.F.	OUTSIDE FACE		
ESR	EVALUATION SERVICE REPORT	OPNG(S)	OPENING(S)		
		OPP	OPPOSITE		
ETC	ETCETERA	OPP HD	OPPOSITE HAND		
EW	EACH WAY	OPT	OPTION (AL)		
EXP	EXPANSION				
EXP JT	EXPANSION JOINT				
EXST	EXISTING				
EXT	EXTERIOR				
EY	EPOXY				

ABBREVIATION NOTES:

1. ABBREVIATIONS AND DESIGNATIONS FOR STEEL MEMBERS MAY BE FOUND IN THE CURRENT STEEL CONSTRUCTION MANUAL BY AISC.
2. ABBREVIATIONS OF TECHNICAL SOCIETIES AND TRADE ASSOCIATIONS MAY BE FOUND IN THE SPECIFICATIONS
3. WELDING SYMBOLS AND ABBREVIATIONS MAY BE FOUND IN AWS 2.4.
4. ABBREVIATIONS LISTED ARE FOR USE WITH STRUCTURAL DRAWINGS ONLY. SOME ABBREVIATIONS LISTED MAY NOT BE USED ON THE PLANS.

LEGEND:

CLASS 2 AGGREGATE BASE



3/11/25

100% DESIGN SUBMITTAL

100% DESIGN / BID SET

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TJC and ASSOCIATES, INC.

PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

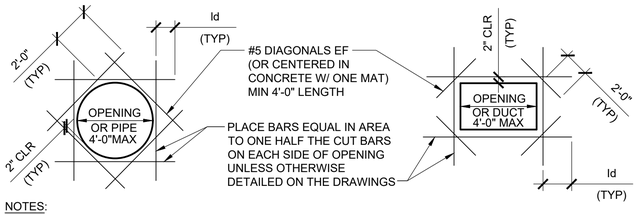
STRUCTURAL GENERAL NOTES II, ABBREVIATIONS AND LEGEND

REV	DESCRIPTION	APPRD	DATE

DATE: MARCH 2025
SCALE: NTS
DRAWN: BV
DESIGNED: RJM
APPROVED: -
JOB NO.: B80108.39

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT, ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEET NUMBER
GS2
14 OF 29



NOTES:

1. PROVIDE STANDARD HOOK IF INDICATED LENGTH IS NOT POSSIBLE.
2. REINFORCING STEEL IS TO BE CARRIED ACROSS ALL CONSTRUCTION JOINTS.
3. DETAIL IS TYPICAL FOR ALL OPENINGS GREATER THAN 10 INCHES AND LESS THAN OR EQUAL TO 4 FEET IN THE LARGER DIMENSION IN CONCRETE WALLS AND SLABS UNLESS OTHERWISE DETAILED ON THE DRAWINGS.
4. TRIM BARS ARE NOT REQUIRED AT AN OPENING EDGE PARALLEL TO AND WITHIN 6 INCHES OF A WALL OR BEAM.

ADDITIONAL TRIM REINFORCEMENT AT OPENINGS

DETAIL 03025 VAR
NTS

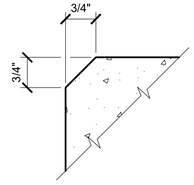
BAR SIZE	4000 PSI CONCRETE				
	ld (INCHES)		ls (INCHES)		ldh
	TOP BAR	OTHER	TOP BAR	OTHER	(INCHES)
#3	19	15	25	20	8
#4	25	20	33	26	10
#5	31	24	41	32	12
#6	37	29	49	38	15
#7	54	42	71	55	17
#8	62	48	81	63	19
#9	70	54	91	71	22
#10	79	61	103	80	25

NOTES:

1. ld: DEVELOPMENT LENGTH FOR A STRAIGHT REINFORCING BAR IN TENSION.
   ls: CLASS B TENSION CONTACT LAP SPLICE LENGTH.
   ldh: DEVELOPMENT LENGTH FOR STANDARD HOOKS IN TENSION.
2. LAP SPLICES SHALL BE CLASS B TENSION CONTACT LAP SPLICES TYPICAL, UNLESS OTHERWISE NOTED ON DRAWINGS.
3. TOP BAR IS ANY HORIZONTAL BAR WITH MORE THAN 12" CONCRETE CAST IN ONE LIFT BENEATH THE BAR, INCLUDING BUT NOT LIMITED TO, HORIZONTAL BARS CAST IN WALLS.
4. SPLICES IN HORIZONTAL BARS SHALL BE STAGGERED.
5. UNLESS OTHERWISE DETAILED ON THE DRAWINGS, SPLICES IN TWO CURTAINS SHALL NOT OCCUR IN THE SAME LOCATION.

LAP SPLICE LENGTH

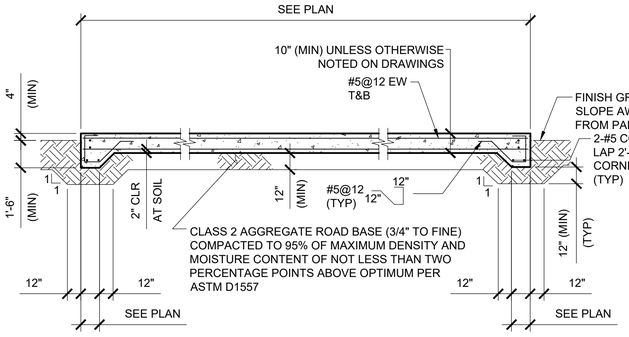
DETAIL 03026 VAR
NTS



UON ON DRAWINGS

CONCRETE CHAMFER

DETAIL 03028 VAR
NTS



EXTERIOR EQUIPMENT SLAB

DETAIL 03075 VAR
NTS

100% DESIGN / BID SET

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HALF MOON BAY, CALIFORNIA

STRUCTURAL STANDARD DETAILS

DATE	DESCRIPTION	APPRVD	DATE

REV	
-	

DATE: MARCH 2025
SCALE: NTS
DRAWN: BV
DESIGNED: RJM
APPROVED: -
JOB NO.: B80108.39

VERIFY SCALE
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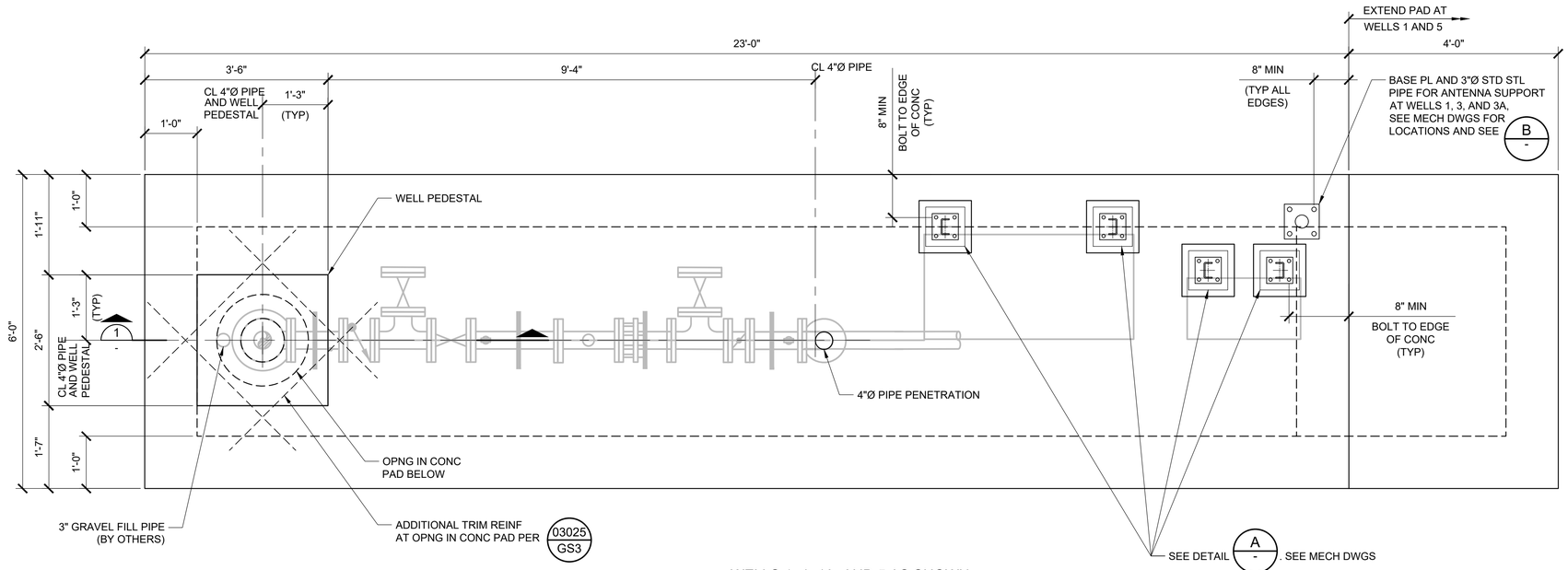
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REGISTERED PROFESSIONAL ENGINEER
RICHARD J. MOMSEN
S 4439
Exp. 12/31/25
STRUCTURAL
STATE OF CALIFORNIA

3/11/25
100% DESIGN SUBMITTAL

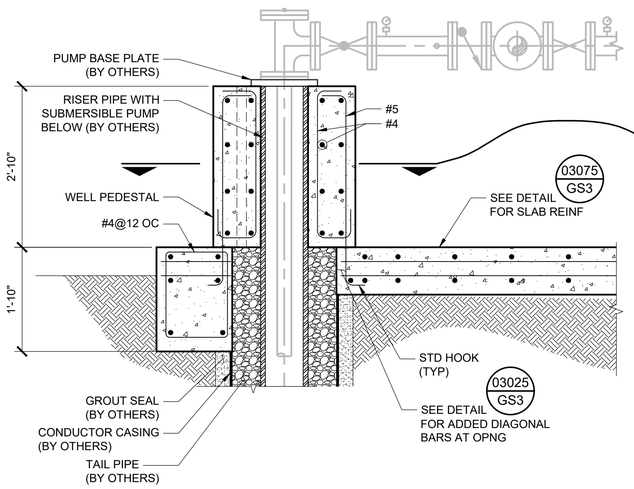
SHEET NUMBER
GS3
15 **OF** 29

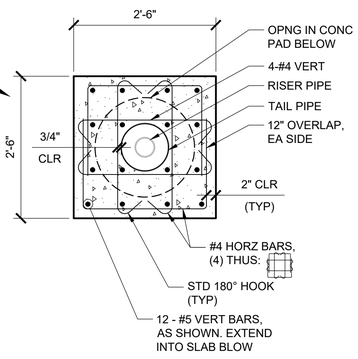


WELLS 1, 4, 4A, AND 5 AS SHOWN
WELLS 3 AND 3A OPP HD

CONCRETE PAD PLAN

SCALE: 3/4"=1'-0"

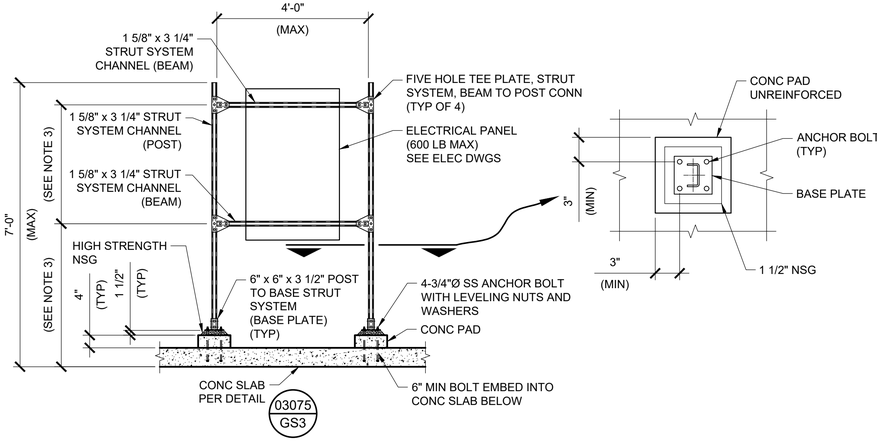




WELL PEDESTAL

SECTION 1

SCALE: 3/4"=1'-0"



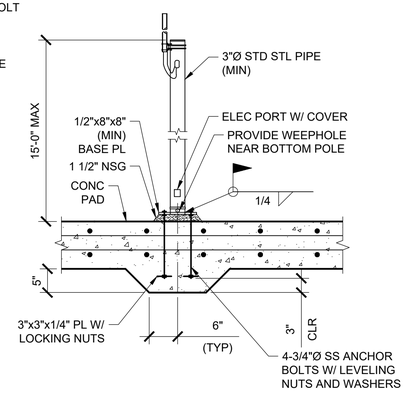
NOTES:

1. STRUCTURAL ELEMENTS SHALL BE PREFABRICATED STEEL STRUT SYSTEMS SUCH AS EATON B-LINE, UNISTRUT OR APPROVED EQUAL. CHANNEL ELEMENTS SHALL NOT HAVE SLOTTED HOLE PATTERN.
2. UNLESS OTHERWISE NOTED, USE 1/2"Ø (MIN.) THROUGH BOLTS FOR STRUT SYST. CONNECTION FITTINGS.
3. BEAM LOCATION TO BE COORDINATED WITH ELECTRICAL PANEL MANUFACTURER.
4. UNLESS OTHERWISE NOTED, ALL MATERIAL SHALL BE TYPE 316 STAINLESS STEEL.

ELECTRICAL PANEL MOUNTING STAND ON SLAB

DETAIL A

SCALE: NTS



DETAIL B

SCALE: 3/4"=1'-0"

100% DESIGN / BID SET

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2001 JUNIPERO SERRA BOULEVARD, SUITE 300
DALY CITY, CALIFORNIA 94014
(650) 292-9100 • FAX (650) 552-9012
TJC and ASSOCIATES, INC.

PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA

STRUCTURAL PLAN AND DETAILS

	DATE	APPR'D	DESCRIPTION	REV

DATE: MARCH 2025
SCALE: AS SHOWN
DRAWN: BV
DESIGNED: RJM
APPROVED: -
JOB NO.: B80108.39

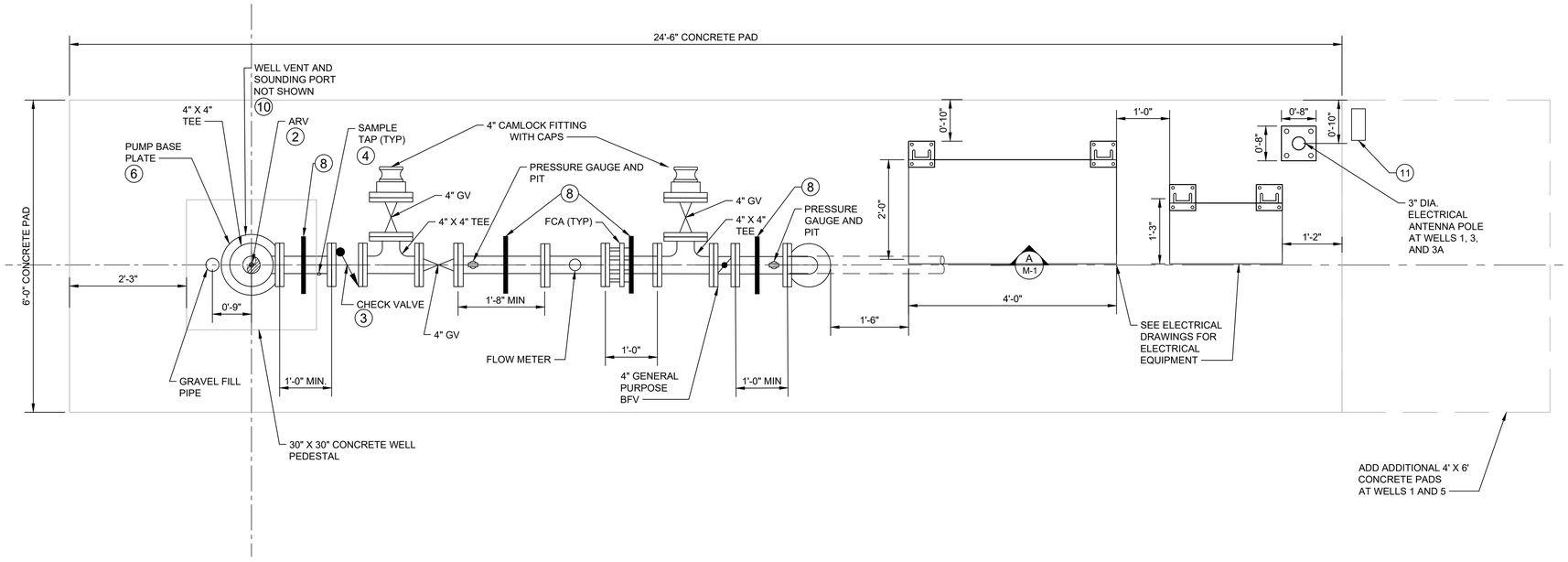
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REGISTERED PROFESSIONAL ENGINEER — Robert J. Mitchell — No. S 4439 Exp. 12/31/25 — STRUCTURAL — STATE OF CALIFORNIA
3/11/25

100% DESIGN SUBMITTAL

SHEET NUMBER
S1
16 OF 29

Path: C:\TJCAA Dropbox\Bee Vue\TJCAA Projects\2024 Projects\124071 - EKI, Coastside Pilarcitos Wellfield Replacement\Stru Filename: S01.dwg Plot Date: March 11, 2025 - 11:46 AM CADD User: Bee Vue

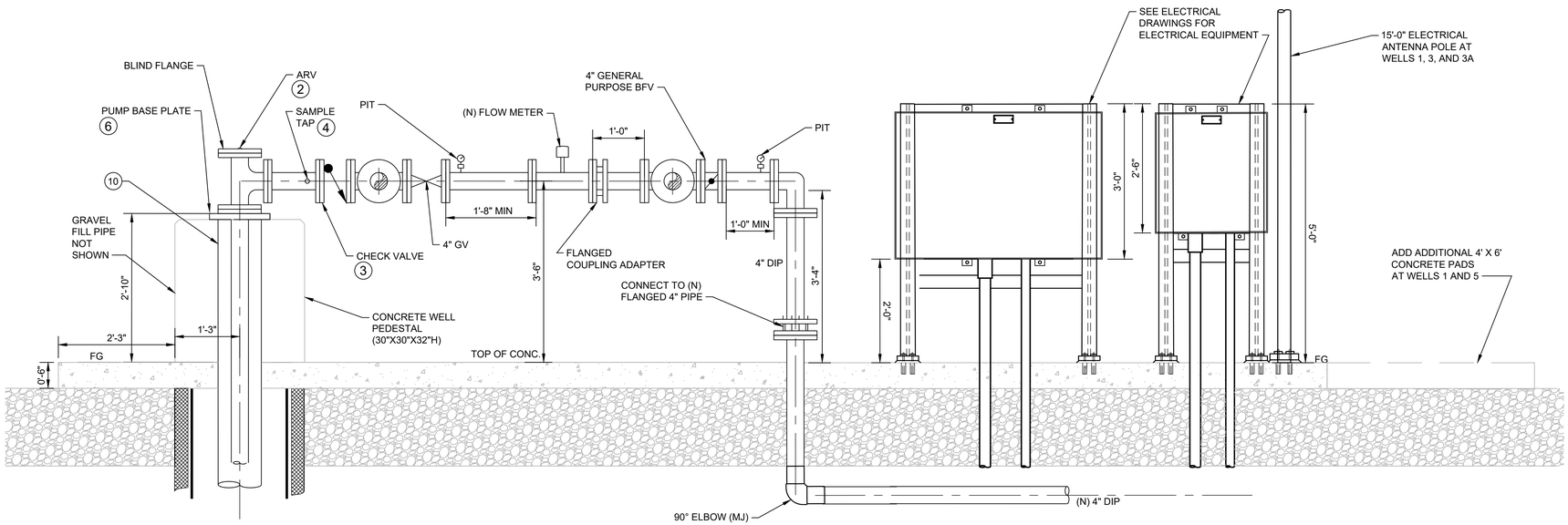


WELL PUMP PIPING PLAN (1 / M-1)

SCALE: 3/4" = 1'-0"

CONSTRUCTION NOTES

1. CONTRACTOR SHALL DESIGN, LOCATE, AND INSTALL ALL PIPE SUPPORTS IN ACCORDANCE WITH STRUCTURAL SPECIFICATIONS AND DRAWINGS.
2. INSTALL AIR RELEASE VALVES AS INDICATED. ALL AIR RELEASE VALVES SHALL BE 1-INCH UNLESS OTHERWISE NOTED. FOR AIR RELEASE VALVES, SEE DETAIL 4 / M-2. PROVIDE BOSS FOR PIPE TAPS IN ACCORDANCE WITH AWWA C151.
3. PUMP DISCHARGE CHECK VALVE SHALL BE APCO SERIES 600 OR APPROVED EQUAL.
4. FOR PIPE TAPS, PROVIDE 1-INCH TAPS USING BRONZE DOUBLE STRAP SADDLE, IP OUTLET WITH CORP STOP, IPXIP. PROVIDE INSULATING BUSHING AT SADDLE. IF SPECIFIED AS A SAMPLE TAP, SEE DETAIL 5 / M-2.
5. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS, PIPELINE ELEVATIONS, PIPELINE CONNECTIONS, AND INSTALLATION REQUIREMENTS.
6. WELL PUMP SUPPLIER SHALL BE RESPONSIBLE FOR DESIGNING THE WELL PUMP BASE PLATE IN ACCORDANCE WITH SPECIFICATION 33 11 36.
7. SEE SPECIFICATION 33 11 36 FOR WELL CONSTRUCTION DETAILS. CONTRACTOR TO FIELD VERIFY COMPATIBILITY BETWEEN WELL AND IMPROVEMENTS SHOWN IN THESE DRAWINGS.
8. SEE PIPE SUPPORT DETAIL 1 / M-2, DETAIL 2 / M-2. NO TOP PIPE STRAP DETIAL 2.
9. ALL ABOVE GRADE VALVES SHALL BE EQUIPPED WITH HAND-TURN WHEELS. GATE VALVES SHALL HAVE RISING STEMS.
10. INSTALL SOUNDING TUBE AND WELL VENT PER DETAIL 3 / M-2.
11. LOCATION OF 120V RECEPTACLE AT WELLS 1 AND 5. CONTRACTOR TO FIELD LOCATE.



WELL PUMP AND PIPING SECTION (A / M-1)

SCALE: 3/4" = 1'-0"

HORIZONTAL SCALE: 3/4" = 1'-0"
VERTICAL SCALE: 3/4" = 1'-0"
(20X VERTICAL EXAGGERATION)

100% DESIGN / BID SET

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(650) 292-9100 • FAX (650) 552-9012

PILARCITOS WELLFIELD REPLACEMENT PROJECT

HALF MOON BAY, CALIFORNIA

MECHANICAL PLAN, WELL PUMP AND PIPING

	DATE	APPRD	DESCRIPTION	REV

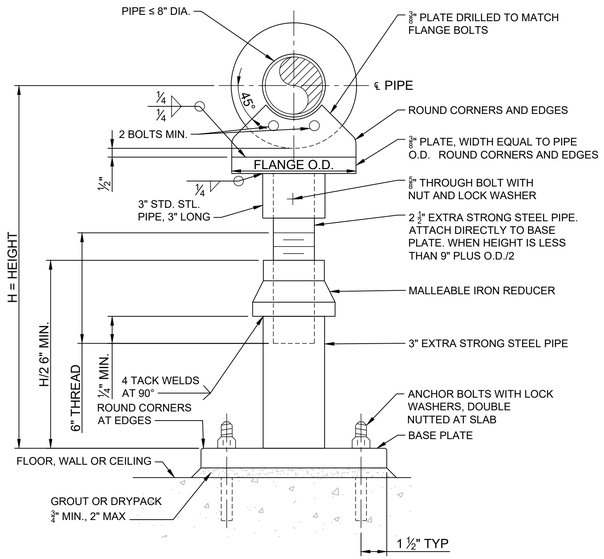
DATE: MAR 2025
SCALE: AS SHOWN
DRAWN: NC
DESIGNED: TC
APPROVED: JS
JOB NO.: B80108.39

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEET NUMBER
M-1
17 OF 29

REGISTERED PROFESSIONAL ENGINEER — JONATHAN P. N. SUN — C 81008 — CIVIL — STATE OF CALIFORNIA — 03/31/2025
100% DESIGN / BID SET

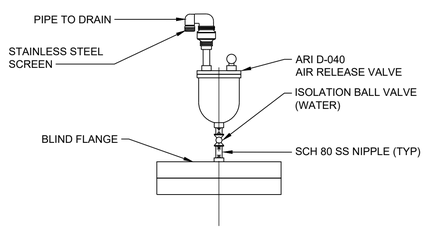
REGISTERED PROFESSIONAL ENGINEER — TYLER F. COLYER — C 80141 — CIVIL — STATE OF CALIFORNIA — 03/31/2025
100% DESIGN / BID SET



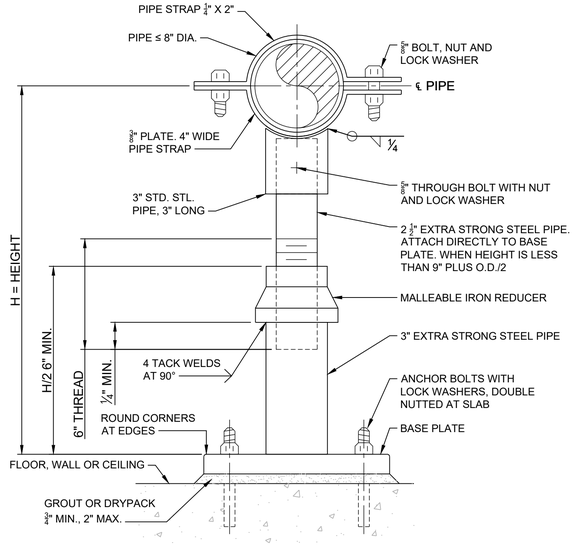
LOCATION	H (MAX.)	MEMBER	
		BASE PLATE	ANCHOR BOLTS
FLOOR	4'-6"	3/8"x12"x12"	4-5/8"
CEILING	4'-0"	5/8"x12"x12"	4-3/4"
WALL	1'-6"	5/8"x12"x12"	4-3/4"

NOTES:
1. AS AN ALTERNATE, IF ADJUSTMENT IS NOT NECESSARY, DELETE 2 ½" PIPE AND REDUCER AND WELD 3" STEEL PIPE DIRECTLY TO ⅜" PLATE ATTACHED TO PIPE FLANGE.
2. DO NOT CUT OR WELD AFTER GALVANIZING.
3. PIPE SUPPORT MAY BE ORIENTED IN ANY DIRECTION.

PIPE SUPPORT 1
NOT TO SCALE



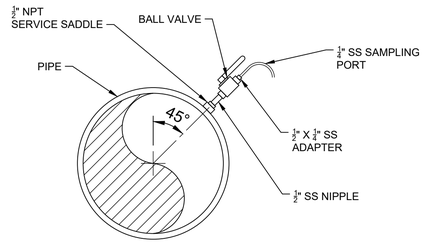
TYPICAL AIR RELEASE VALVE 4
NOT TO SCALE



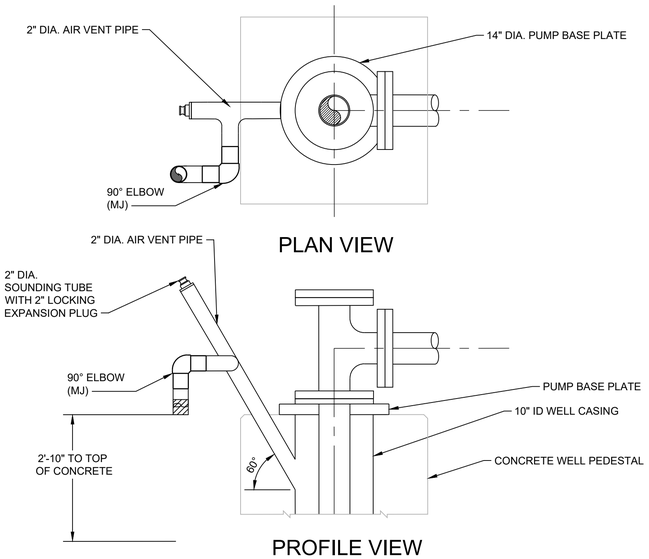
LOCATION	H (MAX.)	MEMBER	
		BASE PLATE	ANCHOR BOLTS
FLOOR	4'-6"	3/8"x12"x12"	4-5/8"
CEILING	4'-0"	5/8"x12"x12"	4-3/4"
WALL	1'-6"	5/8"x12"x12"	4-3/4"

NOTES:
1. AS AN ALTERNATE, IF ADJUSTMENT IS NOT NECESSARY, DELETE 2 ½" PIPE AND REDUCER AND WELD 3" STEEL PIPE DIRECTLY TO BOTTOM OF STRAP.
2. DO NOT CUT OR WELD AFTER GALVANIZING.
3. PIPE SUPPORT MAY BE ORIENTED IN ANY DIRECTION.
4. FOR USE IN CORROSIVE ENVIRONMENTS, SUPPORTS AND APPARATUSES SHALL BE TYPE 316 STAINLESS STEEL.

PIPE SUPPORT 2
NOT TO SCALE



TYPICAL SAMPLE TAP 5
NOT TO SCALE



NOTES:
1. BUG SCREENS SHALL BE PLACED ON AIR VENT PIPE.
2. BASE PLATE, GRAVEL FEED FILL PIPE, AND DISCHARGE ASSEMBLY NOT SHOWN.
3. SOUNDING TUBE SHALL BE WELDED TO THE OUTSIDE OF THE WELL CASING.
4. DESIGN SHALL BE IN CONFORMANCE WITH ALL APPLICABLE CODES AND REGULATIONS AS LISTED IN SPECIFICATIONS.

SOUNDING TUBE AND WELL VENT 3
NOT TO SCALE

100% DESIGN / BID SET

ekI environment & water
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DALY CITY, CALIFORNIA 94014
(650) 292-9100 • FAX (650) 552-9012

PILARCITOS WELLFIELD REPLACEMENT PROJECT
HALF MOON BAY, CALIFORNIA
MECHANICAL DETAILS

REV	DESCRIPTION	APPRD	DATE

DATE: MAR 2025
SCALE: AS SHOWN
DRAWN: NC
DESIGNED: TC
APPROVED: JS
JOB NO.: B80108.39

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
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SHEET NUMBER
M-2
18 OF 29

REGISTERED PROFESSIONAL ENGINEER — JONATHAN P. N. SUN — C 81008 — CIVIL — STATE OF CALIFORNIA — 03/31/2025
100% DESIGN / BID SET

REGISTERED PROFESSIONAL ENGINEER — TYLER F. COLYER — C 80141 — CIVIL — STATE OF CALIFORNIA — 03/31/2025
100% DESIGN / BID SET

County of San Mateo - Planning and Building Department

ATTACHMENT B

Coastal Development Permit Supplemental Information

1. Project Summary

The Coastside County Water District ("CCWD" or "the District") provides treated water to the City of Half Moon Bay and to nearby unincorporated San Mateo County communities. The District is heavily reliant on the San Franciso Public Utilities Commission's Pilarcitos Reservoir for its water supply. The District also relies upon its Pilarcitos Wellfield for supplemental water supply. Due to concerns for seismic safety, the SFPUC is modifying reservoir operations, which will have immediate and substantial water supply consequences for the District. Meanwhile, the District's Pilarcitos wells are nearing the end of their useful life and becoming prohibitively costly to maintain. Thus, with Pilarcitos Reservoir water supply curtailments imminent, the District needs to replace its Pilarcitos wells in order to maintain water supply reliability and to control costs. Under the Project, the District would replace six wells "in kind" by offsetting the new wells from the existing wells and abandoning the old wells (Project area). One of the old wells would also be converted to a monitoring well. The Project would not expand production capacity over that of the existing wells.

The following information is provided as additional or supporting information to that provided in the San Mateo County (County) Planning and Building Department's Coastal Development Permit (CDP) application forms, submitted for the Project. This application presents a description of the Project location and activities; evaluates the potential for Project activities to adversely affect biological resources, cultural resources, and water quality; and explains why the Project would not conflict with applicable Local Coastal Program policies.

Supplemental Project information is provided in the order of the questions presented in the CDP application forms. Additional materials are included in Appendices A through D. These appendices include best management practices and conservation measures that are proposed as part of the Project (Appendix A), a table of special-status species considered in the Project area (Appendix B), Representative Photographs of the Site (Appendix C), the existing water diversion license for the wells (Appendix D), the Categorical Exclusion prepared pursuant to the California Environmental Quality Act (CEQA) (Appendix E), and the Project plans (Appendix F).

2. Project Background

The District purchases approximately 75 percent of its water supply from the San Francisco Public Utilities Commission (SFPUC). The remaining 25 percent of the District's water supply is produced locally from wells and surface water. Thus, the District is highly reliant on SFPUC water.

