County of San Mateo Planning & Building Department

Agricultural Advisory Committee

John Vars
Koren Widdel
Jess Brown
Jim Howard
Frank McPherson
Judith Humburg
Lauren Silberman
Louie Figone
William Cook
Peter Marchi
Natalie Sare
Fred Crowder
Ryan Casey
James Oku
Jonathan Winslow
Summer Burlison

County Office Building
455 County Center, 2nd Floor
Redwood City, California 94063
650/363-1825
Fax: 650/363-4849

Regular Meeting
BY VIDEOCONFERENCE ONLY

Date: **Monday, September 12, 2022**

Time: **7:00 p.m. to 9:00 p.m.**

Place: **Virtual Meeting due to COVID-19 Shelter in Place Order**
https://smcgov.zoom.us/j/92052154710

Pursuant to the Shelter in Place Orders issued by the San Mateo County Health Officer and the Governor, the Governor's Executive Order N-29-20, and the CDC's social distancing guidelines which discourage large public gatherings, the Half Moon Bay Public Library is no longer open to the public for Agricultural Advisory Committee meetings.

*** PUBLIC PARTICIPATION**

Written Comments:
Members of the public may provide written comments by email to SBurlison@smcgov.org and 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.

The length of the emailed comment should be commensurate with the 5 minutes customarily allowed for verbal comments, which is approximately 300-400 words. To ensure your comment is received and read into the record for the appropriate agenda item, please submit your comments no later than 5:00 p.m. the day before the meeting. The County will make every effort to read emails received after that time, but cannot guarantee such emails will be read into the record. Any emails received after the deadline which are not read into the record will be provided to the Committee after the meeting and become part of the administrative record.

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 agenda, meeting notice, agenda packet, or other writings that may be distributed at the meeting should contact Summer Burlison, the Planning Liaison, by 10:00 a.m. on the Friday before the meeting at SBurlison@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 tit, and your ability to comment.

Virtual Meeting/Spoken Comments
Spoke public comments will be accepted during the meeting through Zoom. **Please read the following instructions carefully:**

1. The September 12, 2022 Agricultural Advisory meeting may be accessed through Zoom online at https://smcgov.zoom.us/j/92052154710. The **meeting ID is 920 5215 4710.** The meeting may also be accessed via telephone by dialing +1 669-900-6833 (Local). Enter the meeting ID: 993 5426 8309 then press #. (To find your local number: http://smcgov.zoom.us/u/admSDqceDg).

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.

MATERIALS PRESENTED FOR THE MEETING:
Applicants and members of the public are encouraged to 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. If you wish to retain the original of an item, a legible copy must be left with the Committee Secretary.

AGENDAS AND STAFF REPORTS ONLINE:
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.

CORRESPONDENCE TO THE COMMITTEE:
Summer Burlison, Interim Agricultural Advisory Committee Liaison
455 County Center, 2nd Floor
Redwood City, CA 94062
Email: SBurlison@smcgov.org

NEXT MEETING:
In observation of the October 10, 2022 Columbus Day holiday, the next regularly scheduled Agricultural Advisory Committee meeting is on October 17, 2022.

AGENDA
7:00 p.m.

1. **Call to Order**

2. **Member Roll Call**

3. **Adopt a Resolution** that, as a result of the continuing COVID-19 pandemic state of emergency, meeting in person would present imminent risks to the health and safety of attendees.

4. **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.

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

6. **Committee Discussion and Update** on next action steps for market development for San Mateo County's agricultural production and potential.

7. **Committee Nomination** for an AAC member to serve as a representing member on San Mateo County's new Farmworker Advisory Commmission.

8. **Community Development Director's Report**

Consent Agenda

9. **Owner:** Dolores Togneri
Applicant: David Repetto
File Number PLN 2022-00246
Location: 12331 San Mateo Road, Half Moon Bay (unincorp.)
Assessor's Parcel No. 056-321-020

Consideration of an Agritourism Event Permit for the Repetto's 2022 October pumpkin selling season, October 1, 2022 – November 15, 2022. No operational changes are proposed from last season. Please direct any questions to Project Planner Tiare Pena at TPena@smcgov.org.

10. **Owner:** John and Jennifer Cozzolino
Applicant: John and Jennifer Cozzolino
File Number: PLN 2022-00247
Location: 12291 San Mateo Road, Half Moon Bay (unincorp.)
Assessor's Parcel No.: 056-331-110

Consideration of an Agritourism Event Permit for the upcoming 2022 October pumpkin selling season, October 1, 2022 – November 15, 2022. No operational changes are proposed from last season. Please direct any questions to Project Planner Tiare Pena at TPena@smcgov.org.

11.

Owner:	Daniel and Natalie Sare
Applicant:	Natalie Sare
File Number:	PLN 2022-00248
Location:	78 Pilarcitos Creek Road, Half Moon Bay (unincorp.)
Assessor's Parcel No.:	056-380-110

Consideration of an Agritourism Event Permit for the upcoming winter holiday tree season, November 20, 2022 – December 24, 2022. No operational changes are proposed from last season. Please direct any questions to Project Planner Tiare Pena at TPena@smcgov.org.

END OF CONSENT AGENDA

Regular Agenda

12.

Owner:	**County of San Mateo; La Honda Pescadero Unified School District**
Applicant:	**County of San Mateo**
File Number:	PLN 2021-00056
Location:	County Fire Station #59 located at 1200 Pescadero Creek Road; replacement County Fire Station #59 and La Honda Pescadero Middle/High School located at 330 Butano Cut-Off.
Assessor's Parcel No.:	086-150-050; 087-053-010, respectively

Consideration of a Local Coastal Program amendment to facilitate the future construction of a replacement fire station (County Fire Station Number 59) and extension of CSA-11 to serve the fire station and Pescadero Middle/High School located at 350-360 Butano Cut-Off. **This item is continued from the August 12, 2022 AAC meeting.** Please direct questions to Michael Schaller, Senior Planner, at MSchaller@smcgov.org.

Action Request: That the AAC provide a recommendation to the Board of Supervisors on the proposed Local Coastal Program amendment.

13.

Owner:	Bean Hollow Farm, LLC
Applicant:	Brian Lee
File Number:	PLN 2021-00022
Location:	12720 Cabrillo Highway, Pescadero West
Assessor's Parcel No.:	086-191-100

Consideration of a Coastal Development Permit, Planned Agricultural District Permit, Architectural Review Permit, and Grading Permit for a new 3,658 sq. ft. single-family residence, attached 1,358 sq. ft. garage/workshop/unconditioned storage, 718 sq. ft. greenhouse, conversion of an agricultural well for domestic use, a new septic system, water tanks, and 1,800 cubic yards of grading on a legal 38-acre parcel. The project is appealable to the California Coastal Commission. Please direct question to Kanoa Kelley, Planner II, at KKelley@smcgov.org.

Action Request: That the AAC provide a recommendation to the Planning Commission on the proposed Coastal Development Permit, Planned Agricultural District Permit, Architectural Review Permit, and Grading Permit.

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14. Adjournment

ROLL SHEET – September 12, 2022

Agricultural Advisory Committee Attendance 2021-2022

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept
VOTING MEMBERS													
Judith Humburg Public Member	X			X	X	X	X	X	X	X	X	X	
James Oku Farmer						X	X	X	X	X	X	X	
Natalie Sare Farmer		X	X		X	X	X	X		X		X	
Louie Figone Farmer, Vice-Chair		X	X	X	X	X	X		X	X		X	
Jonathan Winslow Public Member						X	X	X	X	X	X	X	
John Vars Farmer, Chair	X	X	X	X	X	X	X	X	X	X	X	X	
William Cook Farmer	X	X	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	
Fred Crowder Conservationist						X	X	X		X	X	X	
Lauren Silberman Ag Business	X	X	X	X	X	X	X	X	X		X	X	
Natural Resource Conservation Staff Jim Howard													
San Mateo County Agricultural Commissioner Koren Widdel	X		X	X	X	X	X	X	X	X	X	X	
Farm Bureau Executive Director Jess Brown	X		X	X	X			X	X	X	X	X	
San Mateo County Planning Staff Summer Burlison	X	X	X	X	X	X	X	X	X	X	X	X	
UC Co-Op Extension Representative Frank McPherson													

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

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 3

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: August 31, 2022

To: **Agricultural Advisory Committee**

From: Summer Burlison, Planning Liaison

Subject: Resolution to make findings allowing continued remote meetings under Brown Act

RECOMMENDATION:

Adopt a resolution finding that, as a result of the continuing COVID-19 pandemic state of emergency, in person meetings of the Agricultural Advisory Committee would present imminent risks to the health or safety of attendees.

DISCUSSION:

On July 12, 2022, the County of San Mateo Board of Supervisors adopted a Resolution finding that, as a result of the continuing COVID-19 pandemic state of emergency, meeting in person would present imminent risks to the health and safety of attendees. The Board's adopted resolution invokes the provisions of recently enacted state legislation (AB 361) to continue teleconferencing for meetings, and strongly encourages other County legislative bodies to make similar findings and continue meeting remotely through teleconferencing.

As encouraged by the Board of Supervisors, and for the reasons set forth in the proposed resolution, we recommend that your Committee similarly avail itself of the provisions of AB 361 allowing continuation of remote meetings by adopting findings to the effect that conducting in-person meetings would present an imminent risk to the health and safety of attendees. A resolution to that effect, and directing staff to return each 30 days with the opportunity to renew such findings, is attached hereto.

If the resolution is not adopted, the Committee must meet in person, effective as of September 12, 2022.

ATTACHMENTS:

A. Resolution (No. 12) for Adoption

RESOLUTION NO. (12)

RESOLUTION FINDING THAT, AS A RESULT OF THE CONTINUING COVID-19 PANDEMIC STATE OF EMERGENCY, IN PERSON MEETINGS OF THE AGRICULTURAL ADVISORY COMMITTEE WOULD PRESENT IMMINENT RISKS TO THE HEALTH OR SAFETY OF ATTENDEES

RESOLVED, by the Agricultural Advisory Committee of the County of San Mateo, State of California, that

WHEREAS, on March 4, 2020, pursuant to section 8550, *et seq*., of the California Government Code, Governor Newsom proclaimed a state of emergency related to the COVID-19 novel coronavirus and, subsequently, the County of San Mateo Board of Supervisors declared a local emergency related to COVID-19, and the proclamation by the Governor and declaration by the Board remain in effect; and

WHEREAS, on March 17, 2020, Governor Newsom issued Executive Order N-29-20, which suspended certain provisions in the California Open Meeting Law, codified at Government Code section 54950, *et seq*. (the "Brown Act"), related to teleconferencing by local agency legislative bodies, provided that certain requirements were met and followed; and

WHEREAS, on July 12, 2021, the Governor issued Executive Order N-08-21, which extended certain provisions of Executive Order N-29-20 that waive otherwise-applicable Brown Act requirements related to remote/teleconference meetings by local agency legislative bodies through September 30, 2021; and

WHEREAS, on September 16, 2021, Governor Newsom signed AB 361, which provides that a local agency legislative body may continue to meet remotely without complying with otherwise-applicable requirements in the Brown Act related to remote/teleconference meetings by local agency legislative bodies, provided that a state of emergency has been declared and the legislative body determines that meeting in person would present imminent risks to the health or safety of attendees, and provided that the legislative body makes such finding at least every thirty days during the term of the declared state of emergency; and

WHEREAS, on July 12, 2022, the County of San Mateo Board of Supervisors made the finding that, as a result of the continuing COVID-19 pandemic state of emergency, meeting in person would present imminent risks to the health and safety of attendees, and therefore adopted a Resolution invoking the provisions of AB 361 to continue teleconferencing for meetings, and strongly encouraging other County legislative bodies to make similar findings and continue meeting remotely through teleconferencing; and,

WHEREAS, the Agricultural Advisory Committee concludes that there is a continuing threat of COVID-19 to the community, and that Committee meetings have characteristics that give rise to risks to health and safety of meeting participants (such as the increased mixing associated with bringing together people from across the community, the need to enable those who are immunocompromised or unvaccinated to be able to safely continue to participate fully in public governmental meetings, and the challenges with fully ascertaining and ensuring compliance with vaccination and other safety recommendations at such meetings); and

WHEREAS, California Department of Public Health and the federal Centers for Disease Control and Prevention caution that the Delta variant of COVID-19, currently

the dominant strain of COVID-19 in the country, is more transmissible than prior variants of the virus, that it may cause more severe illness, and that even fully vaccinated individuals can spread the virus to others, resulting in rapid and alarming rates of COVID-19 cases and hospitalizations (https://www.cdc.gov/coronavirus/2019-ncov/variants/delta-variant.html); and

WHEREAS, this Agricultural Advisory Committee has an important interest in protecting the health and safety of those who participate in meetings of this Committee; and

WHEREAS, this Agricultural Advisory Committee typically meets in-person in a public setting, such that the number of people present at these meetings may impair the safety of the occupants; and

WHEREAS, the COVID-19 pandemic has informed County agencies about the unique advantages of online public meetings, which are substantial, as well as the unique challenges, which are frequently surmountable; and

WHEREAS, in the interest of public health and safety, as affected by the state of emergency caused by the spread of COVID-19, the San Mateo County Agricultural Advisory Committee finds that meeting in person would present imminent risks to the health or safety of attendees, and the Committee will therefore invoke the provisions of AB 361 related to teleconferencing for meetings of the Agricultural Advisory Committee, as strongly encouraged by the Board of Supervisors, to make such findings and continue meeting remotely through teleconferencing.

NOW, THEREFORE, IT IS HEREBY DETERMINED AND ORDERED that

1. The recitals set forth above are true and correct.
2. The Agricultural Advisory Committee finds that meeting in person would present imminent risks to the health or safety of meeting attendees.
3. The Planning staff liaison to the Committee is directed to continue to agendize public meetings of the Agricultural Advisory Committee only as online teleconference meetings, as strongly encouraged by the Board of Supervisors, until the risk of community transmission has further declined.
4. No later than thirty (30) days, or at the beginning of the next regular meeting, after the date of adoption of this resolution the Committee shall again consider whether to make the findings required by AB 361 in order to continue meeting remotely under its provisions.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 7

RESOLUTION NO. 078906

BOARD OF SUPERVISORS, COUNTY OF SAN MATEO, STATE OF CALIFORNIA

* * * * * *

RESOLUTION ESTABLISHING THE SAN MATEO COUNTY FARMWORKER ADVISORY COMMISION

RESOLVED, by the Board of Supervisors of the County of San Mateo, State of California, that

WHEREAS, the County's agricultural sector and those employed as farmworkers are vital components of San Mateo County's economy; and

WHEREAS, according to the San Mateo County Health Care for the Homeless and Farmworker Health Program 2019 Needs Assessment, there are approximately 80 farms employing approximately 1,300-1,600 farmworkers in San Mateo County; and

WHEREAS, this Board is committed to supporting and promoting the quality of life, well-being, and housing and employment conditions of San Mateo County's farmworkers; and

WHEREAS, many County farmworkers and their families would benefit from support relating to employment, working conditions, immigration, healthcare, education, safety net services, and affordable housing.

NOW, THEREFORE, IT IS HEREBY DETERMINED AND ORDERED as follows:

1. COMMISSION—ESTABLISHMENT AND PURPOSES.

The San Mateo County Farmworker Advisory Commission ("Commission") is hereby established.

The purposes of the Commission include the following:

a. To promote to the Board of Supervisors programs that foster the well-being of farmworkers in San Mateo County;

b. To increase the understanding and visibility of issues that disproportionally impact the County's farmworker population, including but not limited to immigration, employment conditions, healthcare, access to safety net services, and affordable housing;

c. To provide outreach and support to underserved members of the County's farmworker population;

d. To advise the Board of Supervisors on developing initiatives to support County farmworkers and their families;

e. To report and make recommendations to the Board of Supervisors, as needed, but not less frequently than every twelve (12) months;

f. To make and develop an annual work plan, and submit an annual report to the Board of Supervisors.

2. COMMISSION MEMBERSHIP.

The Commission shall consist of ten (10) voting members, who shall reside in San Mateo County. Members shall be appointed by a majority vote of the Board of Supervisors and shall serve at the pleasure thereof.

The following criteria shall be used in appointing Commission members:

a. Three (3) Commission members shall be representatives of designated community-based organizations that serve and benefit the County's farmworker population, including organizations such as: Coastside Hope, Ayudando Latinos A Soñar (ALAS), and Puente de la Costa Sur.

b. Four (4) Commission members shall be farmworkers. For purposes of this resolution, a "farmworker" is an individual who has derived a majority of their income from agricultural employment at any time within the twenty four (24) months immediately preceding appointment to the Commission, as well as individuals who are retired or disabled prior farmworkers.

c. One (1) Commission member shall be an immediate family member of a farmworker. For purposes of this resolution, "immediate family member" means spouse, domestic partner, cohabitant, child, stepchild, grandchild, parent, stepparent, mother-in-law, father-in-law, son-in-law, daughter-in-law, grandparent, great grandparent, brother, sister, half-brother, half-sister, stepsibling, brother-in-law, sister-in-law, aunt, uncle, niece, nephew, or first cousin.

d. One (1) Commission member shall be a representative from the San Mateo County Agricultural Advisory Committee.

e. One (1) Commission member shall be active in the agricultural industry but who is not a farmworker.

f. All Commission members shall have a demonstrated interest in supporting and furthering the well-being of farmworkers.

g. Consideration shall be given to the applicant's background and/or community involvement to the extent relevant to the fulfillment of the Commission's mission.

h. Commission members should have sufficient time and resources to effectively serve on the Commission.