Water from SFPUC is primarily supplied from SFPUC's Pilarcitos Reservoir. CCWD also has facilities to pump water directly from Upper Crystal Springs Reservoir (UCSR) by operating the District's Crystal Springs Pump Station (CSPS), if needed. However, the District relies on supply from Pilarcitos Reservoir to the extent it is available due to the high operating costs and complexity associated with operating

CSPS. In addition, the District has periodically experienced water quality issues with water pumped from the deep intake from UCSR.

The District operates shallow wells in the Pilarcitos Creek Wellfield, located in Pilarcitos Creek Canyon, between Pilarcitos Reservoir and Highway 92. The Pilarcitos wells are considered points of diversion from Pilarcitos Creek, and pumping is governed by the District's License 10598 (Appendix D). The license restricts total aggregate pumping from the wellfield to 1.5 cubic feet second at any given time and limits the total amount pumped to 360 acre-feet between November 1 and March 31 (no pumping is allowed outside of this window).

The SFPUC has completed assessments of Pilarcitos Dam and its associated facilities, which concluded that significant deformation and settlement of the dam embankment are anticipated during a magnitude 8.0 earthquake on the San Andreas Fault. Based upon this analysis, and in consultation with the Department of Water Resources, Division of Safety of Dams, the SFPUC implemented a 14-foot reservoir reduction, which is expected to reduce the risk of the dam overtopping after a significant earthquake. The SFPUC reduced the operating level of the reservoir by 15 feet on September 3, 2024.

While SFPUC is considering potential future modifications to the dam and associated watershed facilities, the reservoir reductions will have an immediate and substantial impact on the District's water supply options. To maintain service, the District will need to increase reliance on the higher cost UCSR and its groundwater wells, including especially its Pilarcitos wells. At the same time, the Pilarcitos wells are nearing the end of their useful life, are no longer capable of producing their design capacity, and are becoming prohibitively expensive to maintain.

Reliability of the Pilarcitos wells is critical due to the SFPUC's projected decrease in supply from Pilarcitos Reservoir. Thus, the District is undertaking the Pilarcitos Wellfield Replacement Project to improve the reliability of the water supply and reduce future maintenance costs. The Project will allow the District to optimize its use under these existing water rights. The Project will not, however, increase well production or distribution capacity.

3. Project Location and Site Conditions

The Project area is located in unincorporated San Mateo County, California within the United States Geologic Survey (USGS) Montara Mountain 7.5-minute quadrangle (**Figure 1**) approximately 2.75 miles northeast of the City of Half Moon Bay. The Project area includes six existing shallow wells which comprise the existing wellfield along the top of bank of an approximately 0.49-mile (2,568 feet) long reach of Pilarcitos Creek (**Figure 2**). All six wells are located on Assessor's Parcel Number (APN) 056-370-080, an approximately 310-acre parcel which is owned by CCWD. Each existing well is set within a concrete well pad (varying between 25 and 100 square feet in size) and has a corresponding 4-inch water pipe which extends under Pilarcitos Creek Road, connecting to the District's 18-inch raw water transmission pipeline. Photographs of site conditions are presented in Appendix C. The raw water transmission pipeline conveys the combined flow from Pilarcitos Reservoir, CSPS, and the Pilarcitos wells to the District's Nunes Water Treatment Plant. Adjacent uses in the vicinity include Santa's Tree Farm to the south and undeveloped riparian corridor and coastal scrub habitats to the north, east and west within a one-quarter mile radius of the Project area.

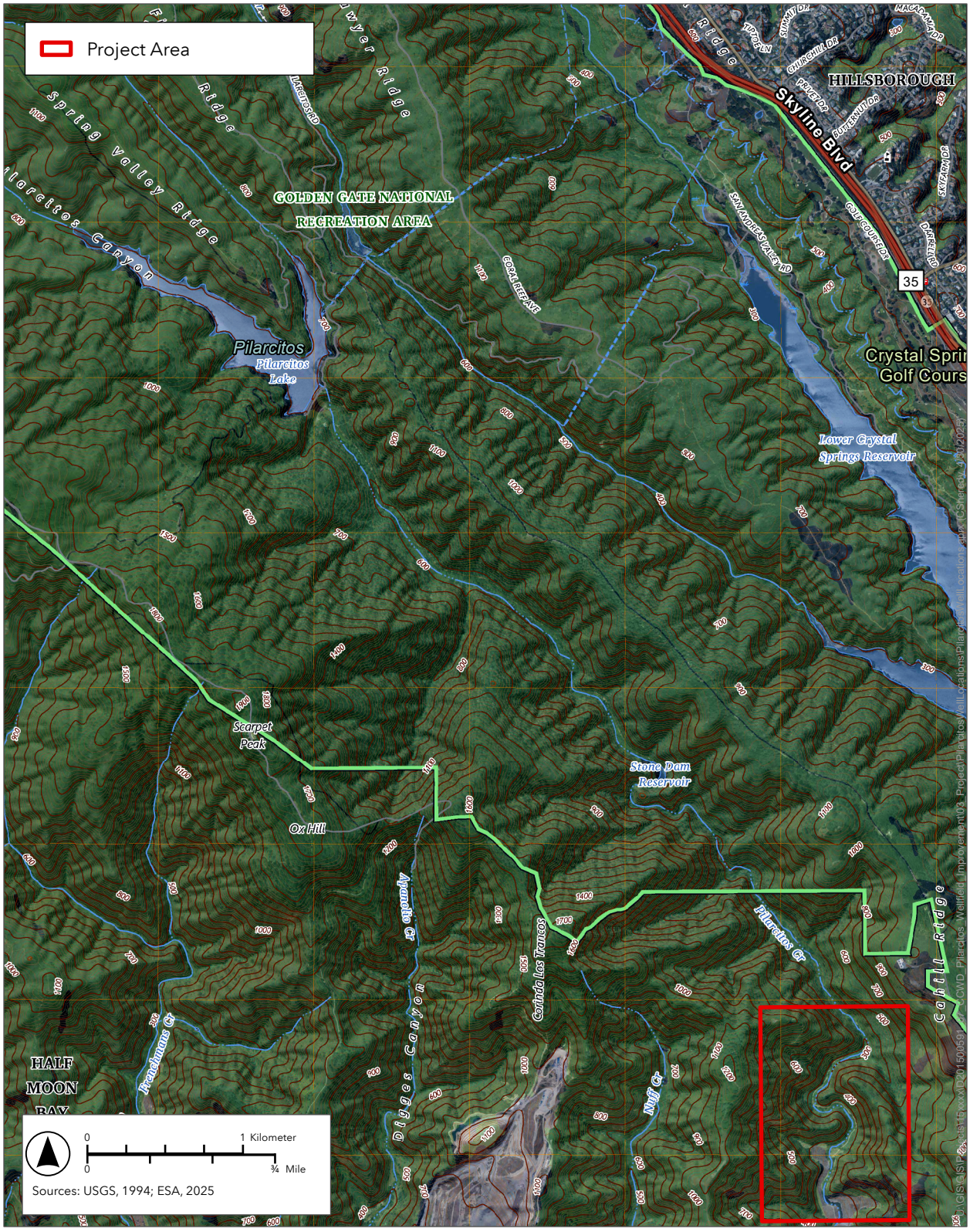

Figure 1
CCWD Pilarcitos Creek Wellfields Replacement Project
7.5-Minute USGS Topographic Map (Montara Mountain Quadrangle)
San Mateo County, CA

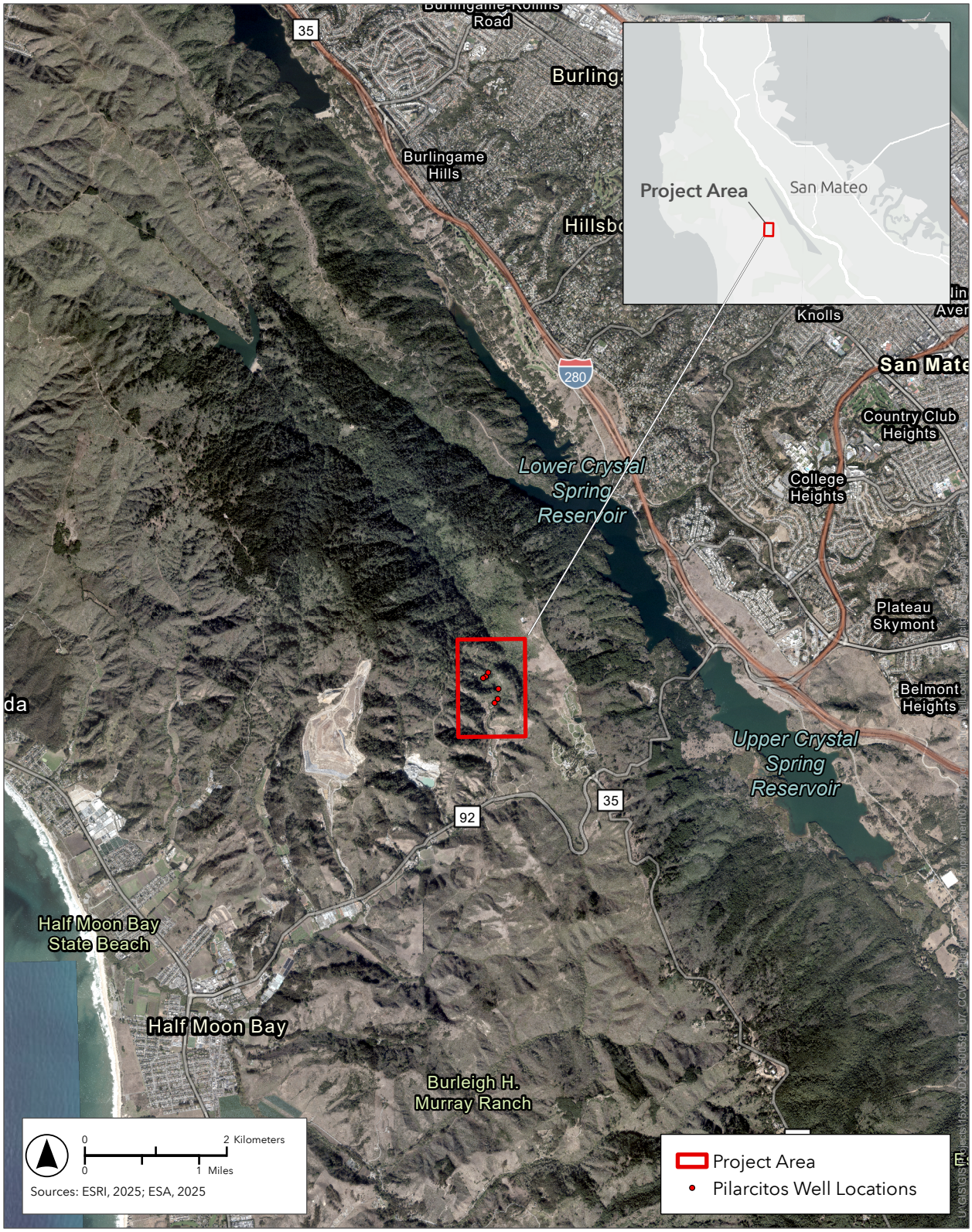

Figure 2
CCWD Pilarcitos Creek Wellfields Replacement Project
Project Location
San Mateo County, CA

4. Project Description

The Project would include (1) the construction of the six new wells, associated reinforced concrete pads, piping, valves and appurtenances, and connections to the raw water transmission pipeline; and (2) the addition of variable frequency drives and network connections to integrate with the District's existing Supervisory Control and Data Acquisition (SCADA) system. The Project would ensure continued, reliable water service to District customers and make future operation and maintenance activities easier and less impactful to the creeks and adjacent communities.

A typical well site would include a new well, drilled to a depth of approximately 50-65 feet below grade, a new 6-foot by 24.5-foot concrete well pad, the well pump and piping, electrical control boxes and an antenna. The concrete pad would rise to a height of approximately 6 inches above grade. The well piping would rise to a height of about 4 feet above the well pad, the electrical boxes would rise to about 5 feet above the well pad, and the antenna would rise to about 15 feet above the well pad. The new well pads would be adjacent to or overlap the existing well pads to be demolished. The new wellbore would be located about 10 to 15 feet from the existing wellbore. See Appendix F for design details.

Project Construction

Project construction and implementation would occur over approximately 4-5 months. This construction phase includes site mobilization, initial clearing and grading of the site; demolition of the existing wells and equipment; drilling of the well boreholes and installation of the well casing and gravel pack; installation of well pads, equipment, piping, and appurtenance; testing; and startup. Five of the existing wells would be destroyed and abandoned in accordance with County and State regulations, and the drilling permit. One of the existing wells (Well 4A) would also be converted to a monitoring well.

The replacement wells would be located near the existing wells where practicable and, in some cases, further away from Pilarcitos Creek. No trees or riparian vegetation are planned for removal.

Drilling and initial construction of each production well is anticipated to take approximately one working day.

A truck-mounted air-rotary drill rig would be used to advance boreholes for the replacement wells. Compressed air (and potentially water) would cool the drill bit and transport the cuttings to the surface during drilling operations. The produced materials from the drilling process would be conveyed through a discharge pipe or hose into a cyclone where cuttings would be separated from air used for circulation. If certain unstable borehole conditions are encountered, mud-rotary drilling and/or continuous activity may be required during installation of well casing, filter pack, and annular seal, to avoid collapse of the borehole.

As the borehole is advanced, a casing hammer would be used to drive a temporary casing into the borehole. After the borehole is drilled and temporary casing set, the permanent well would be constructed within the temporary casing, after which the temporary casing would be removed. The well casing and screen would serve as a housing for the well pump and as a vertical conduit for water flowing upward from the aquifer to the pump intake. The remaining annular space around the screen would be backfilled with clean graded sand and topped with a sand-cement grout seal after the well casing and screen is run

into the temporary casing. The temporary casing would be removed as the annular space is filled. The well would be grouted (sealed) from just above the top of the well screen up to the surface. Following well construction, the well would be developed (prepared for operation) using a bailer, pumps and surge blocks to remove drilling mud from the casing and filter pack, and to establish a hydraulic connection between the well screen and the aquifer.

The water produced during development would be discharged into temporary separation tanks to allow solids to settle prior to discharge of water according to the District's National Pollutant Discharge Elimination System permit. Settled solids will be disposed of at an offsite location. Typical construction equipment for well installation and development would consist of a drill rig, boom truck or crane, backhoe, air compressor, forklift, electrical generator, storage tanks, welding equipment, and miscellaneous support vehicles. The Project would not expand existing water utility services.

After the new wells are installed, the well pumps and other equipment, piping, appurtenances, electrical and controls equipment, and pads would be installed. After the system is tested, the piping would be connected to the existing 18-inch transmission main. The operations of the system would be tested during startup.

Best Management Practices and Conservation Measures

The Project is intended to maintain water supply reliability and control costs of its local water supply near Pilarcitos Creek for the District and its customers. The Project is not anticipated to have any substantial adverse environmental effects. However, since the Project would be constructed in areas near sensitive biological resources, cultural resources, and hydrological and water quality resources, CCWD has developed best management practices (BMPs) and conservation measures (see Appendix A) that would be implemented as part of the Project. These measures, included in Appendix A, are activities or actions that would be undertaken by the contractor during Project construction.

5. Environmental Considerations

This section presents analyses of potential Project effects on biological resources, cultural resources, and water quality.

Biological Resources

ESA biologists[1] performed a reconnaissance pedestrian survey of the Project sites (the study area) December 3, 2024, to characterize biological resources. Prior to the survey, ESA queried the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB)[2] records and reviewed the Calflora database for a 3-mile radius around the study area and obtained the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) list for the study

[1] Tierra Groff (CDFW-approved qualified biologist, biological monitor for California red-legged frog) and Nicole Ibanez (CDFW-approved qualified biologist, qualified botanist, biological monitor; CDFW Plant Collecting Permit (2018(a)-16-107-v) holder and CDFW Scientific Collecting Permit (SC-7617) holder).

[2] The term "special-status" species includes those species that are listed and receive specific protection defined in federal or state endangered species legislation, as well as species not formally listed as Threatened or Endangered, but designated as "Rare" or "Sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations, or local agencies such as counties, cities, and special districts.

area.[3,4,5] The pedestrian survey allowed for complete visual coverage of study area aquatic resources and habitat suitable for special-status species, such as sensitive plant species, ground nesting birds, and aquatic breeding and upland refugia habitat for reptiles and amphibians. The study area vegetation communities and wildlife habitats were characterized as primarily mixed coniferous forest and mixed riparian forest, with one aquatic resource – Pilarcitos Creek (**Figure 3**). Soils within the Project area are predominantly alluvial Soquel loam (sloping, eroded).[6]

Pilarcitos Creek parallels the proposed wellfield replacement locations. The creek contains perennial flows and a relatively contiguous, dense overstory, dominated by native trees, primarily willow (*Salix* sp.) and oak (*Quercus* sp.). Upslope of the creek is dominated by redwoods (*Sequoia sempervirens*). The lower shrub and herbaceous layer include a mix of native and non-native species in a less contiguous distribution. Bank erosion from winter storm flows has resulted in a consistent, sediment-laden channel bed within the study area. Wrack and vegetative stormflow debris occur at various segments within the creek bed. Uplands of the study area consist of an unpaved access road, sparsely vegetated (ruderal) areas (immediately surrounding the wellfield locations), with peripheral, native woodlands.

Analysis of study area habitat conditions with special-status species database query results reveals the potential for three special-status plant species and four special-status animal species to occur based on species' habitat requirements and recorded presence in the region. **Table B-1** and **Table B-2** in **Appendix B** present special-status plant and animal species (respectively) with records documented in CNDDB within 3 miles of the Project area, or identified on the IPaC list, evaluated for their potential to occur in the study area. These tables list all species evaluated for their potential presence, species' federal and/or state protective status, provides a description of their suitable habitat, and includes a determination of the species' potential presence in the study area.

[3] California Natural Diversity Database (CNDDB). 2024. Biogeographic Data Branch, Department of Fish and Wildlife. Sacramento, California. Accessed December 2024.

[4] Calflora. 2024. Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2024. Berkeley, California: The Calflora Database [a non-profit organization]. Available online at: https://www.calflora.org/. Accessed December 2024.

[5] United States Fish and Wildlife Service (USFWS), 2024. List of Threatened and Endangered Species that May Occur In Your Proposed Project Location Or May Be Affected By Your Proposed Project. Unofficial Species List. Coastside County Water District Pilarcitos Wellfield Improvement Project. Project Code: 2025-0035418. Species list generated December 23, 2024.

[6] U.S Department of Agriculture Natural Resources Conservation Service Web Soil Survey. Available online at: https://websoilsurvey.nrcs.usda.gov/. Accessed April 2025.

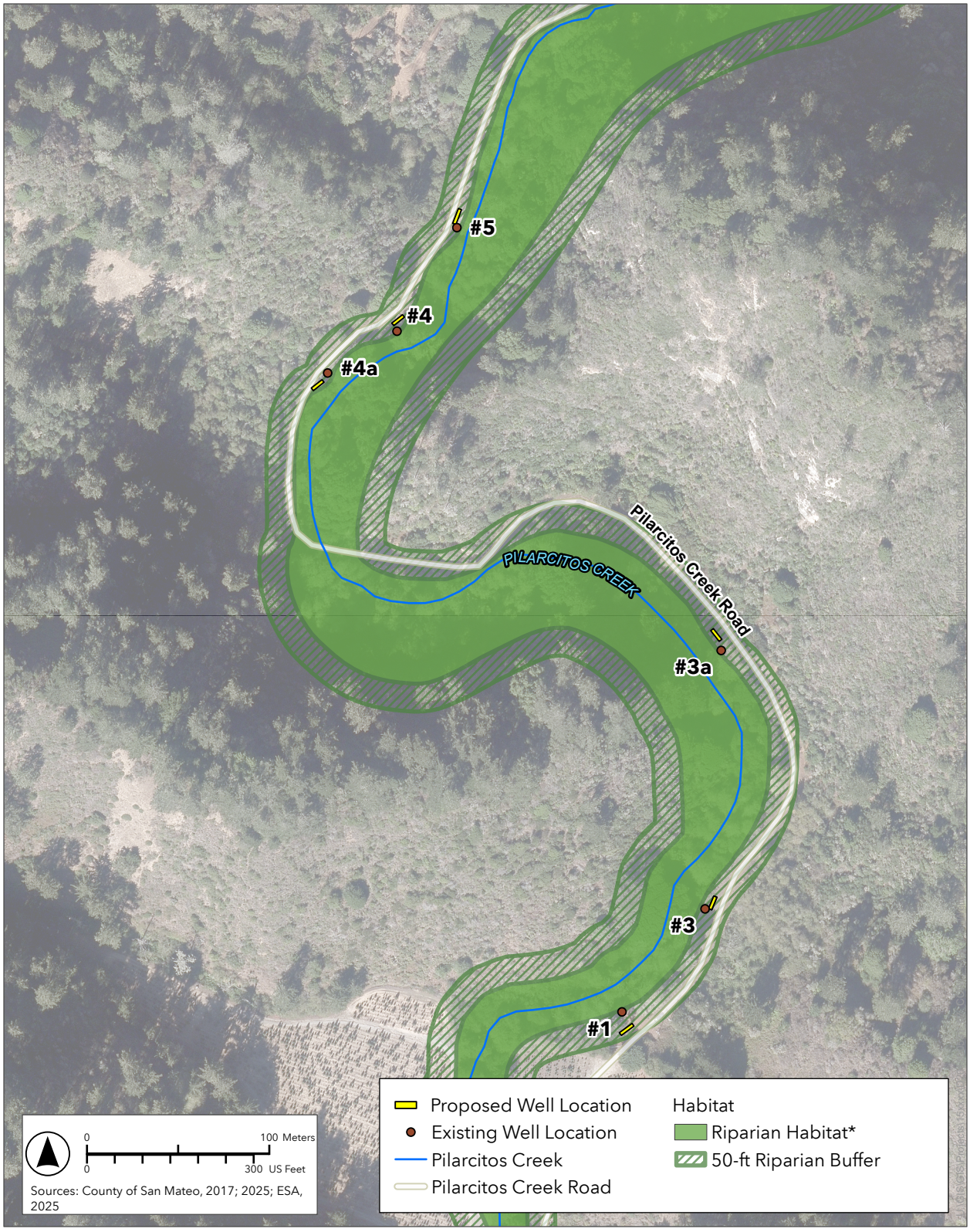

Figure 2
CCWD Pilarcitos Creek Wellfields Replacement Project
Sensitive Habitats Map
San Mateo County, CA

*Riparian habitat was approximated using the following data sources: San Mateo County's Midcoast Local Coastal Program (LCP) sensitive habitats map, USFWS riparian imagery, Google Earth Imagery, County of San Mateo streams data and 2017 aerial imagery.

In summary, San Mateo woolly sunflower (*Eriophyllum latilobum*),[7] western leatherwood (*Dirca occidentalis*),[8] and San Francisco collinsia (*Collinsia multicolor*)[9] all have moderate potential to occur[10] in the study area due to the presence of suitable habitat and numerous records within 3 miles of the study area. The District will conduct a pre-construction plant survey according to **BMP-BIO-5 (see Appendix A),** and if special-status plant species are found and cannot be avoided, the District will prepare a mitigation and monitoring plan that offsets the special-status plant impacts of the Project and ensures that there is no net loss of individuals or area of occupied habitat, whichever is more relevant to the impacted species.

The study area contains suitable habitat for California red-legged frog (*Rana draytonii*; CRLF) and the Project is located within USFWS-designated critical habitat for this species.[11] The CNDDB documents occurrence records in reaches of Pilarcitos Creek within the study area for CRLF. The Pilarcitos Creek riparian corridor provides suitable habitat for San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*); however, no middens were observed during the December 2024 field survey.[12] Steelhead – central California coast Distinct Population Segment (*Oncorhynchus mykiss irideus*)[13] is known to occur in tributaries to Pilarcitos Creek, and the creek is part of NMFS-designated critical habitat. There are known marbled murrelet (*Brachyramphus marmoratus*)[14] nesting sites upstream of the wellfield improvement locations, and the Project would be near USFWS-designated critical habitat for this species. Suitable nesting trees were observed throughout the study area. Numerous migratory birds could also use the study area trees, other vegetation, or ground burrows for nesting (**Figure 4**).

These special-status species and nesting birds are afforded protection under federal and/or State laws, including the federal and State endangered species acts, the Migratory Bird Treaty Act, and the California Fish and Game Code. CCWD is required to comply with all applicable laws and regulations protecting these species, in addition to best management practices to protect fish, wildlife, and plant resources.

In the absence of biological resources protection measures, the type of work required for the Project, including equipment transport and mobilization, ground disturbance, and drilling could have direct and indirect adverse effects on special-status species through habitat modification or accidental 'take'[15,16] of individual animals.

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7 San Mateo woolly sunflower is listed as endangered under FESA and CESA and has a California Rare Plant Rank (CRPR) of 1B.1.

8 Western leatherwood has a CRPR 1B.2 rank.

9 San Francisco collinsia has a CRPR 1B.2 rank.

10 A species was designated as having a "moderate" potential for occurrence if (1) there is low to moderate quality habitat present within the study area or immediately adjacent areas; and (2) the study area is within the known range of the species, even though the species was not observed during biological surveys.

11 CRLF is listed as threatened under the federal Endangered Species Act (FESA) and identified as a California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC).

12 San Francisco dusky-footed woodrat is identified as a CDFW SSC.

13 Steelhead – central California coast distinct population segment is listed as threatened under FESA and a CDFW SSC.

14 Marbled murrelet is listed as threatened under FESA and under the state Endangered Species Act (CESA).

15 Take under FESA is defined as "Harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C., §1532 (19).

16 Take under CESA is defined as "Hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Fish & G. Code, §8.

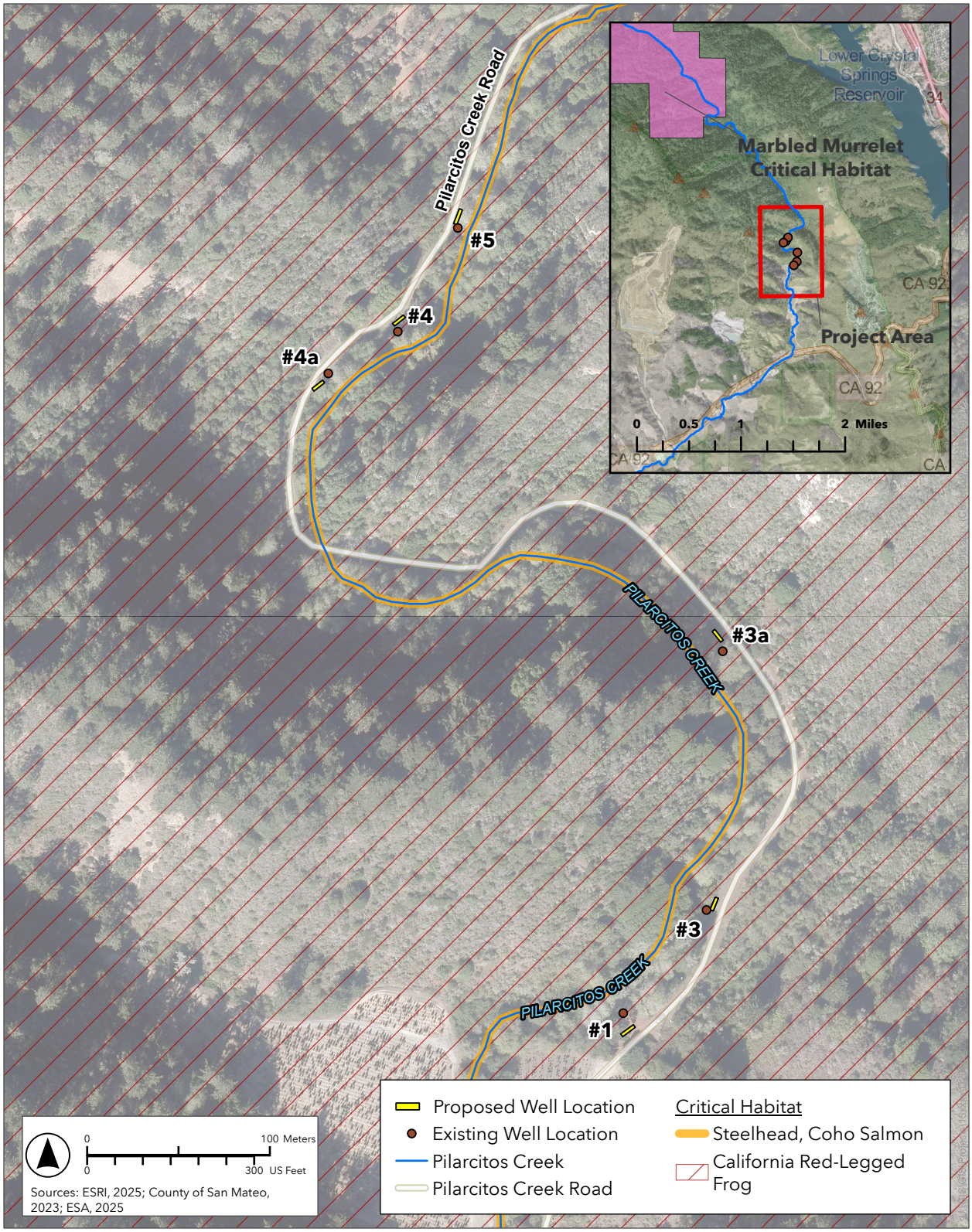

Figure 4
CCWD Pilarcitos Creek Wellfields Replacement Project
Critical Habitat Map
San Mateo County, CA

Similarly, noise and visual disturbance associated with such activities could disrupt birds nesting in the Project vicinity during the nesting season (January 15 – August 15). The disruption of nesting migratory or native birds is not permitted under the federal Migratory Bird Treaty Act or the California Fish and Game Code, as it could constitute unauthorized take.

However, the Project is designed to occur in disturbed uplands that are regularly maintained and avoid direct disturbance to sensitive habitats where special-status species could be present. The Project would avoid impacts on sensitive habitats, including aquatic resources of Pilarcitos Creek and associated riparian corridors by locating the proposed wells adjacent to their existing footprints in developed uplands and ruderal areas. The Project includes CCWD's conservation measures to minimize or avoid entirely potential impacts on biological resources during Project implementation. Such measures include mandatory training of construction personnel to identify sensitive environmental resources in the Project vicinity (e.g., aquatic resources, sensitive habitat areas, and special-status plants and animals with potential to occur on-site, nesting birds, etc.) and educate personnel of their protective status, along with implementation of specific conservation measures such as erecting exclusionary fencing around work areas, conducting pre-construction surveys and biological monitoring during construction, implementing water quality and other general BMPs to ensure resource protection, installing erosion control measures to secure disturbed soils post-construction (e.g., application of native seed and tackifier outside of agricultural fields), and requiring additional protection measures during Project implementation. The full text of these measures is presented in **Appendix A** (see **BMP-BIO-1** through **BMP-BIO-9)**. Through Project design, implementation of the above-described BMPs and conservation measures, and compliance with State and federal resource protection laws and regulations, the Project would not be expected to "take" special-status species or otherwise result in substantial adverse effects on biological resources.

Cultural Resources

An ESA archaeologist conducted a records search at the Northwest Information Center ("NWIC") of the California Historical Resources Information System on November 19, 2024 (File No. 24-0744). The purpose of the records search was to (1) determine whether known cultural resources have been recorded within or adjacent to the Project area; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources.

The records search indicated there are no previously recorded pre-contact Native American or historic-era archaeological resources recorded within the Project area or within 0.5 mile. There are no known resources that are eligible for listing in the National Register of Historic Places (National Register) or the California Register of Historical Resources (California Register), nor are there known resources that have not been evaluated. Therefore, there are no known historical resources in the Project area.

ESA's record search was augmented by a field survey of the Project area on December 3, 2024. The purpose of the field survey was to evaluate the potential for unrecorded cultural resources to occur within the Project area. The field assessment identified no cultural resources within the Project area.

ESA also conducted a review of the following sources of historic maps and aerial photography: USGS topographic quadrangles, U.S. Bureau of Land Management General Land Office plat maps, land ownership maps, and historic aerials. The Project area is north of Highway 92 along Pilarcitos Creek,

west of Lower Crystal Springs Reservoir and northeast of Half Moon Bay. The land that includes the wells was owned by Michael Torpey by 1894[17] and was passed down to his daughter and other children by 1927.[18] Michael and his wife were Irish immigrants and had at least seven children. They lived in San Mateo in 1880,[19] but by 1900[20] they had moved their family to San Francisco. It is unclear if the Torpey family ever developed or farmed on the land around the Project area. The road that follows Pilarcitos Creek and turns east up the slope approximately 0.3-mile north of the wells, was constructed by 1941.[21] The Project area has historically not been developed except for construction of the road.

The underlying geology of the Project alignment consists of Holocene-age alluvial and colluvial deposits formed within and adjacent to the Pilarcitos Creek channel.[22] Soils in the Project alignment are dominated by sloping and eroded Soquel loam along the banks and rough broken land of unweathered bedrock on the surface at the base of Pilarcitos Creek.[23]

Based on the Holocene age of the soils in the Project area, there is the potential for buried pre-contact archaeological deposits within paleosols in undisturbed portions of the Project area.[24] However, the Project area is located within an extremely steep canyon with very little stable flat land due to high creek flows and the narrowness of the valley at the base of the canyon. No pre-contact or indigenous resources have been previously identified within 0.5-mile of the Project Area. Additionally, the Project area is within and adjacent to existing wells and therefore the soil in the immediate Project area has been disturbed by the original construction of the well and the adjacent road. Therefore, the likelihood of intact archaeological resources in this context is significantly lessened. The dynamic landform, previous ground disturbance, and the distance to known archaeological resources suggest that the Project area has a relatively low potential for the presence of pre-contact archaeological resources.

There is also no evidence of historic-era agricultural use or habitation of the Project area besides the construction of the adjacent road. The historic aerial and map imagery review did not identify any features within the Project area that could represent buried historic-era archaeological resources such as artifact-filled wells or privies.[25, 26] Based on this review, the potential for presence of unrecorded, or previously unknown, historic-era archaeological resources is low. This analysis concludes that the Project area's sensitivity for pre-contact and historic-era archaeological resources is low.

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17 Bromfield, D., 1894. Official Map of San Mateo County, Schmidt Label & Litho. Co., San Francisco.

18 Kneese, Geo. A., 1927. Official Map of San Mateo County.

19 U.S. Census Bureau, 1880. 1880 United States Federal Census, California, San Mateo, Township 4.

20 U.S. Census Bureau, 1900. 1900 United States Federal Census, California, San Francisco, District 0124.

21 NETR (Nationwide Environmental Title Research), 2024. Available: https://historicaerials.com/viewer, accessed December 2024.

22 Pampeyan, E.H., 1994. *Geologic map of the Montara Mountain and San Mateo 7.5' quadrangles, San Mateo County, California*, Prepared by U.S. Geological Survey.

23 USDA (U.S. Department of Agriculture), 2024. Natural Resources Conservation Service Web Soil Survey, Version 3.4, http://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx, December 16, 2024.

24 Rosenthal et al., 2004. Rosenthal, Jeffrey S., and Jack Meyer, Cultural Resources Inventory of Caltrans District 10 Rural Conventional Highways: Volume III: Geoarchaeological Study, Landscape Evolution and the Archaeological Record of Central California. Prepared by Far Western Anthropological Research Group, Inc., Davis, CA, Prepared for Caltrans District 10, Stockton, 2004.

25 NETR (Nationwide Environmental Title Research), 2024. Available: https://historicaerials.com/viewer, accessed December 2024.

26 Northwest Information Center (NWIC), 2024. Records Search File No. File No. 24-0744. On file, ESA, November 19, 2024.

For these reasons discussed above and considering BMPs and conservation measures **BMP-CUL-1** and **BMP-CUL-2** in **Appendix A**, substantial adverse effects on cultural resources would not occur.

Hydrology and Water Quality

The Project would result in a disturbance of less than one acre. After the well replacements, the Project area would be restored to the existing grade. Given that the Project would not disturb greater than one acre, the CCWD would not be required to obtain coverage under the State Water Resources Control Board's ("SWRCB") Construction General Permit (2022-0057-DWQ). However, CCWD would implement similar BMPs as those required under Local Coastal Program (LCP) Appendix 1.A, Minimum Stormwater Pollution Prevention Requirements.[27] For instance, BMP-BIO-4 includes equipment storage and maintenance measures designed to prevent inadvertent discharges of oil, grease, or fuels (among other pollutants), and provisions for immediate cleaning and disposal of leaked materials (see Appendix A). Through the implementation of these BMPs, the Project would not have an adverse water quality impact.

Pilarcitos Creek is not listed by the San Francisco Bay Regional Water Quality Control Board ("RWQCB") as impaired. The Project would not result in substantial adverse effects on hydrology or water quality.

6. Environmental Review Checklist

The following explanations are provided in response to the Environmental Information Disclosure Form's Environmental Review Checklist questions for which the Project would result in a "yes" answer.

1h. Does this project involve construction in a sensitive habitat?

Yes, the Project would include decommissioning of existing wells and construction of new wells, in or adjacent to existing riparian canopy.

2b. Will the project involve exterior construction within 100 feet of a stream?

Yes, the existing wellfield is located adjacent to the bank of Pilarcitos Creek, approximately 20 feet from the top of the bank. Replacement wells will be adjacent to existing well locations and will be located further upland from Pilarcitos Creek and the existing wells where practicable. (see Figure 3).

2f. Will the project involve any work within a stream, riparian corridor or shoreline?

No. The Project will include limited ground disturbance within an area adjacent to and outside of the Pilarcitos Creek riparian corridor. As discussed in Section 4, *Project Description*, no trees or riparian vegetation are planned for removal. Consistency with LCP policies regarding riparian corridor protections are discussed in Section 7 below.

[27] County of San Mateo, 2021. Local Coastal Program Policies. Available: https://www.smcgov.org/planning/local-coastal-program. Accessed April 25, 2025.

County of San Mateo - Planning and Building Department

ATTACHMENT C

COASTSIDE COUNTY WATER DISTRICT WELLFIELD IMPROVEMENT PROJECT

Best Management Practices and Conservation Measures

Biological Resources

BMP-BIO-1: Worker Environmental Awareness Program Training

A qualified biologist will develop and implement a project-specific Worker Environmental Awareness Program (WEAP) training that will be attended by all construction personnel prior to beginning work on-site. Interpretation will be provided for non-English speaking workers, if needed, and the same instruction will be provided for any new workers prior to their performing activities on-site. The training could consist of a recorded presentation that could be reused for new personnel. The WEAP training will generally include but not be limited to the following:

1. Applicable state and federal laws, environmental regulations, project permit conditions, and penalties for non-compliance;
2. Information on special-status animal species with potential to occur at or in the vicinity of the project site , their habitat, the importance of these species and their habitat, the general measures that are being implemented to conserve these species as they relate to the project, and the boundaries within which the project construction will occur, avoidance measures, and a protocol for encountering such species including a communication chain;
3. Pre-construction surveys and biological monitoring requirements associated with each phase of work and at each project site;
4. Known sensitive resource areas in the project vicinity that are to be avoided and/or protected (e.g., Pilarcitos Creek) as well as approved project work areas; and
5. Best management practices (BMPs) and their location on the project site for erosion control and/or species exclusion.

BMP-BIO-2: Biological Monitor(s) On-Site with Stop Work Authorization

A qualified biologist or biological monitor will be on site daily during initial site disturbance, exclusion fence installation, and ground disturbance (including drilling) to document compliance with conservation measures and avoid or minimize impacts on sensitive species and their habitat. The qualified biologist may decide to reduce monitoring to spot checks after completion of initial heavy construction (including earth disturbance and use of construction vehicles/equipment) activities. The qualified biologist or biological monitor will be authorized to stop construction if necessary to protect fish and wildlife resources which will be allowed to disperse from the work site of their own volition. If any sensitive,

federal or State listed threatened or endangered species, or Species of Special Concern are found (injured, dead, or alive and unable to leave the project area under its own volition) the biologist will halt work and contact the District and its contractor who will contact the appropriate regulatory agency (e.g., CDFW/USFWS/NOAA-NMFS) immediately.

Qualified biologists and biological monitors are defined as follows:

- A qualified biologist is an individual experienced with biological monitoring, who is able to recognize the species in the project area, and who is familiar with the habits and behavior of those species. Qualified biologists will have a minimum of five years of academic training and professional experience in the biological sciences and related resource management activities as it pertains to this project.
- A biological monitor is an individual experienced with construction level biological monitoring, who is able to recognize species in the Project area, and who is familiar with the habits and behavior of those species. Biological monitors will have academic and professional experience in biological sciences and related resource management activities as it pertains to this Project.

BMP-BIO-3: Wildlife Exclusion Fencing

The District will install temporary exclusion fencing around key project boundaries adjacent to suitable habitat for sensitive federal or State listed threatened or endangered species or Species of Special Concern to ensure isolation of project activities from sensitive aquatic resources and habitat. Exclusion fencing installation and monitoring will adhere to the following practices:

- Fencing locations and design will be determined in consultation with the qualified biologist. Fenced areas may be fitted with gates to allow access during active construction. Gates must be closed at the end of the workday to exclude wildlife from fenced areas.
- Fencing will be installed immediately prior to the start of construction activities under the supervision of a qualified biologist.
- Temporary exclusion fencing will be continuously maintained until all construction activities are completed.
- The qualified biologist or biological monitor will conduct daily inspections of the fenced areas prior to the commencement of heavy construction activities.
- If the biological monitor determines that sensitive species are not within these excluded work areas, equipment or materials may be moved and project activities may commence.
- Fencing within established roadways is not required.

The fence will be of a material and design that meets standards for species exclusion fencing typically approved by USFWS and/or CDFW, including a minimum height of 3 feet above ground surface (when installed), with an additional 4 to 6 inches of fence material buried such that species cannot crawl under the fence. Silt fencing of a size that meets these above- and below-ground dimensions, installed with wooden support stakes facing the work area is acceptable.

BMP-BIO-4: General Conservation Measures during Construction

The District and its contractor will implement the following general measures while working in project sites during construction to prevent and minimize impacts on special-status species, aquatic resources, and sensitive habitat areas:

- Ground disturbance and construction footprints will be minimized to the greatest degree feasible.
- Project-related vehicles will observe a 15 mile-per-hour speed limit on unpaved roads in the project site.
- No firearms or pets will be allowed on the project site.
- The project contractor will provide closed garbage containers for the disposal of all food-related trash items. All garbage will be collected daily from the project site and placed in a closed, wildlife-proof container from which garbage will be removed weekly. Construction personnel will not feed or otherwise attract fish or wildlife to the project site.
- If vehicle or equipment maintenance is necessary, it will be performed in designated upland staging areas (not at creek work sites), and spill kits containing cleanup materials will be available on-site. Maintenance activity and fueling must occur at least 100 feet from all aquatic resources.
- Equipment will be maintained to prevent the leakage of vehicle fluids such as gasoline, oils, or solvents, and a spill response plan will be developed. Hazardous materials such as fuels, oils, or solvents, will be stored in sealable containers in a designated location that is at least 50 feet from aquatic resources.
- As necessary, erosion control measures will be implemented to prevent any soil or other materials from entering any nearby aquatic habitat. Erosion control (e.g., silt fencing, coir wattles) will be installed between the work area(s) and adjacent aquatic habitat to prevent soil from eroding or falling into the sensitive habitat area. Sediment control measures will be furnished, constructed, maintained, and later removed. Plastic monofilament of any kind (including those labeled as biodegradable, photodegradable, or UV-degradable) will not be used. Only natural burlap, coir, or jute wrapped fiber rolls will be used.
- Disturbance or removal of vegetation will be kept to the minimum necessary to complete project related activities. Trimming or removal of trees and riparian vegetation associated with Pilarcitos Creek is prohibited. No equipment used in support of project implementation (e.g., excavator) will enter the riparian habitat or Pilarcitos Creek.
- Upon completion of construction, the District will restore areas disturbed during project construction to their approximate pre-project conditions. All exposed or disturbed soils will re-covered by gravel or other existing non-vegetative surface cover material, or be planted with a native species seed mix appropriate for the area disturbed (e.g., erosion control mix), free from seeds of noxious or invasive weed species, and applied at a rate which ensure establishment. Seeding placed after October 15 will be applied by hydroseeding or will be covered with broadcast straw, jute netting, coconut fiber blanket, weed-free mulch or a similar erosion control method.
- Project personnel will be required to report immediately any harm, injury, or mortality of a listed species (federal or state) during construction, including entrapment, to the construction foreman, qualified biologist, and District staff. Project personnel will provide verbal notification to the USFWS Endangered Species Office in Sacramento, California, and/or to the local CDFW warden or biologist (as applicable) within 1 working day of the incident. Project personnel will follow up with written notification to the appropriate agencies within 5 working days of the incident. The District or its

consultant will record all special-status species observations on California Natural Diversity Data Base (CNDDB) field sheets and send them to the CDFW/USFWS

- The spread of invasive non-native plant species and plant pathogens will be avoided or minimized by implementing the following measures:
  - Construction equipment will arrive at the project clean and free of soil, seed, and plant parts to reduce the likelihood of introducing new weed species.
  - Any imported fill material, soil amendments, gravel, or other materials required for construction and/or restoration activities that will be placed within the upper 12 inches of the ground surface will be free of vegetation and plant material.
  - Certified weed-free imported erosion control materials (or rice straw in upland areas) will be used exclusively, if possible.
  - To reduce the movement of invasive weeds into uninfested areas, the project contractor will stockpile topsoil removed during excavation and will subsequently reuse the stockpiled soil for re-establishment of disturbed project areas.

BMP-BIO-5: Conservation Measures for Sensitive Plants

A qualified botanist will conduct a pre-construction survey within the project boundaries for the special-status plant species identified as having at least moderate potential to occur within the study area. These species include San Mateo woolly sunflower (*Eriophyllum latilobum*),[1] San Francisco collinsia (*Collinsia multicolor*),[2] and western leatherwood (*Dirca occidentalis*).[3]

If special-status plant species are found and cannot be avoided, the District will prepare a mitigation and monitoring plan that offsets the special-status plant impacts of the project and ensures that there is no net loss of individuals or area of occupied habitat- whichever is more relevant to the impacted species. The mitigation and monitoring plan will be prepared before the start of any construction activities in the special-status plant species area. This plan will describe the methods and specify success criteria and monitoring period for transplanted plants and related long-term protection and management of transplanted plants. This mitigation will be implemented by the District.

If federal- or State-listed species are identified during floristic survey, the District will mark these plants for avoidance and comply with the federal and State Endangered Species Acts, as described below.

1. If special-status plant populations(s) are identified during floristic survey and can be avoided during project implementation, it will be clearly marked in the field by a qualified botanist and avoided during construction activities. Before ground clearing or ground disturbance, all on-site construction personnel will be instructed as to the species' presence and the importance of avoiding impacts to this species and its habitat.
2. If special-status plant populations cannot be avoided, the District will consult with USFWS and/or CDFW as appropriate to coordinate relocation of special-status plants or compensation if relocation is not determined to be a feasible or successful option by a qualified biologist:
   i. To the extent feasible, special-status plants that would be impacted by the project will be relocated within local suitable habitat. This can be done either through salvage and transplanting

[1] San Mateo woolly sunflower is a perennial herb listed as endangered under the federal Endangered Species Act (FESA) and California Endangered Species Act (CESA) and has a California Rare Plant Rank (CRPR) of 1B.1 and blooms May – June.

[2] San Francisco collinsia is an annual herb with a CRPR 1B.2 rank which blooms March – May.

[3] Western leatherwood is a shrub with a CRPR 1B.2 rank which blooms November – March.

or by collection and propagation of seeds or other vegetative material. Any plant relocation will be done under the supervision of a qualified botanist or restoration ecologist.

ii. Compensation for temporary or permanent loss of special-status plant occurrences, in the form of land purchase or restoration, will be provided in a way that compensates for the lost individuals and habitat at a ratio of 1:1 or greater. Compensatory measures will be determined on a case-by-case basis and (for listed species) in consultation with the resource agencies. Compensation for loss of special-status plant populations typically involves the purchase and permanent stewardship of known occupied habitat or the restoration and reintroduction of populations in degraded, unoccupied habitat. Restoration or reintroduction may be located on- or offsite.

In either case the District will prepare a Mitigation and Monitoring Plan for relocated special-status plants or to compensate for the loss of special-status plant species. The plan will detail relocation methods or appropriate replacement ratios and methods for implementation, success criteria, monitoring and reporting protocols, and contingency measures that will be implemented if the initial mitigation fails. The plan will be developed in consultation with the appropriate agencies prior to the start of local construction activities. At a minimum, success criteria will require any mitigation to provide equal or better habitat and populations than the impacted area.

BMP-BIO-6: Conservation Measures for California Red-legged Frog

A qualified biologist will survey the work sites 2 weeks before the onset of construction for CRLF to determine presence (and life stage) of these species within portions of Pilarcitos Creek within the project area. Additionally, a qualified biologist will conduct a pre-construction survey of the project work areas for CRLF immediately prior to the start of construction activities. The surveys will consist of walking the project limits and within the project sites that contain suitable habitat to ascertain presence of this species.

- The specific methods for decontamination will follow USFWS (2005) and USGS (2015) protocols, respectively. These protocols describe field equipment maintenance, disinfection, and field hygiene procedures designed to minimize potential spread of pathogens to amphibians.
- CRLF individuals will not be disturbed if encountered during project implementation but allowed to disperse from project areas unharmed and of their own volition while all work outside the fenced areas is halted within 50 feet of individuals.
- If a CRLF is not dispersing on its own volition, the on-site biologist will monitor the frog while work continues, as long as the on-site biologist can ensure the safety of the frog. The qualified biologist will immediately inform the construction manager that work should be halted or modified (in the case of a buffer or non-dispersing individual), if necessary, to avert avoidable take of listed species.

A qualified biologist (or qualified biological monitor) will monitor project work areas that provide suitable habitat for CRLF as described for BMP-BIO-2. The biologist will have the authority to stop construction activities and develop alternative work practices, in consultation with construction personnel (and resource agencies as appropriate), if construction activities are likely to affect CRLF.

- All excavations of a depth of 8 inches or greater will be covered at the end of each workday, or escape ramps will be installed at a 3:1 grade to allow wildlife that fall in a means to escape. If escape ramps cannot be provided, then holes or trenches will be covered with plywood or other hard material.
- Any pipes or similar materials greater than 4 inches in diameter will be capped or stored at the end of each day, so as to prevent listed species from using these as temporary refuges, and becoming trapped or otherwise negatively affected.

- Vehicles or equipment parked overnight at the project staging areas or project sites adjacent creeks will be inspected for harboring species each morning by the qualified biological monitor before vehicles or equipment are moved.

BMP-BIO-7: Protection Measures for Nesting Birds

The following measures will be implemented to protect nesting birds and their nests during the nesting season (January 15 – August 15) during construction:

1. Prior to any ground disturbance during the nesting season, a qualified biologist will conduct a pre-construction nesting survey 7 days prior to the start of such activities or after any construction breaks of 14 days or more. Surveys will be performed for the individual project well sites, vehicle and equipment staging areas, and suitable habitat within 250-feet to locate any active passerine (perching bird) nests and within 500-feet of these individual sites to locate any active raptor (birds of prey) nest sites.

2. If active nests or nest trees presumed to be occupied are located during the pre-construction nesting bird surveys or identified prior to or during project construction, the biologist will evaluate if the schedule of construction activities could affect the active nests and the following measures will be implemented based on their determination:

    a. If construction is not likely to affect the active nest, construction may proceed without restriction; however, a qualified biologist will regularly monitor the nest at a frequency determined appropriate for the surrounding construction activity to confirm there is no adverse effect. Spot-check monitoring frequency would be determined on a nest-by-nest basis considering the particular construction activity, duration, proximity to the nest, and physical barriers which may screen activity from the nest. The qualified biologist may revise his/her determination at any time during the nesting season in coordination with the District.

    b. If it is determined that construction may affect the active nest, the qualified biologist will establish a no-disturbance buffer around the nest(s) and all project work would halt within the buffer until a qualified biologist determines the nest is no longer in use. Typically, these buffer distances are 250 feet for passerines and 500 feet for raptors; however, the buffers may be adjusted if an obstruction, such as a building, is within line-of-sight between the nest and construction. Buffer distances for nesting marbled murrelet will initially be 200 meters (656 feet) from the project site.

        For special-status bird species (i.e., fully protected, endangered, threatened, species of special concern), a District representative, supported by the wildlife biologist, will coordinate with CDFW (and USFWS for FESA–protected species nests such as marbled murrelet) regarding modifying nest buffers, prohibiting construction within the buffer, and modifying or restricting construction activities until nesting is complete.

    c. Modifying nest buffer distances, allowing certain construction activities within the buffer, and/or modifying construction methods in proximity to active nests of all other non-listed species protected under the MBTA and California Fish and Game Code will be done at the discretion of the qualified biologist and in coordination with the District staff.

    d. Any work that must occur within established no-disturbance buffers around active nests will be monitored by a qualified biologist. If adverse effects in response to project work within the buffer are observed and could compromise the nest, work within the no-disturbance buffer(s) will halt until the nest occupants have fledged.

3. Birds that begin nesting within the project site and survey buffers amid construction activities will be assumed to be habituated to construction-related or similar noise and disturbance levels and no work exclusion zones will be established around active nests in these cases; however, should birds nesting nearby begin to show disturbance associated with construction activities, no-disturbance buffers will be established as determined by the qualified wildlife biologist

BMP-BIO-8: Protection Measures for Marbled Murrelet

Tree removal, tree trimming, ground vegetation removal and ground disturbance (including well drilling) will occur outside of the marbled murrelet breeding season (February 1 to September 15), to the extent feasible. If these activities cannot be avoided during bird breeding season, the below measures will apply:

i. A qualified marbled murrelet biologist will conduct a habitat assessment of the Project area prior to construction. The habitat assessment will include a review of the workplan and biological databases and will include up to two site visits. The qualified marbled murrelet biologist will determine if protocol level surveys are required for the Project area based on the habitat assessment.

ii. The District will work with the qualified marbled murrelet biologist to determine the appropriate avoidance and minimization efforts according to USFWS guidelines and the habitat assessment survey results. These avoidance and minimization efforts could include noise suppression, additional monitoring, no-disturbance buffers, etc.

BMP-BIO-9: Conservation Measures for San Francisco Dusky-Footed Woodrat

A qualified wildlife biologist will conduct a pre-construction survey for San Francisco dusky-footed woodrat middens prior to the start of construction in suitable habitat within and surrounding the project footprint proximate to Pilarcitos Creek, staging areas, and access roads. Active middens identified during surveys within the project sites, staging areas, or along access roads will be flagged as a sensitive resource and avoided during construction.

Cultural Resources

BMP-CUL-1: Conservation Measures for Subsurface Resources

In the unlikely event that subsurface resources are identified during ground disturbing activities, project personnel will comply with PRC Section 21083.2(i), which requires the lead agency to make provisions for archaeological resources accidentally discovered during construction. An immediate evaluation will be conducted by a qualified archaeologist, and if the find is determined to be a unique archaeological resource or a historical resource, then it must be avoided. If avoidance is not feasible, the resource will be recovered and treated accordingly. Construction will be allowed in other areas while the archaeological mitigation takes place.

BMP-CUL-2: Conservation Measures for Human Remains

In the unlikely event that ground disturbing activities identify undiscovered human remains, project personnel will comply with Government Code Section 27460 et seq., which requires ground disturbing activities to halt until the County Coroner can determine whether the remains are subject to the provisions

of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner, and cause of death; and the required recommendations concerning the treatment and disposition of the human remains have been made. Pursuant to California Health and Safety Code Section 7050.5, the coroner will make a determination within 48 hours of notification of the discovery of the human remains. If the coroner determines that the remains are not subject to their authority and recognizes or has reason to believe that they are those of a Native American, the coroner will contact the Native American Heritage Commission within 24 hours.

Appendix B.

Special-Status Species Considered in the Project Area

Table B-1 (Special-Status Plant Species) and **Table B-2 (Special-Status Animal Species)**, below, present special-status species with records documented in CNDDB within 3- miles of the Pilarcitos Creek Wellfield Improvement Project (Project) area,[1] or identified on the IPaC list,[2] evaluated for their potential to occur in the study area. Tables B-1 and B-2 list all species evaluated for their potential presence, species' federal and/or state protective status, provides a description of their suitable habitat, and includes a determination of the species' potential presence.[3]

Tables B-1 and B-2 indicates the likelihood of occurrence of each identified species based on a review of the biological literature of the region, information presented in previous environmental documentation, and an evaluation of the habitat conditions within the study areas.

- A species' potential to occur was designated "none" if (1) its specific habitat requirements (e.g., serpentine grasslands, as opposed to grasslands occurring on other soils) are not present; or (2) it is presumed to be extirpated from the area or region based on the best scientific information available.

- A species was designated as having a "low" potential for occurrence if (1) its known current distribution or range is outside of the study area; or (2) only limited or marginally suitable habitat is present within the study area.

- A species was designated as having a "moderate" potential for occurrence if (1) there is low to moderate quality habitat present within the study area or immediately adjacent areas; and (2) the study area is within the known range of the species, even though the species was not observed during biological surveys.

- A species was designated as having a "high" potential for occurrence if (1) moderate to high quality habitat is present within the study area; and (2) the study area is within the known range of the species.

- A species was designated as "present" if species is known to occur in the study area either through (1) direct observation or (2) documentation of species' records in CNDDB or other scientific database located in contiguous habitat within or immediately adjacent to the study area.

1 California Natural Diversity Database (CNDDB). 2024. Biogeographic Data Branch, Department of Fish and Wildlife. Sacramento, California. Accessed December 2024.

2 United States Fish and Wildlife Service (USFWS), 2024. List of Threatened and Endangered Species that May Occur In Your Proposed Project Location Or May Be Affected By Your Proposed Project. Unofficial Species List. Coastside County Water District Pilarcitos Wellfield Improvement Project. Project Code: 2025-0035418. Species list generated December 23, 2024.

3 Calflora. 2024. Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2024. Berkeley, California: The Calflora Database [a non-profit organization]. Available online at: https://www.calflora.org/. Accessed December 2024.

TABLE B-1
SPECIAL-STATUS PLANT SPECIES CONSIDERED IN THE PROJECT AREA

Common Name *Scientific Name*	Federal/State Status	CNPS Status	Habitat and Blooming Period	Potential to Occur
arcuate bushmallow *Malacothamnus arcuatus*	-/-	1B.2	Shrub species found in chaparral, cismontane woodland. Gravelly alluvium. Occurs at elevations 1-735 m. Blooms April – September.	**None.** No suitable habitats or soils occur in the study area. Four CNDDB records occur within 3-miles of the study area.
bent-flowered fiddleneck *Amsinckia lunaris*	-/-	1B.2	Annual herb found in cismontane woodland, valley and foothill grassland, and coastal bluff scrub. Occurs at elevations 3-795 m. Blooms March – June.	**None.** No suitable habitats occur in the study area. Four CNDDB records occur within 3-miles of the study area.
Choris' popcornflower *Plagiobothrys chorisianus var. chorisianus*	-/-	1B.2	Annual herb found in chaparral, coastal scrub, coastal prairie. Mesic sites. Occurs at elevations 5-705 m. Blooms March – June.	**None.** No suitable habitats occur in the study area. Three CNDDB records occur within 3-miles of the study area.
coastal marsh milk-vetch *Astragalus pycnostachyus var. pycnostachyus*	-/-	1B.2	Perennial herb found in coastal dunes, marshes and swamps, and coastal scrub. Mesic sites in dunes or along streams or coastal salt marshes. Occurs at elevations 0-155 m. Blooms April – October.	**None.** No suitable habitats occur in the study area. One CNDDB record occurs within 3-miles of the study area.
Crystal Springs lessingia *Lessingia arachnoidea*	-/-	1B.2	Annual herb found in coastal sage scrub, valley and foothill grassland, cismontane woodland. Grassy slopes on serpentine; sometimes on roadsides. Occurs at elevations 90-200 m. Blooms July – October.	**None.** No suitable habitats or soils occur in the study area. Five CNDDB records occur within 3-miles of the study area.
fountain thistle *Cirsium fontinale var. fontinale*	FE/SE	1B.1	Perennial herb found in valley and foothill grassland, chaparral, cismontane woodland, and meadows and seeps. Serpentine seeps and grassland. Occurs at elevations 45-185 m. Blooms May – October.	**None.** No suitable habitats or soils occur in the study area. One CNDDB record occurs within 3-miles of the study area.
fragrant fritillary *Fritillaria liliacea*	-/-	1B.2	Perennial herb (bulb) found in coastal scrub, valley and foothill grassland, coastal prairie, and cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. Occurs at elevations 3-385 m. Blooms February – April.	**None.** No suitable habitats occur in the study area. Four CNDDB records occur within 3-miles of the study area.
Franciscan onion *Allium peninsulare var. franciscanum*	-/-	1B.2	Perennial herb (bulb) found in cismontane woodland and valley and foothill grassland. Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. Occurs at elevations 5-320 m. Blooms May – June.	**None.** No suitable habitats occur in the study area. Five CNDDB records occur within 3-miles of the study area.
Hickman's cinquefoil *Potentilla hickmanii*	FE/SE	1B.1	Perennial herb found in coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, marshes and swamps. Freshwater marshes, seeps, and small streams in open or forested areas along the coast. Occurs at elevations 5-125 m. Blooms April – August.	**None.** Outside range of known occurrences. No CNDDB records within 3-miles of the study area.
Hillsborough chocolate lily *Fritillaria biflora var. ineziana*	-/-	1B.1	Perennial herb (bulb) found in cismontane woodland, valley and foothill grassland. Probably only on serpentine; most recent site is in serpentine grassland. Occurs at elevations 90-170 m. Blooms March – April.	**None.** No suitable habitats or soils occur in the study area. Two CNDDB records occur within 3-miles of the study area.

TABLE B-1
SPECIAL-STATUS PLANT SPECIES CONSIDERED IN THE PROJECT AREA

Common Name *Scientific Name*	Federal/State Status	CNPS Status	Habitat and Blooming Period	Potential to Occur
Kellogg's horkelia *Horkelia cuneata var. sericea*	-/-	1B.1	Perennial herb found in closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral, old dunes, coastal sandhills, and openings insandy or gravelly soils. Occurs at elevations 5-430 m. Blooms February – July.	**None.** No suitable habitats or soils occur in the study area. One CNDDB record occurs within 3-miles of the study area.
Kings Mountain manzanita *Arctostaphylos regismontana*	-/-	1B.2	Shrub species is found in broadleafed upland forest, chaparral, and north coast coniferous forest. Granitic or sandstone outcrops. Occurs at elevations 240-705 m. Blooms January – April.	**None.** No elevations occur in the study area. One CNDDB record occurs within 3-miles of the study area.
Marin western flax *Hesperolinon congestum*	FT/ST	1B.1	Annual herb found in chaparral, valley and foothill grassland. In serpentine barrens and in serpentine grassland and chaparral. Occurs at elevations 60-400 m. Blooms April – July.	**None.** No suitable habitats occur in the study area. Five CNDDB records occur within 3-miles of the study area.
Monterey clover *Trifolium trichocalyx*	FE/SE	1B.1	Annual herb is found in closed-cone coniferous forest. Openings, burned areas, and roadsides. Sandy soils. Occurs at elevations 105-215 m. Blooms April – June.	**None.** No elevations or soils occur in the study area. No CNDDB records within 3-miles of the study area.
great (Oregon) polemonium *Polemonium carneum*	-/-	2B.2	Perennial herb found in coastal prairie, coastal scrub, and yellow pine forest. Occurs at elevations 15-1525 m. Blooms April – September.	**None.** No suitable habitat occurs in the study area. One historical (1916) CNDDB record occurs within 3-miles of the study area. Record notes that additional fieldwork is necessary to confirm occurrence.
San Francisco campion *Silene verecunda ssp. verecunda*	-/-	1B.2	Perennial herb found in coastal scrub, valley and foothill grassland, coastal bluff scrub, chaparral, and coastal prairie. Often on mudstone or shale; one site on serpentine. Occurs at elevations 30-645 m. Blooms March – June.	**None.** No suitable habitats occur in the study area. One CNDDB record occurs within 3-miles of the study area.
San Francisco collinsia *Collinsia multicolor*	-/-	1B.2	Annual herb found in closed-cone coniferous forest and coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. Occurs at elevations 10-275 m. Blooms March – May.	**Moderate.** Suitable habitat occurs in the study area. Three CNDDB records occur within 3-miles of the study area. One record (#15) is mapped in the vicinity of Pilarcitos Lake and Canyon from 1900.
San Francisco owl's-clover *Triphysaria floribunda*	-/-	1B.2	Annual herb found in coastal prairie, coastal scrub, valley and foothill grassland. On serpentine and non-serpentine substrate (such as at Pt. Reyes). Occurs at elevations 1-150 m. Blooms April – June.	**None.** No suitable habitats occur in the study area. One CNDDB record occurs within 3-miles of the study area.
San Mateo thorn-mint *Acanthomintha duttonii*	FE/SE	1B.1	Annual herb found in chaparral, and valley and foothill grassland. Uncommon serpentinite vertisol clays; in relatively open areas. Occurs at elevations 50-185 m. Blooms April – June.	**None.** No suitable habitats occur in the study area. Two CNDDB records occur within 3-miles of the study area.