Outreach efforts shall be made to ensure, to the maximum extent possible, that the Commission members reflect the diversity of San Mateo County in terms of race/ethnicity, gender, age, sexual orientation, and geographic distribution.

Commission members who are farmworkers or family members of farmworkers shall be compensated at the rate of one-hundred dollars ($100.00) for each Commission meeting actually attended, including any regular meetings, subcommittee meetings, or ad hoc committee meetings.

3. TERMS OF COMMISSION MEMBERS.

Initial terms of Commission members shall be staggered to help ensure the continuity of the Commission. For the initial appointment of members five (5) members shall be appointed to serve three (3) year terms, and five (5) members shall be appointed to serve two (2) year terms. Thereafter, each of the terms shall be three (3)

year terms. Upon the conclusion of a term, a member may be reappointed by the Board of Supervisors, subject to a maximum of four (4) full three (3) year terms. This limit shall not include partial terms to which a member may be appointed at the beginning of their service, including those members initially appointed to two (2) year terms. A Commission member may exceed that limit due to holdover service caused by delay in appointing a replacement at the end of the member's term of service.

In the event a vacancy shall occur on the Commission during the term of any member, the Board of Supervisors shall appoint a replacement Commission member who shall serve the remainder of that member's term.

Terms shall begin on July 1 of the year of appointment and end on June 30. Initial terms at the formation of the Commission may begin any time on or after July 1, 2022, and shall end on June 30 of the applicable year depending on the length of the member's initial term.

4. ORGANIZATION.

The Commission shall adopt rules for the conduct of its own business which shall be consistent with the terms of this resolution, and which shall include, but not limited to, the following provisions:

a. The Commission shall annually select, by majority vote, a Chair and a Vice Chair.

b. The Commission shall meet at least six (6) times a year, unless otherwise determined by a majority vote of the Commission.

c. A minimum of five (5) Commission members must be present to constitute a quorum and hold a meeting. Commission action may be taken only by a majority vote. “Majority vote” means a majority of the members in attendance at a meeting.

d. The Commission shall have the authority to establish ad hoc committees, whose members shall not include more than a quorum of all Commission members, and appoint to such ad hoc committees non-voting volunteer committee members from the community. These ad hoc committees will serve the sole purpose of developing and making recommendations to the Commission.

e. The Commission shall work with the Office of Community Affairs as its administrative liaison, including a member of the Immigrant Services staff, or such other County department as the Board of Supervisors may authorize. The Commission shall also receive staff support from the San Mateo County Healthcare for the Homeless/Farmworker Health program, as needed.

f. The Commission shall establish the time and place of its regular meetings.

g. All meetings of the Commission or committees thereof shall be subject to the open meeting requirements of the Government Code, specifically the Brown Act, section 54590, *et seq.*

h. All documents and reports generated by the Commission shall be subject to the provisions of the Public Records Act, specifically, Government Code section 6254, *et seq.*

i. Except to the extent that this resolution sets forth different rules or processes, the Commission shall comply with all standing rules for County boards, commissions, and advisory committees established by the Board of Supervisors.

5. COMMISSION'S POWERS, DUTIES, AND FUNCTIONS

The duties, functions, and powers of the Commission shall be as follows:

a. To advise and make recommendations to the Board of Supervisors;

b. To develop and implement an annual work plan;

c. To provide a public forum for input from the farmworker community to identify unmet needs;

d. To work with existing farmworker advocacy and service organizations to help coordinate systems of care and benefits;

e. To act as an advocate for farmworkers, taking positions pertaining to federal, state, and local policies, programs, procedures, and any legislation affecting farmworkers and their families; and

f. To fulfill other duties and engage in other activities as directed by the Board of Supervisors.

* * * * * *

RESOLUTION NUMBER: 078906

Regularly passed and adopted this 14th day of June, 2022

AYES and in favor of said resolution:

Supervisors: *DAVE PINE*

CAROLE GROOM

DON HORSLEY

WARREN SLOCUM

DAVID J. CANEPA

NOES and against said resolution:

Supervisors: *NONE*

President, Board of Supervisors
County of San Mateo
State of California

Certificate of Delivery

I certify that a copy of the original resolution filed in the Office of the Clerk of the Board of Supervisors of San Mateo County has been delivered to the President of the Board of Supervisors.

Assistant Clerk of the Board of Supervisors

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 8

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: August 30, 2022

TO: Agricultural Advisory Committee

FROM: Planning Staff

SUBJECT: Community Development Director's Report

CONTACT INFORMATION: Summer Burlison, Senior Planner, SBurlison@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 July 28, 2022 to August 30, 2022.

PLANNED AGRICULTURAL DISTRICT (PAD) PERMIT OUTCOMES

The following PAD permit applications were heard or considered by the Board of Supervisors and/or Planning Commission during this time period:

None.

UPCOMING PLANNED AGRICULTURAL DISTRICT PERMIT PROJECTS

The following PAD permit applications were received by the Planning Division during this time period:

a. **Owner:** Anna Sweet
Applicant: David Hirzel
File Number: PLN2022-00268
Location: 131 Tunitas Creek Road, San Gregorio
Assessor's Parcel No: 066-340-070

Planned Agricultural District Permit, Coastal Development Permit (CDP), and Architectural Review Permit to address Violation Case No. VIO2018-00043, including legalization of 810 sq. ft. of unpermitted garage conversion to habitable space, addition of 306 sq. ft. to the main residence, relocation of three (3) accessory buildings which have been constructed without permits (were being rented out as short-term rentals) within the creek setback, demolition of a corner of the stable to meet the required 20-foot setback, and construction of a new carport. The project parcel is located within the Cabrillo Highway State Scenic Corridor and the CDP is appealable to the California Coastal Commission. Please direct questions to project planner Sonal Aggarwal at SAggarwal@smcgov.org.

This application was filed on August 29, 2022.

COASTAL DEVELOPMENT EXEMPTIONS FOR AGRICULTURAL PROJECTS

Two (2) rural CDX applications were submitted during this time period. Please see the attached status report regarding the applications. The CDX list includes the description of the project and its status. A copy of the CDX is available for public review upon request.

OTHER PROJECTS

a. **Owner:** Peninsula Open Space Trust
Applicant: Midpeninsula Regional Open Space District
File Number: PLN2022-00256
Location: 3393 Cloverdale Road and 10436 Cabrillo Highway, Pescadero
Assessor's Parcel No.: 086-050-030, 086-080-020, 086-300-200, 086-300-210, 087-190-080, and 087-220-050, portions of 086-080-030, 086-080-040, 086-080-050, 086-270-010, 086-270-020, 086-280-030, 086-290-010, 086-290-090, 086-310-010, 086-320-040, 086-340-010, 020, 030, 040, 050, 070, 080, 090, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 230, 240, 280, 300 and 320

General Plan Conformity for Midpeninsula Regional Open Space District acquisition of the 6,700 +/- acre Cloverdale Ranch property located at 3393 Cloverdale Road and 10436 Cabrillo Highway, south of the Town of Pescadero. The property has frontage along Pescadero, Gazos Creek and Bean Hollow roads. Please direct any questions to Chanda Singh, Senior Planner, at CSingh@smcgov.org.

This application was filed on August 22, 2022.

ADDITIONAL ANNOUNCEMENTS

1. In observation of the October 10, 2022 Columbus Day holiday, the next Agricultural Advisory Committee meeting is scheduled for Monday, October 17, 2022.

COUNTY OF SAN MATEO

Count Distinct (RECORD ID)
2

Permit Number	RECORD NAME	DATE OPENED	DESCRIPTION	APN	ADDR FULL LINE1	RECORD STATUS
PLN2022-00250	GENERATOR	8/15/2022	CDX to allow for the addition of an emergency back-up generator to serve an existing cellular facility (facility permitted under PLN2002-00463).	056320090	LEWIS FOSTER, HALF MOON BAY (unincorp)	Submitted
PLN2022-00257	TEMP EVENT	8/23/2022	CDX for one-time Coastside Community Celebration public event on Sept 10 hosted by Midpen to celebrate 50 years of open space; event will include 50 educational organization booths, a main stage, and 3-4 food trucks, onsite parking to be provided.	065210110	HIGGINS PURISSIMA RD, HALF MOON BAY (unincorp)	Submitted

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 9

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: September 12, 2022

TO: Agricultural Advisory Committee

FROM: Tiare Peña, Planning Staff, 650/363-1850

SUBJECT: Consideration of an Agritourism Event starting on October 1, 2022 and ending on November 15, 2022, located at 12331 San Mateo Road in unincorporated Half Moon Bay (Repetto's Pumpkins).

County File Number: PLN 2022-00246 (Repetto/Togneri)

PROPOSAL

The applicant, Repetto, has applied for an Agritourism Event for the upcoming 2022 October pumpkin selling season, October 1, 2022 – November 15, 2022, at 12331 San Mateo Road, unincorporated Half Moon Bay (Repetto's Pumpkins). The proposed days and hours of operation are as follows: Daily from 9:00 a.m. to sunset. The proposed Event elements include a pumpkin patch, hayride, and corn maze. Parking for the Event will occur in an existing open field on the 15-acre property. There will be 4-6 employees on the site. No changes are proposed from the previous year's Event operation.

DECISION MAKER

Community Development Director

QUESTIONS FOR THE AGRICULURAL ADVISORY COMMITTEE

1. Is the agritourism use compatible with the long-term agricultural uses of the land?

2. Will the agritourism operation have any adverse effect on surrounding agricultural uses? If so, can any conditions of approval be recommended to minimize any such impact?

3. What decision do you recommend the Community Development Director take with respect to this application?

BACKGROUND

Report Prepared By: Tiare Pena, Project Planner

Applicant: David Repetto

Owner: Dolores Togneri c/o Lagomarsino Properties

Location: 12331 San Mateo Road, unincorporated Half Moon Bay

APN: 056-321-020

Parcel Size: 15 acres

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

General Plan Designation: Agriculture

Local Coastal Plan Designation: Agriculture

Williamson Act: The subject parcel is not encumbered by a Williamson Act contract.

Existing Land Use: Agriculture including ornamental flowers, pumpkins and corn

Water Supply: Private agricultural well permitted in 1991 (CDX91-0080) and an agricultural water impoundment permitted in 1991 (GRX91-00004).

Sewage Disposal: None.

Flood Zone: Flood Zone A (1% annual chance of flooding) and Flood Zone X (Area of Minimal Flooding), pursuant to Federal Emergency Management Agency, Flood Insurance Rate Map, Community Panel 06081C0260E, effective October 16, 2012.

Environmental Evaluation: Categorically exempt from environmental review pursuant to Section 15304, Class 4, of the California Environmental Quality Act (CEQA) Guidelines, for the minor temporary use of land having negligible or no permanent effects on the environment.

Setting: The subject 15-acre parcel is located on the south side of San Mateo Road, also known as California Highway 92, and is visible from the roadway. The site is relatively flat and just slightly lower in elevation from the roadway.

Chronology:

Date		Action
October 2019	-	Agritourism Event permit, PLN2019-00407, approved.
August 2020	-	Agritourism Event permit, PLN2020-00286, approved
August 2021	-	Agritourism Event permit, PLN 2021-00270, approved.
July 2022		Agritourism Event permit application submitted, PLN 2022-00246
September 2022	-	Agricultural Advisory Committee public hearing

Will the project be visible from a public road?

Yes, the project site is visible from San Mateo Road/Highway 92; however, the Event is secondary, and supplemental to ongoing agricultural use of the land, and as a seasonal event not uncharacteristic for the area.

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

No.

Is there prime soil on the project site?

Yes, a majority of the parcel contains prime soils as illustrated in Attachment B.

DISCUSSION

A. KEY ISSUES

Planning staff has reviewed this application for conformance with the following Agritourism Guidelines and Performance Standards:

1. Temporary Seasonal Agritourism Uses and Activities

a. The Agritourism operation will not interfere with agricultural production on or adjacent to the lot.

The Agritourism Event does not interfere with the agricultural use of the land, which includes the growing of ornamental flowers, pumpkins, and corn.

b. The Agritourism event will not exceed a maximum of 45 consecutive days and will not occur more than two times per year.

The proposed Agritourism Event is for the October 1, 2022 – November 15, 2022 (typical) pumpkin season.

c. The Agritourism event will operate within the guideline's allowance of Sunday through Saturday from 9:00 a.m. to sunset; no lighting is allowed.

The Event will operate daily from 9:00 a.m. to sunset. No lighting is proposed in association with the Event; therefore, the proposal meets these requirements.

d. The Agritourism event will consist of no more than the maximum allowed uses and activities indicated below:

Maximum Allowed Agritourism Use/Activity	Proposed (Quantity)
Two (2) inflatables[1] allowed on all lands[2]	
One (1) pony ride area[3]	
One (1) farm animal petting zoo on all lands	
One (1) hayride on all lands	1
One (1) train with rubberized wheels on all lands	
One (1) food vendor, mobile or on-site, including mobile prepackaged food/snack bar[4], located on all soils	
One (1) prepackaged food/snack bar on non-prime soils[4]	
Other recreational/educational activities, see discussion below	1

[1] Inflatables are subject to the standards of the Safe Inflatable Operators Training Organization.

[2] Subject to a 36-foot height limit as set forth in the Planned Agricultural District and Resource Management District Regulations.

[3] Confined animal permit or exemption required.

[4] Environmental Health Permit required.

Other recreational/educational activities:

In addition to operating a pumpkin patch and hayrides, the Event will include a corn maze.

2. Performance Standards for Seasonal Agritourism Uses and Activities

a. Adequate on-site parking is provided including conformance with applicable provisions from Local Coastal Program Policy 10.22 *(Parking)* for adequate parking facilities to accommodate the temporary seasonal uses that are appropriate for the site's size, environmental sensitivity, and amount of land suitable for parking; and that are not visually prominent from public views.

Approximately 1 acre of the property will be designated for parking in association with the Event. The area for parking is a large open field in the western portion of the property, nearest the roadway; this area has been used in past years for parking during the annual pumpkin season Event at the property. While this parking area is visible from San Mateo Road/Highway 92, there will be no modifications made to the area to accommodate parking so that the designated area maintains a natural and rural setting complementary to the surrounding area.

b. Any new signage will be temporarily established and maintained throughout the duration of the Agritourism event, as allowed pursuant to Local Coastal Program Policy 8.21 *(Commercial Signs),* will be simple and easy to read, and will not be brightly illuminated colored, rotating, reflective, blinking, flashing or moving signs, pennants, or streamers.

Temporary signage meeting these requirements, as provided in past years, will be erected for the seasonal operation.

c. All Agritourism uses and activities shall meet the current standards for setbacks and buffers from watercourses, including creeks, and/or riparian vegetation.

All uses and activities associated with the Agritourism Event will be located on the front half of the lot, farthest away from nearby Pilarcitos creek and its natural habitat.

d. On parcels under forty (40) acres in size, all agritourism elements shall be clustered and shall consume no more than one (1) gross acres (excluding hayrides or trains with rubberized wheels); parking is excluded from this acreage calculation.

The proposal meets these requirements.

e. The agritourism operation shall not involve any land disturbance, including import of gravel or fill.

No land disturbance is necessary to accommodate the Event.

3. Recommended Findings for the Agritourism Event

a. That the agritourism use is compatible with the long-term agricultural uses of the land as the proceeds from the Agritourism Event, including pumpkin sales, supports the economic viability of the farm and does not prevent future agricultural uses on the land.

b. That the agritourism operation will not adversely affect the health or safety of persons in the area and will not be materially detrimental to the public welfare or injurious to agricultural property. Staff has evaluated the Event proposal and finds there will be no negative impacts on the agricultural uses of the land. Staff believes that use of the land for the proposed seasonal Event is of a greater benefit then letting the land lay fallow. Further, the applicant is responsible for following all restrictions set forth through State and County Health Orders related to COVID-19, including but not limited to social distancing protocols and health and safety plan requirements applicable to the Event.

c. That the agritourism operation is in substantial conformance with the goals set forth in the San Mateo County Agritourism Guidelines. Specifically, that the operation is secondary and supplemental to existing agricultural operation on the land.

d. That the proposed use and activities comply with all relevant provisions of the General Plan, Local Coastal Program, and Zoning Regulations as discussed throughout this report.