TABLE B-1
SPECIAL-STATUS PLANT SPECIES CONSIDERED IN THE PROJECT AREA

Common Name *Scientific Name*	Federal/State Status	CNPS Status	Habitat and Blooming Period	Potential to Occur
San Mateo woolly sunflower *Eriophyllum latilobum*	FE/SE	1B.1	Perennial herb found in cismontane woodland, coastal scrub, and lower montane coniferous forest. Often on roadcuts; found on and off of serpentine. Occurs at elevations 30-610 m. Blooms May – June.	**Moderate.** Suitable habitat occurs in the study area. Five CNDDB records occur within 3-miles of the study area.
short leaved evax *Hesperevax sparsiflora var. brevifolia*	-/-	1B.2	Annual herb found in coastal bluff scrub, coastal dunes, and coastal prairie. Sandy bluffs and flats. Occurs at elevations 0-640 m. Blooms March – June.	**None.** No suitable habitats occur in the study area. One CNDDB record occurs within 3-miles of the study area.
western leatherwood *Dirca occidentalis*	-/-	1B.2	Shrub species found in broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, and riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. Occurs at elevations 20-640 m. Blooms November – March.	**Moderate.** Suitable habitat occurs in the study area. Eight CNDDB records occur within 3-miles of the study area.
White rayed pentachaeta *Pentachaeta bellidiflora*	FE/SE	1B.1	Annual herb found in valley and foothill grassland, cismontane woodland. Open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock. Occurs at elevations 35-610 m. Blooms March – May.	**None.** No suitable habitats occur in the study area. One CNDDB record occurs within 3-miles of the study area.
woodland monolopia (woollythreads) *Monolopia gracilens*	-/-	1B.2	Annual herb found in chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, North Coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns, but may have only weak affinity to serpentine. Occurs at elevations 120-975 m. Blooms March – July.	**None.** No suitable elevations occur in the study area. One CNDDB record occurs within 3-miles of the study area.

KEY TO STATUS CODES:

Federal

Candidate = FC
Delisted = FD
Endangered = FE
None = -
Proposed Endangered = FPE
Proposed Threatened = FPT
Threatened = FT

State

Candidate Endangered = SCE
Candidate Threatened = SCT
Delisted = SD
Endangered = SE
None = -
Rare = CR
Threatened = ST
Species of Special Concern = SSC
Fully Protected = FP

Other

CNPS Rank Categories:
1A = Plants presumed extirpated in California and either rare or extinct elsewhere
1B = Plants Rare, Threatened, or Endangered in California and elsewhere
2A = Plants presumed extirpated in California, but more common elsewhere
2B = Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3 = Plants about which more information is needed - A Review List
4 = Plants of limited distribution - A Watch List

CNPS Code Extensions:
.1 = Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 = Fairly endangered in California (20U+002d80% occurrences threatened)
.3 = Not very endangered in California (less than 20% of occurrences threatened or no current threats known)

Sources: CNPS 2024; USFWS 2024; CDFW 2024

TABLE B-2
SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE PROJECT AREA

Common Name *Scientific Name*	Federal/State Status	Habitat	Potential to Occur
Amphibians			
California red-legged frog *Rana draytonii*	FT/SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Present.** Suitable habitat is present in Pilarcitos Creek. 25 CNDDB records occur within 3-miles of the study area, including four in Pilarcitos Creek in the study area.
Birds			
California least tern *Sternula antillarum browni*	FE/SE, FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas.	**None.** No suitable habitat occurs in the study area. No CNDDB records within 3-miles of the study area.
California Ridgway's rail *Rallus obsoletus obsoletus*	FE/SE, FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	**None.** No suitable habitat occurs in the study area. No CNDDB records within 3-miles of the study area.
marbled murrelet *Brachyramphus marmoratus*	FT/SE	Species feeds near-shore and nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	**Present.** Known nesting sites are located upstream of the study area. Suitable habitat, including nesting trees, is present in the redwood forest of the study area. Study area is nearby designated critical habitat.
saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	-/SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**None.** No suitable habitat occurs in the study area. Single CNDDB record within 3-miles of the study area is in the riparian habitat of Upper Crystal Spring Reservoir.
western snowy plover *Charadrius nivosus nivosus*	FT/SSC	Species is found on sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	**None.** No suitable habitat occurs in the study area. No CNDDB records within 3-miles of the study area.
Fish			
steelhead - central California coast DPS *Oncorhynchus mykiss irideus pop. 8*	FT/SSC	DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays.	**Present.** Known to occur in tributaries to Pilarcitos Creek; the creek is part of designated critical habitat. Species is presumed extant in the 2 CNDDB records within 3-miles of the study area.
tidewater goby *Eucyclogobius newberryi*	FE/SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	**None.** No suitable habitat occurs in the study area. No CNDDB records within 3-miles of the study area.

TABLE B-2
SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE PROJECT AREA

Common Name *Scientific Name*	Federal/State Status	Habitat	Potential to Occur
Insects			
Bay checkerspot butterfly *Euphydryas editha bayensis*	FT/-	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants.	**None.** No suitable habitat occurs in the study area. Two CNDDB records occur within 3-miles of the study area.
Mission blue butterfly *Icaricia icarioides missionensis*	FE/-	Inhabits grasslands of the San Francisco peninsula. hree larval host plants: *Lupinus albifrons*, *L. variicolor*, and *L. formosus*, of which *L. albifrons* is favored.	**None.** No suitable habitat occurs in the study area. No CNDDB records within 3-miles of the study area.
monarch butterfly *Danaus plexippus*	FPT/-	Species' winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepia*s spp.).	**None.** No suitable overwintering or breeding habitat occurs in the study area No CNDDB records within 3-miles of the study area.
western bumble bee *Bombus occidentalis*	-/SCE	Meadows and grasslands with abundant floral resources. Nectar plants include species in the following genera: *Melilotus, Cirsium, Trifolium, Centaurea, Chrysothamnus, Eriogonum*	**None.** No habitat occurs in the study area. One CNDDB record occurs within 3-miles of the study area.
Mammals			
salt-marsh harvest mouse *Reithrodontomys raviventris*	FE/SE, FP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow; builds loosely organized nests. Requires higher areas for flood escape.	**None.** No suitable habitat occurs in the study area. No CNDDB records within 3-miles of the study area.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	-/SSC	Forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves and other material. May be limited by availability of nest-building materials.	**High.** Suitable habitat occurs in the study area. Five CNDDB records occur within 3-miles of the study area.
Reptiles			
northwestern pond turtle *Actinemys marmorata*	FPT/SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	**Low.** Marginally suitable aquatic habitat is present, and little suitable upland habitat is present.

TABLE B-2
SPECIAL-STATUS ANIMAL SPECIES CONSIDERED IN THE PROJECT AREA

Common Name *Scientific Name*	Federal/State Status	Habitat	Potential to Occur
San Francisco gartersnake *Thamnophis sirtalis tetrataenia*	FE/SE, FP	Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	**None.** No suitable habitat occurs in the study area. 23 CNDDB records occur within 3-miles of the study area. Note that these records have suppressed locations and may not represent the actual number of occurrences within 3-miles of the study area. Pilarcitos Creek is too fast flowing and shallow for this species and there is no suitable upland habitat.

KEY TO STATUS CODES:

Federal

Candidate = FC
Delisted = FD
Endangered = FE
None = -
Proposed Endangered = FPE
Proposed Threatened = FPT
Threatened = FT

State

Candidate Endangered = SCE
Candidate Threatened = SCT
Delisted = SD
Endangered = SE
None = -
Rare = CR
Threatened = ST
Species of Special Concern = SSC
Fully Protected = FP

Other

CNPS Rank Categories:
1A = Plants presumed extirpated in California and either rare or extinct elsewhere
1B = Plants Rare, Threatened, or Endangered in California and elsewhere
2A = Plants presumed extirpated in California, but more common elsewhere
2B = Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3 = Plants about which more information is needed - A Review List
4 = Plants of limited distribution - A Watch List

CNPS Code Extensions:
.1 = Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 = Fairly endangered in California (20U+002d80% occurrences threatened)
.3 = Not very endangered in California (less than 20% of occurrences threatened or no current threats known)

Sources: CNPS 2024; USFWS 2024; CDFW 2024

Appendix C.
Representative Photographs

Photo 1. Well Site Photo #1

Photo 2. Well Site Photo #2

Photo 3. Wellfield & Pilarcitos Creek Road

Photo 4. Existing Well, Pilarcitos Creek Wellfield, Pilarcitos Creek Road

Photo 5. Pilarcitos Creek

Photo 6. Pilarcitos Creek and Creek Bank

Photo 7. Existing Well, Wellfield and Pilarcitos Creek Road

Photo 8. Pilarcitos Creek Wellfield

Photo 9. Vegetation along the Project Area

Photo 10. Existing well, canopy along Pilarcitos Wellfield

Photo 11. Pilarcitos Creek Road

Photo 12. Pilarcitos Wellfield

Photo 13. Adjacent Vegetation

Photo 14. Existing Well and Pilarcitos Creek Road

Photo 15. Pilarcitos Creek Road and Pilarcitos Wellfield

Photo 16. Existing Wells, Pilarcitos Wellfield, and adjacent vegetation

County of San Mateo - Planning and Building Department

ATTACHMENT D

Print Form

Notice of Exemption

Appendix E

To: Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk
County of: San Mateo
555 County Center
Redwood City, CA 94063

From: (Public Agency): Coastside County Water District
766 Main Street
Half Moon Bay, CA 94109
(Address)

129142

FILED
SAN MATEO COUNTY
Mar 03 2025
MARK CHURCH, County Clerk
By _____ Deputy Clerk

Project Title: Pilarcitos Wellfield Improvement Project

Project Applicant: Coastside County Water District

Project Location - Specific:

Located ~50 ft of Pilarcitos Creek; Latitude: 37°30'0.71"N, Longitude:122°23'3.03"W

Project Location - City: Half Moon Bay Project Location - County: San Mateo County

Description of Nature, Purpose and Beneficiaries of Project:

The Project would include (1) the construction of six replacement wells, associated reinforced concrete pads, piping, valves and appurtenances, and connections to the raw pipeline; and (2) the addition of variable frequency drives and cellular connections to the existing SCADA system. The Project would ensure continued water service to District customers and make future operation and maintenance activities easier and less impactful to the creeks and adjacent communities.

Name of Public Agency Approving Project: Coastside County Water District

Name of Person or Agency Carrying Out Project: Coastside County Water District

Exempt Status: **(check one):**

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☒ Categorical Exemption. State type and section number: section 15302(c)
- ☐ Statutory Exemptions. State code number: _____

Reasons why project is exempt:

The Project involves the "replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity" as a Class 2 exemption. As discussed in the Project Description, the Project would be replacing non-operating wells with wells in-kind. The Project would not have a significant or cumulative impact on the environment. For these reasons, the Project would meet the exemption criteria under CEQA Guidelines section 15302(c).

Lead Agency Contact Person: Darin Sturdivan Area Code/Telephone/Extension: 650-276-0271

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? Yes No

Signature: Mary Rey Date: Feb 5 2025 Title: General Manager

Signed by Lead Agency Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: _____

Revised 2011

☐

ESA

575 Market Street
Suite 3700
San Francisco, CA 94105
415.896.5900 phone
415.896.0332 fax

esassoc.com

Memorandum

date	March 6, 2025
to	Jonathan Sutter, EKI Water and Environment, Inc.
from	Eli Davidian, Darcy Kremin and Emily Kline, ESA
subject	Pilarcitos Wellfield Replacement Project

The Coastside County Water District ("CCWD" or "the District") provides treated water to the City of Half Moon Bay ("City") and to nearby unincorporated San Mateo County communities. The Pilarcitos Wellfield Replacement Project (Project) would replace six wells "in kind" by offsetting the new wells from the existing wells and abandoning the old wells. The old wells may also be converted to monitoring wells. This memorandum presents a description of the Project location and activities; evaluates the potential for Project activities to adversely affect biological resources, cultural resources, and water quality; and explains why the Project is exempt from the California Environmental Quality Act ("CEQA") under the Categorical Exemption for the replacement or reconstruction of existing structures or facilities (Class 2).

Project Location

The Project site is located in Half Moon Bay in San Mateo County, California. The site currently includes six existing shallow wells that produce groundwater under the influence of surface water. The wells are considered points of diversion under the District's Pilarcitos Creek water rights. The existing wellfield is located adjacent to the bank of Pilarcitos Creek, approximately 20 feet from the top of the bank. Replacement wells will be located further from Pilarcitos Creek and further upland from the existing wells.

Project Description

The Pilarcitos Wellfield is comprised of six existing shallow wells that produce groundwater under the influence of surface water. The wells are considered points of diversion under the District's Pilarcitos Creek surface water rights. These water rights limit the periods and rates of pumping water from the wellfield. Water produced from the wellfield is conveyed to and treated at the District's Nunes Water Treatment Plant. The District intends to replace all six of these wells "in kind" by offsetting the new wells from the existing wells and abandoning the old wells or converting them to monitoring wells. The Project would include (1) the construction of the six new wells, associated reinforced concrete pads, piping, valves and appurtenances, and connections to the raw pipeline; and (2) the addition of variable frequency drives and network connections to integrate with the District's existing

SCADA system.[1] The Project would ensure continued, reliable water service to District customers and make future operation and maintenance activities easier and less impactful to the creeks and adjacent communities.

The project sites are located within the County's Local Coastal Program (LCP) jurisdiction and would normally require a coastal development permit (CDP) from the Planning and Building Department. The LCP exempts certain types of development from the requirement to obtain. For example, Zoning Regulation Section 6328.5 exempts from the CDP requirements the maintenance, alteration, or addition to existing structures. Exemptions to the CDP are discussed below.

Project Construction

Project construction and implementation would occur over approximately 4-5 months. This construction phase includes site mobilization, initial clearing and grading of the site; demolition of the existing wells and equipment; drilling of the well boreholes and installation of the well casing and gravel pack; installation of well pads, equipment, piping, and appurtenance; testing; and startup. The existing wells may be destroyed and abandoned in accordance with County and State regulations, and the drilling permit. The existing wells may also be converted to monitoring wells.

The replacement wells would be located near the existing wells where practicable, and, in some cases, further away from Pilarcitos Creek. No trees or riparian vegetation are planned for removal. During well replacement, minimal trimming may be required to enable ground visibility for walkover monitoring of the bore locations.

Drilling and basic construction of each production well is anticipated to take approximately one working day each and will require approximately 12 hours. Under some circumstances, using reverse-circulation drilling, continuous activity would be required to avoid collapse of the borehole before the well casing, filter pack, and annular seal are installed.

A truck-mounted mud-rotary drill rig would be used to advance boreholes for the replacement wells. Drilling fluid ("mud"), consisting of a suspension of sodium montmorillonite clay ("bentonite") in water, would cool the drill bit and transport the cuttings to the surface during drilling operations. The mud and cut materials from the drilling process would be conveyed through a discharge pipe or hose into a separator system ("shaker") and mud tank. The shaker and associated system would be used to separate cuttings from the drilling fluid. The mud tank would be used on site to control drilling mud volume and properties during operations.

An initial shallow borehole will be drilled to install permanent conductor casing, which will be grouted in place. Following this process, the primary borehole would be drilled, and the well casing and screen would be installed. The well casing and screen serves as a housing for the well pump and as a vertical conduit for water flowing upward from the aquifer to the pump intake. After casing is run into the borehole, the remaining annular space around the screen will be backfilled with clean graded sand and topped with a sand-cement grout seal. The well casing would be grouted (sealed) from just above the top of the well screen up to the surface.

Following well construction, the well would be prepared for operation using a bailer, pumps and surge blocks to remove drilling mud from the casing and filter pack, and to re-establish a hydraulic connection between the well screen and the aquifer. The mud and water produced during development would be discharged into temporary

[1] SCADA (supervisory control and data acquisition) is a control system architecture comprising computers, networked data communications and graphical user interfaces for high-level supervision of machines and processes.

separation tanks to allow solids to settle prior to discharge of water according to the District's National Pollutant Discharge Elimination System permit. Settled mud solids will be disposed of at an offsite location. Typical construction equipment for well installation and development would consist of a drill rig, boom truck or crane, backhoe, air compressor, forklift, electrical generator, storage tanks, welding equipment, and miscellaneous support vehicles. The Project would not expand existing water utility services.

After the new wells are installed, the well equipment, piping, appurtenances, electrical and controls equipment, and pads would be installed. After the system is tested, the piping would be connected to the existing 18-inch transmission main. The operations of the system would be tested during startup.

Conservation Measures

The Project is intended to ensure continued service and restored water supply near Pilarcitos Creek for CCWD. The Project is not anticipated to have any substantial adverse environmental effects. However, since the Project would be constructed in areas near sensitive biological resources, cultural resources, and hydrological and water quality resources, CCWD has developed best management practices (BMPs) and conservation measures (see Attachment A) that would be implemented as part of the Project. These measures, included in Attachment A, are activities or actions that would be undertaken by the contractor during Project construction.

Environmental Considerations

This section presents analyses of potential Project effects on biological resources, cultural resources, and water quality.

Biological Resources

An ESA biologist performed a reconnaissance pedestrian survey of the Project sites (the study area) December 3, 2024, to characterize biological resources. Prior to the survey, ESA queried the California Department of Fish and Wildlife's ("CDFW") California Natural Diversity Database ("CNDDB")[2] records and reviewed the Calflora database for a 3-mile radius around the study area and obtained the U.S. Fish and Wildlife Service ("USFWS") Information for Planning and Consultation ("IPaC") list for the study area.[3][4][5] The pedestrian survey allowed for complete visual coverage of study area aquatic resources and habitat suitable for special-status species, such as sensitive plant species, ground nesting birds, and aquatic breeding and upland refugia habitat for reptiles and amphibians. The study area vegetation communities and wildlife habitats were characterized as primarily mixed coniferous forest and mixed riparian forest, with one aquatic resource – Pilarcitos Creek.

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[2] The term "special-status" species includes those species that are listed and receive specific protection defined in federal or state endangered species legislation, as well as species not formally listed as Threatened or Endangered, but designated as "Rare" or "Sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations, or local agencies such as counties, cities, and special districts.

[3] California Natural Diversity Database (CNDDB). 2024. Biogeographic Data Branch, Department of Fish and Wildlife. Sacramento, California. Accessed December 2024.

[4] Calflora. 2024. Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2024. Berkeley, California: The Calflora Database [a non-profit organization]. Available online at: https://www.calflora.org/. Accessed December 2024.

[5] United States Fish and Wildlife Service (USFWS), 2024. List of Threatened and Endangered Species that May Occur In Your Proposed Project Location Or May Be Affected By Your Proposed Project. Unofficial Species List. Coastside County Water District Pilarcitos Wellfield Improvement Project. Project Code: 2025-0035418. Species list generated December 23, 2024.

Pilarcitos Creek parallels the proposed wellfield replacement locations. The creek contains perennial flows and a relatively contiguous, dense overstory, dominated by native trees, primarily willow (*Salix* sp.) and oak (*Quercus* sp.). Upslope of the creek is dominated by redwoods (*Sequoia sempervirens*). The lower shrub and herbaceous layer include a mix of native and non-native species in a less contiguous distribution. Bank erosion from winter storm flows has resulted in a consistent, sediment-laden channel bed within the study area. Wrack and vegetative stormflow debris occur at various segments within the creek bed. Uplands of the study area consist of an unpaved access road, sparsely vegetated (ruderal) areas (immediately surrounding the wellfield locations), with peripheral, native woodlands.

Analysis of study area habitat conditions with special-status species database query results reveals the potential for three special-status plant species and four special-status animal species to occur based on species' habitat requirements and recorded presence in the region. **Table B-1** and **Table B-2** in **Attachment B** present special-status plant and animal species (respectively) with records documented in CNDDB within 3 miles of the Project area, or identified on the IPaC list, evaluated for their potential to occur in the study area. These tables list all species evaluated for their potential presence, species' federal and/or state protective status, provides a description of their suitable habitat, and includes a determination of the species' potential presence.

In summary, San Mateo woolly sunflower (*Eriophyllum latilobum*)[6], western leatherwood (*Dirca occidentalis*)[7], and San Francisco collinsia (*Collinsia multicolor*)[8] all have moderate potential to occur[9] in the study area due to the presence of suitable habitat and numerous records within 3 miles of the study area. The District will conduct pre-construction plant surveys according to **BMP-BIO-5** (see **Attachment A**), and if special-status plant species are found and cannot be avoided, the District will prepare a mitigation and monitoring plan that offsets the special-status plant impacts of the Project and ensures that there is no net loss of individuals or area of occupied habitat, whichever is more relevant to the impacted species.

The study area contains suitable habitat for California red-legged frog (*Rana draytonii*; CRLF) and the Project is located within designated critical habitat for this species.[10] The CNDDB documents occurrence records in reaches of Pilarcitos Creek within the study area for CRLF. The Pilarcitos Creek riparian corridor provides suitable habitat for San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*); however, no middens were observed during the December 2024 field survey.[11] Steelhead – central California coast Distinct Population Segment (*Oncorhynchus mykiss irideus*)[12] is known to occur in tributaries to Pilarcitos Creek, and the creek is part of designated critical habitat. There are known marbled murrelet (*Brachyramphus marmoratus*)[13] nesting sites upstream of the wellfield improvement locations, and the Project would be near designated critical habitat

6 San Mateo woolly sunflower is listed as endangered under FESA and CESA and has a California Rare Plant Rank (CRPR) of 1B.1.

7 Western leatherwood has a CRPR 1B.2 rank.

8 San Francisco collinsia has a CRPR 1B.2 rank.

9 A species was designated as having a "moderate" potential for occurrence if (1) there is low to moderate quality habitat present within the study area or immediately adjacent areas; and (2) the study area is within the known range of the species, even though the species was not observed during biological surveys.

10 CRLF is listed as threatened under the federal Endangered Species Act (FESA) and identified as a California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC).

11 San Francisco dusky-footed woodrat is identified as a CDFW SSC.

12 Steelhead – central California coast distinct population segment is listed as threatened under FESA and a CDFW SSC.

13 Marbled murrelet is listed as threatened under FESA and under the state Endangered Species Act (CESA).

for this species. Suitable nesting trees were observed throughout the study area. Numerous migratory birds could also use the study area trees, other vegetation, or ground burrows for nesting.

These special-status species and nesting birds are afforded protection under federal and/or State laws, including the federal and State endangered species acts, the Migratory Bird Treaty Act, and the California Fish and Game Code. CCWD is required to comply with all applicable laws and regulations protecting these species, in addition to best management practices to protect fish, wildlife, and plant resources.

In the absence of biological resources protection measures, the type of work required for the Project, including equipment transport and mobilization, vegetation removal and ground disturbance, and drilling could have direct and indirect adverse effects on special-status species through habitat modification or accidental 'take'[14,15] of individual animals. Similarly, noise and visual disturbance associated with such activities could disrupt birds nesting in the Project vicinity during the nesting season (January 15 – August 15). The disruption of nesting migratory or native birds is not permitted under the federal Migratory Bird Treaty Act or the California Fish and Game Code, as it could constitute unauthorized take.

However, the Project is designed to primarily occur in disturbed uplands and avoid or strategically limit direct disturbance to sensitive habitats where special-status species could be present. The Project would avoid impacts on sensitive habitats, including aquatic resources of Pilarcitos Creek and associated riparian corridors by locating the proposed wells adjacent to their existing footprints in developed uplands and ruderal areas. The Project includes CCWD's conservation measures to minimize or avoid entirely potential impacts on biological resources during Project implementation. Such measures include mandatory training of construction personnel to identify sensitive environmental resources in the Project vicinity (e.g., aquatic resources, sensitive habitat areas, and special-status plants and animals with potential to occur on-site, nesting birds, etc.) and educate personnel of their protective status, along with implementation of specific conservation measures such as erecting exclusionary fencing around work areas, conducting pre-construction surveys and biological monitoring during construction, implementing water quality and other general BMPs to ensure resource protection, installing erosion control measures to secure disturbed soils post-construction (e.g., application of native seed and tackifier outside of agricultural fields), and requiring additional protection measures during Project implementation. The full text of these measures is presented in **Attachment A** (see **BMP-BIO-1** through **BMP-BIO-9)**. Through Project design, implementation of the above-described BMPs and conservation measures, and compliance with State and federal resource protection laws and regulations, the Project would not be expected to "take" special-status species or otherwise result in substantial adverse effects on biological resources.

Cultural Resources

An ESA archaeologist conducted a records search at the Northwest Information Center ("NWIC") of the California Historical Resources Information System on November 19, 2024 (File No. 24-0744). The purpose of the records search was to (1) determine whether known cultural resources have been recorded within or adjacent to the Project area; (2) assess the likelihood for unrecorded cultural resources to be present based on historical

[14] Take under FESA is defined as "Harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C., §1532 (19).

[15] Take under CESA is defined as "Hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Fish & G. Code, §8.

references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources.

The records search indicated there are no previously recorded pre-contact Native American or historic-era archaeological resources recorded within the Project area or within 0.5 mile. There are no known resources that are eligible for listing in the National Register of Historic Places (National Register) or the California Register of Historical Resources (California Register), nor are there known resources that have not been evaluated. Therefore, there are no known historical resources in the Project area.

ESA's record search was augmented by a field survey of the Project area on December 3, 2024. The purpose of the field survey was to evaluate the potential for unrecorded cultural resources to occur within the Project area. The field assessment identified no cultural resources within the Project area.

ESA also conducted a review of the following sources of historic maps and aerial photography: USGS topographic quadrangles, U.S. Bureau of Land Management General Land Office plat maps, land ownership maps, and historic aerials. The Project area is north of Highway 92 along Pilarcitos Creek, west of Lower Crystal Springs Reservoir and northeast of Half Moon Bay. The land that includes the wells was owned by Michael Torpey by 1894[16] and was passed down to his daughter and other children by 1927[17]. Michael and his wife were Irish immigrants and had at least seven children. They lived in San Mateo in 1880[18], but by 1900[19] they had moved their family to San Francisco. It is unclear if the Torpey family ever developed or farmed on the land around the Project area. The road that follows Pilarcitos Creek and turns east up the slope approximately 0.3-mile north of the wells, was constructed by 1941[20]. The Project area has historically not been developed except for construction of the road.

The underlying geology of the Project alignment consists of Holocene-age alluvial and colluvial deposits formed within and adjacent to the Pilarcitos Creek channel[21]. Soils in the Project alignment are dominated by sloping and eroded Soquel loam along the banks and rough broken land of unweathered bedrock on the surface at the base of Pilarcitos Creek[22].

Based on the Holocene age of the soils in the Project area, there is the potential for buried pre-contact archaeological deposits within paleosols in undisturbed portions of the Project area[23]. However, the Project area is located within an extremely steep canyon with very little stable flat land due to high creek flows and the narrowness of the valley at the base of the canyon. No pre-contact or indigenous resources have been previously identified within 0.5-mile of the Project Area. Additionally, the Project Area is within and adjacent to existing wells and therefore the soil in the immediate Project area has been disturbed by the original construction of the

16 Bromfield, D., 1894. Official Map of San Mateo County, Schmidt Label & Litho. Co., San Francisco.

17 Kneese, Geo. A., 1927. Official Map of San Mateo County.

18 U.S. Census Bureau, 1880. 1880 United States Federal Census, California, San Mateo, Township 4.

19 U.S. Census Bureau, 1900. 1900 United States Federal Census, California, San Francisco, District 0124.

20 NETR (Nationwide Environmental Title Research), 2024. Available: https://historicaerials.com/viewer, accessed December 2024.

21 Pampeyan, E.H., 1994. *Geologic map of the Montara Mountain and San Mateo 7.5' quadrangles, San Mateo County, California*, Prepared by U.S. Geological Survey.

22 USDA (U.S. Department of Agriculture), 2024. Natural Resources Conservation Service Web Soil Survey, Version 3.4, http://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx, December 16, 2024.

23 Rosenthal et al., 2004. Rosenthal, Jeffrey S., and Jack Meyer, Cultural Resources Inventory of Caltrans District 10 Rural Conventional Highways: Volume III: Geoarchaeological Study, Landscape Evolution and the Archaeological Record of Central California. Prepared by Far Western Anthropological Research Group, Inc., Davis, CA, Prepared for Caltrans District 10, Stockton, 2004.

well and the adjacent road. Therefore, the likelihood of intact archaeological resources in this context is significantly lessened. The dynamic landform, previous ground disturbance, and the distance to known archaeological resources suggests that the Project area has a relatively low potential for the presence of pre-contact archaeological resources.

There is also no evidence of historic-era agricultural use or habitation of the Project area besides the construction of the adjacent road. The historic aerial and map imagery review did not identify any features within the Project area that could represent buried historic-era archaeological resources such as artifact-filled wells or privies[24] [25]. Based on this review, the potential for presence of unrecorded, or previously unknown, historic-era archaeological resources is low. This analysis concludes that the Project area's sensitivity for pre-contact and historic-era archaeological resources is low.

For these reasons discussed above and considering BMPs and conservation measures **BMP-CUL-1** and **BMP-CUL-2** in **Attachment A**, substantial adverse effects on cultural resources would not occur.

Hydrology and Water Quality

The Project would result in a disturbance of less than one acre. After the well replacements, the Project area would be restored to the existing grade. Given that the Project would not disturb greater than one acre, the CCWD would not be required to obtain coverage under the State Water Resources Control Board's ("SWRCB") Construction General Permit (2022-0057-DWQ). However, CCWD would implement similar BMPs as those required under the Stormwater Pollution Prevention Plan ("SWPPP"). For instance, **BMP-BIO-4** includes equipment storage and maintenance measures designed to prevent inadvertent discharges of oil, grease, or fuels (among other pollutants), and provisions for immediate cleaning and disposal of leaked materials (see Attachment A). Through the implementation of these BMPs, the Project would not have an adverse water quality impact.

Pilarcitos Creek is not listed by the San Francisco Bay Regional Water Quality Control Board ("RWQCB") as impaired. The Project would not result in substantial adverse effects on hydrology or water quality.

CEQA Exemptions

CEQA Guidelines section 15302(c) exempts projects that involve the "replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity" as a Class 2 exemption. As discussed in the Project Description, the Project would be replacing aging wells with new wells in-kind. The Project would not increase or expand the well capacity and would only restore and improve the wellfield's functionality. Over the past several months, CCWD has prepared detailed plans for the Project. With the aforementioned BMPs and conservation measures for biological, cultural, and hydrologic resources, the Project would not have a significant or cumulative impact on the environment. For these reasons, the Project would meet the exemption criteria under CEQA Guidelines section 15302(c).

Exemption or Exclusion from a Coastal Development Permit

The proposed Project is located in a Coastal Zone; however, given that the Project would restore functionality of aging wells in a wellfield, the Project would qualify for an exemption from the coastal development permit

[24] NETR (Nationwide Environmental Title Research), 2024. Available: https://historicaerials.com/viewer, accessed December 2024.

[25] Northwest Information Center (NWIC), 2024. Records Search File No. File No. 24-0744. On file, ESA, November 19, 2024.

requirements of the County's Local Coastal Program.. Under the San Mateo County Zoning Regulations Section 6328.5(d), the Project would be exempt given that it is a repair or maintenance activity. The Project would not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities. The Project would replace aging wells in-kind and would therefore not enlarge or expand the capacity of the wells. As discussed above, the Project would not involve substantial adverse environmental impacts. BMPs and conservation measures discussed above would be implemented to minimize or reduce any residual environmental impacts.

Given that the Project would be located entirely within the existing wellfield, would implement BMPs to minimize potential environmental effects, and would not increase the capacity of the wellfield, the Project would be exempt from a Coastal Development Permit under Section 6328.5(d).

Attachments

Attachment A. Best Management Practices and Conservation Measures
Attachment B. Special Status Species Considered in the Project Area
Attachment C. Representative Photographs

County of San Mateo - Planning and Building Department

ATTACHMENT E

STATE OF CALIFORNIA
THE RESOURCES AGENCY
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

License for Diversion and Use of Water

APPLICATION 16498 PERMIT 11494 LICENSE 10598

THIS IS TO CERTIFY, *That* COASTSIDE COUNTY WATER DISTRICT
766 MAIN STREET, HALF MOON BAY, CALIFORNIA 94019

HAS *made proof as of* JULY 20, 1973 *(the date of inspection) to the satisfaction of the State Water Resources Control Board of a right to the use of the water of* (1)(2)(3)(4) AND (6) PILARCITOS CREEK AND (5) AN UNNAMED STREAM IN SAN MATEO COUNTY
tributary to (1)(2)(3)(4) AND (6) PACIFIC OCEAN AND (5) PILARCITOS CREEK THENCE PACIFIC OCEAN

for the purpose of MUNICIPAL AND DOMESTIC USES
under Permit 11494 *of the Board and that the right to the use of this water has been perfected in accordance with the laws of California, the Regulations of the Board and the permit terms; that the priority of this right dates from* AUGUST 3, 1955 *and that the amount of water to which this right is entitled and hereby confirmed is limited to the amount actually beneficially used for the stated purposes and shall not exceed* ONE AND FIVE-TENTHS (1.5) CUBIC FEET PER SECOND, TO BE DIVERTED FROM NOVEMBER 1 OF EACH YEAR TO MARCH 31 OF THE SUCCEEDING YEAR. THE TOTAL AMOUNT DIVERTED UNDER THIS LICENSE AND UNDER ANY EXISTING RIGHTS OF LICENSEE IN THE SOURCES NAMED AS OF THE DATE OF ISSUANCE OF THIS LICENSE SHALL NOT EXCEED 1.5 CUBIC FEET PER SECOND. THE MAXIMUM AMOUNT DIVERTED UNDER THIS LICENSE SHALL NOT EXCEED 360 ACRE-FEET PER YEAR.