ATTACHMENTS

A. Vicinity Map
B. Prime Soils Map
C. Site Plan

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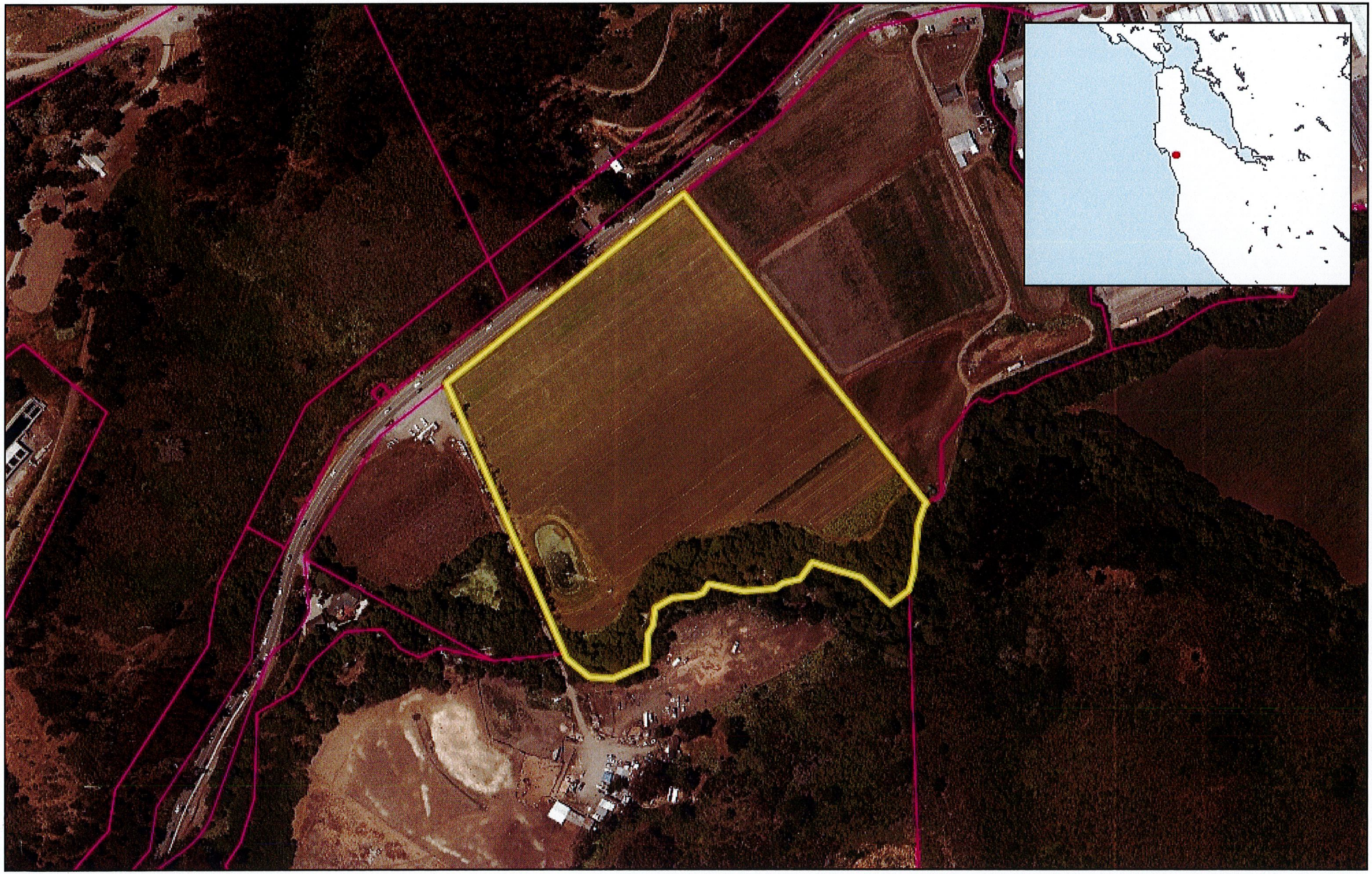
COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT A

San Mateo County

12331 San Mateo Road



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THIS MAP IS NOT TO BE USED FOR NAVIGATION

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

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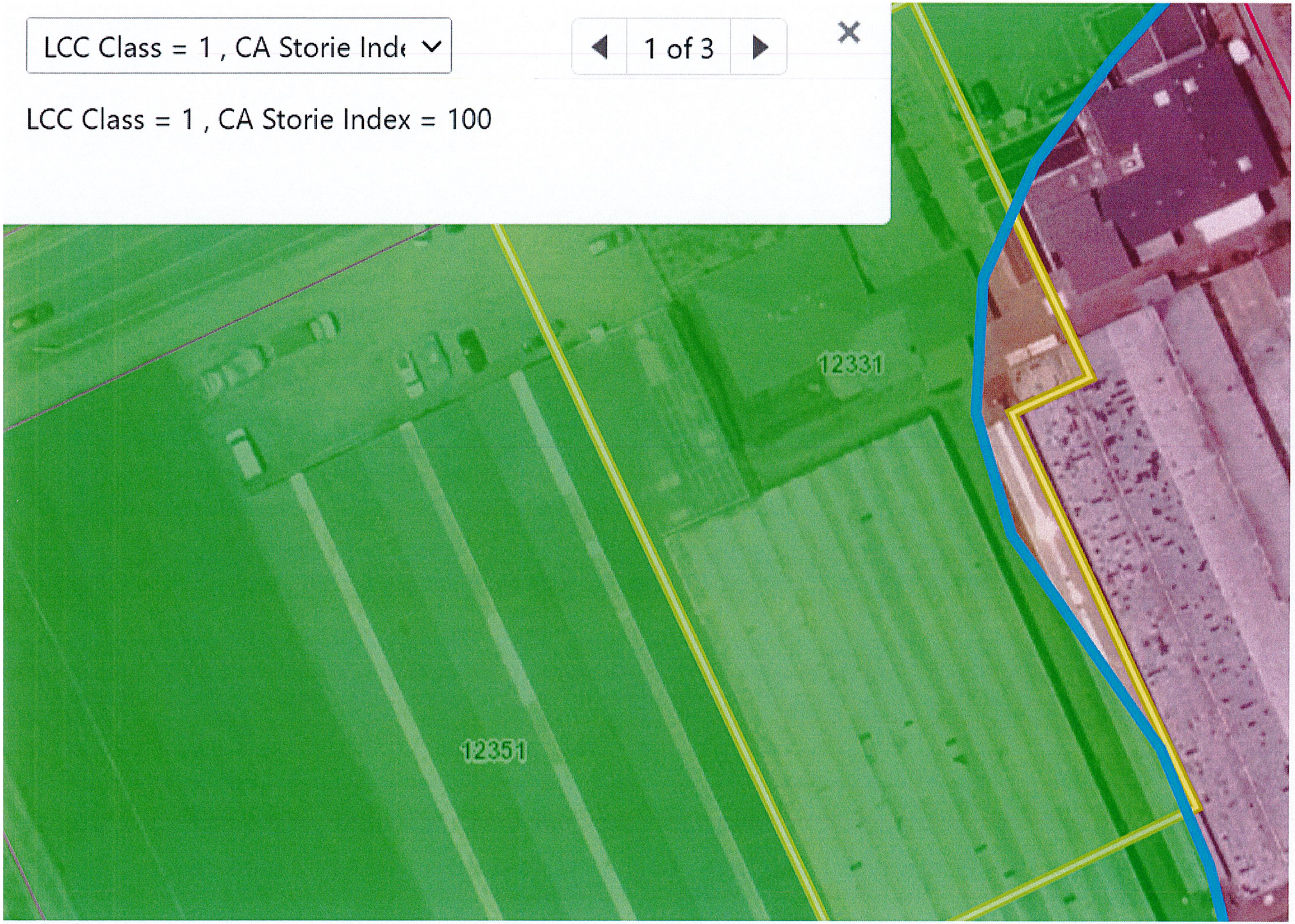
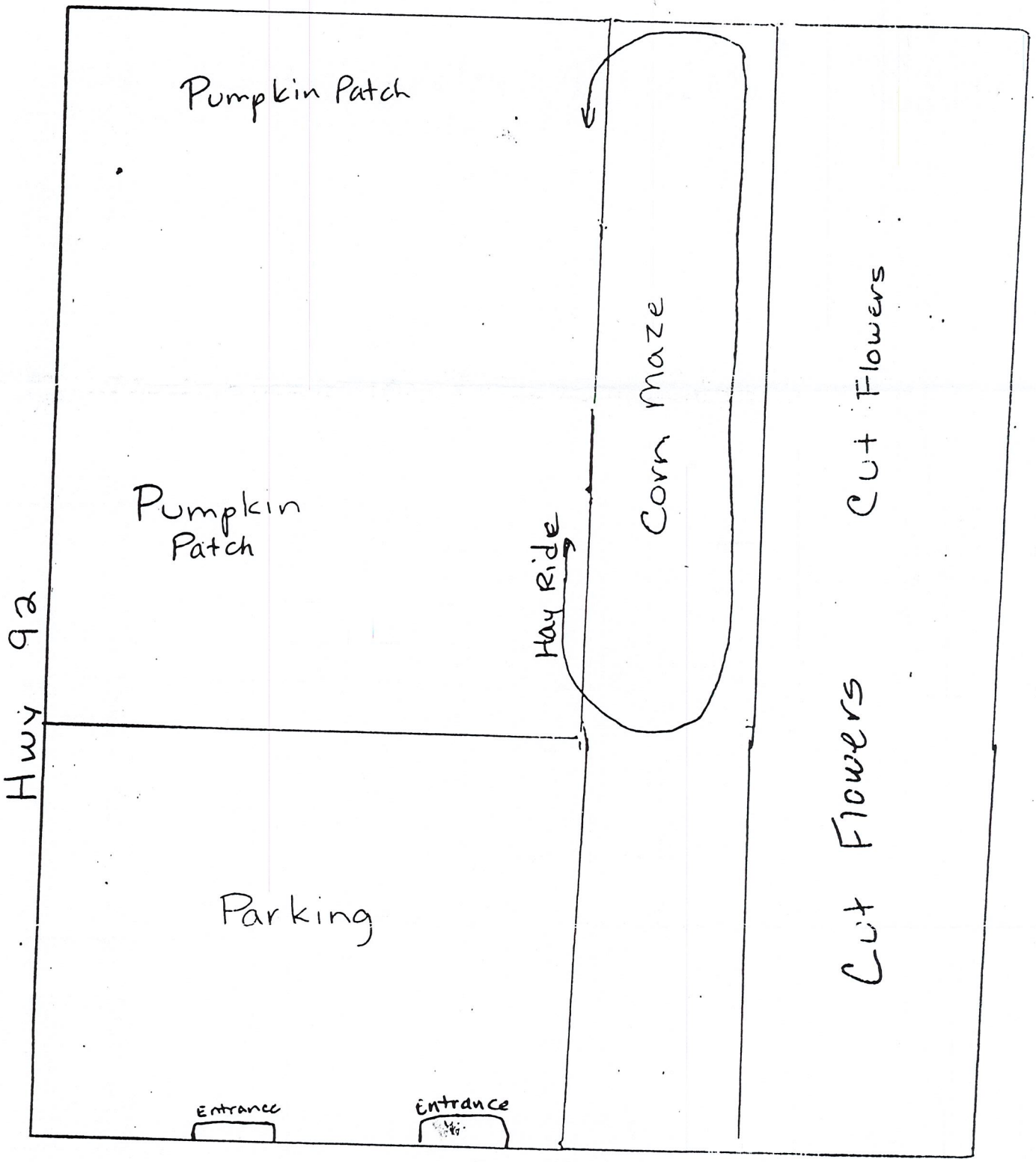


COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C


Pumpkin Patch
Pumpkin Patch
Hay Ride
Corn Maze
Cut Flowers
Cut Flowers
Hwy 92
Parking
Entrance
Entrance

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 10

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: September 12, 2022

TO: Agricultural Advisory Committee

FROM: Tiare Pena, Planning Staff, 650/363-1850

SUBJECT: Consideration of an Agritourism Event starting on October 1, 2022 and ending on November 15, 2022, located at 12291 San Mateo Road, unincorporated Half Moon Bay (4-C's Pumpkin Farm).

County File Number: PLN 2022-00247 (Cozzolino)

PROPOSAL

The applicant, Cozzolino, has applied for an Agritourism Event for the upcoming 2022 October pumpkin selling season, October 1, 2022 – November 15, 2022, at 12291 San Mateo Road, unincorporated Half Moon Bay (4-C's Pumpkin Farm). The proposed days and hours of operation are as follows: Monday – Friday from 9:00 a.m. to 5:00 p.m. and Saturday – Sunday from 9:00 a.m. to 6:00 p.m. The proposed Event elements are: 1) a pumpkin patch, pony ride, petting zoo, two inflatables, and 2) one food vendor. The food vendor will be onsite during weekends only.

Parking for the Event will occur in the existing large open field adjacent to the Event area and in the gravel parking lot between these two fields. There will be 2-4 employees on the site, consisting primarily of Cozzolino family members.

DECISION MAKER

Community Development Director

QUESTIONS FOR THE AGRICULTURAL ADVISORY COMMITTEE (AAC)

1. Is the agritourism use compatible with the long-term agricultural uses of the land?

2. Will the agritourism operation have any adverse effect on surrounding agricultural uses? If so, can any conditions of approval be recommended to minimize any such impact?

3. What decision do you recommend the Community Development Director take with respect to this application?

BACKGROUND

Report Prepared By: Tiare Pena, Project Planner

Owner/Applicant: John and Jennifer Cozzolino

Location: 4-C's Pumpkin Farm, 12291 San Mateo Road, unincorporated Half Moon Bay

APN: 056-331-110

Parcel Size: 3.57 acres

Existing Zoning: Planned Agricultural District/Coastal Development

General Plan Designation: Agriculture

Local Coastal Plan Designation: Agriculture

Williamson Act: The subject parcel is encumbered by a Williamson Act contract (AP 72-18)

Existing Land Use: Agriculture

Water Supply: Private well

Flood Zone: Flood Zone A (1% annual chance of flooding) and Flood Zone X (Area of Minimal Flooding), pursuant to Federal Emergency Management Agency, Flood Insurance Rate Map, Community Panel 06081C0260E, effective October 12, 2016.

Environmental Evaluation: Categorically exempt from environmental review pursuant to Section 15304, Class 4, of the California Environmental Quality Act (CEQA) Guidelines, for the minor temporary use of land having negligible or no permanent effects on the environment.

Setting: The subject site is located on the south side of San Mateo Road, also known as California Highway 92, and is visible from the roadway. The site is quaint and provides the public with the first view of San Mateo County's rich history of agriculture and demonstrates how the County respects and encourages small family farms to succeed.

Chronology:

Date		Action
September 2018	-	Application for Agritourism Event received and recommended for approval by the AAC.
October 2019	-	Application for Agritourism Event received and recommended for approval by the AAC.
Aug. 13, 2020	-	Subject application for Agritourism Event received.
Sept. 12, 2022	-	Agricultural Advisory Committee public meeting.

Will the project be visible from a public road?

Yes, the project site is visible from San Mateo Road/Highway 92; however, the Event is secondary and supplemental to ongoing agricultural use of the land, and as a seasonal event not uncharacteristic for the area.

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

No.

Is there prime soil on the project site?

Yes, there are prime soils interspersed throughout the site.

DISCUSSION

A. KEY ISSUES

Planning staff has reviewed this application for conformance with the following Agritourism Guidelines and Performance Standards:

1. Temporary Seasonal Agritourism Uses and Activities

a. The Agritourism operation will not interfere with agricultural production on or adjacent to the lot.

The Agritourism Event does not interfere with the agricultural use of the land, which includes the growing of hay, pumpkins and Christmas trees.

b. The Agritourism event will not exceed a maximum of 45 consecutive days and will not occur more than two times per year.

The proposed Agritourism Event is for the October 1, 2022 - November 15, 2022 (typical) pumpkin season.

c. The Agritourism event will operate within the guideline's allowance of Sunday through Saturday from 9:00 a.m. to sunset; no lighting is allowed.

The Event will operate Monday – Friday from 9:00 a.m. to 5:00 p.m. and Saturday – Sunday from 9:00 a.m. to 6:00 p.m. No lighting is proposed in association with the Event; therefore, the proposal meets these requirements.

d. The Agritourism event will consist of no more than the maximum allowed uses and activities indicated below:

Maximum Allowed Agritourism Use/Activity	Proposed (Quantity)
Two (2) inflatables[1] allowed on all lands[2]	2
One (1) pony ride area[3]	1
One (1) farm animal petting zoo on all lands	1
One (1) hayride on all lands	
One (1) train with rubberized wheels on all lands	
One (1) food vendor, mobile or on-site, including mobile prepackaged food/snack bar[4], located on all soils	1
One (1) prepackaged food/snack bar on non-prime soils[4]	
Other recreational/educational activities, see discussion below	

[1] Inflatables are subject to the standards of the Safe Inflatable Operators Training Organization.

[2] Subject to a 36-foot height limit as set forth in the Planned Agricultural District and Resource Management District Regulations.

[3] Confined animal permit or exemption required.

[4] Environmental Health Permit required.

2. Performance Standards for Seasonal Agritourism Uses and Activities

a. Adequate on-site parking is provided, as designated on the attached site plan, including conformance with applicable provisions from Local Coastal Program Policy 10.22 *(Parking)* for adequate parking facilities to accommodate the temporary seasonal uses that are appropriate for

the site's size, environmental sensitivity, and amount of land suitable for parking; and that are not visually prominent from public views.

There are approximately 50 unmarked spaces located on the adjacent large open field and on the existing graveled section of the parcel that will be used for Event parking; these areas have been used in past years for this annual pumpkin season Event at the property. While these areas are visible from San Mateo Road/Highway 92, the spaces are purposely unmarked to keep with the natural and rural setting of the site.

b. Any new signage will be temporarily established and maintained throughout the duration of the Agritourism event, as allowed pursuant to Local Coastal Program Policy 8.21 *(Commercial Signs),* will be simple and easy to read, and will not be brightly illuminated colored, rotating, reflective, blinking, flashing or moving signs, pennants, or streamers.