THE POINTS OF DIVERSION OF SUCH WATER ARE LOCATED:

(1) SOUTH 800 FEET AND WEST 250 FEET FROM NE CORNER OF SECTION 10, T5S, R5W, MDB&M, BEING WITHIN NE1/4 OF NE1/4 OF SAID SECTION 10,
(2) NORTH 1,300 FEET AND EAST 300 FEET FROM SW CORNER OF SECTION 11, T5S, R5W, MDB&M, BEING WITHIN SW1/4 OF SW1/4 OF SAID SECTION 11,
(3) NORTH 300 FEET AND EAST 1,100 FEET FROM SW CORNER OF SECTION 11, T5S, R5W, MDB&M, BEING WITHIN SW1/4 OF SW1/4 OF SAID SECTION 11,
(4) NORTH 100 FEET AND EAST 1,000 FEET FROM SW CORNER OF SECTION 11, T5S, R5W, MDB&M, BEING WITHIN SW1/4 OF SW1/4 OF SAID SECTION 11,
(5) SOUTH 1,200 FEET AND WEST 1,000 FEET FROM NE CORNER OF SECTION 10, T5S, R5W, MDB&M, BEING WITHIN NE1/4 OF NE1/4 OF SAID SECTION 10, AND
(6) NORTH 600 FEET AND EAST 1000 FEET FROM SW CORNER OF SECTION 11, T5S, R5W, MDB&M, BEING WITHIN SW1/4 OF SW1/4 OF SAID SECTION 11..

A DESCRIPTION OF LANDS OR THE PLACE WHERE SUCH WATER IS PUT TO BENEFICIAL USE IS AS FOLLOWS:

WITHIN COASTSIDE COUNTY WATER DISTRICT, AS SHOWN ON MAP FILED WITH STATE WATER RESOURCES CONTROL BOARD.

LICENSEE SHALL, PRIOR TO NOVEMBER 1 OF EACH YEAR, FURNISH THE STATE WATER RESOURCES CONTROL BOARD A CERTIFIED COPY OF ITS PUMPING RECORDS ALONG WITH ANY OTHER REPORT THE BOARD FEELS NECESSARY TO SHOW THAT AMOUNT AND SEASON SET FORTH IN THIS LICENSE HAVE NOT BEEN VIOLATED.

THE QUANTITY OF WATER DIVERTED UNDER THIS LICENSE IS SUBJECT TO MODIFICATION BY THE STATE WATER RESOURCES CONTROL BOARD, IF, AFTER NOTICE TO THE LICENSEE AND AN OPPORTUNITY FOR HEARING, THE BOARD FINDS THAT SUCH MODIFICATION IS NECESSARY TO MEET WATER QUALITY OBJECTIVES IN WATER QUALITY CONTROL PLANS WHICH HAVE BEEN OR HEREAFTER MAY BE ESTABLISHED OR MODIFIED PURSUANT TO DIVISION 7 OF THE WATER CODE. NO ACTION WILL BE TAKEN PURSUANT TO THIS PARAGRAPH UNLESS THE BOARD FINDS THAT (1) ADEQUATE WASTE DISCHARGE REQUIREMENTS HAVE BEEN PRESCRIBED AND ARE IN EFFECT WITH RESPECT TO ALL WASTE DISCHARGES WHICH HAVE ANY SUBSTANTIAL EFFECT UPON WATER QUALITY IN THE AREA INVOLVED, AND (2) THE WATER QUALITY OBJECTIVES CANNOT BE ACHIEVED SOLELY THROUGH THE CONTROL OF WASTE DISCHARGES.

Licensee shall allow representatives of the Board and other parties, as may be authorized from time to time by the Board, reasonable access to project works to determine compliance with the terms of this license.

All rights and privileges under this license, including method of diversion, method of use and quantity of water diverted are subject to the continuing authority of the Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

This continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this license with a view to minimizing waste of water and to meeting the reasonable water requirements of licensee without unreasonable draft on the source. Licensee may be required to implement such programs as (1) reusing or reclaiming the water allocated; (2) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (3) suppressing evaporation losses from water surfaces; (4) controlling phreatophytic growth; and (5) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this license and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

Reports shall be filed promptly by licensee on appropriate forms which will be provided for the purpose from time to time by the Board.

The right hereby confirmed to the diversion and use of water is restricted to the point or points of diversion herein specified and to the lands or place of use herein described.

This license is granted and licensee accepts all rights herein confirmed subject to the following provisions of the Water Code:

Section 1625. Each license shall be in such form and contain such terms as may be prescribed by the Board.

Section 1626. All licenses shall be under the terms and conditions of this division (of the Water Code).

Section 1627. A license shall be effective for such time as the water actually appropriated under it is used for a useful and beneficial purpose in conformity with this division (of the Water Code) but no longer.

Section 1628. Every license shall include the enumeration of conditions therein which in substance shall include all of the provisions of this article and the statement that any appropriator of water to whom a license is issued takes the license subject to the conditions therein expressed.

Section 1629. Every licensee, if he accepts a license does so under the conditions precedent that no value whatsoever in excess of the actual amount paid to the State therefor shall at any time be assigned to or claimed for any license granted or issued under the provisions of this division (of the Water Code), or for any rights granted or acquired under the provisions of this division (of the Water Code), in respect to the regulation by any competent public authority of the services or the price of the services to be rendered by any licensee or by the holder of any rights granted or acquired under the provisions of this division (of the Water Code) or in respect to any valuation for purposes of sale to or purchase, whether through condemnation proceedings or otherwise, by the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State, of the rights and property of any licensee, or the possessor of any rights granted, issued, or acquired under the provisions of this division (of the Water Code).

Section 1630. At any time after the expiration of twenty years after the granting of a license, the State or any city, city and county, municipal water district, irrigation district, lighting district, or any political subdivision of the State shall have the right to purchase the works and property occupied and used under the license and the works built or constructed for the enjoyment of the rights granted under the license.

Section 1631. In the event that the State, or any city, city and county, municipal water district, irrigation district, lighting district, or political subdivision of the State so desiring to purchase and the owner of the works and property cannot agree upon the purchase price, the price shall be determined in such manner as is now or may hereafter be provided by law for determining the value of property taken in eminent domain proceedings.

Dated: MAR 10 1976

STATE WATER RESOURCES CONTROL BOARD

Chief, Division of Water Rights

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 9

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: August 11, 2025

TO: Agricultural Advisory Committee

FROM: Camille Leung, Planning Staff, 650/363-1826

SUBJECT: UPDATED REPORT: Consideration of a Planned Agricultural District Permit, Coastal Development Permit, and Grading Permit, to address facility and operational violations (VIO2023-00035) at Terra Gardens, including grading of 14,050 cubic yards (c.y.) associated with site clean-up, drainage/access improvements, and permitting existing work, located at 12761 San Mateo Road (Highway 92) within the unincorporated Half Moon Bay area of San Mateo County.

County File Number: VIO2023-00035, PLN2023-00334 (Smith/Guan)

PROPOSAL

Terra Gardens, an approximately 103-acre mushroom farm property, with a western portion located in the City of Half Moon Bay, but a majority of the site within the Unincorporated County, proposes the following actions, including grading of 14,050 c.y. associated with site clean-up, drainage/access improvements, restoration, and permitting of site improvements, including 54 hoop houses and a cold storage building.

PHASE 1 - CLEAN UP

a. Completed removal of Farm Labor Housing Units (R-1 and R2) and associated utilities (City of Half Moon Bay).

b. Completed removal of spent mushroom logs and wood debris located within riparian setback and buffer zone areas.

c. Completed removal of diversion structure and appurtenances from Pilarcitos Creek.

d. Remove failing greenhouses: 12,980 sq. ft greenhouse (G6) and 16,760 sq. ft. greenhouse (G7) and adjacent debris pile and concrete pad.

e. Remove 7,260 sq. ft. greenhouse (G5; City of Half Moon Bay)

f. Remove one substandard farm labor housing dwelling unit (R3) and removing associated utilities.

PHASE 2 – PERMITTING

a. Legalization of fifty-four (54) existing unpermitted hoophouses, existing cold storage buildings, replace a greenhouse, and associated site improvements, including access roads and drainage channels.

b. Minor road widening to improve fire access.

c. New Work:

(1) Construction of a new Bioretention basin to treat flow from green houses and compost area before entering into Pilarcitos creek and associated vegetated swales.

(2) Proposed 5.3-acre restoration area (located in the western portion of the property located in the City of Half Moon Bay).

(3) New permanent wildlife exclusion fence to be installed between the proposed bioretention facility and compost facility to deter special status species.

(4) Onsite 4,389 sq. ft. Composting Facility and Waste Management Plan for spent mushroom logs.

d. Address California Department of Fish and Wildlife (CDFW) Violations:

(1) Proposed three (3) new 5,000-gallon lift station storage tanks on compacted class 2 aggregate pad near bioretention area.

(2) Building and electrical improvements to address permit violations at existing dam pumphouse and treatment facilities (P1, P2, and P3).

(3) Improvements to address creek and streambed violations noted by CDFW including new diversion location, including riparian restoration at the former diversion location on Pilarcitos Creek.

(4) Grading and Drainage improvements to repair existing emergency outfall at reservoir to the south of hoophouses

(5) Close existing, unpermitted rail car bridge

DECISION MAKER

Planning Commission

QUESTIONS FOR THE AGRICULURAL ADVISORY COMMITTEE

1. Will the development, specifically work proposed within the unincorporated County area, have any negative effect on surrounding agricultural uses? If so, can any conditions of approval be recommended to minimize any such impact?

2. What position do you recommend that Planning staff take with respect to the application for this project?

BACKGROUND

Report Prepared By: Camille Leung, Senior Planner

Applicant: Jim Guan

Owner: Half Moon Bay Properties LLC

Location: 12761 San Mateo Road (Highway 92)

APN(s): 056-270-010, -030, -060, -090, and -100 (Also involves work on parcels located in the City of Half Moon Bay)

Approximate Parcel Sizes: 056-270-010 (50.53 acres), - 030 (12.5 acres), - 060 (1 acre), - 090 (7 acres), and - 100 (31.67 acres)

Existing Zoning: Planned Agricultural District/ Coastal District (PAD/CD)

General Plan Designation: Agriculture

Williamson Act: N/A; The subject properties are not under a Williamson Act contract.

Existing Land Use: Agriculture (Mushroom production)

Water Supply: Reservoir, Creek Diversion, and Well System

Sewage Disposal: Septic system

Flood Zone: Flood Zone X; Flood Zone A in areas adjoining Pilarcitos Creek

Environmental Evaluation: Exempt from California Environmental Quality Act (CEQA) under these sections:

- Section 15301 *(Class 1: Repair and Alteration of Existing Facilities, involving negligible or no expansion of existing or former use)*: Building and electrical improvements, access road widening, new diversion location

- Section 15303 *(Class 3: New Construction of Small Structures)*: Legalization of hoophouses; lift station storage tanks

- Section 15330 *(Class 30: Minor Actions to Prevent, Minimize, Stabilize, Mitigate or Eliminate the Release or Threat of Release of Hazardous Waste or Hazardous Substances)*: Minor clean-up activities; new bioretention basin; onsite composting facility

Setting: The subject site and larger Terra Garden property is bordered by Highway 92 (San Mateo Road) to the northwest, rural and agricultural parcels to the north and south, open space (consisting of a relatively steep hillslope dominated by coastal scrub habitat and eucalyptus woodland to the east), and the city limits of Half Moon Bay to the southwest. Pilarcitos Creek and its associated riparian corridor intersect the north and western boundary of the subject site. The subject site includes agricultural facilities surrounded by ruderal vegetation, eucalyptus groves, segments of Pilarcitos Creek and its associated riparian corridor, and an onstream reservoir. Agricultural facilities include glass greenhouses and newer hoophouses, the pump station, and related appurtenances; the former labor housing was primarily in the northernmost extent of the subject site.

Chronology:

Date		Action
2014-2023	-	Per aerial maps, the 54 hoophouses were built in stages overtime between 2014 and 2022.
April 10, 2023	-	Code Compliance Section staff issues Notice of Violation to property owner, based on violations observed during joint inspections. The NOV identified violations of building code (electrical, plumbing, fire) associated with the pump house/filtration room and unpermitted development; stormwater violations associated with the used mushroom compost storage and site erosion; and nuisance and hazardous conditions associated with general site maintenance.

May 18, 2023	-	CDFW staff issue a Notice of Violation of Fish and Game Code to property owner, based on violations observed during joint County-CDFW inspections. The California Department of Fish and Wildlife violations involved an unpermitted structure for water diversion from Pilarcitos Creek and storage of hazardous materials within proximity of Pilarcitos Creek.
October 26, 2023	-	Applicant applies for subject permit. Subsequently, application is deemed incomplete for the applicant to address Planning and review agency comments.
January 27, 2025	-	Application deemed complete, with submittal of revised civil plans and biological report.
April 14, 2025	-	Agricultural Advisory Committee continued its review to May 2025 AAC meeting, requesting an analysis of impact of hoop houses/mushroom operation to underlying prime soil (productivity, cleanliness) for the purpose of determining whether a condition should be added to require removal of hoophouses and remediation of soil after use has ended; and 2) a presentation of project by Owner. Public comments re: use of grading spoils on-site, use of composting facility, extent of wildlife exclusion fencing, and monitoring of remediation work, were received.
June 20, 2025	-	Applicant submits revised project documents, including plans and biological report. Documents submitted describe minor changes to exclusion fencing and clarifications to status of buildings proposed for demolition.
August 11, 2025	-	Agricultural Advisory Committee meeting.

Will the project be visible from a public road?

Yes, the project includes permitted the hoophouses constructed on the northeast side of the property, of which a portion are visible from Highway 92, others are located in an area that is screened by eucalyptus trees which line the south side of the highway. Views of the hoophouses from Highway 92 are included in Attachment E.

Will any habitat or vegetation need to be removed for the project?

Yes, approximately 0.22 acres of riparian habitat, and an additional 1.15 acre of riparian buffer area were impacted by project operations. The proposed habitat restoration area, approximately 5.3 acres located on the west side of the processing areas as shown in Attachment 4 (Figure 6 Proposed Restoration Plan Area) in the City of Half Moon Bay, is proposed in this area to offset the impacted areas.

Is there prime soil on the project site?

Yes, as shown in Attachment F, the areas of mapped prime soils on the property are largely developed with existing and proposed greenhouses and hoophouses. The hoophouses are not soil dependent (dependent on imported mushroom compost), but do not have building foundations.

DISCUSSION UPDATE FOR AUGUST 11, 2025 AAC MEETING

Analysis of Impacts of Mushroom Operation on Prime Soils

At its meeting of April 14, 2025, the AAC requested an analysis of the impact of hoop houses/mushroom operation to underlying prime soil (productivity, cleanliness) for the purpose of determining whether the condition should be added.

The applicant took one sample at 6-12" depth from each of 4 hoop houses and then an additional sample outside of the hoop houses. All samples were taken within the prime agricultural land as shown on the County maps. Staff referred the test results to staff at the County's San Mateo County Groundwater Protection Program and the County's Agriculture Ombudsman for review.

After review focused on the presence of hazardous chemicals or heavy metals, staff at the County's San Mateo County Groundwater Protection Program did not have any concerns based on the information provided.

After review, the Agriculture Ombudsman determined that the concentration of certain nutrients in the greenhouses and fields is likely related to the mushroom growing substrate, specifically from substrate either falling onto the ground, leaching when irrigated, or possibly from discarded mushroom remnants. While the owner mentioned that only water is used on the substrate, the substrate itself comes preloaded with nutrients, so that can affect soil quality. That said, the Agriculture Ombudsman concluded that none of the nutrient levels are particularly concerning and can be remediated if there is a specific crop goal in mind.

While concerns of soil contamination or damage from mushroom production may be put aside, Planning staff still recommends the removal of most if not all of the hoop houses upon a significant lapse in use (one year or more) to encourage and enable the use of prime soils land for soil dependent agriculture in the future. This requirement would run with the land (apply to this owner or future owners), to be in better compliance with specific PAD criteria which requires encroachment by development onto agricultural lands to be minimized and to locate structural uses away from prime agricultural soils, where possible.

Discussion of Other Issues Identified at the April AAC Meeting

In response to public comments and AAC discussion, the applicant clarified that, as proposed and to be conditioned by staff, proposed grading would largely be balanced on-site with 1,900 c.y. of remaining cut spoils to be off-hauled, use of the composting facility would compost waste generated from on-site only, installation of wildlife exclusion fencing would be limited to between the proposed bioretention facility and the compost facility to deter entry by special status species, and, that remediation work would be monitored by the County and CDFW staff.

DISCUSSION FROM APRIL 14, 2025, AAC MEETING

A. KEY ISSUES

Planning staff has reviewed this proposal and has concluded the following:

1. Compliance with Planned Agricultural District (PAD) Regulations:

The project complies with the applicable development standards and requirements, discussed below:

a. Development Standards

As shown in the table below, the project conforms to Section 8.106 (PAD Regulations) of the San Mateo County Zoning Regulations, which regulate the height and setbacks of structures. The buildings to be permitted include:

(1) 54 Hoophouses (H1-H54)

(2) Cold storage buildings (G3, G4, and G4A)

(3) Replace a greenhouse (G8)

	PAD Development Standard	Proposed Buildings
Minimum Front Setback	50 feet	487 feet
Minimum Side Setbacks	20 feet	525 feet
Minimum Rear Setback	20 feet	450 feet
Maximum Building Height	36 feet	12 feet-6 inches (G3) 18 feet (G4) 12 feet (G4A)13 feet-8-inches (Hoop houses)

b. PAD Permit Requirements

The project conforms to the substantive criteria for the issuance of a PAD Permit, as applicable and outlined in Section 6355 of the Zoning Regulations. As proposed and conditioned, the project conforms to the following applicable policies.

(1) General Criteria

(a) *The encroachment of all development upon land which is suitable for agricultural uses shall be minimized.*

While the 54 new hoophouses, cold storage, and greenhouse buildings to be permitted were built in an undeveloped area of mapped prime soils, the hoophouses follow the pattern of development of the site, aligning with existing greenhouses (which are also on prime soils) and immediately abutting large undeveloped, sloped areas of the property to the east. Its location clusters development with existing development and natural obstacles (topography; heavy vegetation) to farming and preserves a large area of agricultural land to the north (between hoop houses and Pilarcitos Creek).

The hoophouses are not soil dependent (dependent on imported mushroom compost), but do not have building foundations, and can, therefore, be removed easily from the site. Planning staff had recommended a condition of approval that would require the owner, when the hoophouses are no longer being used, remove the hoophouses and that the land be restored for agricultural production. While the current owner operates a mushroom farm that is not soil dependent, this would allow the use of the converted prime soils land for soil dependent agriculture in the future.

(b) *All development permitted on a site shall be clustered.*

The 54 new hoophouses follow the pattern of development of the site, aligning and clustering with existing greenhouses and abutting large undeveloped, sloped areas of the property to the east.

(c) *Where possible, structural uses shall be located away from prime agricultural soils.*

As discussed in section (a) above, while hoophouses are on prime soils, Planning staff recommends a condition that, when the hoophouses are no longer being used, that the buildings be removed and that the land restored for agricultural production.

(2) Water Supply Criteria

Adequate and sufficient water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished.

The project involves removal of an unpermitted diversion structure, and improvements to address creek and streambed violations noted by CDFW, including a new diversion location at Pilarcitos Creek. At the point of diversion, once creek flow rates exceed the minimum requirements per the water rights license (State Water Board Division of Water Rights Permit 17849; a Compliance and Effectiveness Monitoring Plan will be implemented in accordance with Section 1600), water will overtop the weir plate located within the screen riser and then flow into the pipe buried in the bank. Other sources of water to support agricultural operations include an existing well and reservoir.

Per the Project Biologist, water from the reservoir drainage feature will be redirected to the Restoration Area, consistent with historical conditions, via the Southern Vegetated Swale; water from the swale will be allowed to fan out into the restoration area where it can percolate into the ground to provide recharge to Pilarcitos Creek and its surrounding riparian and wetland habitats, and to increase soil moisture within the riparian setback and nearby upland refugia for sensitive wildlife.

2. Compliance with Local Coastal Program (LCP) Policies:

The project complies with the following applicable LCP Policies:

a. Agricultural Component

Policy 5.5.b (*Permitted Uses on Prime Agricultural Lands Designated as Agriculture*) allows for conditional permitting of non-soil-dependent greenhouses and nurseries and uses ancillary to agriculture.

Policy 5.8 (*Conversion of Prime Agricultural Land Designated as Agriculture*) prohibits conversion of prime agricultural land within a

parcel to a conditionally permitted use unless compliance with the following criteria can be demonstrated (Staff discussion follows each criteria):

(1) That no alternative site exists for the use: The hoophouses, cold storage, and greenhouse buildings to be permitted have already been constructed and are clustered with existing development and immediately abut large undeveloped, sloped areas of the property to the east, preserving as much flat agricultural land as possible to the northwest along Pilarcitos Creek/Highway 92.

(2) Clearly defined buffer areas are provided between agricultural and non-agricultural uses: All proposed and existing uses at the site are agricultural or accessory to agriculture.

(3) The productivity of any adjacent agricultural land will not be diminished: No uses are proposed on adjacent agricultural land. Used mushroom compost logs that were once stored on agricultural lands will be stored and processed into compost at a new onsite Compost Waste Management Facility. The new enclosed composting and storage facility onsite would accommodate 200 tons of spent mushroom and other green compost materials. Operational procedures and general guidelines are also included in the plan details (Sheet 6.0, Detail 4 of Attachment B), and serves as the "Waste Management and Soil Management Plan" requested by regulatory agencies. This facility is located outside riparian and wetland buffers.

(4) Public service and facility expansions and permitted uses will not impair agricultural viability, including by increased assessment costs or degraded air and water quality. The project does not involve a public service and facility expansion.

b. Biological Component

LCP Policy 7.8 (*Designation of Riparian Corridors*) establishes riparian corridors for all perennial and intermittent streams and lakes and other bodies of freshwater in the Coastal Zone. The following existing structures would be permitted within the riparian corridor for Pilarcitos Creek, where removal of the structures would be more damaging to habitat than retaining the structures:

(1) Maintenance of a small section of a cold storage building (G3)

(2) Maintenance of an existing rail car bridge to be closed.

LCP Policy 7.11 (*Establishment of Riparian Buffer Zones*) establishes on both sides of riparian corridors, from the "limit of riparian vegetation" extend buffer zones 50 feet outward for perennial streams, such as Pilarcitos Creek. The following work is proposed within the riparian buffer zone, where removal of the structures would be more damaging to habitat than retaining the structures:

(1) Maintenance of a cold storage building (G3)

(2) Removal of an unpermitted fire access road located in the western portion of the property in the City of Half Moon Bay.

LCP Policies 7.13 and 7.17 (*Performance Standards in Wetland* and *Wetland Buffer Zones*) requires that development permitted in wetlands minimize adverse impacts during and after construction, such as elevating paths so as not to impede movement of water, limiting construction to daylight hours, minimizing outdoor lighting, and replacing removed vegetation. These performance standards will be added as conditions of approval. The following work is proposed within the wetland buffer zone:

(1) Approximately 160 linear feet of the vegetated swale (necessary to treat runoff from the south side of the hoophouses) is located within the wetland buffers; of that, 40 feet is located within the existing wetland.

c. Visual Component

Policy 8.31 (*Regulation of Scenic Corridors in Rural Areas*) applies Primary Scenic Resources Areas Criteria of the Resource Management (RM) Zoning District as specific regulations protecting scenic corridors in the Coastal Zone, including those listed below:

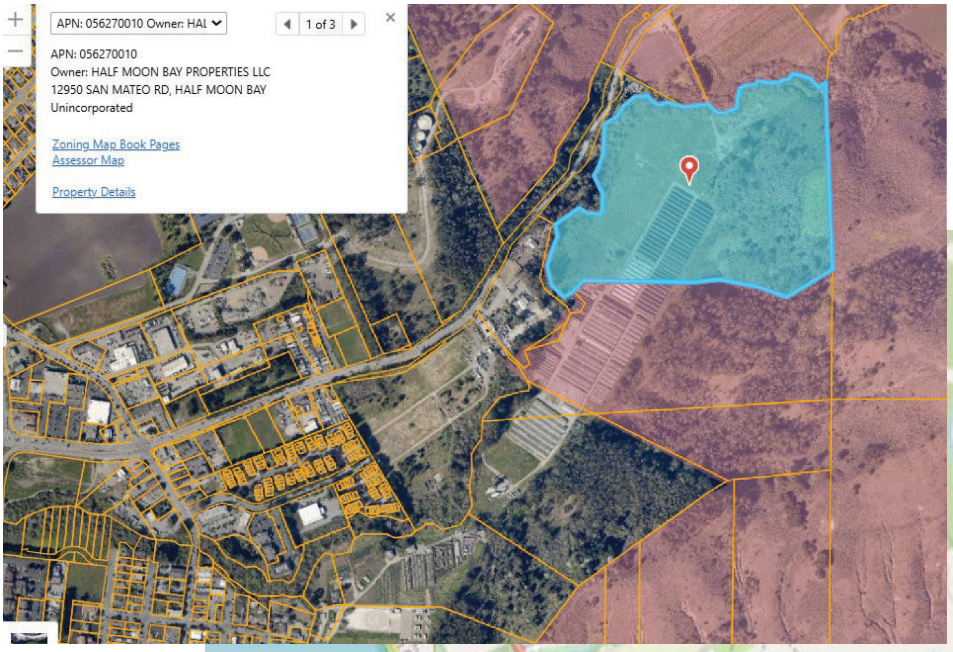
(1) Public views within and from Scenic Corridors shall be protected and enhanced, and development shall not be allowed to significantly obscure, detract from, or negatively affect the quality of these views. Policy 8.31 requires a minimum setback of 100 feet from the right-of-way line, and greater where possible; however, a 50-foot setback may be permitted when sufficient screening is provided to shield the structure(s) from public view. The project includes permitting the hoophouses constructed on the northeast side of the property, located approximately 600 feet from Highway 92, of which a portion are visible from Highway 92, others are located in an area that is screened by eucalyptus trees which line the highway. Views of the hoophouses from Highway 92 are included in Attachment E.

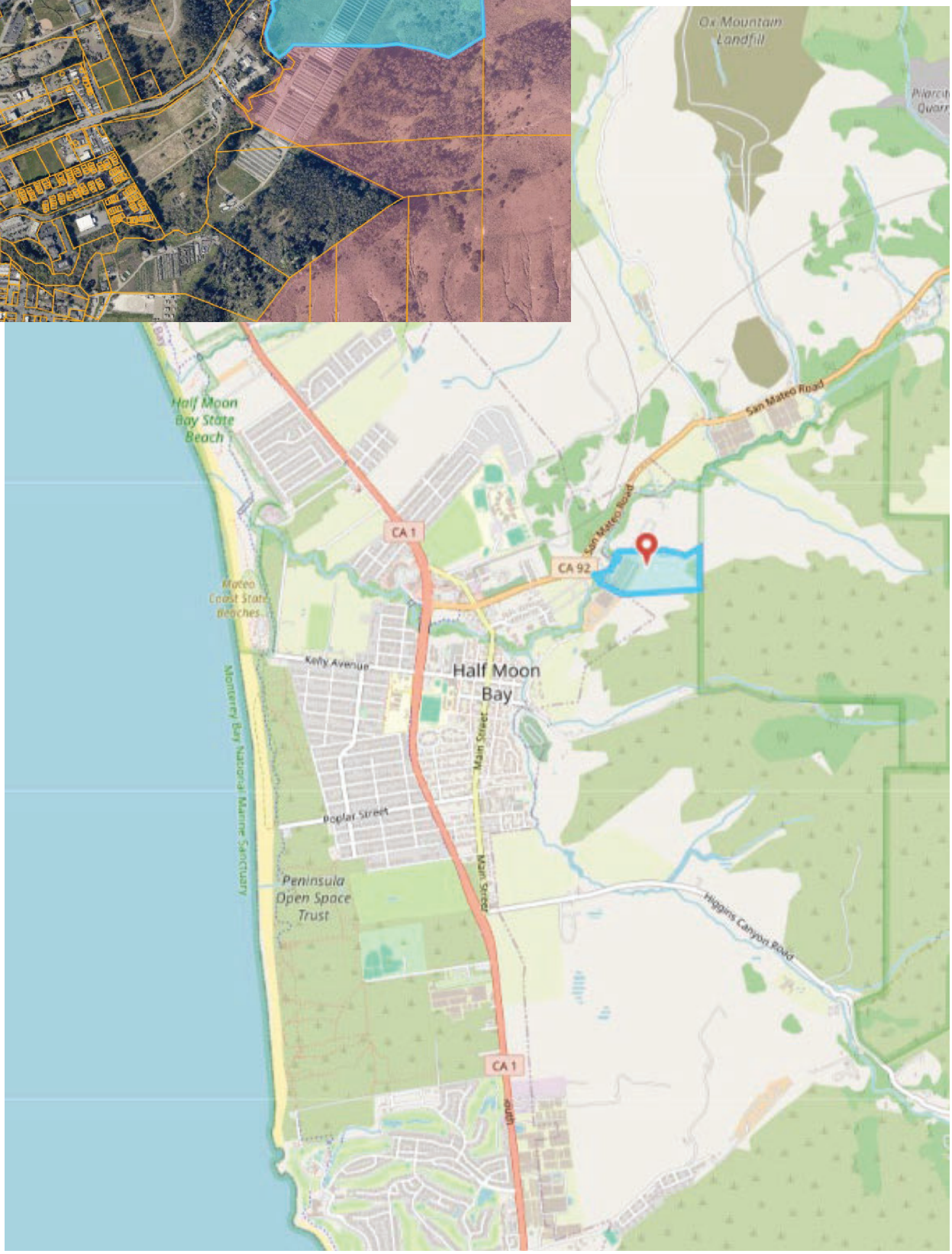
No mitigation or screening is necessary due to the distance of the buildings from Highway 92, that views of these agricultural buildings are consistent with existing agricultural views along Highway 92, and due to the presence of intervening, screening trees along Highway 92.

ATTACHMENTS

A. Vicinity Map
B. Project Plans, revised June 20, 2025
C. County and CDFW Notices of Violation
D. Biological Report Addendum with Stormwater Management Plan and Habitat Restoration and Mitigation Monitoring and Reporting Plan, revised June 20, 2025
E. Views of the hoophouses from Highway 92
F. Prime soil map for subject property

ATTACHMENT A: VICINITY MAP (AERIAL MAP SHOWS COUNTY/CITY LIMITS)





COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C

COUNTY OF SAN MATEO
PLANNING AND BUILDING

CODE COMPLIANCE DIVISION

455 County Center, 2nd Floor
Redwood City, CA 94063
650-363-4825 T
www.CodeComplaint@smcgov.org

NOTICE OF VIOLATION

Issue Date: 04/10/2023
Case Number: VIO2023-00035
Issued By: John Bologna/Senior Code Compliance Officer
Phone: (650) 363-4825
Email: jbologna@smcgov.org

Issued to Property Owner:
Half Moon Bay Properties LLC aka California Terra Gardens
12950 San Mateo Rd.
Half Moon Bay, CA 94019

Assessor's Parcel Number: 056270010, 056321010
Zone: PAD/CD

RE: 12950 San Mateo Rd., Half Moon Bay, CA 94019
12761 Highway 92, Half Moon Bay, CA 94019

The staff members of City of Half Moon Bay (Joe Butcher, John Doughty, Jill Ekas, Maziar Bozorginia); 4Leaf, Inc. (Farris Hix, Mike Leontiades); California Dept. of Fish and Wildlife (Gabrielle Stauffer, Amanda Culpepper, Will Kanz); Cal Fire (John Riddell, Austin Seely); County of San Mateo Environmental Health Services or EHS (Aris Veloso, Ed Diaz, Emily Pfeifer, Dirk Jensen, Allen Chiu), Building Division (Fred Lustenberger), District Attorney's Office (Kevin Raffaelli, James Haggerty), and Code Compliance Division (Tim Sullivan, John Bologna, Eleonor Hilario, Kevin Thorpe, Glenn Morton) conducted joint inspections on January 31, 2023, February 9, 2023, and February 16, 2023, and observed/noted the following violations:

1. **Violation: Pump House/Filtration Room/Pond**
   - Corroded 3-phase electrical panel in pump house needs to be upgraded/corrected immediately
   - Chlorine treatment of pond water
   - New pipes added without a permit
   - Filtration Room – not permitted

   Code: CA Electrical Code 89.108.4, *et al.*, ART.90.2 *et al.*
   Code: CA Plumbing Code Sections 1.8.3-1.8.5
   Code: SMC Ordinance No. 4873 Building Regulations Section 9006

   - **Further directions concerning water treatment are forthcoming from CA Department of Fish and Wildlife.**

2. **Violation: Mushroom Compost Storage**

- Per Planning Division, compost needs to be properly disposed of
- Per Cal Fire, piles need to be turned over occasionally and cannot be more than 4' high

Code: 2019 CA Fire Code
Code: Chapter 4.100 Stormwater Ordinance of County Code
Code: SMC Ordinance No. 4273 Building Regulations Section 9281 *et al*.