One painted wood sign for the 4-C's farm, located at the entrance to the farm, will be used throughout the duration of the Event. The wood sign blends with the natural environment and rural feel of the farm.

c. All Agritourism uses and activities shall meet the current standards for setbacks and buffers from watercourses, including creeks, and/or riparian vegetation.

All uses associated with the Agritourism Event will be located on the opposite side of an existing access road separating the Event area from nearby Pilarcitos creek and its natural habitat.

d. On parcels under forty (40) acres in size, all agritourism elements shall be clustered and shall consume no more than one (1) gross acres (excluding hayrides or trains with rubberized wheels); parking is excluded from this acreage calculation.

The proposal meets these requirements.

e. The agritourism operation shall not involve any land disturbance, including import of gravel or fill.

No land disturbance is necessary to accommodate the Event.

3. Compliance with the Williamson Act

The project parcel was placed under Williamson Act contract in 1972 (County File No. AP 72-18) and currently remains under contract. Pursuant

to the County's Williamson Act regulations, compatible uses include those uses that are incidental to and will not interfere with existing or potential agricultural productivity on the property or in the surrounding area.

The proposed Agritourism Event is secondary and supplemental to existing agricultural use of the land. The proposed Event will comprise less than 1 acre of the 3.57-acre parcel. The Agritourism Event will not interfere, hinder or impair existing ongoing agricultural use or operations, or the potential for future agricultural use, on the subject parcel or surrounding parcels.

Therefore, staff considers the proposed seasonal Agritourism Event to be a compatible use to existing ongoing primary agricultural use of the parcel, and thus, in compliance with the Williamson Act.

4. Recommended Findings for the Agritourism Event

a. That the agritourism use is compatible with the long-term agricultural uses of the land as 4-C's grows the pumpkins onsite with the proceeds from the Agritourism Event including pumpkin sales, supporting the economic viability of the farm.

b. That the agritourism operation will not adversely affect the health or safety of persons in the area and will not be materially detrimental to the public welfare or injurious to agricultural property. The farming activity and Agritourism Event is primarily operated by family members. Staff has evaluated the Event proposal and finds there will be no negative impacts on the agricultural uses of the land. Staff believes that use of the land for the proposed seasonal Event is of a greater benefit then letting the land lay fallow. Further, the applicant is responsible for following any restrictions set forth through State and County Health Orders related to COVID-19, including but not limited to social distancing protocols and health and safety plan requirements applicable to the Event.

c. That the agritourism operation is in substantial conformance with the goals set forth in the San Mateo County Agritourism Guidelines. Specifically, the operation is secondary and supplemental to existing agricultural operation on the land.

d. That the proposed use and activities comply with all relevant provisions of the General Plan, Local Coastal Program, Zoning Regulations, and Williamson Act as discussed throughout this report.

ATTACHMENTS

A. Vicinity Map
B. Prime Soils Map
C. Site Plan

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COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT A

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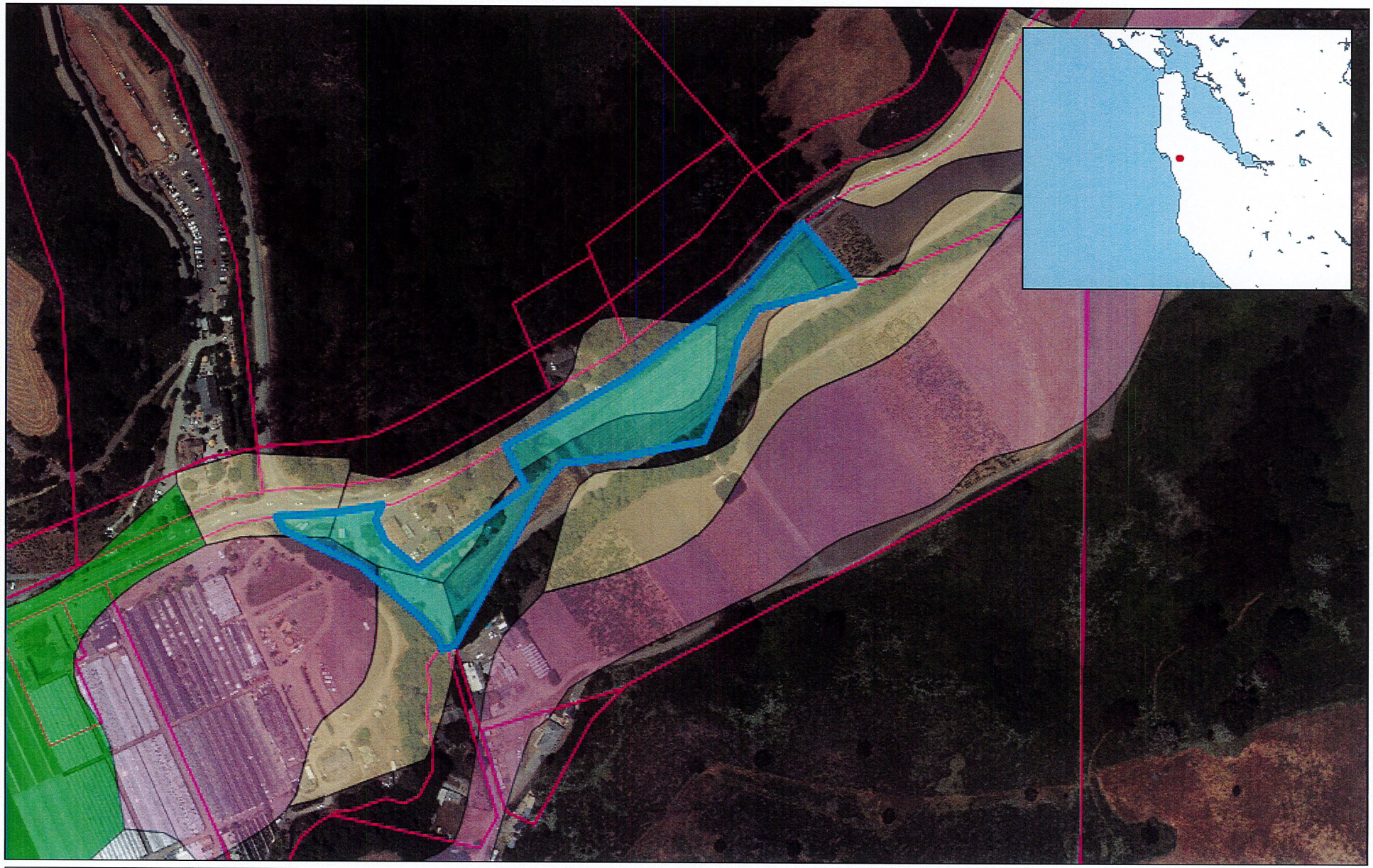
COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

San Mateo County

County San Mateo, CA



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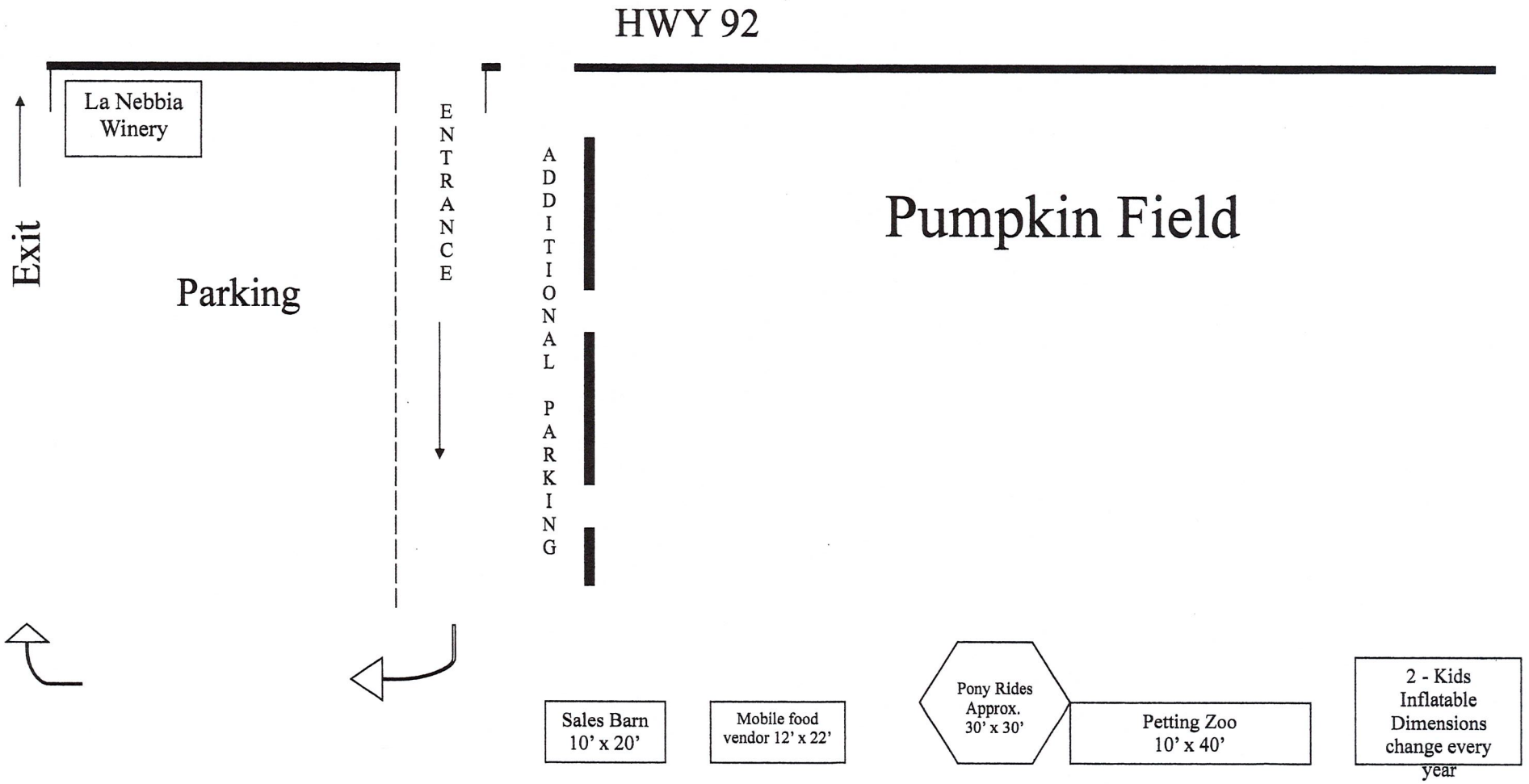
THIS MAP IS NOT TO BE USED FOR NAVIGATION

2020 4-C's Pumpkin Farm Layout



COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 11

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: September 12, 2022

TO: Agricultural Advisory Committee

FROM: Tiare Peña, Planning Staff, 650/363-1850

SUBJECT: Consideration of an Agritourism Event starting on November 20, 2022 and ending on January 3, 2022, located at 78 Pilarcitos Creek Road, unincorporated Half Moon Bay (Santa's Tree Farm).

County File Number: PLN 2022-00248 (Sare)

PROPOSAL

The applicant has applied for an Agritourism Event for the upcoming winter holiday tree season, November 20, 2022 – December 24, 2022, at 78 Pilarcitos Creek Road, unincorporated Half Moon Bay (Santa's Tree Farm). The proposed days and hours of operation are as follows: Daily from 9 a.m. to 5 p.m. The proposed Event elements include Christmas tree sales, a train ride (rubber tires), hayride, and a pre-packaged snack bar (less than 25 sq. ft.) with seasonal Christmas tree related item sales. Parking for the Event will occur alongside of the tree farm fields. There will be three (3) employees on the site. No changes are proposed from the previous year's Event operation.

DECISION MAKER

Community Development Director

QUESTIONS FOR THE AGRICULURAL ADVISORY COMMITTEE

1. Is the agritourism use compatible with the long-term agricultural uses of the land?

2. Will the agritourism operation have any adverse effect on surrounding agricultural uses? If so, can any conditions of approval be recommended to minimize any such impact?

3. What decision do you recommend the Community Development Director take with respect to this application?

BACKGROUND

Report Prepared By: Tiare Peña, Project Planner, 650/363-1850

Owner/Applicant: Daniel and Natalie Sare

Location: 78 Pilarcitos Creek Road, unincorporated Half Moon Bay

APN: 056-380-110

Parcel Size: 200.16 acres (above listed parcel only)

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

General Plan Designation: Agriculture

Local Coastal Plan Designation: Agriculture

Williamson Act: N/A

Existing Land Use: Christmas tree production, barns, residence

Water Supply: Private well

Sewage Disposal: Private septic system

Flood Zone: Flood Zone A (1% annual chance of flooding) and Flood Zone X (Area of Minimal Flooding), pursuant to Federal Emergency Management Agency, Flood Insurance Rate Map, Community Panel 06081C0260E, effective October 16, 2012.

Environmental Evaluation: Categorically exempt from environmental review pursuant to Section 15304, Class 4, of the California Environmental Quality Act (CEQA) Guidelines, for the minor temporary use of land having negligible or no permanent effects on the environment.

Setting: The subject property is located on the north side of Highway 92 with the Event located over 1/2 mile north of the highway along Pilarcitos Creek Road. Intervening vegetation and mountains screen the Event location from the highway.

Chronology:

Date		Action
October 23, 2019	-	Agritourism Event permit, PLN 2019-00434, approved.
October 5, 2020	-	Agritourism Event application submitted, PLN 2020-00335.
November 9, 2020	-	Agricultural Advisory Committee public meeting.
July 2022	-	Agritourism Event application submitted, PLN 2022-00248, recommended for approval.

Will the project be visible from a public road?

No, the Event site is located over 1/2 mile north of Highway 92, along Pilarcitos Creek Road, with intervening vegetation and mountainous topography that screens visibility of the Event area from Highway 92.

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

No.

Is there prime soil on the project site?

Minimal areas of the parcels contain prime soils, see Attachment B. The Agritourism Event will not occur on prime soils.

DISCUSSION

A. KEY ISSUES

Planning staff has reviewed this application for conformance with the following Agritourism Guidelines and Performance Standards:

1. Temporary Seasonal Agritourism Uses and Activities

   a. The Agritourism operation will not interfere with agricultural production on or adjacent to the lot.

      The Agritourism Event does not interfere with the agricultural use of the land for Christmas tree production.

   b. The Agritourism event will not exceed a maximum of 45 consecutive days and will not occur more than two times per year.

The proposed Agritourism Event is for the November 20, 2022 through December, 2022 (winter holiday tree season).

c. The Agritourism event will operate within the guideline's allowance of Sunday through Saturday from 9:00 a.m. to sunset; no lighting is allowed.

The Event will operate daily from 9:00 a.m. to 5:00 p.m. No lighting is allowed in association with the Event; therefore, the proposal meets these requirements.

d. The Agritourism event will consist of no more than the maximum allowed uses and activities indicated below:

Maximum Allowed Agritourism Use/Activity	Proposed (Quantity)
Two (2) inflatables[1] allowed on all lands[2]	
One (1) pony ride area[3]	
One (1) farm animal petting zoo on all lands	
One (1) hayride on all lands	1
One (1) train with rubberized wheels on all lands	1
One (1) food vendor, mobile or on-site, including mobile prepackaged food/snack bar[4], located on all soils	
One (1) prepackaged food/snack bar on non-prime soils[4]	1
Other recreational/educational activities, see discussion below	

[1] Inflatables are subject to the standards of the Safe Inflatable Operators Training Organization.

[2] Subject to a 36-foot height limit as set forth in the Planned Agricultural District and Resource Management District Regulations.

[3] Confined animal permit or exemption required.

[4] Environmental Health Permit required.

2. Performance Standards for Seasonal Agritourism Uses and Activities

a. Adequate on-site parking is provided, as designated on the attached site plan, including conformance with applicable provisions from Local Coastal Program Policy 10.22 *(Parking)* for adequate parking facilities to accommodate the temporary seasonal uses that are appropriate for the site's size, environmental sensitivity, and amount of land suitable for parking; and that are not visually prominent from public views.

Parking for the Event will occur in the same area as used in past years, alongside the tree farm fields. Up to 600 vehicles can be accommodated and the parking areas are not visible from San Mateo Road/Highway 92. Furthermore, no land modifications are necessary to accommodate parking.

b. Any new signage will be temporarily established and maintained throughout the duration of the Agritourism event, as allowed pursuant to Local Coastal Program Policy 8.21 *(Commercial Signs),* will be simple and easy to read, and will not be brightly illuminated colored, rotating, reflective, blinking, flashing or moving signs, pennants, or streamers.

Temporary signage meeting these requirements, as provided in past years, will be erected for the duration of the seasonal operation.

c. All Agritourism uses and activities shall meet the current standards for setbacks and buffers from watercourses, including creeks, and/or riparian vegetation.

Pilarcitos Creek meanders through the property; however, the Event is confined to previously used/disturbed areas only.

d. On parcels forty (40) acres or more in size, all agritourism elements shall be clustered and shall consume no more than two (2) gross acres (excluding hayrides or trains with rubberized wheels); parking is excluded from this acreage calculation.

The proposal meets these requirements as the Event area does not occupy more than 1 acre.

e. The agritourism operation shall not involve any land disturbance, including import of gravel or fill.

No land disturbance is necessary to accommodate the Event.

3. Recommended Findings for the Agritourism Event

a. That the agritourism use is compatible with the long-term agricultural uses of the land because the proceeds from the Agritourism Event supports the economic viability of the farm and does not prevent future agricultural uses on the land.

b. That the agritourism operation will not adversely affect the health or safety of persons in the area and will not be materially detrimental to the public welfare or injurious to agricultural property. Staff has

evaluated the Event proposal and finds there will be no negative impacts on the agricultural uses of the land. Staff believes that use of the land for the proposed seasonal Event is a great benefit to the economic sustainability of the farm. Further, the applicant is responsible for following all restrictions set forth through State and County Health Orders related to COVID-19, including but not limited to social distancing protocols and health and safety plan requirements applicable to the Event.

c. That the agritourism operation is in substantial conformance with the goals set forth in the San Mateo County Agritourism Guidelines. Specifically, that the operation is secondary and supplemental to existing agricultural operation on the land.

d. That the proposed use and activities comply with all relevant provisions of the General Plan, Local Coastal Program, Zoning Regulations as discussed throughout this report.

ATTACHMENTS

A. Vicinity Map
B. Prime Soils Map
C. Site Plan

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COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT A

San Mateo County

Vicinity Map

Vicinity Map

0.57 0 0.28 0.57 Miles

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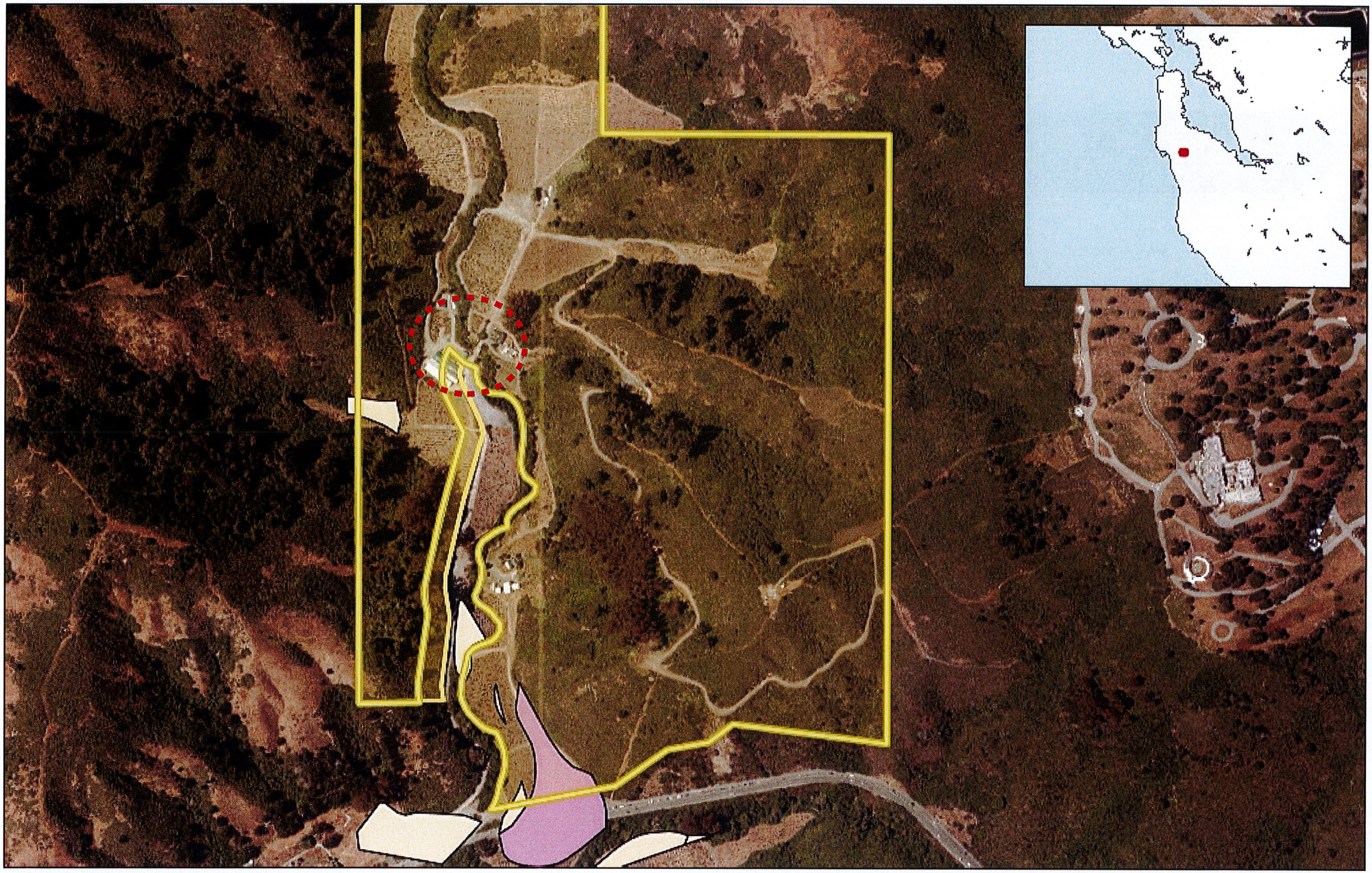
COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

San Mateo County

Prime Soils

Prime Soils Map



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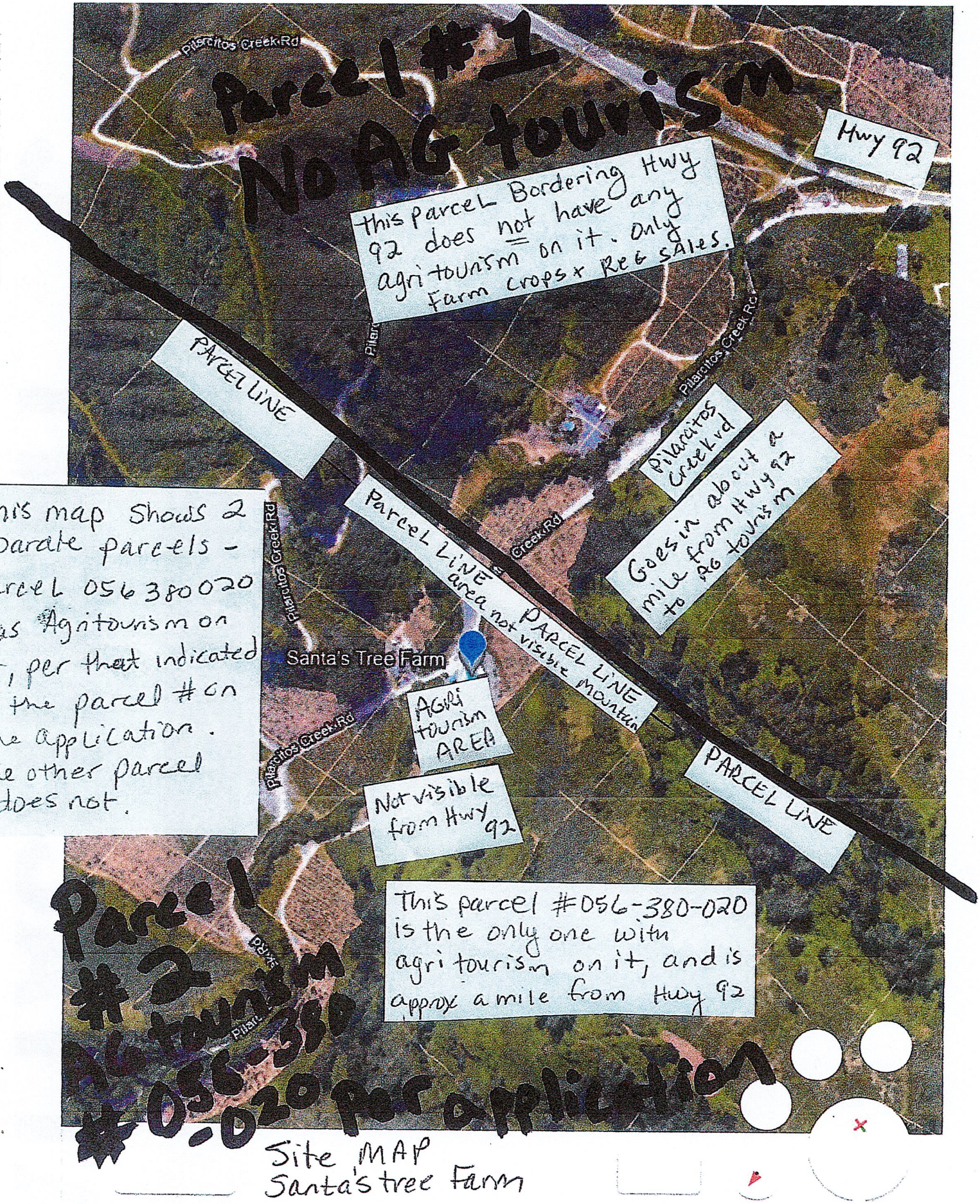
COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C



Site MAP
Santa's tree Farm

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 12

Item 12
Included Documents:

1. Planning & Building Department Staff Report dated June 13, 2022.

2. Planning & Building Department Staff Report Addendum dated August 8, 2022.

3. Report submitted by William H. Cook titled: *The Flood of Pescadero Road & Restoration of Butano Creek*, dated November 2002, by William H. Cook.

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: June 13, 2022

TO: Agricultural Advisory Committee

FROM: Melissa Ross, Planning Services Manager, 650/599-1559

SUBJECT: Consideration of Local Coastal Program amendment to facilitate future construction of a replacement fire station (County Fire Station Number 59) and extension of CSA-11 to serve the fire station and Pescadero Middle/High School located at 350-360 Butano Cut Off. Both projects are located in the Pescadero area of the unincorporated San Mateo County.

County File Number: PLN 2021-00056 (County of San Mateo)

PROPOSAL

The County of San Mateo proposes to amend the San Mateo County Local Coastal Program (LCP) to facilitate construction of a replacement County Fire Station (Station No.59 in Pescadero), partial demolition and remodel of the existing fire station at 1200 Pescadero Creek Road for use during emergencies, and CSA-11 (County Service Area 11) water line extension to serve the replacement fire station and the existing Pescadero Middle/High School located at 350-360 Butano Cut Off. The project is limited in scope for these critical facilities to continue to serve the surrounding south coast area and are not otherwise growth inducing.

The County Board of Supervisors allocated Measure K funds to replace Fire Station No. 59 due to its current location at 1200 Pescadero Creek Road that is partially within a floodplain which has resulted in annual interior flooding, mold, and plumbing backups to the barracks building, among other issues. Seasonal flooding of the adjacent Butano Creek also impacts Pescadero Creek Road by restricting and sometimes prohibiting fire personnel from accessing the broader Pescadero Community.

Pescadero Middle/High School serves approximately 170 students in Grades 6 through 12 and has been cited by the State Water Resources Control Board Division of Drinking Water for nitrate maximum contaminant level exceedance of its well (nontransient-noncommunity water system) and currently relies on bottled water delivered to the school. Past attempts to drill new wells have failed due to insufficient water quality and quantity on the property which will be remedied by connecting the school to CSA-11. Funding for planning and construction of the CSA-11 water line extension to serve the school is provided by the State Water Resources Control Board Prop 1 Technical Assistance Funding Program.

Location of the replacement fire station and water line extension is a joint effort between the County, the La Honda-Pescadero Unified School District, County Fire, and the Pescadero Community through multiple community meetings and the efforts of the Pescadero Fire Station Steering Committee.

The San Mateo County Local Agency Formation Commission adopted a Municipal Service Review for CSA-11 in May 2022 and will complete a Sphere of Influence/Annexation for CSA-11.

Proposed Amendments

To facilitate construction of the fire station facilities and CSA-11 connect, amendments to the LCP include the following (refer to Attachment A for full text):

1. Amendment to Policy 2.37 *Monitoring*
2. Amendment to Policy 2.39 *Service Area Boundary*
3. New Policy 2.60 *Pescadero Fire Station*
4. Amendment to Table 2.16 *Estimate of Water Consumption Demand at Land Use Plan Buildout for the Town of Pescadero*
5. Amendment to LCP Land Use map and LCP Land Use South Coast map.

No other policies or regulations are proposed for amendment.

APPLICATION PROCESS AND OTHER CONSULTATIONS

The Planning Department is processing this project in two stages: LCP amendment and subsequent Coastal Development Permit(s). Planning staff is processing the first stage, however, since the LCP amendment will facilitate construction to which the County has completed due diligence, schematic drawings and associated reports/studies, a more comprehensive discussion on the project is provided in this report.

The proposed amendments require formal consideration and action by both the Planning Commission and Board of Supervisors. If approved, the amendments will be submitted to the California Coastal Commission for certification. If the amendments are certified by the Coastal Commission, staff will begin processing the Coastal Development Permit(s).

Prior to these formal hearings and following consultation by AAC, staff intends to present the project to the Pescadero Municipal Advisory Council (June 14, 2022) and San Mateo County Farm Bureau (June 15, 2022).

No construction is authorized under the LCP amendment. Future development will require California Environmental Quality Act (CEQA) compliance, Coastal Development permitting, Local Agency Formation Commission Annexation and Sphere of Influence approval, and subsequent multiple building permit issuance for construction.

DECISION MAKER

Board of Supervisors

QUESTIONS FOR THE AGRICULURAL ADVISORY COMMITTEE

1. Any feedback on the potential effects on impacted agricultural uses as a result of the proposed amendments? Any recommended conditions of approval or other questions to address?

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

BACKGROUND

Report Prepared By: Melissa Ross, Planning Services Manager, mross@smcgov.org

Applicant: County of San Mateo

Owners: County of San Mateo; La Honda Pescadero Unified School District

Locations: County Fire Station No.59 located at 1200 Pescadero Creek Road; replacement County Fire Station No.59 and La Honda Pescadero Middle/High School located at 330 Butano Cut Off.

APNs and Parcel Sizes: 086-150-050 (Existing Fire Station Site) 1.287 acres; 087-053-010 (Pescadero High School and New Fire Station site) 350-360 Butano Cut Off, 28.61 acres.

Existing Zoning: Existing Fire Station (086-160-050): PAD/CD (Planned Agricultural District/Coastal Development); New Fire Station site and School (087-053-010): RM-CZ/CD (Resource Management-Coastal Zone/Coastal Development); Pipeline: right-of-way in the Coastal Zone.

General Plan Designation: Institutional

Local Coastal Plan Designations: Institutional (Existing Fire Station and School); Agricultural (New Fire Station Site).

Williamson Act: Not contracted

Existing Land Uses: Existing Fire Station, Middle/High School, fallow field

Water Supply: Continued CSA-11 water service to the Existing Fire Station; new CSA-11 water service to the Middle/High School and New Fire Station.

Sewage Disposal: Septic systems.

Flood Zone: Existing Fire Station: Zone AE (floodplain) and Zone X (area of minimal flooding). Middle/High School: Zone X (area of minimum flooding), 0.2 pct Annual Chance Flood Hazard, Zone AE (floodplain), Zone AE with Floodway. New Fire Station: Zone X (area of minimal flooding).

Environmental Evaluation: Initial Study and Mitigated Negative Declaration posting anticipated June 8, 2022 to July 7, 2022.

Setting: The existing fire station is located at the intersection of Pescadero Creek Road and Bean Hollow Road. Much of the site is relatively flat with a steep hill located behind the facility buildings, which include an apparatus bay and barracks. Existing septic system for this site is located on the adjacent uphill County owned property. The property is subject to annual onsite flooding and flooding of the adjacent Butano Creek and Pescadero Creek Road. The school site is developed with the Pescadero Middle/High School buildings and school related facilities, an agricultural field at the north west portion of the property, and an open field in the area of the proposed fire station.

Will the project be visible from a public road?

Yes. The existing fire station is currently visible from Pescadero Creek (County Scenic Corridor) and Bean Hollow Roads. Removal of the barracks building will lessen the visual impact on this parcel. The new fire station will be visible from Cloverdale Road (County Scenic Corridor) and Butano Cut Off, but not visible from Pescadero Creek Road due to topography and vegetation. The pipeline will be under the roadways, thus not visible.

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

No habitat or vegetation removal is proposed at the existing fire station site. Ground disturbance for the new fire station will remove ruderal vegetation in the field, but no tree removal is proposed. Sensitive habitats are potentially located in the area of new fire station. Mitigation measures require pre-construction surveys, buffer zones, and on-site biologist during ground disturbance will ensure sensitive habitats are not adversely impacted. The pipeline will be undergrounded within the road right-of-way, including at the intersection of Cloverdale Road and Butano Cut Off to minimize potential impacts to sensitive habitats.

Is there prime soil on the project site?

The existing fire station does not contain prime soils. The pipeline is within mapped prime soils but will be installed underground within the road right-of way where soils conversion has already occurred. The new fire station is located on Land Capability Classification Class 1 and Storie Index Grade 100 soils. Conversion of prime

agricultural lands will occur. The project includes mitigation for the loss of prime lands at a 2:1 ratio (at least 3.5 acres) with an off-site mitigation parcel of similar quality soils, located within reasonable proximity, and for the parcel to be encumbered with an agricultural easement in perpetuity.