3. **Violation: Hazardous/Unsafe Conditions**
   - Piles of wood construction debris need to be removed
   - Remove metal debris
   - Hole in the ground close to dilapidated, single-family house needs to be covered
   - Plastic/wood bridge connectors/walkways to greenhouses need to be building code standard
   - Trash/junk/debris need to be removed
   - Four containers (next to the greenhouses) need safety lock mechanisms and egress
   - Dilapidated, abandoned, single-family house needs to be securely boarded. A building permit is needed to legalize or demolish the structure
   - Derelict greenhouse structures need to be demolished or restored
   - Hoop house greenhouses must have approved egress
   - Diesel fuel tank installed inside building structure (work with CalFire in correcting this violation)

   Code: SMC Sec. 1.12.010 (4) Nuisance
   Code: SMC Ordinance No. 4873 Building Regulations Section 9006
   Code: CA Building Code Section 1006.2 *et al.*
   Code: CA Building Code Section 1008 *et al.*
   Code: CA Building Code Section 1009 *et al*.
   Code: CA Building Code Section 1010 *et al*.
   Code: CA Building Code Section 11B-401.1 *et al.*
   Code: CA Building Code Section 116 *et al.*
   Code: CA Fire Code Section 5704

4. **Violation: Trailers**
   - Three vacant, not connected, abandoned fifth wheel trailers will be removed - located on the east side of the property near the dilapidated house

   Code: SMC Sec. 1.12.010 (4) Nuisance
   Code: SMC Sec. 2.60.040 – IPMC 302.8 Motor Vehicles

5. **Violation: New Construction Without Permits**
   - New refrigeration unit with new electrical panels

   Code: CA Building Code Section 1.8.4.1 *et al*.
   Code: CA Building Code Section 105 *et al.*
   Code: SMC Ordinance No. 4873 Building Regulations Section 9006

6. **Violation: Erosion**
   - Qualified engineer needs to assess soil erosion behind pump house

   Code: CA Building Code Section 116 *et al*.

7. **Violation: Miscellaneous**
   - Electric meter not in use needs to be disconnected (meter #1NG10064560281009; 00135002009FA92D) - located on the east side of the property near the dilapidated house

   Code: SMC Ordinance No. 4873 Building Regulations Section 9006

NOTE: Reports/Violations from CalFire and San Mateo County Environmental Health Services Department MUST be corrected by indicated compliance due dates. Please work with each department/agency individually.

Required Corrections:

Please contact me no later than 04/24/2023 so we can set up a meeting to discuss the required corrections with Terra Gardens property owners and the Terra Gardens Licensed Designed Professional (Architect/Engineer).

Provide **Building Division** the following:

- A Site and Floor Plan of the complex from a Licensed Design Professional (Architect/Engineer)
- Include in the plan how you are going to address the above violations
- All violations related to structural/building, mechanical, plumbing, electrical MUST be corrected and done with permits

Submit digital plans to the Building Division at buildingcounter@smcgov.org.
If you have any questions, the Building Division can be reached at 650-599-7311.

Violations MUST be corrected by 10/10/2023. The County may conduct a reinspection after that date. If the violations are not corrected by the date shown above, Administrative Citations ranging from $100 to $500 per violation per day or more severe enforcement remedies may be implemented.

This Notice of Violation may be recorded against the property with the San Mateo County Recorder's Office.

All building permits are to be applied for online at aca-prod.accela.com/smcgov/Welcome.aspx

The main business operation of California Terra Garden is located within the jurisdiction of San Mateo County, which has adopted a "Red Tag" ordinance. See SMC Code of Ordinances Chapter 3.108 (Property Owner Obligations With Respect to Tenants Displaced from Unsafe or Substandard Units). Under the County's ordinance, you have liability and obligations for relocation expenses for having allowed illegal and unsafe housing for these individuals. The conditions and relocation expenses will be provided at a later date.

Thank you for your cooperation,

John Bologna
Senior Code Compliance Officer
County of San Mateo
Planning & Building Department
455 County Center, 2nd Floor
(650) 363-4825
Email: jbologna@smcgov.org
www.smcgov.org/planning

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

May 18, 2023

Mr. Jim Guan
California Terra Garden, Inc.
12761 San Mateo Road
Half Moon Bay, California 94019
Jim.Guan@ca-terragarden.com

Subject: Notice of Violation of Fish and Game Code Section 1602, 5650, 5652, and 5937

Dear Mr. Guan:

On February 16, 2023, California Department of Fish and Wildlife (CDFW) environmental scientific staff and a wildlife officer, along with San Mateo County staff, conducted a site inspection with your permission at the property at Assessor's Parcel Numbers (APN) 056-270-100, 056-270-060, and 056-270-010, managed by California Terra Garden, Inc. (Property). The Property is associated with the address 12761 San Mateo Road in unincorporated San Mateo County. During that visit, CDFW staff observed activities that are in violation of Fish and Game Code sections 1602, 5650, 5652, and 5937.

CDFW Observations at the Property

During the site inspection, CDFW staff observed evidence of water diversion from Pilarcitos Creek, associated with State Water Resources Control Board (SWRCB) statement of use S022526. Reported water diversion associated with statement of use S022526 includes diversion during summer month low flow periods in 2021, 2019, 2015, 2014, 2013, and 2012. Water diversion occurred near the southwest side of the Property where broken water diversion and other equipment along Pilarcitos Creek was observed (Figure 1). Mr. Guan stated this diversion was active prior to the large storm events in December 2022 and January 2023 when it is believed the diversion system broke. CDFW staff viewed a pump station, electrical panel, as well as a green pipe entering Pilarcitos Creek (Figure 2). Alongside the pump station was a steep-walled open pit lined with wooden boards (Figure 3) and a container with old pump hoses that matched the diameter and color of the pipe that entered Pilarcitos Creek (Figure 4). Other hoses, pipes, trash, and debris were observed within the stream banks of Pilarcitos Creek. Some of those pipes and debris were buried under sand and woody debris.

CDFW staff observed a large pile of organic mushroom waste piled approximately 150 feet from Pilarcitos Creek (Figure 5). Stormwater runoff appeared to have flowed from the organic waste down the earthen path to Pilarcitos Creek.

Mr. Guan informed CDFW staff that diverted water from Pilarcitos Creek was pumped to a reservoir at the southeastern end of the property, associated with SWRCB appropriative water right application A025407. CDFW staff visited the reservoir and associated pump house and 5,000-gallon water storage tank (Figure 6). CDFW staff walked the perimeter of the reservoir and observed an unnamed tributary that was draining into the reservoir (Figure 7). The reservoir is acting as an on-stream reservoir with an earthen dam, typically preventing the unnamed tributary from entering Pilarcitos Creek. However, when the reservoir reaches a certain elevation, it begins flowing into a metal culvert on the embankment of the earthen dam (Figure 8). From the metal culvert the water travels into a concrete-lined modified tributary with plastic filter fabric for approximately 350 feet, adjacent to buildings where mushrooms are grown (Figure 9). The water flows through various plastic culverts in the modified concrete tributary until it passes through a final 26-inch corrugated metal pipe road crossing and exits into an earthen channel, a modified tributary, for another approximately 400 feet before entering Pilarcitos Creek (Figure 10). All irrigation run-off from mushroom-growing activities appears to eventually enter the earthen channel. CDFW staff observed a three-spined stickleback (*Gasterosteus aculeatus aculeatus*) (Figure 11) in the earthen channel approximately 250 feet upstream of Pilarcitos Creek. No flow measurements were taken during our site visit on February 16, 2023. CDFW staff observed inflow into the on-stream reservoir, but did not observe any streamflow below the reservoir.

CDFW staff walked to the northern end of the Property where, according to Mr. Guan, an old slaughterhouse used to be. CDFW staff observed large piles of wood, including some pressure-treated lumber from the recently demolished building approximately 75 feet from Pilarcitos Creek (Figure 12). CDFW staff also observed trash and debris in Pilarcitos Creek, as well as an existing railroad flatcar bridge over the stream.

Violations observed by CDFW are further summarized in Table 1 and the map in Figure 13.

Fish and Game Code Section 1602

Fish and Game Code section 1602 requires a person to notify CDFW before: 1) substantially diverting or obstructing the natural flow of a river, stream, or lake; 2) substantially changing the bed, channel, or bank of a river, stream, or lake; 3) using any material from the bed, channel, or bank of a river, stream, or lake; and/or 4) depositing or disposing of debris, waste, or material containing crumbled, flaked, or ground pavement where it may pass into a river, stream, or lake. Hence, any person who engages in an activity subject to section 1602 without first notifying CDFW violates section 1602.

In CDFW’s view, notification under Fish and Game Code section 1602 was required for the water diversion, installation and maintenance of the on-stream reservoir, placement

of waste and debris along the banks of Pilarcitos Creek, as well as the installation of a railroad flatcar bridge. However, CDFW was unable to locate a Lake and Streambed Alteration (LSA) Notification or LSA Agreement for those activities. The location and brief description of the items listed above are provided in Table 1.

Fish and Game Code Section 5937

Fish and Game Code section 5937 requires the owner of any dam to allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish[1] that may be planted or exist below the dam.

The Property's on-stream reservoir that dams the unnamed tributary to Pilarcitos Creek must ensure sufficient water downstream to keep fish in good condition.

Fish and Game Code Sections 5650 and 5652

Fish and Game Code sections 5650 and 5652 make it unlawful to pollute waters of the state[2]. Section 5650 makes it unlawful to deposit in, permit to pass into, or place where it can pass into waters of the state any substance or material deleterious to fish, plant life, mammals, or bird life, including, but not limited to gasoline, oil, petroleum products, and sediment. Section 5652 makes it unlawful to deposit in, permit to pass into, or place where it can pass into waters of the state, or to abandon, dispose of, or throw away, within 150 feet of the high water mark of the waters of the state, any garbage, refuse, or waste, among other materials.

The Property contains waters of the state, including the streamflow in the unnamed tributary to Pilarcitos Creek and within Pilarcitos Creek. CDFW staff observed placement of trash and debris along the banks of Pilarcitos Creek, which violates section 5650 and/or 5652, as further described in Table 1.

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[1] Fish, as defined in Fish and Game Code section 45, means a wild fish, mollusk, crustacean, invertebrate, amphibian, or part, spawn, or ovum of any of those animals.

[2] Pursuant to Fish and Game Code section 89.1 and Water Code section 13050 subdivision (e), "'Waters of the state,' means any surface water or groundwater, including saline waters, within the boundary of the state."

TABLE 1
Fish and Game Code Section Violations at the Property

Site ID	Approximate coordinates	Description of Activity	Fish and Game Code Section	Description of Violation
WS-1	37.4707, -122.4206	Water diversion from Pilarcitos Creek.	1602(a)	Substantial diversion of streamflow.
PP-1	37.4708, -122.4709	Piles of hoses, PVC, and plastic pipes.	5652(a)	Trash and debris placed within 150 feet of the high water mark of Pilarcitos Creek.
PP-2	37.4710, -122.4201	Mushroom waste found within the Pilarcitos Creek channel.	5650(a)(6)	Deleterious nutrient pollution from organic matter placed where it has/can pass into waters of the state.
WSt-2	37.4711, -122.4170	Earthen dam used to impound streamflow from an unnamed tributary and to store diverted water from Pilarcitos Creek.	1602(a)	Substantial obstruction of streamflow; Substantial alteration of a stream channel.
		Water diversion located within the on-stream reservoir	1602(a)	Substantial diversion of streamflow.
		On-stream reservoir operated without any infrastructure to release water downstream.	5937	Insufficient flow to keep fish in good condition.
PL-1	37.4716, -122.4189	Modified unnamed tributary to Pilarcitos Creek, including concrete, geotextile lining, multiple culverts, and channelization	1602(a)	Substantial alteration of a stream bed, bank, and channel.

TABLE 1
Fish and Game Code Section Violations at the Property

Site ID	Approximate coordinates	Description of Activity	Fish and Game Code Section	Description of Violation
PL-1	37.4716, -122.4189	Hoop-houses containing mushroom growing infrastructure built along the top of a streambank and along a stream. Concrete pad built along a stream. Porta potty placed over a stream.	1602(a)	Substantial stream channel alterations.
			5650(a)(6)	Deleterious organic materials placed where they can pass into waters of the state.
PP-3	37.4739, -122.4168	Wood waste including pressure treated lumber, as well as metal and trash piled and strewn on the ground.	5650(a)(6)	Deleterious substances/materials placed where it can pass into waters of the state.
			5652(a)	Wood and debris placed within 150 feet of the high water mark of waters of the state.
PP-3	37.4741, -122.4169	Railroad flatcar bridge installed over Pilarcitos Creek	1602(a)	Substantial stream channel alteration.

Violation Summary

Fish and Game Code Section	Count
1602	6
5650	3
5652	2
5937	1
Total	**12**

Impacts to Fish and Wildlife Resources

The Property is located in the San Gregorio Creek-Frontal Pacific Ocean watershed (Hydrologic Unit Code 10) and consists of both developed and undeveloped land, including vegetative communities such as red alder (*Alnus rubra*) forests, coyote brush (*Baccharis pilularis*) scrub, and eucalyptus (*Eucalyptus* spp.) groves. Pilarcitos Creek and the unnamed tributary to Pilarcitos Creek on the Property are fish-bearing streams that provide habitat for a variety of aquatic and terrestrial species. Pilarcitos Creek supports the Central California Coast Distinct Population Segment of steelhead (*Oncorhynchus mykiss irideus* pop. 8), federally listed as threatened pursuant to the Endangered Species Act (ESA). In addition, the Property is within the range of the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), federally and state listed as endangered pursuant to the ESA and the California Endangered Species Act (CESA) and a state Fully Protected species, and the federally threatened California red-legged frog (*Rana draytonii*) is likely to occur on or near the Property. These are just some of the species that are likely to be present on or near the Property and must be considered and appropriately avoided during any activities at the site.

The violations of Fish and Game Code identified above have adversely affected fish and wildlife resources on and near the Property by altering and reducing streamflow through diversions, obstructing streamflow, degrading riparian habitat through placement of trash and debris, and polluting streams with organic and inorganic waste.

Steps to Address the Violations

Immediate Actions

In order to avoid the potential for incurring additional Fish and Game Code violations, you will need to immediately:

1) Stop all diversions from Pilarcitos Creek if you have not done so already.

2) Remove all loose trash and debris that exists within 150 feet from the ordinary high water mark of Pilarcitos Creek.

3) Prevent mushroom waste runoff from entering Pilarcitos Creek.

4) Provide CDFW with evidence these immediate actions have been completed within **15 days** of receipt of this letter by submitting via email to Will.Kanz@wildlife.ca.gov or mailing to the CDFW Fairfield regional office.

Additional Actions and LSA Notification

CDFW requests you seek LSA permit compliance by submitting a complete 1602

notification package via EPIMS: https://epims.wildlife.ca.gov/index.doc with correct notification fees for activities discussed below. CDFW requests the complete 1602 notification be submitted by **July 1, 2023**, unless otherwise approved in writing by CDFW**.** This notification should include itemized project activities by location, with corresponding fees.

1) Water diversion infrastructure built without a prior 1602 notification used to divert Pilarcitos streamflow under riparian basis of right S022526, (37.4707, -122.4206). As part of a complete LSA notification for this activity, include if any actions will be needed to repair the damaged water diversion equipment at Pilarcitos Creek. If the damaged water diversion equipment will not be repaired, it should be completely removed. Any future water diversion activities from Pilarcitos Creek must obtain 1602 authorization prior to diverting streamflow. In order for CDFW to evaluate potential adverse impacts to fish and wildlife resources, supporting information regarding water diversion, timing, rates and volumes will be needed.

2) On-stream reservoir built and operated without a prior 1602 notification. The reservoir should be evaluated by a qualified professional to determine any modifications or upgrades necessary to protect fish and wildlife including downstream resources. Examples could include installation of plumbing infrastructure to bypass streamflow, spillway repairs, and/or development of an invasive species management plan.

3) Water diversion infrastructure built without a prior 1602 notification used to divert out of the reservoir.

4) Rail car bridge built without a prior 1602 notification. As part of a complete LSA notification for this activity, include an assessment of the bridge by a licensed engineer and any actions needed to meet engineering standards.

5) Hoop-houses and a concrete pad placed on-top of an unnamed stream without a prior 1602 notification.

6) Multiple culverts placed within a concrete channelized unnamed stream without a prior 1602 notification. As part of complete LSA notification, these culverts shall be assessed by a qualified professional who can determine if the culverts are properly sized to meet the 100-year flood flow and debris. The qualified professional should be evaluated for placement and function.

In addition, as part of the complete LSA notification package, CDFW requests a property remediation plan be included for more long-term actions needed beyond the immediate actions listed above. The remediation plan should include the following:

1) Completely cover any steep-walled holes or pits such as those identified in Figure 3. Prior to covering the holes or pits, they must be thoroughly inspected for trapped wildlife. Wildlife shall not be able to enter the hole or pit once covering is completed.

2) Removal of all remaining trash and debris that exists within 150 feet from the ordinary high water mark of Pilarcitos Creek. This shall include any buried trash and debris (i.e., buried pipes that are no longer being used), as well as treated wood, and all other waste, debris, etc.

3) Removal of mushroom waste that is within 150 feet of the ordinary high water mark of Pilarcitos Creek and any actions needed to prevent mushroom waste runoff from entering Pilarcitos Creek.

If you have not already done so, CDFW recommends you seek assistance from a qualified professional to assist with immediate actions and the LSA notification, as well as potentially other permits from agencies with permitting authority. Additional environmental review and permitting may include, but are not limited to, the California Environmental Quality Act environmental review process, County of San Mateo, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, SWRCB, and the San Francisco Bay Regional Water Quality Control Board. Depending on specific project infrastructure and needs, various professional disciplines may be needed to assist such as a restoration specialist, consulting biologist, engineering geologist and/or hydrologist. A qualified professional can assist with appropriate project designs for both long-term and short-term actions needed to address the violations identified in Table 1.

Please submit the notification and fee by **July 1, 2023**.

Conclusion

CDFW appreciates your cooperation. If you have any questions regarding this letter, please contact Will Kanz, Environmental Scientist, via email at Will.Kanz@wildlife.ca.gov; or Mr. Wesley Stokes, Senior Environmental Scientist (Supervisory), at Wesley.Stokes@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Erin Chappell
B77E9A6211EF486...

Erin Chappell
Regional Manager
Bay Delta Region

ec: **California Department of Fish and Wildlife**

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Regional Water Quality Control Board

Tahsa Sturgis, Tahsa.Sturgis@waterboards.ca.gov

FIGURES

Figure 1. Broken equipment at the bank of Pilarcitos Creek, associated with water diversion and pumping, at WS-1.

Figure 2. View of debris located at WS-1 includes an electrical panel within 150 feet of

Pilarcitos Creek (top). A green pipe (circled in red) is visible in Pilarcitos Creek partially buried in sediment and debris (bottom). The pipe was previously associated with a diversion from Pilarcitos Creek.

Figure 3. Steep-walled hole or pit next to the water diversion system (WS-1).

Figure 4. Old pipes and debris within 150 feet of Pilarcitos Creek located at PP-1.

Figure 5. View of a portion of the mushroom waste pile in the foreground at PP-2 (on the right of the red line). Pilarcitos Creek flows in the background along the tree line, within 150 feet.

Figure 6. Site WSt-1 includes a 5,000-gallon storage tank next to a shed (top). The storage tank is situated below the on-stream reservoir at WSt-2 (bottom).

Figure 7. An unnamed stream in the foreground flows to the on-site reservoir (WSt-2) in the background.

Figure 8. An existing earthen dam built on-top of an unnamed tributary prevents water from flowing downstream until the water surface level in the reservoir (WSt-2) reaches the culvert spillway (circled in red).

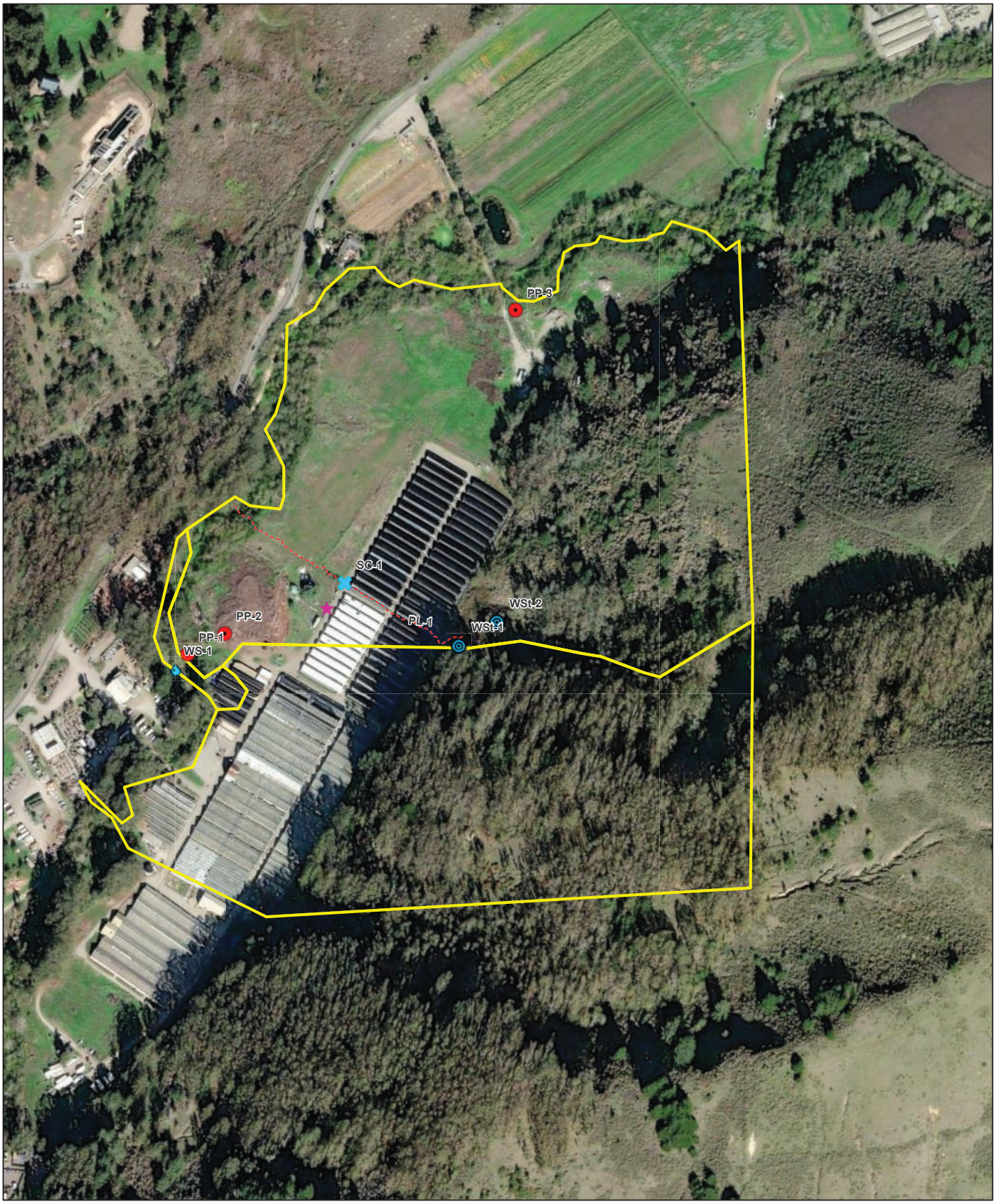
Figure 9. A concrete and geotextile-lined modified tributary adjacent to a mushroom building (left and right picture, PL-1). The reservoir embankment is visible in the background (red arrow in left picture).

Figure 10. A 26-inch corrugated metal pipe (red circle, SC-1) marks the transition to a modified tributary that flows to Pilarcitos Creek.

Figure 11. A three-spined stickleback (*Gasterosteus aculeatus aculeatus*) was located within an isolated drying pool located in the same modified tributary as Figure 9.

Figure 12. Wooden debris from a demolished building at PP-3 within 150 feet of Pilarcitos Creek.

Figure 13. Map of Observations at the Property



3/2/2023, 9:39:05 AM

Site Visit
Water Source
Water Storage
Stream Crossing
Pollution Point
Pollution Line
Associated Parcels

1:4,514

0 0.04 0.08 0.16 mi

0 0.05 0.1 0.2 km

Maxar

California Department of Fish and Wildlife

Maxar | Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community | USGS National Map 3D Elevation Program (3DEP). February 15, 2023. | U.S. Bureau of

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT D

SOL ECOLOGY

P.O. Box 5214
Petaluma, CA 94955
(707) 241-7718
www.solecology.com

MEMORANDUM

TO: Camille Leung, San Mateo County Planning and Building Department

FROM: Dana Riggs, Sol Ecology, Inc.

SUBJECT: California Terra Garden Biological Resources Report Addendum and Remedial Action Plan

DATE: June 20, 2025

CC: Jim Guan, property owner
Craig Smith, BKF Engineers

The following information is provided as an Addendum to the California Terra Garden Biological Resources Report prepared by Sol Ecology and submitted to the San Mateo County (County) in July 2024 (Biology Report)) to reflect additions and revisions in the plan set submitted to permitting agencies, and to address requested changes by San Mateo County Planning Staff (County staff). Initially, the Biology Report was prepared to document biological resource impacts described in the notice of violation issued by the California Department of Fish and Wildlife (CDFW) on May 18, 2023 (CDFW NOV). This Addendum describes the remedial actions that have been completed and identifies additional proposed remedial actions to correct the remaining outstanding violations identified by the County, City of Half Moon Bay, and CDFW. This report also includes an analysis of potential biological impacts associated with implementing the proposed Remedial Action Plan and provides recommendations for ensuring future operations minimize impacts to surrounding sensitive habitats and special status species.

The Project Description in this addendum includes all of the completed and proposed remedial actions provided with the revised Cycle 2 Improvement Plans updated in June 2025 and submitted with this addendum report.

This Addendum includes the following sections:

- 1.3 Updated Project Description and Remedial Action Plan (**new**)
- 3.2 Sensitive Communities (**revised**)
- 5.0 Impact Discussion (**revised**)

- 6.1 Recommended Avoidance and Minimization Measures (**revised**)

In addition, the following additional information is also provided as attachments to this report:

- **Attachment 1.** Photographs Documenting Completed Project Actions (January 2025)
- **Attachment 2.** Figure 6 - Proposed Restoration Plan Area (On-Site)
- **Attachment 3**. Habitat Restoration and Mitigation Monitoring and Reporting Plan (HRMMP)

1.3 Remedial Action Plan

Completed and proposed actions within each agency's jurisdiction are indicated in Table 1. If the project action addresses a specific CDFW violation, it is indicated in the table. These actions are described in greater detail in the following sections.

Table 1. Remedial Action Plan Summary

Action No.	Action Description	Plan Sheet No.	County	City	CDFW
COMPLETED					
1	Demolition of two existing permitted mobile homes (R1, R2) and a group of unpermitted residential trailer hookups and associated utilities, including water, septic, and electrical systems as part of the habitat restoration improvements.	C1.1		X	
3	Removal of existing hazardous materials within proximity of Pilarcitos Creek, namely wood debris and agricultural waste outside of applicable creek setbacks	C1.1 C1.2 C1.3	X		DFW-1, Section 5650/5652
4	Diversion structure removal	N/A			DFW-1
PROPOSED					
2	Demolition of greenhouse G5 and removal of adjacent debris pile and concrete pad	C1.1		X	
5	Demolition of existing permitted, but failing, greenhouses G6 and G7	C1.1		X	
6	Proposed grading to create a new vegetated swale to divert upland flows around development and agricultural operations	C2.1 C2.2 C6.0/6	X	X	DFW- 2
7	Grading and drainage improvements to route stormwater from existing hoophouses and new compost facility to a new bioretention planters for treatment	C2.2 C6.0/5, 6, 7		X	DFW-5
8	Demolition, grading, planting to develop habitat restoration areas (Attachment 2, Figure 6). Existing septic tanks to be filled with concrete and abandoned in place along with drainfields per San Mateo County Environmental Health Standards.	C1.1 C2.1		X	DFW-1 DFW-5 DFW-6
9	Building and electrical permits to legalize modifications to existing heating and cooling building B1 and G4A (deferred)	C2.1		X	

Action No.	Action Description	Plan Sheet No.	County	City	CDFW
10	Improvements and permitting to address creek and streambed violations noted by CDFW including new permanent and temporary diversion structures	C2.1 C2.2	X	X	DFW-1 DFW-3
11	Grading and drainage improvements to repair existing emergency outfall at reservoir to the south of hoophouses	C2.2 C6.0/2, 3	X		DFW-2
12	Legalization of existing unpermitted hoophouses and associated site improvements, including stormwater treatment	C2.2 C6.0/5,7	X		DFW-5
13	Improvements to address ingress/egress safety at existing hoophouses to remain	C4.0	X		
14	Improvements to create a dedicated composting and storage facility onsite for processing agricultural waste outside of applicable creek setbacks	C2.2 C6.0/4, 5, 6, 7	X		Section 5650/5652
15	Demolition of existing permitted but condemned single family home R3 and removal of unpermitted trailer hookups and associated utilities	C1.3	X		
16	Building and electrical improvements to address permit violations at existing dam pumphouse and treatment facilities P1, P2, and P3	C2.2	X		
17	Structural assessment at the existing rail car bridge. Existing signage to be replaced and barricade to be installed at a future date.	C2.3	X		DFW-4
18	Wildlife exclusion fence installation between planned detention basin and processing areas.	C2.2			

Source: Improvement Plans (June 2025), Sheet C0.0: Project Description

Completed Actions

Actions completed to date address the "immediate actions" and "remedial plan" items requested in the CDFW NOV and include structure demolition and debris piles removal (Actions 1 and 3). Structure demolition also includes removal of existing water diversion structure (Action 4). Photographic documentation of completed actions is provided in Attachment 1.

Action 1: Structure Demolition. Demolition of two existing permitted mobile homes (R1, R2) and removing unpermitted residential trailer hookups and associated utilities, including water, septic, and electrical systems have occurred, and this is part of the site preparation for the habitat restoration improvements. This includes abandonment of two septic system drainfields that are located within the 50' riparian setback zone and within the 50' wetland setback zone; these drainfields will be abandoned per Environmental Health Department Standards as indicated via the Existing Septic System Removal Notes on Sheet C1.1, which generally include cleaning and disposing of septic system materials appropriately and backfilling leach trenches with native fill. Photos 1 and 2 provide documentation of removal.

Action 3: Debris Pile Removal. consists of removal of debris piles that were located within the 50-foot riparian setback; this includes the mushroom compost stockpile located near greenhouse G3 (sheet C1.2) and the wood construction debris (sheet 1.3). Mushroom compost stockpile

removal addresses CDFW NOV Immediate Action 3 and Remediation Plan 3. Wood construction debris removal addresses CDFW NOV Immediate Action 2 and Remediation Plan 2. Photos 3 and 4 provide documentation of removal.

Action 4: Removal of Diversion Structure. Water diversion ceased upon receipt of the CDFW NOV and diversion structure, and appurtenances were removed. This was not depicted in the plan set. This addresses Immediate Action 1 and Remediation Plan 1. Documentation is shown via Photos 5 and 6. Riparian restoration at the former diversion location on Pilarcitos Creek is proposed (Action No. 8).

Proposed Actions

The proposed actions (Action 2, and 5 through 18) collectively address remaining violation items identified by the CDFW NOV as "additional action and LSA notification," or as shown in Table 1 as DFW-1 through DFW-6. The goals of the proposed actions are to address all of the biological impacts identified in the July 2024 Biological Resources Report. Specifically, proposed actions described below will ensure avoidance of direct and indirect effects to sensitive habitats and special status species by moving existing facilities out of sensitive habitats, as appropriate; providing appropriate and adequate solid waste and water processing systems; and ensuring that all new and existing structures are up to code. Actions that require additional detail beyond what is described in Table 1 are discussed below; potential permanent and temporary impacts to biological resources that may occur during implementation of proposed remedial actions are described in Section 5.0. Implementation of the Remedial Action Plan will be subject to the review and approval of respective agencies, including the County and CDFW.