DISCUSSION

A. KEY ISSUES

1. Fire Station Needs Assessment and School Water Quality

In 2014, the County completed a Site Assessment of the exiting fire station facility at 1200 Pescadero Creek Road. The three-year study investigated the overall incident response direction, hazards, and building structural assessment. The report identified an even number of calls east and west of the station, location of the property within a FEMA special flood hazard area (floodplain) worsened by sea level rise, location adjacent to a mapped Tsunami Inundation area, and subject to annual flooding of Pescadero Creek Road at the Butano Creek Bridge. The structural assessment noted that although minor structural upgrades could be completed, the facility could not comply with life safety and immediate occupancy performance levels due to location within a flood hazard rendering the building inoperable during a flood event.

The Pescadero Middle/High School is served by one on-site domestic well that has had four nitrate and coliform maximum contaminant exceedances between 2015 and 2017 resulting in a State Water Resources Control Board citation and reliance on bottled water as a potable water source. Non-potable uses continue to draw from the well. A well drilled in 2019 on the school property to determine water available to serve the replacement fire station resulted in insufficient yield.

Further, the County's recently adopted Multi-Jurisdictional Local Hazard Mitigation Plan created long- and short- term programs and policies to reduce injury and damage resulting from natural hazards. The existing Pescadero Fire Station was identified as a vulnerable facility with a short-term timeline and high social equity lens priority. Additionally, the school is an evacuation center and served residents as such during the CZU Lightning Complex Fire. These critical facilities are essential to the health and welfare of the population, serve as community lifelines, and enable continuous operation of government functions. Replacement of the fire station and connection of the school to CSA-11 water will ensure these facilities can continue to effectively serve visitors and the Pescadero community.

2. Consistency with the Coastal Act

Amendments to the County's LCP must be consistent with the requirements of the California Coastal Act (CCA) as discussed below.

a. California Coastal Act Definitions

CCA Section 30106: *"Development" means, on land…, the placement or erection of any solid material or structure; change in the intensity of use of water, or of access thereto"*

CCA Section 30114: *"Public works means the following: (a) All production, storage, transmission, and recovery facilities for water owned or operated by any public agency"*

The fire station and water line extension are defined as development that must be consistent with the CCA. The water line extension is further defined as a public works facility owned and operated by the County ("Special District" defined under CA Section 30118).

b. California Coastal Act: Core Values

CCA Section 30001(c): *That to promote the public safety, health, and welfare, and to protect public and private property, wildlife, marine fisheries, and other ocean resources, and the natural environment, it is necessary to protect the ecological balance of the coastal zone and prevent its deterioration and destruction.*

CCA Section 30001.5(d): *That existing developed uses, and future developments that are carefully planned and developed consistent with the policies of this division, are essential to the economic and social well-being of the people of this state and especially to working persons employed within the coastal zone.*

The three-year study to determine incident response direction for the existing fire station, completed by consulting firm Ratcliff as part of the Site Assessment Report: Pescadero Fire Station[1] (Ratcliff Report), identified nearly an equal number of incident responses east and west of the existing station (454 incidents west; 452 incidents east) over a three-year period. The Mission of County Fire, *to protect life, property, and natural resources of its citizens and visitors through effective emergency response, incident mitigation, preparedness, education, and prevention*, is hindered when flooding events at Butano Creek Bridge render Pescadero Creek Road unpassable. Retention of the apparatus bay at the existing fire station for emergency response west

[1] Ratcliff. (2014). *Site Assessment: Pescadero Fire Station Report*.

of Pescadero Marsh bridge and the eastward location of the replacement fire station ensures County Fire staff are effective and efficient in responding to medical emergencies, traffic collisions, and flooding and fires, among other incidents along Highway 1 and within the greater Pescadero community. Connection of CSA-11 to these critical facilities ensures clean drinking water for residents, visitors, and people employed in the coastal zone both during normal operations and emergencies.

A CSA-11 Water Supply Yield and Sustainability Study was prepared evaluating municipal water service. The report considered multiple tasks: audit of existing connections; analysis of short-term and long-term impact, potential water quality impacts; potential LCP buildout; climate change modeling; anticipated non-revenue water (leaks); and potential additional sources of supply. Estimates use the two highest months of water usage based on LCP Policy 1.8 (*Land Uses and Development Densities in Rural Areas)*. To summarize a few points[2]:

(1) Short-Term Effects on CSA-11 with Fire Station and School.

Based on pre-Covid water consumption, total new demand on CSA-11 from connection to the school for drinking water purposes, is estimated at an average of 835 gallons per day (gpd), an increase of 4.3%. Non-potable water uses (i.e., bus washing, storage tank cleaning) are currently served by the existing well and will remained served by the well with no anticipated adverse impacts.

Increase in potable water usage for the new and existing fire stations is minimal given the demolition of the barracks and use of the existing fire station site for emergency staffing. Potable water use is estimated at 326 gpd for the new station (similar to the existing station) with 8 gpd for 8 days for emergency staffing at the existing station, an overall 0.04% increase. Non-potable water uses at the existing fire station can continue to use the existing well and non-potable water uses at the new fire station location can utilize the school well, both with no anticipated adverse impacts.

(2) Project Effects of Connecting the Fire Station and School.

The aquifer serving CSA-11 continues to be in overdraft as it has since 1992. Well Nos. 1 and 2 serve as standby wells with Well No. 3 operating as the primary well. Under static conditions (no pumping), water levels are anticipated to drop below the top

[2] Todd Groundwater. *Town of Pescadero (CSA-11) Water Supply Yield and Sustainability (Draft)*, 2021.

of Well No. 1 well screen around year 2039 and Well No. 3 around year 2105. Connection of the fire station and school to CSA-11 may result in water levels declining to the top of well screens in 2035 for Well No. 1 and 2074 for Well No. 3 under static conditions. Under non-static conditions (pumping) and the project implemented, Well No. 3 could be impacted in approximately 2057 at which point the pump could be lowered. Well No. 1 may also need to be lowered and upsized. The Todd Groundwater report did not indicate any adverse impacts to coastal resources resulting from CSA-11 service to these uses.

The LCP amendments are consistent with the core values and will facilitate development that continues to protect coastal resources and is essential to working persons employed within the coastal zone.

c. California Coastal Act: Public Access

CCA Section 30210: *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Though no public access is proposed with this project, these critical facilities support public recreation and coastal access by ensuring the public's safety when responding to incidents and other calls for service along the coast and through student and public education focusing on understanding and protection of coastal resources.

The LCP amendment is consistent with public access in that it does not lessen public access requirements. Future development facilitated by the amendment will continue to protect public access and recreation through public education and emergency response.

d. California Coastal Act: Land Resources

CCA Section 30240: *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*

CCA Section 30241: *The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection*

of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

(a) *By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.*

(b) *By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.*

(c) *By developing available lands not suited for agriculture prior to the conversion of agricultural lands.*

(d) *By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.*

A Biological Habitat Evaluation Report evaluating both fire station locations and pipeline was prepared and identified emergent wetlands in the drainage channel parallel to Cloverdale Road north of Butano Cut Off near the new fire station. Sensitive habitats were not identified on the existing fire station parcel or within the proposed pipeline area. No direct impacts to sensitive habitats were identified since the new fire station is setback from the emergent wetlands, however potential indirect impacts can occur without mitigation. As such, mitigation will include temporary exclusion fencing, timing of construction, and pre-construction surveys, among others, will ensure compliance with CCA 30240.

The entirety of the greater Pescadero area is rural, thus the use of the school is the nearest single urban use. As applicable, CCA Section 30250 outlines new development location to be *within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it would not have significant adverse effects, either individually or cumulatively, on coastal resources*. In considering Section 30250 and Section 30241(d), the County explored 14 parcels for location of the new fire station, both privately and publicly owned, within the Pescadero rural and rural service center areas for impacts to coastal resources. The Steering Committee and County selected the school parcel based on available parcels and constraints, impacts to coastal resources including agricultural lands, community input, and water needs of the school.

As identified by the United States Department of Agricultural Natural Resources Conservation Service and defined by LCP Policy 5.1, the new fire station will be located on mapped prime agricultural soils (Land Capability Classification Class 1 soils and Grade 1 Storie Index soils). Though the field has been fallow since 2013, construction of the fire station will convert prime agricultural soils. Loss of agricultural lands will be mitigated by an off-site agricultural mitigation parcel to be encumbered by an agricultural easement in perpetuity (2:1 ratio). Securing the off-site mitigation parcel and compliance with relevant LCP policies will occur during the Coastal Development Permit stage. The field north of the new fire station is and remains under agricultural production. An approximately 9- to 17-foot buffer from the proposed fence line and leach field, respectively, are proposed. The agricultural field is unaffected by CSA-11 pipeline construction, which will occur within the Cloverdale and Butano Cut Off road prism and the existing fire station is not located prime agricultural land.

The LCP amendment are consistent with the land resources in that the amendments do no lessen protections for sensitive habitats nor would the future development adversely impact sensitive habitats, as mitigated. The amendment also does not reduce overall agricultural protections. Future development resulting from the LCP amendment will impact agricultural lands on one site, however, this is mitigated through an off-site agricultural parcel.

e. California Coastal Act: Development

CCA Section 30251: *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

CCA Section 30253: *New development shall do all of the following:*

(a) *Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*

(b) *Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or*

destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

(c) *Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.*

(d) *Minimize energy consumption and vehicle miles traveled.*

(e) *Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.*

CCA Section 30254: *New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal-dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.*

Demolition of the existing fire station barracks will lessen the visual impact on the Pescadero Creek Road county scenic corridor and construction of the pipeline within and under the road right-of-way will not visually intrude into the scenic area. The new fire station is designed to minimize topographical alterations and be compatible architectural character of the surrounding rural community.

Minimizing hazards risks, erosion, and air quality are incorporated into the project in that removal of the barracks removes a building within a floodplain, no active faults were located in the area of the new fire station, stormwater and erosion control measures are part of the design and construction as required by the County's National Pollutant Discharge Elimination System Permit, and both construction and operation of the fire stations will require a permit from Bay Area Air Quality Management District. The new station will be more energy efficient compared with the existing station and the same number of

employees and relative distance to the existing station will not significantly increase vehicle miles travelled.

Retaining the existing apparatus bay and construction of the new fire station provides County fire staff a state-of-the-art station and two locations from which to plan and respond to calls and incidents during flood events across Pescadero Creek Road. CSA-11 service is expanding to serve the new fire station and school but other service connections along the pipeline are prohibited. Water flow between the new upstream connection and the fire station and school will be monitored for leaks and illegal connections. The LCP amendment does not lessen hazards protections and serves to facilitate fire station facilities, pipeline construction and school connection and is otherwise not growth inducing.

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

The existing fire station and pipeline are zoned PAD; the new fire station location is zoned Resource Management-Coastal Zone (RM-CZ). If the LCP amendments are certified and subsequent Coastal Development Permit(s) approved, the barracks at the existing fire station can be demolished and the pipeline constructed (all subject to applicable building permit issuance). As discussed previously, the existing fire station is not located on prime agricultural lands and any prime agricultural lands in the area of the pipeline are already converted (PAD Sections 6355.D. and E. *Criteria for the Conversion of Prime Agricultural Lands* and *Criteria for the Conversion of Lands Suitable for Agriculture and Other Land*, respectively). Future construction at the existing fire station site includes demolition of the barracks and minor improvements to the apparatus bay and CSA-11 will continue to serve the apparatus bay as a potable water source (PAD Section 6355.B. *Water Supply Criteria*).

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

Multiple policies are identified to be modified or added to facilitate the project. Additionally, two LCP maps are proposed to be updated designating the new fire station site as an “Institutional” land use. Below is a brief description of the modifications, refer to Attachment A for the full text amendments.

a. Policy 2.37 (*Monitoring)*

This policy requires monitoring of water systems for consumption by use. CSA-11 water consumption is currently monitored but given the addition of the fire station and school, this policy is being amended to ensure groundwater level trends and sustainability are also monitored.

Updates to buildout capacity limits may be explored in depth at a later date with additional data after project implementation and/or through exploration of a Pescadero community plan.

b. Policy 2.39 (*Service Area Boundary)*

This policy limits CSA-11 water connections to the fire protection facilities serving the rural service center on July 28, 1993 and is being amended to include service to the new fire station and school. The policy is specific to fire protection facilities and public schools serving the rural service center, thus no other connections along the pipeline will be allowed.

c. Policy 2.60 (*Pescadero Fire Station)*

This policy is being added to identify where LCP policy conflicts may occur regarding construction of the fire station at the Butano Cut Off location, specifically that construction of the fire station shall not effectively be prohibited provided maximum compliance with protection for agricultural lands is achieved. To this, the County will mitigate conversion of prime agricultural lands by acquiring an off-site mitigation parcel where an agricultural easement will encumber prime agricultural lands at a 2:1 ratio.

d. Table 2.16 *Estimate of Water Consumption Demand at Land Use Plan Buildout for the Town of Pescadero*

Based on the estimated water usage of the fire station facilities and school, Table 2.16 is amended to list the school and estimated water consumption for both uses. The estimated Total Demand GPD in the table is increasing by 225 gallons per day to account for the fire station and school connections. However, as noted in the Todd Groundwater Report when considering existing connections, LCP buildout, and the addition of the fire station and school facilities: *Estimated total water use with the additional connections plus the middle/high school (a demand that was not anticipated in the LCP) is 48,544 gpd, or 43-68 percent of the LCP estimate.* This is below the adjusted total gpd range of 72,275 – 113,745 and may be due to water efficient appliances and fixtures, and overall water conservation. As previously noted, buildout limits may be explored in depth at a later date with additional data after project implementation and/or through exploration of a Pescadero community plan.

e. LCP Map Amendments

For consistency with land use designations for public facilities, a land use designation change is included in the project to change the LCP Land Use Designation from “Agriculture” to “Institutional” for the portion for the parcel proposed for the replacement fire station. Two LCP maps are proposed for amendment: Land Use (Pescadero) and Land Use (South Coast). The existing fire station and portion of the parcel occupied by the school are already designated Institutional on the same maps. The land use designation change is consistent with the County’s General Plan which already identifies the existing fire station and entire school parcel as Institutional.

The LCP amendments are consistent with other components of the LCP and, if approved and certified, implementation of the project would be consistent with other LCP Policies relating to Locating and Planning New Development, Public Works, Agriculture, Sensitive Habitats, Visual Resources, and Hazards in that the project would be allowed subject to permitting, CSA-11 water can serve the community and the additional uses, agricultural impacts would be mitigated, potential sensitive habitats impacts are also mitigated, conceptual design is consistent with the surrounding community, and hazards are reduced.

ATTACHMENTS

A. Proposed Amendments and Maps
B. Fire Station Plans
C. CSA-11 Plans
D. Todd Groundwater Report
E. Ratcliff Report: Site Assessment
F. Wetland Delineation Report

SSB:cmc – SSBGG0190_WCU.DOCX

Proposed Amendments

The following LCP amendments are proposed to facilitate construction of the replacement fire station and water line extension. Deleted text is ~~strikethrough~~, added text in **bold**.

1. LCP PUBLIC WORKS COMPONENT (AMENDED POLICY)

   2.37 Monitoring

   Require the managing entity of the water system to monitor water consumption by use**, groundwater level trends and sustainability,** and revise the estimated buildout capacity limits and the reservations for the priority uses annually on the basis of this monitoring.

2. LCP PUBLIC WORKS COMPONENT (AMENDED POLICY)

   2.39 Service Area Boundary

   Limit water connections to uses within the boundary of the rural service center and to the fire protection facilit~~y~~**ies and public schools** serving the rural service center ~~on July 28, 1993~~.

3. LCP PUBLIC WORKS COMPONENT (NEW POLICY)

   2.60 Pescadero Fire Station

   No provision of this Local Coastal Program shall be interpreted in such a manner as to prohibit, or effectively prohibit, the construction and use of a fire protection facility and related uses at 350-360 Butano Cut Off in the Town of Pescadero, subject to conditions of a permit under Policy 5.6(b)(6) that achieves maximum compliance with Local Coastal Plan policies.

4. LCP PUBLIC WORKS COMPONENT (AMENDED TABLE)

   Table 2.16 *Estimate of Water Consumption Demand at Land Use Plan Buildout for the Town of Pescadero* is amended to reflect estimated water use of the replacement fire station, existing fire station as modified for use during emergencies, and addition of the school.

TABLE 2.16

ESTIMATE OF WATER CONSUMPTION DEMAND AT LAND USE PLAN BUILDOUT FOR THE TOWN OF PESCADERO

	Existing	Proposed	Total	Demand GPD[5]
Dwelling Units	125[1]	125[3]	250	61,250–97,000
Commercial Outlets	20[2]	20[4]	40	9,800–15,520
Fire Station[6]	1	1	1	~~1,000~~ **390**
Public School[7]	**1**	**1**	**1**	**835**
TOTAL				~~**72,050 –113,520**~~ **72,275 – 113,745**

NOTES:

1. In the special census done for Pescadero in 1977, there were 100 households and 143 dwelling units in the census area. For the purpose of projecting water connections, it is assumed that when safe water is available, approximately 25 of the abandoned dwellings will be rehabilitated or repaired.
2. Count of retail outlets.
3. All lots infilled, all residential areas fully developed at densities shown.
4. Assumes slightly higher ratio of acreage to commercial outlets than exists, since best sites are already developed.
5. Assumes average consumption per connection at 245 to 388 gpd.