Action 6: Southern Vegetated Swale. Grading will occur to create a new vegetated swale that is approximately 2,000 linear feet, ranging from 21-30 inches in depth. The vegetated swale will intercept water from both the reservoir overflow and upland flows around development/agricultural operations and direct water westwards towards Pilarcitos Creek where it is expected to terminate at a level channel spreader within the restoration area (see additional details under Action 8: Restoration). The new vegetated swale will be located along the southern length of the greenhouses and hoophouses and will be graded to drain in a westerly direction. The siting of this feature is consistent with historical conditions present from 1943 up until 1968 when hoophouses were first constructed on the property (refer to Appendix B of the Biology Report). The capacity of the vegetated swale is designed to accommodate flows from the reservoir and site operations. See Sheet 6.0: Detail 6, Cross Sections A, B, and C for additional specifications. Approximately 160 linear feet of the vegetated swale is located within the wetland buffers; of that, 40 feet are located within the existing wetland (refer to Section 5.0 regarding this temporary impact). Planting plan specifications for this feature are addressed in the accompanying HRMMP (Attachment 3.)

Action 7: Bioretention Facility. The earthen drainage ditch, previously constructed to direct water from the reservoir overflow pipe along with stormwater flows originating from the hoophouses into a historic ditch that drains to Pilarcitos Creek, will be redirected to flow into a newly constructed bioretention basin (note, flows from the reservoir will be captured in the

Southern Vegetated Swale and redirected to the Restoration Area). The ditch will then be reconstructed to follow vegetated swale designs as detailed on Sheet 6.0: Detail 6, Cross Section D. The new swale will be lined with grass species and will be designed such that it does not pond water to avoid attracting aquatic species to the processing area. The majority of the flow that enters the bioretention basin is designed to infiltrate into the ground, where the vegetation and abiotic substrate would capture organic materials like nitrogen from the grow operations. Overflows that occur during periods of intense and/or prolonged rain events would be directed out via the northern outlet, dissipated over the upland area, and into Pilarcitos Creek. Overflow water quality is not expected to be compromised due to high quantities of freshwater input from precipitation, and ongoing filtration during the dry season or times of low rain. The bioretention facility is in upland areas, outside of the riparian and wetland buffer zones. The bioretention area will encompass 12,560 square feet, or roughly ¼ acre, with the cross-section shown on Sheet 6.0: Detail 5. The rock outfall specifications are shown on Sheet 6.0: Detail 7.

Action 8: Restoration. Habitat restoration is proposed to offset temporal losses associated with areas of impact throughout the property. The proposed habitat restoration area is approximately 5.8 acres and is located on the west side of the processing areas as shown in Attachment 2 (Figure 6 Restoration Plan Area) and fully described within the accompanying HRMMP (Attachment 3). Habitat restoration is proposed in this area to offset 0.22 acres of impacts to riparian habitat, and an additional 1.10 acres of impacts to riparian buffers from activities as identified in the Biology Report; the proposed vegetated swale described under Action 6 will offset impacts to approximately 730 linear feet of drainage impacts.

The goal of the restoration plan is to create high quality habitat within an existing wildlife corridor to avoid or reduce potential future effects from agricultural operations on the site, and to enhance and restore riparian functions to historic conditions prior to development of the site. Site preparation includes Action 1 (removing existing structures and septic systems) and invasive species removal. The area would then be revegetated with native species that are appropriate for riparian, wetland, and upland areas and supportive of target species breeding, foraging, estivation, and dispersal needs. The primary objectives will be to increase riparian function and values for native species, improve the buffer areas to provide refugia for target species, and lengthen an existing wildlife corridor. Additionally, water from the reservoir drainage feature will be redirected to the Restoration Area, consistent with historical conditions, via the Southern Vegetated Swale; water from the swale will be allowed to fan out into the restoration area where it can percolate into the ground to provide recharge to Pilarcitos Creek and its surrounding riparian and wetland habitats, and to increase soil moisture within the riparian setback and nearby upland refugia for sensitive wildlife. Maintenance and monitoring would follow to ensure successful establishment of planted species. The full restoration plan includes a planting palette, planting plan, performance criteria, monitoring and reporting requirements, and guidance for adaptive management.

Action 10: New Water Diversion Facilities. The new water diversion facilities include a new diversion weir/intake basin, a settling basin, a diversion sump pump, diversion flow meter, and storage tanks, all connected to the reservoir via buried piping. The general configuration of this

equipment is shown on Sheet C2.2. The diversion weir/intake basin, settling basin, diversion sump pump, and diversion flow meter will be at the same location as the previously removed system, below top of bank on the east side of Pilarcitos Creek and south of the existing well. Appurtenances will be installed outside the active floodplain and only the diversion pipe and bypass will be placed in the wetted channel (subject to federal/state permitting). The instream portion of the water diversion system will consist of a 36-inch circular HDPE pipe (riser) embedded vertically into the stream bed and bank. The open end of the riser will be covered with a secured lid and act to encase the intake pipe and allow for incorporation of an appropriately sized fish screen that meets National Marine Fisheries Service (NMFS) and CDFW screening criteria and limits entrainment of fish into the diversion system. The riser will be cut and fitted with the screen, leaving no gaps. An adjustable rectangular weir place will be secured inside the riser to allow for adjustment of the intake system, as necessary to meet permit requirements. At the point of diversion, once creek flow rates exceed the minimum requirements per the water rights license[1], water will overtop the weir plate located within the screen riser and then flow into the pipe buried in the bank.

Moving upslope, there will be approximately 120 feet of buried piping below the top of bank, and an additional 120 feet within the riparian buffer zone. The diverted water will be piped to three 5,000-gallon lift station storage tanks set on a pad consisting of class 2 aggregate material; these tanks are located outside of riparian and wetland buffer zones. From there, the pipes lead to the reservoir, where approximately 200 feet of buried piping will be in the wetland buffer zone. All pipes would be buried approximately 18" to 24" deep. A ditch approximately 12" wide and 18"-24" deep would be dug to accommodate the pipes, then backfilled with native fill.

A new streambed alteration agreement will be obtained prior to re-installing new diversion facilities (including interim temporary facilities); information including the maximum rate of diversion rates, timing of diversion, maximum volume diverted per year, and the minimum rate of flow at the point of diversion will be provided with notification to CDFW. A flow meter will be installed at the in-stream diversion array and a Compliance and Effectiveness Monitoring Plan will be prepared and implemented to ensure diversion operations, including bypass flow monitoring are performed in accordance with the respective water rights licenses for the property.

Action 11: Reservoir Improvements. The structural integrity of the reservoir will be improved via geotechnical engineering as detailed on Sheet 6.0, Detail 2. Existing grade is to remain after excavation, compacting, and fill is completed. Existing pumphouses (P1, P2) located within the wetland buffer zone are to be left in place to minimize potential impacts. The emergency outfall will be relocated to direct water away from existing wetland via a 24" HDPE culvert outfitted with a riprap dissipater at the end, as shown on Sheet 6.0, Detail 3. Reservoir overflow will be directed into the Southern Vegetated Swale as described in Action 6. The reservoir outfall will be relocated

[1] State Water Board Division of Water Rights Permit 17849; a Compliance and Effectiveness Monitoring Plan will be implemented in accordance with Section 1600.

to be outside of the wetland buffer. A floating pond ladder and/or ramp will be installed to allow any trapped wildlife to escape, as water levels drop.

Action 14: Compost Waste Management Facility. A new enclosed composting and storage facility onsite will accommodate 200 tons of spent mushroom and other green compost materials. Materials will be transported to this facility by tractor and trailer via dedicated asphalt concrete roads as shown on Sheet 2.2. The composting facility will be enclosed via a 6-inch-thick concrete slab on the ground, with an 8-inch-thick poured concrete or concrete masonry unit as surrounding walls, per Sheet 6.0, Detail 4. Operational procedures and general guidelines are also included in the plan details on Sheet 6.0, Detail 4 and serves as the "Waste Management and Soil Management Plan" requested by regulatory agencies. Any incidental drainage from the composting facility would be directed towards the gravel apron located in front of the facility. The gravel apron would consist of 3 inches of decomposed granite over 6 inches of Caltrans class 2 aggregate base, for a total of 9 inches in depth. Further drainage would flow into the bioretention area as described in Action 7. A roof will also be constructed over the composting facility to minimize runoff generated from rain events. This facility is located outside riparian and wetland buffers. Wildlife exclusion fencing will be placed between the new facility and the nearby bioretention facility.

Action 17: Rail Car Bridge. The rail car bridge will be abandoned in place; permanent barricades and signage to prevent vehicular use will be installed at either end of the bridge.

Action 18: Permanent Wildlife Exclusion Fence. Permanent WEF is proposed between the riparian setback and places that contain movement of machinery and other processes that may be harmful to wildlife as shown on the accompanying plan set. Design and installation requirements are further described in Section 6.1.

3.2 Sensitive Communities

Seasonal Wetland

In addition to the coastal wetland described in the Biology Report, a 0.26-acre coastal wetland feature (2-parameter) has been identified within the planned Restoration Area, as shown in Attachment 2, Figure 6. This feature appears to be formed as the result of a perched water table, with additional hydrological inputs from the former septic leach field, and an upstream drainage feature located adjacent to the southern property boundary. A slight depression is present at the southern end of the property. Wetland composition is predominantly herbaceous, with several small arroyo willow (*Salix lasiolepis*) shrubs established along the southern portions of the feature. Common rush (*Juncus effusus*) is the dominant species, occurring in relatively patchy clusters, interspersed with non-native grasses and forbs including harding grass (*Phalaris aquatica*), velvet grass (*Holcus lanatus*), bristly ox-tongue (*Helminthotheca echioides*) and poison hemlock (*Conium maculatum*). The native California blackberry (*Rubus ursinus*) is also present on the upper margins of the wetland feature. This feature may meet the definition of Waters of the U.S. and/or State.

5.0 Impact Discussion

The following actions would not have any direct or indirect impacts to water quality, sensitive habitats, or special status species either due to the nature of the work or its location outside of sensitive habitats and/or respective buffer zones:

Action 2: Demolition of Greenhouse G2
Action 5: Demolition of Greenhouses G6 and G7
Action 9: Building and Electrical Permits for Structures B1 and G4A
Action 12: Legalization of Hoophouses and Stormwater Treatment (see Action 7 for Stormwater Treatment)
Action 13: Circulation Improvements
Action 15: Demolition of Structure R3 and Associated Facilities
Action 16: Building and Electrical Permits at Structures P1, P2, and P3

The remaining actions and their respective potential biological impacts are discussed below.

Action 1: Housing Demolition and Septic System Removal. The removed structures and related appurtenances (with the exception of septic systems) are outside of the riparian and wetland buffer zone and therefore did not have an impact on sensitive areas. Removal of the drainfields that are located within the riparian and wetland buffer zones would be done in accordance with Environmental Health Department Standards and is not expected to result in any impacts to riparian and wetland habitats. Earth disturbance in this area could potentially impact special status amphibians and/or nesting birds if present. Pre-construction surveys are recommended prior to work to ensure mortality does not occur, as described AAM [AMM] 1 and 2 of the Biology Report. No additional avoidance or minimization measures are needed for this action.

Action 3: Debris Pile Removal. Removal of debris piles located within the riparian buffer zone has a net positive effect on water quality and wildlife. Implementation of this action complies with Section 5650/5652 of the Fish and Game Code.

Action 4: Diversion Structure Removal. The removal of the old diversion structure was performed prior to the initial site assessment by the biologist. Based on existing conditions noted during the June 7, 2023, site walk, little cover was observed that would offer refugia to sensitive aquatic wildlife within the area where the diversion facility was located. This area was largely denuded as described in the Biology Report. Additional appurtenances on the bank were removed at a later date. Restoration of habitat at the diversion point is proposed as described in the HRMMP (Attachment 3); additional mitigation for temporal impacts to riparian habitat and 1.10 acres of riparian setback areas will also be accomplished.

Action 6: Southern Vegetated Swale. Construction of the new Southern Vegetated Swale within the coastal wetland and wetland buffer would result in a small amount of permanent impact to

the coastal wetland. Minor impacts to the coastal wetland will occur but such impacts will enhance the biological productivity of the wetland, consistent with permitted uses described in the LCP (LCP 2021). See LCP Policy 7.16 (7): "diking, dredging, and filling in any other wetland only if such activity serves to restore or enhance the biological productivity of the wetland."

Action 7: Bioretention Facility. Implementation of the bioretention facility would not result in impacts to water quality or sensitive habitats since it is located outside of sensitive habitats and/or setbacks. The location of the facility is designed to be away from processing areas, separated by a permanent WEF (AMM 2). The facility is designed to infiltrate into the ground and as such would not likely hold water long enough to support California red-legged frog (CRLF) breeding but may provide aquatic non-breeding foraging habitat for CRLF, which would result in a net beneficial effect. The pond will be designed with sloped sides to allow CRLF (and other wildlife species) to move freely in and out of the facility. Construction of the facility could potentially impact CRLF, and/or nesting birds if present in uplands at the time of construction. Implementation of AAM [AMM] 1 and 2 will ensure no adverse effects during construction of the facility. No additional avoidance or minimization measures are proposed.

Action 8: Restoration. Implementation of the restoration plan may result in temporary impacts during the site preparation/construction stage, as septic fields are being removed. However, following Environmental Health Department standards and the implementation of AAM [AMM] 1, 2, and 5 would ensure no impacts to sensitive habitats and/or species occur. Planned restoration at the diversion point will replace lost riparian habitat in this area, reduce potential sedimentation to downstream habitats in Pilarcitos Creek, improve habitat for fish and wildlife, and reduce cover and dispersal of invasive species to downstream habitats. Additional planned restoration within the Restoration Area depicted in Attachment 2, Figure 6 will offset impacts described in the Biology Report including temporal effects, provide a net increase in riparian habitat and buffers, and will provide greater refugia for dispersing wildlife including CRLF, within an existing wildlife corridor, resulting in a net benefit for target wildlife species. Impacts to the seasonal wetland are not proposed, other than minor enhancements to remove invasive species and re-vegetate those areas with native wetland species. Targeted maintenance of this area is expected to improve wetland functions and values and mitigate any minor temporal effects to wetlands located near the reservoir.

Action 10: New Water Diversion Facilities. Implementation of the new water diversion facilities may result in temporary impacts to water quality and wildlife during the installation and construction. AAM [AMM] 1, 2, and 5 will ensure effects associated with construction of the new facilities do not result in any new deleterious effects to Pilarcitos Creek or its associated riparian habitat, and/or aquatic wildlife. Regulatory permits including a new Section 1600 Notification, Section 404 permit, and Section 401 Water Quality Certification are required prior to installation of the new permanent diversion facilities within the stream channel; temporary diversion facilities are proposed in the interim, under a new Section 1600 Notification. Adherence to permit standards is also required. Planned restoration activities described under Action 8 will offset impacts to riparian habitat and setback areas associated with new diversion facilities in Pilarcitors

Creek, and minor impacts to the wetland buffer associated with new water diversion facilities at the reservoir, as described in the Biology Report.

Action 11: Reservoir Improvements. The existing pumphouses do not currently have any adverse impacts on the adjacent wetland feature based on analysis provided in the Biology Report; leaving the pumphouses in place would avoid potential impacts associated with removal. Implementation of the reservoir outfall within the wetland buffer would not result in impacts to the adjacent wetland feature; the plan was designed to avoid the wetland feature. Implementation of AMM 2, including a new pond ladder will ensure the reservoir improvements, including the outfall repair and relocation, do not result in mortality to listed species or other sensitive wildlife that may be present.

Action 14: Compost Waste Management Facility. The new facility will be located away from all sensitive habitats and all potential runoff would be contained within appropriate treatment facilities. Implementation of the compost waste management facility would not result in impacts to water quality, sensitive habitats, wildlife, or any special status species. AMM 2, including a new permanent WEF between riparian setback areas and the new facility will prevent potential adverse effects to CRLF (and other wildlife) that may forage in the nearby uplands and/or bioretention facility.

Action 17: Rail Car Bridge. Leaving the rail car bridge in place is the least environmentally damaging option, is consistent with the recommendation in the 2024 biology report, and would not result in impacts to water quality, sensitive habitats, wildlife, or any special status species. The completion of a structural engineering analysis and a plan to safely abandon the bridge in place fully addresses DFW-4.

Action 18: Permanent Wildlife Exclusion Fence (WEF). Implementation of a permanent WEF is intended to deter wildlife from active work areas to prevent direct impacts to wildlife. This action is further described under AMM-2 below.

6.1 Recommended Avoidance and Minimization Measures

The following additional avoidance and minimization measures (AMMs) are proposed to ensure remedial actions do not result in any new adverse effects to sensitive habitats and/or special status species. Additional regulatory permits including a new Lake and Streambed Alteration Agreement (and other permits as outlined above) shall be obtained prior to implementation of the Remedial Action Plan.

AMM-2. CRLF (AND OTHER SENSITIVE AQUATIC WILDLIFE)

- **Permanent wildlife exclusion fencing** is recommended to be installed between the proposed bioretention facility and compost facility to deter special status species, including CRLF from accessing active processing areas where they may be subject to morality. A permanent WEF fence plan shall be submitted to CDFW with the Section 1600 Notification, for review and approval prior to installation. The fence should be

constructed of durable materials (such as wire fencing with hardware cloth with a mesh size of one quarter inch or smaller) that will not leach into ground water (e.g., no pressure-treated wood, nor degradable plastic may be used) and be maintained in good repair for the life of the project. Installation of the WEF should be performed under the supervision of a CDFW-approved biologist; field fitting may be appropriate subject to site conditions following construction of the bioretention facility under the direction of the biologist. An annual inspection of the permanent wildlife exclusion fencing is recommended to occur in October, prior to the start of the rainy season to ensure fencing is in good working order.

- **A pond ladder, ramp, or similar structure** shall be constructed and maintained in the on-site reservoir to allow trapped wildlife to escape. The design and placement of the ladder should be performed under the supervision of a CDFW-approved biologist and shall be constructed from durable materials which will not leach chemicals nor discharge any material into the waterbody. An annual inspection of the ladder is recommended during the pond draw-down period (summer) to ensure that the structure is intact and serves the intended purpose.
- **Diversion structure inspections.** An annual inspection of the diversion facility, including fish screens, shall be performed prior to the start of pumping each year. Periodic inspections are recommended during the winter season following any major storm events for the first 1-3 years to monitor performance, subject to the requirements set forth in the LSAA and/or the Compliance and Effectiveness Monitoring Plan

AMM-5. CONSTRUCTION BEST MANAGEMENT PRACTICES FOR WORKING IN WATERWAYS

Work Period and Erosion Control

- No work shall occur during periods of wet weather or where saturated ground conditions exist; if a 60% chance of a one-half inch of rain or more within a 24-hour period is forecasted, then the site shall be treated with erosion control measures and construction operations will cease until 24 hours after rain has ceased.
- In areas expected or forecasted to get rainfall during the construction season, effective erosion control measures should be in place at all times during construction activities. Construction within the 5-year floodplain may not begin until all temporary erosion controls (e.g., straw bales, silt fences that are effectively keyed in) are in place, downslope of project activities within the riparian area. Erosion control structures shall be maintained throughout, and possibly after, construction activities. Sediment shall be removed from sediment controls once it has reached one-third of the exposed height of the control. Whenever straw bales are used, they shall be staked and dug into the ground 12 centimeters (cm). Catch basins shall be maintained so that no more than 15 cm of sediment depth accumulates within traps or sumps.
- Adequate erosion control supplies (gravel, straw bales, shovels, etc.) should be stored on site.

Hazardous Waste

- A Spill Prevention and Control Plan shall be created, and the Plan and all materials necessary to implement shall be accessible on site
- All construction equipment will be maintained to prevent leaks of fuel, lubricants, or other fluids by checking heavy equipment daily for leaks. Do not use equipment until any leaks are repaired.
- Refuel outside of active stream channel, more than 100 feet away from top of bank.
- Petroleum products, chemicals, fresh cement, or water contaminated by the aforementioned shall not be allowed to enter flowing waters.
- Stationary equipment such as motors, pumps, generators, and compressors, located within the dewatered portion of the stream channel or adjacent to the stream, will be positioned over drip pans.

General

- Where available, use existing ingress or egress points, or perform work from the top of the stream banks.
- All food scraps, paper wrappers, food containers, cans, bottles, and other trash will be deposited in securely covered containers to prevent wildlife from accessing.

Attachments:

Attachment 1. Photographs Documenting Completed Project Actions (January 2025)
Attachment 2. Figure 6 - Proposed Restoration Plan Area (On-Site)
Attachment 3. Habitat Restoration and Mitigation Monitoring and Reporting Plan (HRMMP)

Attachment 1. Photographs Documenting Completed Project Actions

Photo index map. Aerial imagery basemap from September 2020 (Google Earth).

Photo 1. Action 1 – mobile home (R1, R2) removal

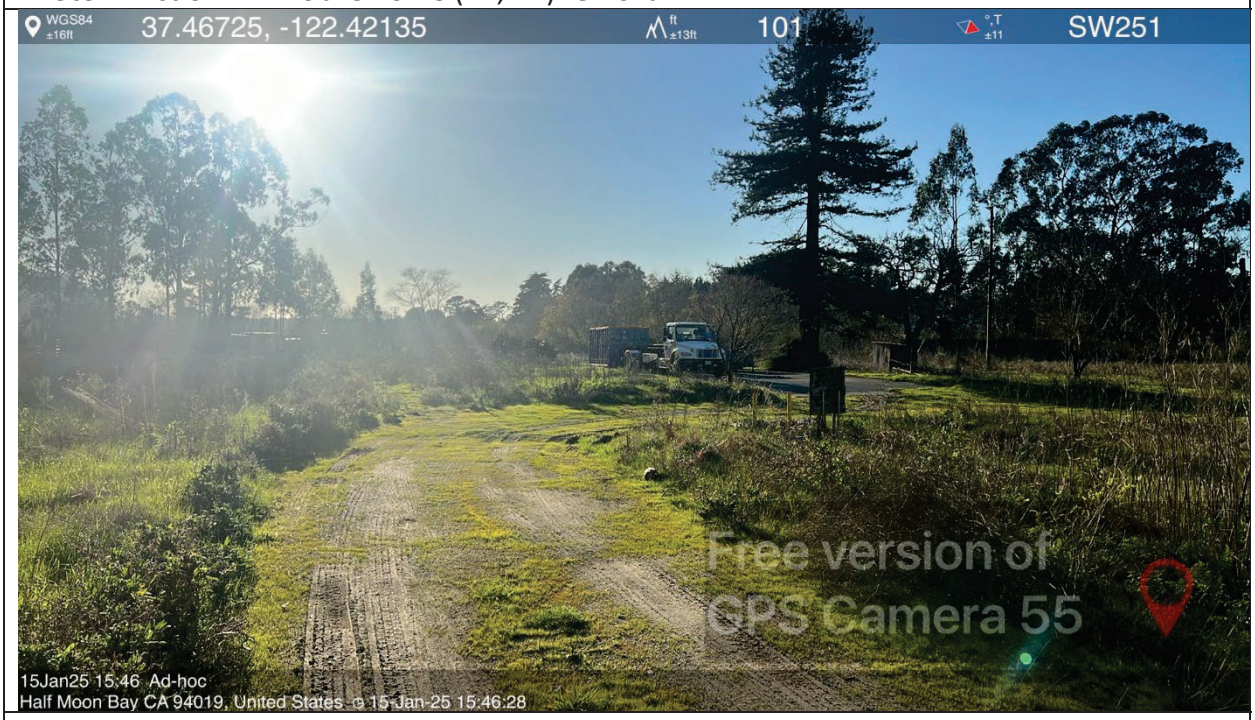


Photo 2. Action 1 – mobile home (R1, R2) removal)

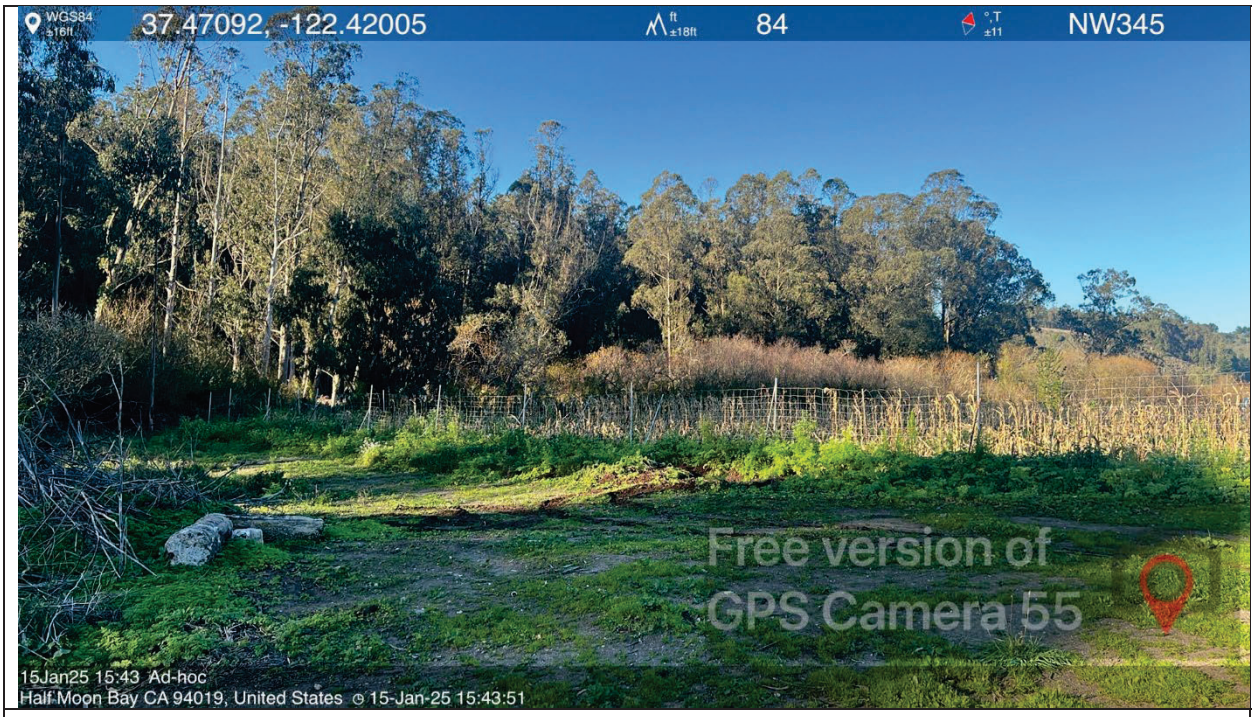


Photo 3. Action 3 - mushroom waste removal

Photo 4. Action 3 – wood debris removal

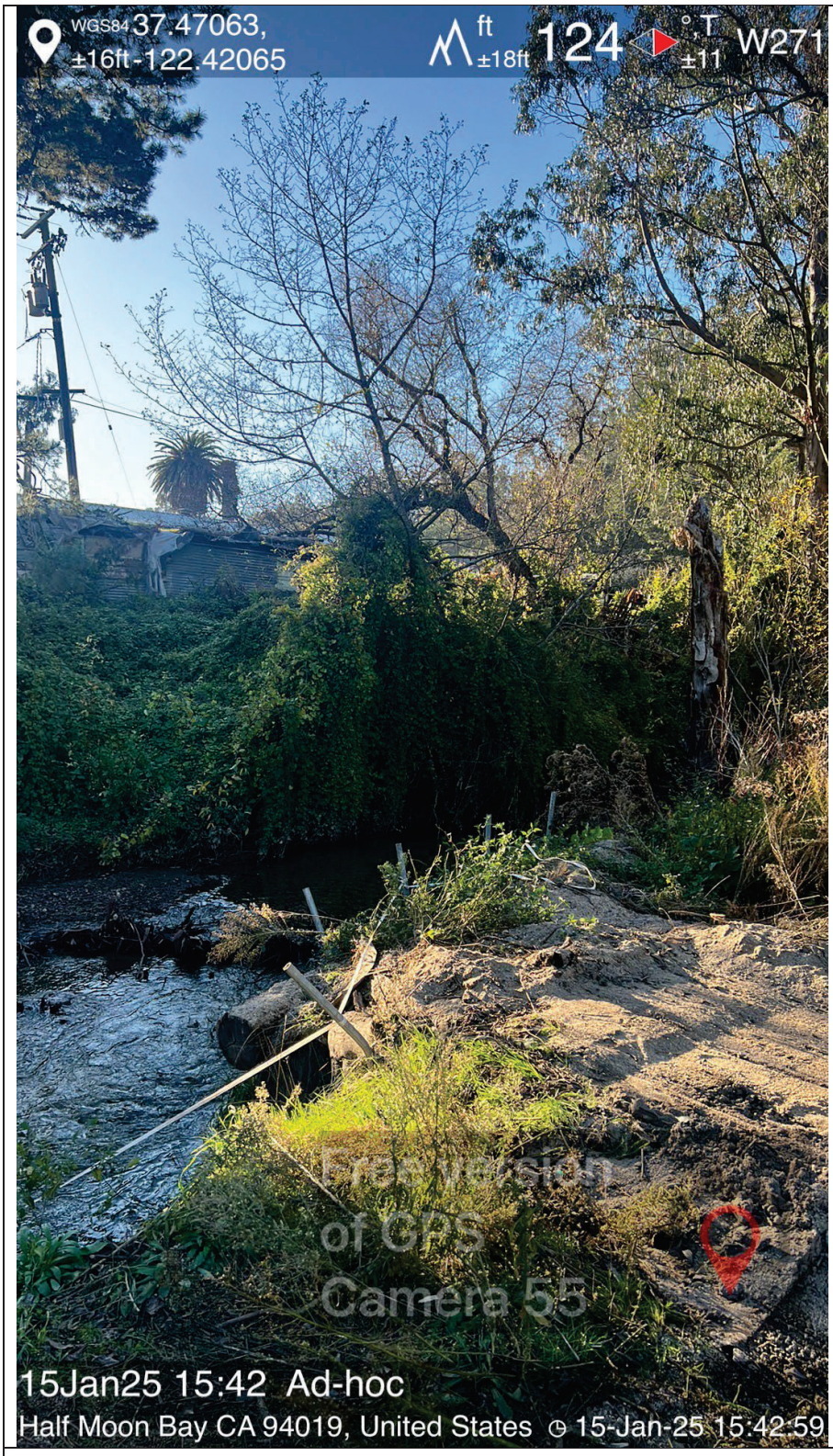
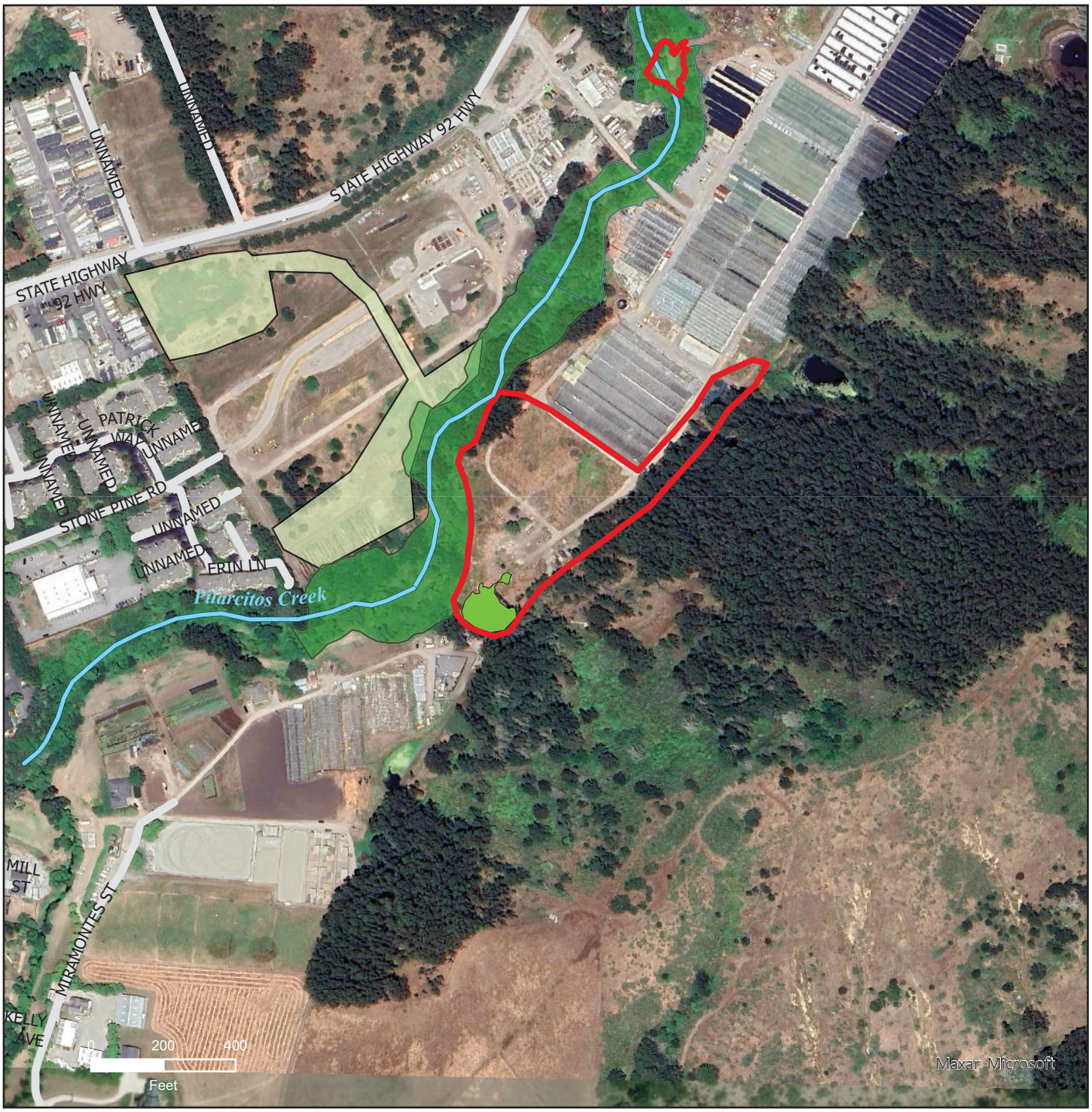


Photo 5. Action 4 – diversion structure removal location.