   Basis: Per capita consumption of 70 gpd is low compared to Midcoast per capita consumption of 90 gpd; 70 gpd is considered sufficient in Pescadero providing water conservation is practiced and/or public domestic supply is supplemented by water from existing private wells for non-potable uses such as lawn watering or car washings. Household size at buildout is assumed to be 3.5 persons. (3.5) (70) = 245 gpd. It is also assumed that each commercial outlet will consume as much water as one residence, with stores and similar establishments with low water needs balancing restaurants with greater water needs.

6. **County Fire Station 59 average daily (CSA-11) potable water use is estimated at 326 gpd for the replacement station located at 350-360 Butano Cut Off (data based on actual use for the fire station facility at 1200 Pescadero Creek Road). Total GPD demand in this Table includes the fire station at Butano Cut Off and removal of the barracks and continued emergency staffing of the apparatus bay at 1200 Pescadero Creek Road of 8 days per year at 8 gpd. Source: Todd Groundwater, Town of Pescadero (CSA-11) Water Supply Yield and Sustainability Study, Final, March 31, 2021.**
7. **Pescadero Middle/High School located at 350-360 Butano Cut Off anticipated average daily potable water use is 835 gpd. Source: Todd Groundwater, Town of Pescadero (CSA-11) Water Supply Yield and Sustainability Study, Final, March 31, 2021.**

5. LCP LAND USE MAPS (AMENDMENTS)

For consistency with land use designations for public facilities, a land use designation change is included in the project to changing the LCP Land Use Designation from “Agriculture” to “Institutional” for the portion for the parcel proposed for the replacement fire station. Two LCP maps are proposed for amendment: Land Use (Pescadero) and Land Use (South Coast). The existing fire station and portion of the parcel occupied by the school are already designated Institutional on the same maps. The land use designation change is consistent with the County’s General Plan which already identifies the existing fire station and school parcel as Institutional.

SSB:cmc – SSBGG0190_WCU.DOCX

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT A

LAND USE

NORTH

0 400 800 1600 FEET

0 122 244 488 METERS

- LOW DENSITY RESIDENTIAL 0.3-2.0 DU/AC
- MEDIUM DENSITY RESIDENTIAL 6.1-9.0 DU/AC
- MEDIUM HIGH DENSITY RESIDENTIAL 9.1-16.0 DU/AC
- NEIGHBORHOOD COMMERCIAL
- INSTITUTIONAL
- PUBLIC RECREATION
- AGRICULTURE
- WATER

SOURCE:

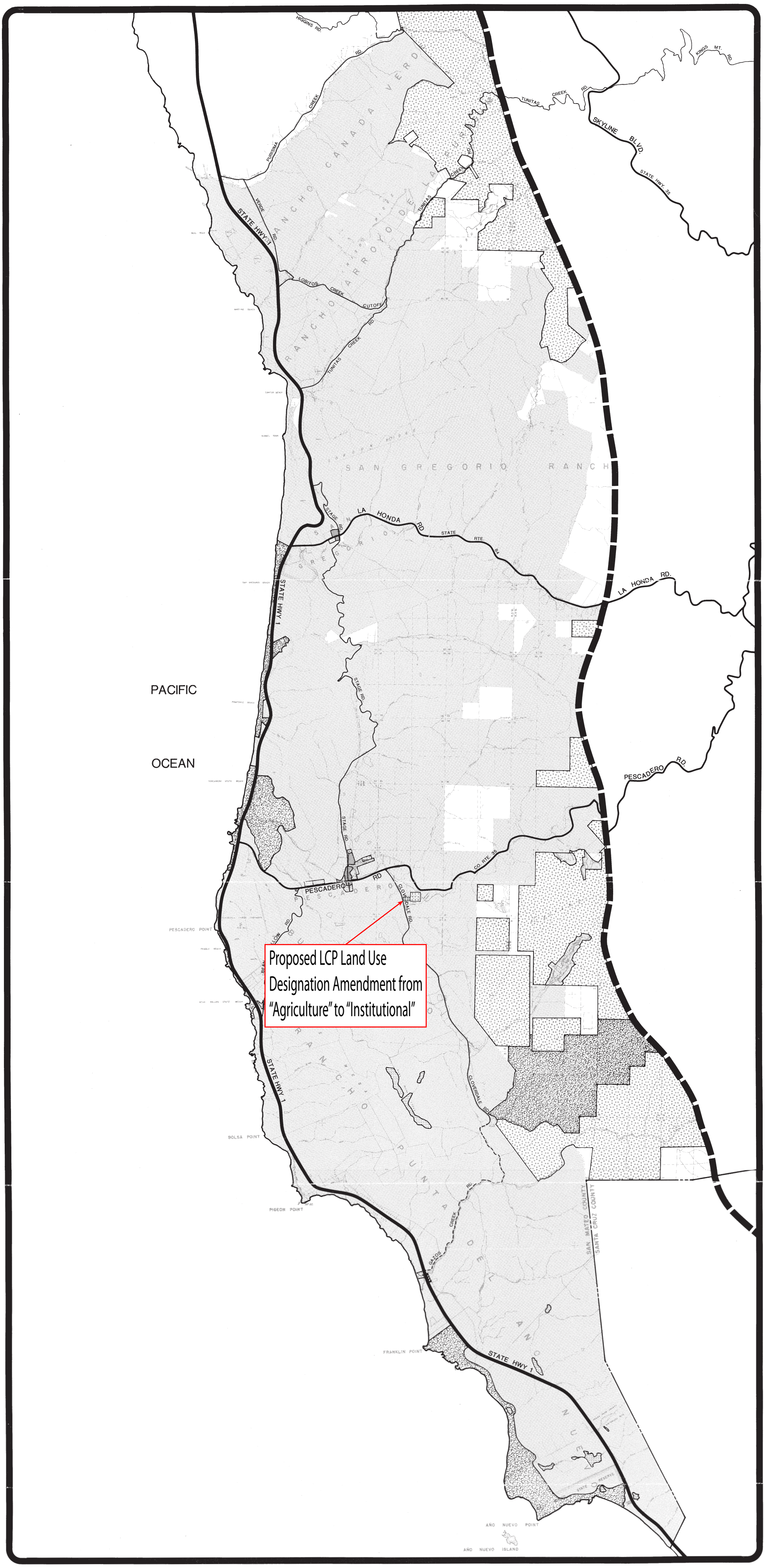
DATE:

PESCADERO

LOCAL COASTAL PROGRAM

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

PLANNING AND DEVELOPMENT DIVISION • SAN MATEO COUNTY, CALIFORNIA



SOUTH-COAST

LOCAL COASTAL PROGRAM

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
PLANNING AND DEVELOPMENT DIVISION • SAN MATEO COUNTY, CALIFORNIA

LAND USE

NORTH

0 1 2 3 4 MILES
0 1.6 3.2 4.8 6.4 KILOMETERS

- LOW DENSITY RESIDENTIAL 0.3-2.0 DU/AC
- MEDIUM LOW DENSITY RESIDENTIAL 2.1-6.0 DU/AC
- MEDIUM HIGH DENSITY RESIDENTIAL 9.1-16.0 DU/AC
- NEIGHBORHOOD COMMERCIAL
- COMMERCIAL RECREATION
- INSTITUTIONAL
- PUBLIC RECREATION
- AGRICULTURE
- TIMBER PRESERVE
- GENERAL OPEN SPACE
- WATER

SOURCE:

DATE:

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

PESCADERO FIRE STATION 59 RELOCATION PROJECT

PROPOSED FIRE STATION 59 LOCATION: 350-360 BUTANO CUTOFF, PESCADERO, CA

EXISTING FIRE STATION 59 LOCATION: 1200 PESCADERO RD. PESCADERO, CA

ABBREVIATIONS

#	POUND/NUMBER	CPT.	CARPET	FLUOR.	FLUORESCENT	MTL.	METAL	SMS.	SHEET METAL SCREW
&	AND	CTSK.	COUNTERSINK	FRPF.	FIREPROOF	MUL.	MULLION	SPEC.	SPECIFICATION
(E)	EXISTING			FT.	FOOT/FEET			SQ.	SQUARE
(N)	NEW	D.F.	DRINKING FOUNTAIN	FTG.	FOOTING	N.	NORTH	STA.	STATION
<	ANGLE	D.O.	DOOR OPENING	FURR.	FURRING	N.I.C.	NOT IN CONTRACT	STD.	STANDARD
@	AT	D.S.P.	DRY STANDPIPE	FUT.	FUTURE	N.T.S.	NOT TO SCALE	STL.	STEEL
C/L	CENTERLINE	DBL.	DOUBLE			NO.	NUMBER	STOR.	STORAGE
P/L	PLATE/PROPERTY LINE	DEPT.	DEPARTMENT	G.B.	GRAB BAR/GRADE BREAK	NOM.	NOMINAL	STRUC.	STRUCTURAL
ø/DIA.	DIAMETER/ROUND	DET.	DETAIL	G.F.R.G.	GLASS FIBER REINFORCED GYPSUM			SUSP.	SUSPENDED
		DIA.	DIAMETER	G.I.	GALVANIZED IRON	O.A.	OVERALL	SYM.	SYMMETRICAL
A.B.	AGGREGATE BASE	DIM.	DIMENSION	GA.	GAUGE	O.C.	ON CENTER		
A.C.	ASHPHALT CONCRETE	DISP.	DISPENSER	GALV.	GALVANIZED	O.D.	OUTSIDE DIAMETER/DIMENSION	T.	TREAD
A.D.	AREA DRAIN	DN.	DOWN	GL.	GLASS	O.H.	OVERHEAD	T.&B.	TOP AND BOTTOM
A.F.F.	ABOVE FINISHED FLOOR	DR.	DOOR	GND.	GROUND	O/	OVER	T.&G.	TONGUE AND GROOVE
ACOUS.	ACOUSTICAL	DS.	DOWNSPOUT	GR.	GRADE	OFF.	OFFICE	T.C.	TOP OF CURB
ADJ.	ADJUSTABLE	DWG.	DRAWING	GYP.	GYPSUM	OPNG.	OPENING	T.O.	TOP OF
AHU.	AIR HANDLING UNIT	DWR.	DRAWER			OPP.	OPPOSITE	T.O.F.	TOP OF FRAMING
ALUM.	ALUMINUM			H.B.	HOSE BIBB			T.O.S.	TOP OF STEEL
APPROX.	APPROXIMATE	E.	EACH	H.C.	HOLLOW CORE/ACCESSIBLE CURB RAMP	P.C.	PRECAST	T.S.	TUBE STEEL
ARCH.	ARCHITECTURAL	E.J.	EXPANSION JOINT			P.I.V.	POST INDICATOR VALVE	T.V.	TELEVISION
ASB.	ASBESTOS	E.P.	ELECTRICAL PANELBOARD	H.G.	HARDWARE GROUP	P.M.	PRESSED METAL	T.W.	TOP OF WALL
AUTO.	AUTOMATIC	E.W.C.	ELECTRIC WATER COOLER	H.M.	HOLLOW METAL	P.O.C.	POINT OF CONNECTION	TEL.	TELEPHONE
		EA.	EACH	HDWD.	HARDWOOD	P.T.	PRESSURE TREATED	TER.	TERAZZO
B.D.F.	BUILDING DISTRIBUTION FACILITY	EL.	ELEVATION	HDWE.	HARDWARE	PL.	PLATE	THK.	THICK
B.F.P.	BACK FLOW PREVENTER	ELEC.	ELECTRICAL	HORIZ.	HORIZONTAL	PLAS.	PLASTER/PLASTIC	TYP.	TYPICAL
BD.	BOARD	ELEV.	ELEVATION	HR.	HOUR	PLYWD.	PLYWOOD		
BIT.	BITUMINOUS	EMER.	EMERGENCY	HSS.	HOLLOW STEEL SECTION	PR.	PAIR	U.O.N.	UNLESS OTHERWISE NOTED
BLDG.	BUILDING	ENCL.	ENCLOSURE	HT.	HEIGHT	PT.	POINT	UR.	URINAL
BLK.	BLOCK	EQ.	EQUAL			PTN.	PARTITION		
BLKG.	BLOCKING	EQUIP.	EQUIPMENT	I.D.	INSIDE DIAMETER/DIMENSION			VCT.	VINYL COMPOSITION TILE
BM.	BEAM	EXIST.	EXISTING	I.D.F.	INTERMEDIATE DISTRIBUTION FACILITY	Q.T.	QUARRY TILE	VERT.	VERTICAL
BTM.	BOTTOM	EXP.	EXPANSION					VEST.	VESTIBULE
BW.	BACK OF WALK	EXT.	EXTERIOR	INSUL.	INSULATION	R.	RISER/RADIUS		
		F.A.	FIRE ALARM	INT.	INTERIOR	R.D.	ROOF DRAIN	W.	WEST
C.B.	CATCH BASIN	F.A.A.N.	FIRE ALARM REMOTE ANNUNCIATOR			R.O.	ROUGH OPENING	W.C.	WATER CLOSET
C.G.	CORNER GUARD	F.B.	FLAT BAR	JAN.	JANITOR	R.W.L.	RAIN WATER LEADER	W/	WITH
C.I.	CAST IRON	F.D.	FLOOR DRAIN	JT.	JOINT	REF.	REFRIGERATOR	W/O	WITHOUT
C.I.D.	CLEAR INSIDE DIMENSION	F.D.C.	FIRE DEPARTMENT CONNECTION			REG.	REGISTER	WD.	WOOD
C.J.	CONTROL JOINT	F.E.	FIRE EXTINGUISHER	KIT.	KITCHEN	REINF.	REINFORCED	WP.	WATERPROOF/WORK POINT
C.L.	CENTERLINE	F.E.C.	FIRE EXTINGUISHER CABINET			REQD.	REQUIRED	WSCT.	WAINSCOT
C.M.U.	CONCRETE MASONRY UNIT	F.E.C.	FIRE EXTINGUISHER CABINET	LAB.	LABORATORY	RESIL.	RESILIENT	WT.	WEIGHT
C.O.	CASED OPENING/CLEAN OUT	F.F.	FINISH FLOOR	LAM.	LAMINATE	RM.	ROOM		
C/L	CENTERLINE	F.F.E.	FINISH FLOOR ELEVATION	LAV.	LAVATORY	RWD.	REDWOOD	XFMR.	TRANSFORMER
CAB.	CABINET	F.H.	FIRE HYDRANT	LKR.	LOCKER				
CEM.	CEMENT	F.H.V.C.	FIRE HOSE VALVE CABINET	LT.	LIGHT	S.	SOUTH		
CER.	CERAMIC	F.O.	FACE OF			S.C.	SOLID CORE		
CLG.	CEILING	F.O.C.	FACE OF CONCRETE/CURB	M.C.	MEDICINE CABINET	S.S.	STAINLESS STEEL		
CLKG.	CAULKING	F.O.F.	FACE OF FINISH	M.O.	MASONRY OPENING	S.V.	SHEET VINYL		
CLO.	CLOSET	F.O.M.	FACE OF MASONRY	MAX.	MAXIMUM	SCHED.	SCHEDULE		
CLR.	CLEAR	F.O.S.	FACE OF STUDS	MDF.	MEDIUM DENSITY FIBERBOARD	SECT.	SECTION		
CNTR.	COUNTER	F.R.T.	FIRE RETARDANT TREATED	MECH.	MECHANICAL	SH.	SHELF		
COL.	COLUMN	F.S.	FULL SIZE	MEMB.	MEMBRANE	SHT.	SHEET		
CONC.	CONCRETE	FDN.	FOUNDATION	MFR.	MANUFACTURER	SHWR.	SHOWER		
CONN.	CONNECTION	FIN.	FINISH	MH.	MANHOLE	SIM.	SIMILAR		
CONSTR.	CONSTRUCTION	FL.	FLOW LINE	MIN.	MINIMUM	SMH.	SEWER MANHOLE		
CONT.	CONTINUOUS	FLASH.	FLASHING	MIRR.	MIRROR				
COORD.	COORDINATE	FLR.	FLOOR	MISC.	MISCELLANEOUS				
CORR.	CORRIDOR			MTD.	MOUNTED				

SYMBOLS

0	GRID LINE TYPICAL
	WORK POINT, CONTROL POINT OR DATUM POINT
ROOM NAME 101	ROOM NAME ROOM NUMBER
03 10 01	KEYNOTE TAG - CSI PREFIX SEE NOTES ON SIDE OF SHEET
D001	DEMOLITION KEYNOTE TAG SEE NOTES ON SIDE OF SHEET
X101	DOOR TAG SEE DOOR SCHEDULE SHEET
S1	WINDOW TAG SEE WINDOW SCHEDULE SHEET
XXXX	EQUIPMENT DESIGNATION SEE EQUIPMENT SCHEDULE SHEET
222 / XX XX XX	WI NUMBER HEIGHT DEPTH WIDTH MILLWORK TYPE TAG
PT-1	FINISH MATERIAL TAG
PT-2	FINISH MATERIAL TAG (CEILING)
CPT1	FINISH MATERIAL TAG (FLOOR)
XX XX	SIGN NO. SIGN TYPE SIGNAGE TYPE TAG
A30A	WALL TYPE TAG SEE DETAILS
1	REVISION TAG
1 / A101	REFERENCE NO. SHEET NO. DETAIL TAG SEE SHEET INDICATED
1 / A5.01	REFERENCE NO. SHEET NO. INTERIOR ELEVATION TAG SEE SHEET INDICATED
1 / A5.01	REFERENCE NO. SHEET NO. SECTION CUT/EXTERIOR ELEVATION TAG SEE SHEET INDICATED

PROJECT SUMMARY

OWNER: SMC - LA HONDA PESCADERO UNIFIED HIGH SCHOOL DISTRICT
CALFIRE - LEASEE OPERATOR

PROJECT LOCATION: 350-360 BUTANO CUTOFF
PESCADERO, CA.