Photo 6. Action 4 – Diversion structure removed as of June 7, 2023

Attachment 2 Figure 6. Restoration Plan Area
California Terra Garden, Half Moon Bay, CA



Restoration Area
City of Half Moon Bay Wildlife Corridor Conservation Area
Streets
Pilarcitos Creek
Seasonal Wetland
Riparian Habitat

Projected Coordinate System: NAD 1983 (2011) StatePlane California II FIPS 0402 (US Feet)
Projection: Universal Transverse Mercator
Datum: North American 1983

Base: ESRI
Data: Sonoma Co., Sol Ecology Inc.
Date: 3-2-2025
GIS: AG2418.1 loc 1

SOL ECOLOGY

HABITAT RESTORATION AND MITIGATION MONITORING AND REPORTING PLAN

California Terra Garden, San Mateo County, CA

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1.0 INTRODUCTION

1.1 Purpose

The primary purpose of the restoration plan is to implement compensatory mitigation for the temporary loss of habitat associated with Pilarcitos Creek and adjacent upland and aquatic habitats resulting from unlawful activities on the site, as required by California Department of Fish and Wildlife (CDFW).

This habitat restoration and mitigation monitoring and reportingplan (Plan) has been prepared to accompany the Biological Resources Report (July 1, 2024) and subsequent Addendum (June 19, 2025), as required to offset permanent and temporal impacts to aquatic and riparian habitat associated with violations identified by CDFW, San Mateo County, and City of Half Moon Bay.

This Plan provides the details for **Action 8: Restoration** as described in the Addendum and includes the restoration goals and objectives; basis for design; implementation details; maintenance activities, monitoring methods, performance success criteria, and reporting requirements to ensure the long-term success of this restoration effort.

1.2 Background

Restoration activities are proposed to offset 0.22 acres of impacts to riparian habitat and 1.10 acres of impacts to riparian and wetland buffers from activities as identified in the Biological Resources Report and Addendum. Impacts considered and mitigated within the scope of this restoration plan are inclusive of actions from the initial violation and actions taken to correct the violations. A full discussion of impacts is included in the Biological Resources Report and Addendum, in Section 5.0.

2.0 PROJECT DESCRIPTION

2.1 Restoration Goals and Objectives

The goal of the restoration plan is to provide ecological function and value uplift and improve native wildlife habitat within an existing wildlife corridor (Appendix A: Figure 1). These goals would be accomplished by fulfilling the following objectives:

- Add or enhance habitat elements for target species like basking substrate, foraging habitat, and refugia;
- Increase hydrologic input to Pilarcitos Creek via groundwater recharge along the vegetated swale (connected to bypass flow from the reservoir);
- Improve dispersal corridors and increase soil moisture levels within nearby upland refugia for sensitive wildlife by planting and maintaining shorter grass heights; and
- Improve native plant species richness and diversity by removing invasive species and replacing with habitat-appropriate species local to the watershed.

2.2 Basis for Design

Restoration goals and objectives described in this report are based on the need for further corrective actions and/or mitigation to restore or offset the function and habitat value to areas that remain affected as a result of unauthorized activities.

Site Selection

The restoration areas have been selected as a result of the violation activities, in areas that complement existing and planned uses within the property, and connect adjacent suitable habitats. Generally, there are two areas proposed for improvements – the first is located within the southwestern portion of the property and consist of multiple habitat types (southwestern restoration area) and the second is located within Pilarcitos Creek and its adjacent riparian habitat where the diversion facilities are located (diversion restoration area). The restoration areas and their respective habitat types/zones and sizes are summarized in the table below and are also shown in Appendix A: Figure 2.

Table 1. Restoration Area Overview

Zone No.	Habitat Zone	Area (Acres)
Southwestern Restoration Area		
1	Riparian Setback Mitigation	0.80
2	Upland Habitat Mitigation	4.54
3	Seasonal Wetland Enhancement	0.26
4	Vegetated Swale	0.20
Diversion Restoration Area		
5	Riparian Habitat Restoration	0.22
	Total	**6.02**

The southwestern restoration area previously contained living quarters and ancillary structures. This area was selected for restoration activities and habitat improvements since it is within an existing wildlife movement pathway between Pilarcitos Creek and the City of Half Moon Bay Corporation Yard Wildlife Overpass to the north, and upland habitats and Arroyo Leon Creek (and its tributaries) to the south. Existing agricultural facilities are located to the east and west of the site, which otherwise restrict movement. Water spilling from the on-site reservoir and upstream bypass (to be constructed) will be routed into a vegetated swale and directed away from existing processing and transport areas to the proposed upland habitat restoration area, to avoid encouraging wildlife to access portions of the site where they may be injured or harmed. The upland habitat will be designed to provide enhanced upland and dispersal habitat for two targeted wildlife species documented in Pilarcitos Creek, California red-legged frog (*Rana draytonii*; CRLF), and San Francisco garter snake (*Thamnophis sirtalis tetrataenia*; SFGS).

The southwestern restoration complex consists of an open field dominated by ruderal vegetation, including poison hemlock and invasive grasses. The riparian corridor features some native trees and shrubs such as red elderberry and arroyo willow, but is dominated by invasives such as vinca,

cape ivy, Himilayan blackberry, and English ivy in the understory. A coastal wetland at the southwestern end of complex includes mesic vegetation such as rushes (*Juncus* sp.) and arroyo willow. Upland slopes along the southeastern border include Monterey pine and eucalyptus forest with an understory of weedy species.

The diversion restoration area consists of the active channel for Pilarcitos Creek and the creek banks. Riparian restoration will be designed to provide enhanced aquatic habitat for fish and wildlife, including both common and special status species described in the Biological Resources Report.

Target Species Habitat Requirements

Habitat enhancement for target species is based on the results of the July 2024 Biological Resources Report, to restore impacted functions and values associated with Pilarcitos Creek and its associated riparian corridor. Target listed species identified in the report include California red-legged frog (CRLF; *Rana draytonii*, San Francisco garter snake (SFGS; *Thamnophis sirtalis*) southwestern pond turtle (SWPT; *Actinemys pallida*), and central California coastal steelhead distinct population segment (steelhead; *Oncorhynchus mykiss irideus*), along with other native fish and wildlife species that rely on these habitats. The location for proposed restoration activities was selected based on its proximity to existing wildlife corridors, nearby occupied habitats, and proximity to existing agricultural activities to avoid attracting wildlife to processing areas. Target species habitat goals include increasing riparian habitat stratification, diversity, and shade for fish and aquatic wildlife, and improving upland terrestrial habitats for CRLF and SFGS hibernacula, basking, foraging, and dispersal.

Ideal upland habitat for CRLF includes natural terrestrial habitats within approximately 100 meters of occupied aquatic habitat with sufficient cover features such as dense vegetation, rocks, logs, and small mammal burrows (USFWS 2022). CRLF spend most of their time in upland habitats hidden from view, mostly under live plants (Bulger 2003). Small mammal burrows are an important source of cover and estivation habitat for frogs foraging and dispersing in uplands. Additionally, grassland habitats with generally low vegetation or short grasses are more suitable for dispersal to ease movement, retain soil moisture, and promote rodent activity (Ford et al 2013).

Ideal upland habitat for SFGS is open grassland with small mammal burrows and scattered shrubs. Small mammal burrows serve as important hibernacula for SFGS during winter months when temperatures would otherwise be lethal. Additionally, during spring, summer, and fall months, SFGS often bask at the entrances to mammal burrows which they can quickly enter to evade predators. Shrubs are also important as sources of cover from predators but can crowd out exposed ground surfaces which are important for snake thermoregulation. SFGS prefer a shrub concentration of 1 medium sized bush every 20 square meters to 1 large sized bush every 30 square meters (USFWS 2006). SFGS seem to tolerate nonnative grasses well, including wild oat (*Avena fatua*), wild barley (*Hordeum* spp.), and bromes (*Bromus* spp.), though these species are

not crucial to upland habitats. In fact, SFGS abundance has been shown to correlate with habitat diversity (e.g. woody vegetation, herbaceous vegetation, litter, rock, bare ground, etc.) and with species diversity (Kim *et al.* 2018). And since the presence of nonnative grasses tend to lower species diversity in grasslands, replacing these with a diverse array of native herbs and grasses may increase upland habitat value for SFGS.

Currently, the upland restoration plan area is composed almost entirely of nonnative grassland with a few trees and shrubs. Habitat diversity and vegetation species diversity are both relatively low. Weedy colonizers including poison hemlock, eucalyptus, and other taller weeds restrict amphibian and reptile movement and prevent small rodents (e.g. gophers and voles) from creating burrow refugia. The current concentration of shrubs is much lower than the 1 per 20-30 square meter concentration preferred by SFGS. However, a high density of small mammal burrows is present throughout the site which may potentially serve as shelter or hibernacula for frogs and snakes. Nearby eucalyptus trees provide nesting substrate for raptor species, which can lead to increased predation on CRLF and SFGS, given the lack of other available refugia.

Plant Palette Selection and Cover Targets

Plant palettes were designed to (a) be compatible with existing environmental conditions including soil type, shade, moisture level, and overstory vegetation; (b) compete with invasive vegetation; and (c) create optimal wildlife conditions for target species as described previously. Generally, species selection was also determined by commercial availability and hardiness (e.g., browse resistant, drought tolerance). Plant forms (seed vs. container) were selected to balance ease of installation with survival likelihood. A unique plant palette was developed for each zone based on the desired ecological objectives and environmental conditions.

Zone 1: Riparian Setback. Species selection focuses on developing the shrub stratum to increase habitat structure and function. The species selected tolerate a wide range of light availability and seasonal hydrological conditions, in addition to relatively rapid growth rates to keep the currently dense and extensive network of non-native, invasive species at bay. Fendler's meadow rue (*Thalictrum fendleri*) is recommended as an understory plant to be utilized along upper/outer margins of riparian habitat, in between and/or adjacent to woody shrubs or trees. It is a shade-tolerant perennial herb whose foliage senesces entirely in late summer/early fall. Vegetative growth resumes during the early to mid-spring months, with flowers produced in spring to early summer. Plant species that would enhance CRLF habitat include winter deciduous species; reduced vegetative matter during the wet season would facilitate ease of dispersal during periods when frogs would be active and moving out into upland areas, and increased foliage during the dry season to provide structure and shade during the more vulnerable portion of the target species' life cycle. Target of 75% absolute cover shrub stratum is planned to provide sufficient refugia within the riparian setback, and add stratification for optimal nesting substrate, and foraging habitat.

Zone 2: Upland. Species selection, spacing, and total cover for the upland terrestrial habitat was done to promote shorter grass heights, replace weedy colonizers with plants that support healthy rodent populations, and a create a mosaic of open grassland with non-spreading shrub islands that can provide refugia from predators. Target of 16% absolute cover within the shrub stratum and 50% relative cover of native forbs will provide sufficient open space for dispersal pathways, without introducing new platforms for predators.

Zone 3: Seasonal Wetland. Mesic perennial herbs and graminoids were selected to complement the coastal seasonal wetland habitat (depressional feature) found in the southern extent of the Project Study Area, immediately south of the more extensive non-native grassland. These species were also selected based on the ability quickly spread via seed and/or rhizome to more effectively compete with nonnative and invasive species like harding grass (*Phalaris aquatica*), velvet grass (*Holcus lanatus*), bristly ox-tongue (*Helminthotheca echioides*) and poison hemlock (*Conium maculatum*). Species selection to favor shade-tolerant species and species that tolerate a relatively wide spectrum of hydrological conditions, from perennially wet to ephemerally mesic. Use of perennial species selected that exhibit a wide range of sizes, growth patterns, and life history dynamics to provide localized structural heterogeneity and simultaneously enhance habitat function. Target of establishing native forbs at 60% relative cover.

Zone 4: Vegetated Swale. Same species selection and cover criteria as Zone 3. California grey rush (*Juncus patens*) is a perennial species that would establish and spread via rhizome to ensure soil retention. This is included as an optional species to provide additional soil structural integrity in a system that is anticipated to convey lateral flow (with potential scour).

Zone 5. Riparian Habitat. Similar to other zones, the species selected for revegetating the riparian habitat is intended to create greater overhead and understory habitat structure via the use of tree and shrub stratum species. Species are also selected for their ability to quickly establish and spread to increase slope stabilization and compete with existing nonnative species. Target absolute cover of 25% within the shrub stratum to account for open water and unvegetated portions of the active channel.

2.3 Implementation

Site Preparation and Plant Installation

Revegetation with native species will enhance habitat quality and diversity on this segment of the creek as well as associated wetland and upland habitat. This will include planting of native grasses, herbs, and shrubs consistent with species found currently growing within Pilarcitos Creek. Non-native and invasive species ranked as having medium and high threats to California's natural areas by the Cal-IPC inventory will be targeted for removal. Native shrubs and trees will be retained since they will continue to provide shade and wildlife habitat. Plants and plant materials will be obtained from California sources, locally sourced where possible.

Prior to planting, the restoration area will be cleared of invasive species and other weeds that may threaten native plant establishment. Mulch or other weed and erosion control materials are highly recommended; a layer of compost is recommended. Following plant installation, cages to prevent deer browsing will be installed. Plants will be watered for the first year to ensure establishment in the event of dry conditions or drought.

Planting Plan

The plant palette, or plant species selected for each zone based on hydrology, light availability, topography, and habitat goals, and planting specifications in are included in **Table 2,** with zone location shown in Appendix A: Figure 2.

Table 2. Planting Palette by Zone

Zone No.	Scientific Name	Common Name	Size	OC Spacing (ft)	Qty.	Plant Protection	% Cover
1	*Alnus rubra*	Red alder	TP4	25	5	cage	10%
1	*Frangula californica*	Coffeeberry	DP40	6	43	cage	5%
1	*Heteromeles arbutifolia*	Toyon	DP40	8	39	none	8%
1	*Holodiscus discolor*	Ocean spray	DP40	6	43	none	5%
1	*Lonicera involucrata*	Twinberry	TB4	8	39	cage	8%
1	*Morella californica*	Wax myrtle	TP4	12	11	none	5%
1	*Rubus parviflorus*	Thimbleberry	1 gal	6	51	none	6%
1	*Rubus spectabilis*	Salmonberry	TB5	6	34	none	4%
1	*Rubus ursinus*	California blackberry	1 gal	5	62	cage	5%
1	*Sambucus racemosa*	Red elderberry	D40	8	29	none	6%
1	*Symphoricarpus mollis*	Snowberry	D16	6	43	none	5%
1	*Salix lasiolepis*	Arroyo willow	stake	8	39	none	8%
1				**Subtotal**		**438 containers 75% cover**	
2	*Frangula californica*	Coffeeberry	DP40	8	117	cage	4%
2	*Heteromeles arbutifolia*	Toyon	DP40	10	56	cage	3%
2	*Rubus ursinus*	California blackberry	1 gal	6	156	cage	3%
2	*Eriophyllum staechadifolium*	Lizard tail	1 gal	6	156	cage	3%
2	*Festuca idahoensis*	Idaho fescue	plug	3	623	cage	3%
2	*Calamagrostis nutkaensis*	Pacific reedgrass	seed mix	N/A	1	none	N/A
2	*Danthonia californica*	California oat grass	seed mix	N/A	5.5	none	N/A
2	*Stipa pulchra*	Purple needle grass	seed mix	N/A	5	none	N/A
2	*Festuca idahoensis*	Idaho fescue	seed mix	N/A	4	none	N/A
2	*Eschscholzia californica*	California poppy	seed mix	N/A	3	none	N/A
2	*Gilia capitata*	Globe gilia	seed mix	N/A	1.5	none	N/A
2				**Subtotal**		**1,108 containers and 20 PLS lb/acre; 16% cover**	
3/4	*Artemisia douglasiana*	Mugwort	seed mix	N/A	0.25	none	N/A

Zone No.	Scientific Name	Common Name	Size	OC Spacing (ft)	Qty.	Plant Protection	% Cover
3/4	*Bromus carinatus*	California brome	seed mix	N/A	8	none	N/A
3/4	*Danthonia californica*	California oat grass	seed mix	N/A	5.5	none	N/A
3/4	*Deschampsia cespitosa*	Tufted hairgrass	seed mix	N/A	0.75	none	N/A
3/4	*Elymus glaucus*	Blue wild rye	seed mix	N/A	8	none	N/A
3/4	*Elymus triticoides*	Creeping wildrye	seed mix	N/A	8	none	N/A
3/4	*Festuca californica*	California fescue	seed mix	N/A	3	none	N/A
3/4	*Luzula comosa**	Pacific woodrush	seed mix	N/A	3	none	N/A
4	*Juncus patens (optional)*	California gray rush	plugs	3	135	none	15%
4	*Hordeum brachyantherum (optional)***	Meadow barley	seed mix	N/A	10	none	N/A
3/4				**Subtotal**	**15% cover; 36.5 PLS lb/acre**		
5	*Rubus parviflorus*	Thimbleberry	1 gal	6	51	none	6%
5	*Sambucus racemosa*	Red elderberry	D40	8	29	none	6%
5	*Symphoricarpus mollis*	Snowberry	D16	6	43	none	5%
5	*Salix lasiolepis*	Arroyo willow	stake	8	39	none	8%
5				**Subtotal**	**162 containers 25% cover**		

* There may be limited availability in plants or seed for *Luzula comosa*, may need to collect and contract grow.

** This is a suitable substitute for *Juncus patens*, at the rate specified.

Following temporary ground disturbance and/or removal of invasive species, upland habitats will also be reseeded using a native seed mix provided in Table 2.

Depending on nursery stock availability, substitutes may be necessary for the plants listed above. Where possible, plant substitutions should have the same life form, consist of the same quantity, have similar habitat/water requirements, and should be native to the area. Deviations to the planting plan (e.g., spacing) in the attached Plan Sheets may also be necessary as part of the field-fitting process. All plant substitutes shall be approved by the biologist prior to purchase to ensure substitutions are appropriate.

Non-native plants shall not be planted in the Restoration Areas. Invasive plants or any aggressive non-native species that can easily spread into the restoration area shall not be installed anywhere on the property as it would pose a risk to the native plantings.

The optimal time to plant native species is during the late fall after rains have begun and when more rain is predicted in the coming weeks and months. This allows the plants to establish sufficient root systems and reduces the need for supplemental irrigation. Irrigation is still recommended immediately after planting, during any dry spells during the first few months, and weekly during the first dry season. Native shrubs and herbs will benefit from occasional (approximately bi-weekly) and deep dry season watering in the subsequent two to three years, and do not need to be continually irrigated once they appear to be established. Excessive watering of these drought-resistant species may encourage root rot, excessive above ground

growth without deep roots, or competition from weeds near the irrigation source. The Applicant shall be responsible for ensuring plants are irrigated during the first year.

3.0 MAINTENANCE, MONITORING, AND REPORTING

For a minimum of five years following installation, a consulting biologist or restoration ecologist will perform annual monitoring of the restoration area. The purpose of the monitoring will be to verify that the specifications included within this report and success criteria summarized below have been completed. The restoration area will be examined for signs of damage from foot traffic, natural causes (herbivory), or any other uses beyond the necessary management and monitoring outlined in this Plan. Photographs will be taken from at least one permanent photo point to document riparian habitat development during each monitoring year.

Monitoring will be conducted in the early summer of each year before leaf drop of early deciduous trees/shrubs and at peak growth for planted species – roughly around June, no later than July. Monitoring during this period ensures accurate representation and assessment of the planted species survival and health within the restoration area. General health and vigor of each planted species should be noted and may guide any changes in the planting plan if replanting is necessary. The primary goal of this monitoring program is to ensure establishment of healthy native species throughout the restoration area, and their spacing will eventually create a dense canopy of shrubs that will improve the treeless or exotic-dominated areas currently lining the creek, in line with the Plan's goals as stated in Section 2.1.

3.1 Maintenance

Maintenance activities should include scheduled inspections of once per quarter for plant protection, irrigation, plant health, and invasive species, followed by adaptive management actions including, but not limited to:

1) repair, replacement, or removal of malfunctioning items, of plant protection devices,
2) irrigation adjustments and repairs
3) replacement planting for dead individuals and/or species substitution
4) invasive species control

Plant protection devices should be inspected once per year. Bent or fallen support structures, cages, and/or fencing will be repaired as necessary by landscaping staff. Cages may need to be adjusted to accommodate the growth of plant installations to prevent crowding. Cages may be removed once the protected plants have attained heights where they are not significantly suppressed by deer browsing. Removal of temporary fencing and individual plant flagging or other identification should only occur when plants are sufficiently established to withstand foot

traffic in the vicinity, and the difference between native plantings and weeds can be easily determined.

Observations of plant health and vigor during the dry season should inform irrigation adjustments (frequency and water levels). Regular tests of the irrigation to check for leaks or blockages should be performed to ensure irrigation system is in working order.

If any year's survival goals are not achieved, the appropriate number of plants species will be re-planted as part of a remedial planting during the subsequent fall or winter. The number and species to be replanted will be determined by the consulting biologist based upon available space, appropriate locations, and potential for competition with existing plantings. If growth of native plantings and canopy coverage is rapid and replacement planting is not deemed necessary towards the end of the monitoring period, the total numbers required in the success criteria may be modified accordingly.

Invasive plant species identified as either moderate or highly invasive on the California Invasive Plant Control (IPC) List will be removed prior to planting. Mechanical controls will be implemented following re-colonization to either eliminate or to control any invasive species so that it will not have a significant impact on the survival of installed plantings or the ecological function of the restored habitat.

3.2 Monitoring

Methods

At the start of the monitoring period, two permanent points will be established in each planting zone to collect releve data. The permanent points will be selected based on best representation of each zone, according to the discretion of the monitoring biologist. The data collection protocols will follow methods outlined CNPS Releve Protocol (CNPS 2007). Data collected from the releve allow for progress tracking.

Success Criteria

Success of the riparian habitat restoration and establishment of creek vegetation requires the prevention of human disturbance and control of invasive species in planting areas. Therefore, the following criteria listed in Table 3 will be evaluated to ensure that protective measures and maintenance are being performed, and that native plants are established and likely to persist beyond the monitoring period. Invasive plants on the Cal-IPC High or Moderate lists will not exceed 5 percent relative cover in any year following mechanical controls.

Table 3. Restoration Success Criteria by Year and Zone

Year	Zone 1	Zone 2	Zone 3/4	Zone 5
1	Native shrub species 25% absolute cover; invasive species less than 15% relative cover	Native shrub absolute cover at 5%; native forb relative cover of 50%; invasive species less than 15% relative cover.	Native forb species at 20% relative cover; invasive species less than 15% relative cover	Shrub stratum at absolute cover of 10%; invasive species less than 15% relative cover.
3	Native shrub species 50% absolute cover; invasive species less than 10% relative cover	Native shrub absolute cover at 10%; native forb relative cover of 50%; invasive species less than 10% relative cover.	Native forb species at 30% relative cover; invasive species less than 10% relative cover	Shrub stratum at absolute cover of 15%; invasive species less than 10% relative cover.
5	Native shrub species 75% absolute cover; invasive species less than 5% relative cover	Native shrub absolute cover at 18%; native forb relative cover of 50%; invasive species less than 5% relative cover.	Native forb species at 60% relative cover; invasive species less than 5% relative cover	Shrub stratum at absolute cover of 25%; invasive species less than 5% relative cover.

If performance criteria have been met by the end of the monitoring period, annual monitoring may be discontinued. If not, remedial actions and additional monitoring may need to be implemented.

3.3 Reporting

Monitoring reports shall include a general description of work performed over the previous year (including any maintenance or weed control) and an evaluation of the restoration area according to the success criteria. The numbers and condition of planted shrubs and native herbaceous species should be described, as well as any observed threats to these plants or to native habitats. New invasions of non-native species and plans for their removal or control should be detailed, as necessary.

The final monitoring report should also evaluate whether the restoration area has become sufficiently self-sustaining or whether additional invasive species control work or other conservation activities or monitoring should be performed. Annual reports will be prepared by January 31 following the end of each monitoring year.

4.0 REFERENCES

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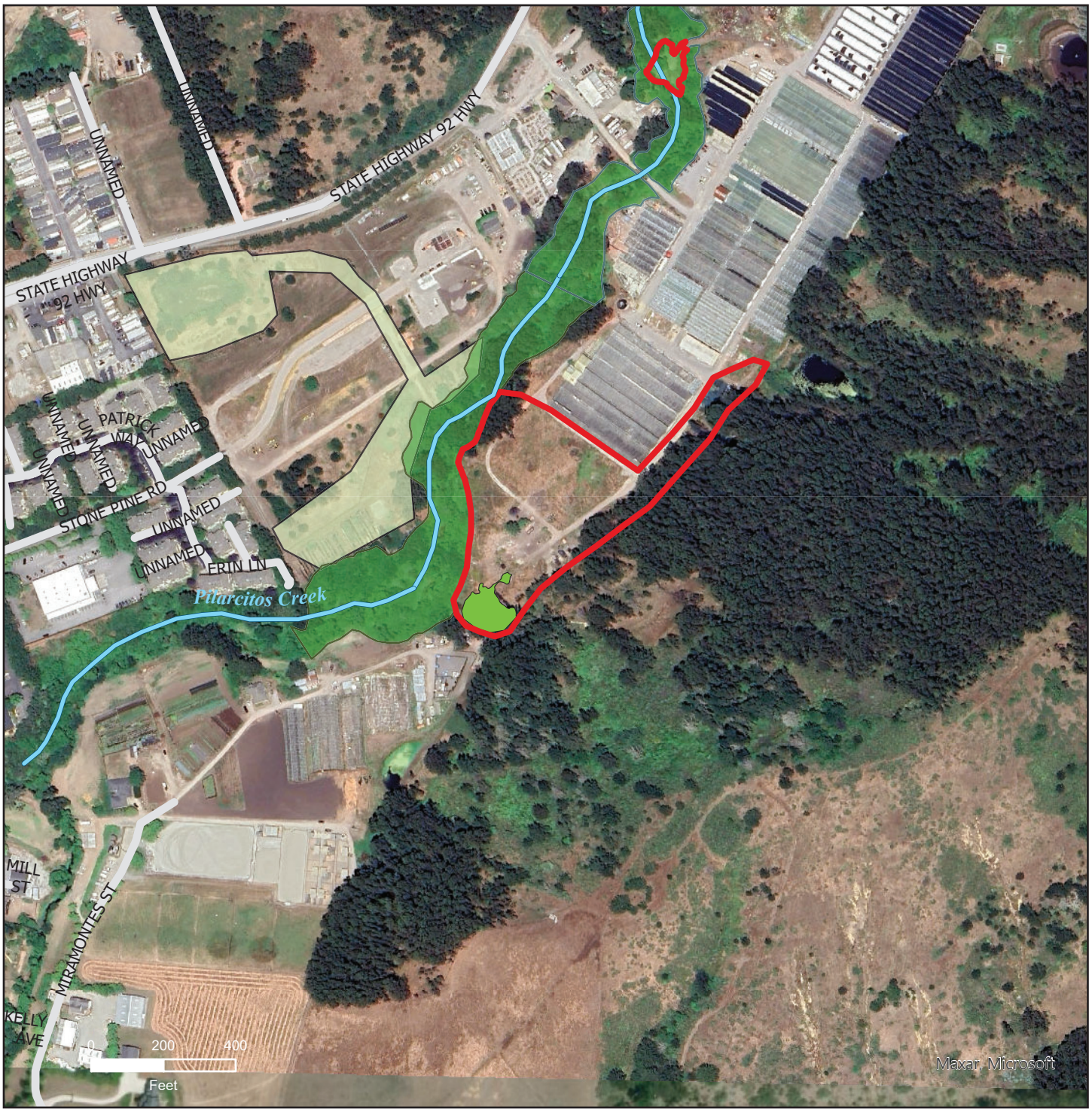
APPENDIX A – PROJECT FIGURES

Figure 1. Restoration Area Location Map
California Terra Garden, Half Moon Bay, CA



Projected Coordinate System: NAD 1983 (2011) StatePlane California II FIPS 0402 (US Feet)
Projection: Universal Transverse Mercator
Datum: North American 1983

Base: ESRI
Data: Sonoma Co., Sol Ecology Inc.
Date: 3-2-2025
GIS: AG2418.1 loc 1

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Figure 2. Vegetation Restoration Zones
California Terra Garden, Half Moon Bay, CA

Vegetation Restoration Zones

Restoration Zones
- 1-Riparian Setback Mitigation (0.80 ac)
- 2-Upland Habitat Mitigation (4.54 ac)
- 3-Seasonal Wetland Enhancement (0.26 ac)
- 4-Vegetated Swale (0.20 ac)
- 5-Riparian Habitat Restoration (0.22 ac)

- Riparian Habitat
- Seasonal Wetland
- Streams
- Restoration Area
- Parcel Boundary
- Streets

Projected Coordinate System: NAD 1983 (2011)
StatePlane California III FIPS 0402 (US Feet)
Projection: Universal Transverse Mercator
Datum: North American 1983
Base: Google 6/2025, ESRI
Data: San Mateo Co., Sol Ecology Inc.
Date: 6-19-2025
GIS: AG2326.5 terra restoration 2

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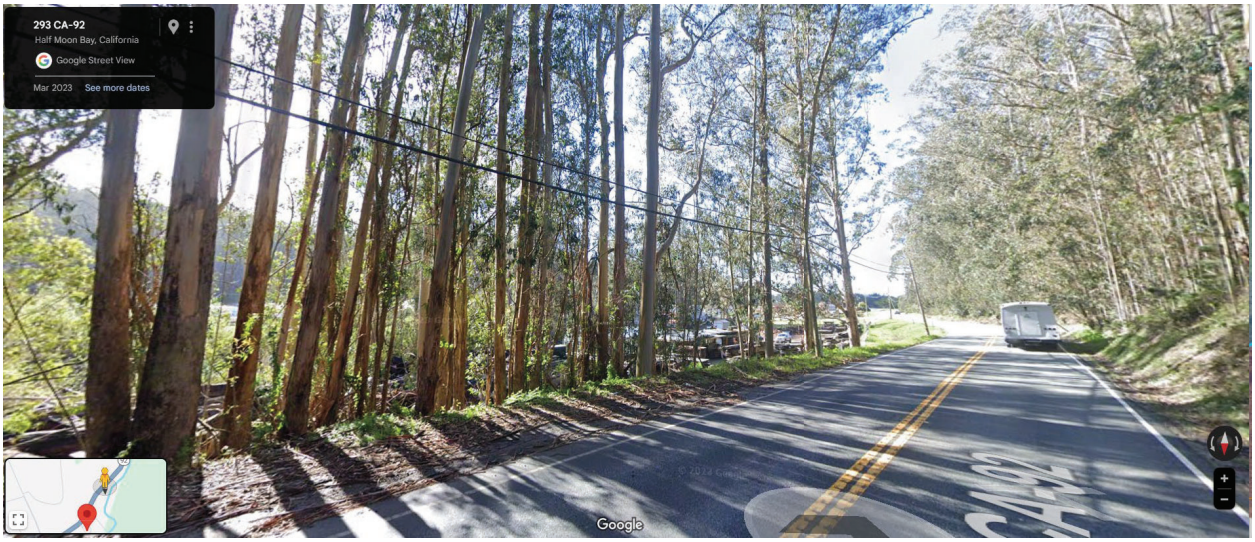
ATTACHMENT E: Views of the hoophouses from Highway 92




326 CA-92
Half Moon Bay, California
Google Street View
Mar 2023
See more dates
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ATTACHMENT F: PRIME SOILS MAP