SITE AREA: 28.61 ACRES (1,246,251.6 SF)
PROJECT AREA: 1.744 ACRES (76,000 SF)

APN: 087-053-010

DESCRIPTION:

THE PROJECT CONSISTS OF:
1. CONSTRUCTION OF A REPLACEMENT PESCADERO FIRE STATION (STATION 59) TO BE LOCATED ON LA HONDA-PESCADERO UNIFIED SCHOOL DISTRICT PROPERTY CURRENTLY DEVELOPED WITH THE PESCADERO MIDDLE/HIGH SCHOOL AT 350-360 BUTANO CUT OFF, PESCADERO;
2. PARTIAL DEMOLITION OF EXISTING PESCADERO FIRE STATION; AND
3. CSA-11 WATER SERVICE EXTENSION TO SERVE THE FUTURE FIRE STATION AND EXISTING PESCADERO MIDDLE/HIGH SCHOOL, BOTH LOCATED AT 350-360 BUTANO CUT OFF.

ZONING: RM-CZ/CD
LCP LAND USE: INSTITUTIONAL & AGRICULTURAL
TSUNAMI ZONE - NO
FLOOD ZONE: MAJORITY ZONE X. REAR AGRICULTURE & PLAY FIELDS IN ZONE AE WITH FLOODWAY

FRONT YARD SETBACK: 50'-0"
SIDE YARD SETBACK: 20'-0"

SITE DATA: BUILDING LOT COVERAGE: 8.23 % (COMBINED FOOTPRINT; 9235 SF)
IMPERVIOUS SURFACES: 33,781 SF (44%)
LANDSCAPED AREAS: 42,781 SF (56%)
PARKING: REFER A1.01 SITE PLAN

BUILDING DATA: CONSTRUCTION TYPE: VB - FULLY SPRINKLERED
OCCUPANCY: B, R2, S2
BUILDING HIEGHT: ALLOWED: 36'-0" ACTUAL: 33'-9"
NUMBER OF STORIES: 2
BUILDING GROSS AREAS:

B OCCUPANCY: 3150 SF
R2 OCCUPANCY: 4862 SF
S2 OCCUPANCY: 4004 SF
S2 ACCESSORY: 545 SF

TOTAL AREA: 12, 561 SF

ALL WORK SHALL CONFORM TO THE FOLLOWING CODES:

2019	CBC	CALIFORNIA BUILDING CODE
2019	CEC	CALIFORNIA ELECTRIC CODE
2019	CMC	CALIFORNIA MECHANICAL CODE
2019	CPC	CALIFORNIA PLUMBING CODE
2019		CALIFORNIA ENERGY CODE
2019	CHBC	CALIFORNIA HISTORICAL BUILDING CODE
2019	CFC	CALIFORNIA FIRE CODE
2019		CALIFORNIA GREEN BUILDING STANDARDS CODE

PROJECT TEAM

DEVELOPER
COUNTY OF SAN MATEO
PROJECT DEVELOPMENT UNIT
1402 MAPLE STREET
REDWOOD CITY, CA 94063

ARCHITECTURAL
DREYFUSS & BLACKFORD ARCHITECTS
3540 FOLSOM BOULEVARD
SACRAMENTO, CALIFORNIA 95816
TELEPHONE: 916 453-1234
FACSIMILE: 916 453-1236

CIVIL
BKF ENGINEERS
1730 N. FIRST STREET, SUITE 600
SAN JOSE, CA 95112

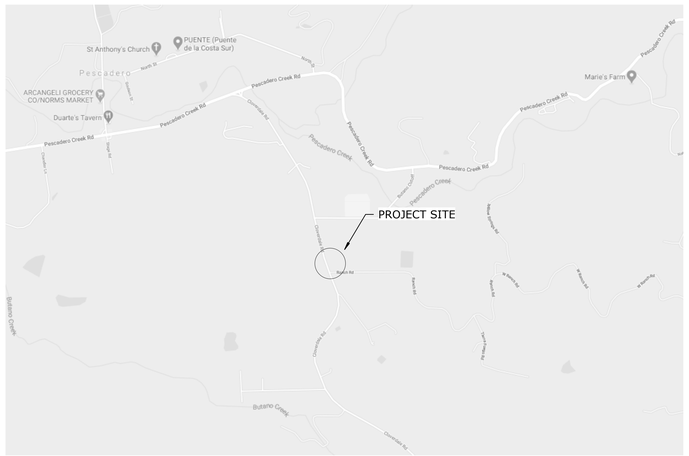
MECHANICAL & PLUMBING
GUTTMAN & BLAEVOET
2351 POWELL ST.
SAN FRANCISCO, CA 94133

ELECTRICAL
GUTTMAN & BLAEVOET
2351 POWELL ST.
SAN FRANCISCO, CA 94133

SHEET INDEX

ARCH	G0.000 COVER SHEET
ARCH	A1.01 SCHEMATIC SITE PLAN
ARCH	A1.02 EXISTING SITE - PARTIAL DEMO PLAN
ARCH	A3.00 BUILDING ELEVATIONS

Civil	C1.0
Civil	C2.0



PROJECT SITE, VICINITY MAP

Dreyfuss+ Blackford architecture
3540 Folsom Blvd
Sacramento, CA
95816-6699
T 916.453.1234
dreyfussblackford.com

PDU PROJECT DEVELOPMENT UNIT COUNTY OF SAN MATEO

REGISTERED ARCHITECT C25102 Scott Shannon REN. 01/31/21 STATE OF CALIFORNIA

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SCHEMATIC DESIGN

REVISION	BY	DATE

NOT FOR CONSTRUCTION

SAN MATEO COUNTY

PESCADERO FIRE STATION 59 RELOCATION PROJECT

LOCAL COASTAL PROGRAM AMENDMENT
Schematic Design Submission

COVER SHEET

NORTH

C0006.00

05/11/2020

G0.000

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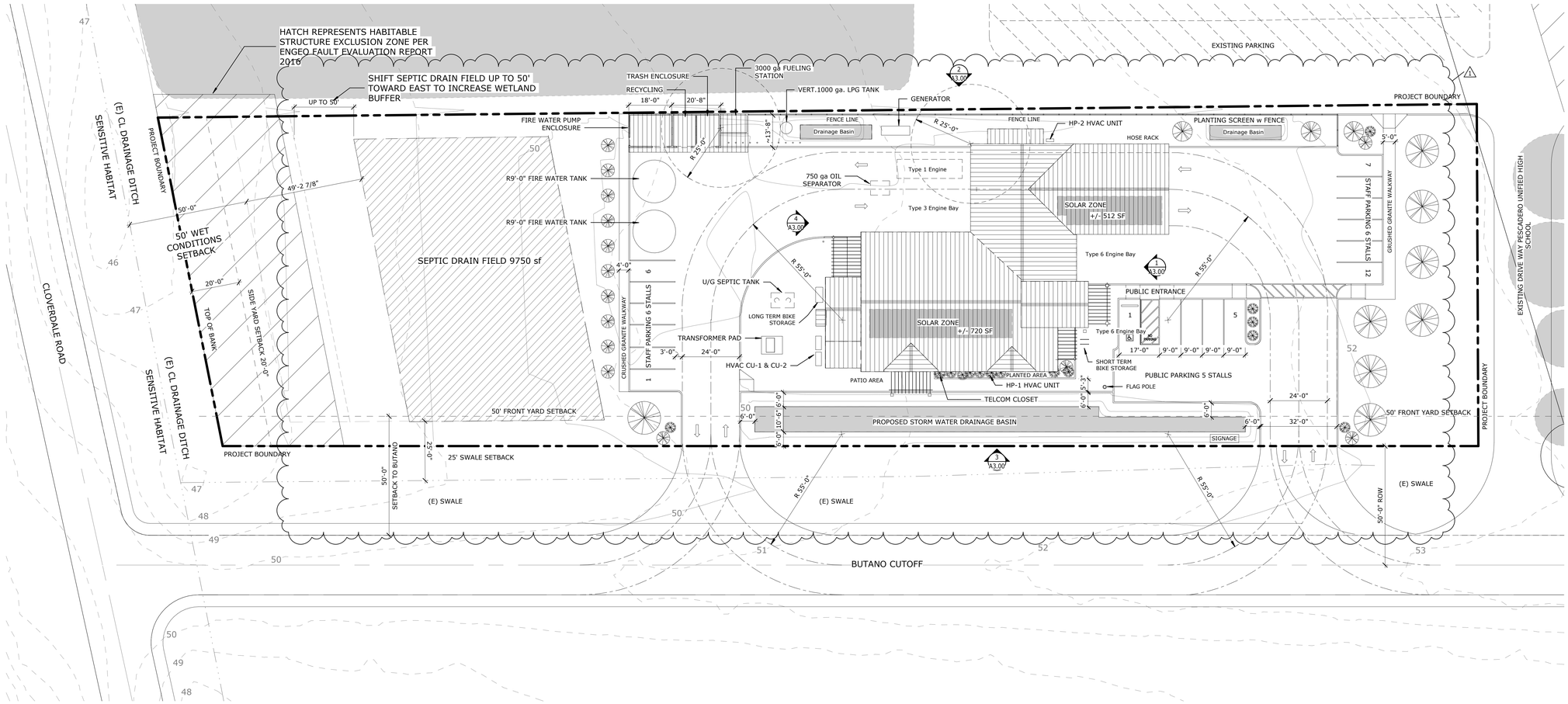

PROPOSED SITE PLAN

1" = 20'-0"

Existing La Honda High School Site

PROJECT SUMMARY

OWNER: SMC - LA HONDA PESCADERO UNIFIED HIGH SCHOOL DISTRICT
CALFIRE - LEASEE OPERATOR

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FLOOD ZONE: MAJORITY ZONE X. REAR AGRICULTURE & PLAY FIELDS IN ZONE AE WITH FLOODWAY

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2019	CPC	CALIFORNIA PLUMBING CODE
2019		CALIFORNIA ENERGY CODE
2019	CHBC	CALIFORNIA HISTORICAL BUILDING CODE
2019	CFC	CALIFORNIA FIRE CODE
2019		CALIFORNIA GREEN BUILDING STANDARDS CODE

PARKING REQUIREMENTS

	PUBLIC REQ'D	PUBLIC PROV'D	PRIVATE REQ'D	PRIVATE PROV'D
STANDARD 9'-0" X 19'-0" STALLS	-	5	13	13
OVERSIZED 10'-0" X 20'-0" STALLS	-	-	-	-
ACCESSIBLE PARKING CBC 11B §208.2				
STANDARD	-	-	-	-
VAN	1	1	-	-
ELECTRIC VEHICLE CHARGING SPACES CGCBC §5.106.5.3, CBC 11B §228.3.2.1				
STANDARD	1	1	-	-
ACCESSIBLE STANDARD	0	0	-	-
ACCESSIBLE VAN			-	-
CLEAN AIR/VANPOOL SPACES CGCBC §5.106.5.2	1	1	-	-
COMPACT SPACES SMC;25 % LOTS OVER 20 STD. STALLS	N/A	0	N/A	-

BICYCLE

SHORT TERM BICYCLE PARKING
CGCBC §5.106.4.1.1
REQUIRED: 1
PROVIDED: 2

LONG TERM BICYCLE PARKING
CGCBC §5.106.4.1.2
REQUIRED: 1 X DBL RACK
PROVIDED: 1 X DBL RACK

GENERAL NOTES

1. THE ACCESSIBLE ROUTE OF TRAVEL (OR PATH OF TRAVEL) IS A CONTINUOUS UNOBSTRUCTED WALKWAY (OR PATH) CONNECTING ALL ACCESSIBLE ELEMENTS AND SPACES AS INDICATED ON THIS SHEET. THE CONTRACTOR SHALL VERIFY THAT A PERSON CAN NEGOTIATE THE ACCESSIBLE ROUTE WITH A DISABILITY USING A WHEELCHAIR AND THAT THE ROUTE IS ALSO SAFE AND USABLE BY PERSONS WITH OTHER DISABILITIES.
2. ALL WALKS, SIDEWALKS AND LANDINGS THAT ARE PART OF THE ACCESSIBLE ROUTE OF TRAVEL SHALL HAVE A CONTINUOUS COMMON SURFACE, NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2 INCH, AND SHALL HAVE A MINIMUM WIDTH OF 48 INCHES, UNLESS NOTED OTHERWISE. THE SLOPE IN THE DIRECTION OF TRAVEL SHALL BE LESS THAN 1:20 (5%) WITH A MAXIMUM CROSS SLOPE OF 1/4 INCH PER FOOT (2%), UNLESS OTHERWISE NOTED.
3. ALL DESIGNATED ACCESSIBLE RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12 (8.33%) IN THE DIRECTION OF TRAVEL WITH A MAXIMUM CROSS SLOPE OF 1/4 INCH PER FOOT (2%), UNLESS OTHERWISE NOTED.
4. AT FLATWORK, PROVIDE CONTROL JOINTS AS INDICATED AND EXPANSION JOINTS AT 20'-0" O.C. MAXIMUM, SEE DETAIL X/XX.XX
5. SEE CIVIL DRAWINGS FOR FULL EXTENT OF SITE WORK IN THIS CONTRACT.

Dreyfuss+ Blackford architecture
3540 Folsom Blvd
Sacramento, CA
95816-6699
T 916.453.1234
dreyfussblackford.com

PDU PROJECT DEVELOPMENT UNIT
COUNTY OF SAN MATEO

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SCHEMATIC DESIGN

	REVISION	BY	DATE
1	SMC PDU REQUESTED REVISION		01/28/22

SAN MATEO COUNTY

PESCADERO FIRE STATION 59 RELOCATION PROJECT

LOCAL COASTAL PROGRAM AMENDMENT
Schematic Design Submission

SCHEMATIC SITE PLAN

NORTH

C0006.00
As indicated
05/11/2020

A1.01

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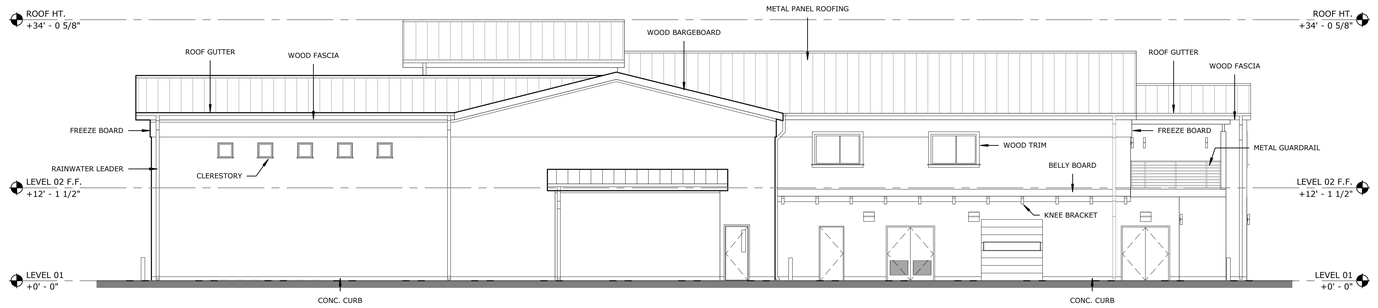
3/7/2022 9:27:33 AM

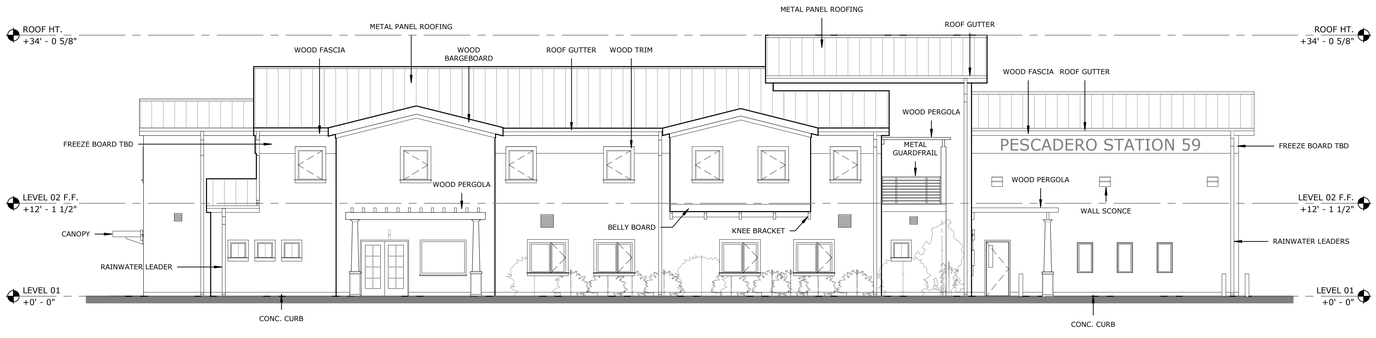
East Elevation

1/8" = 1'-0"



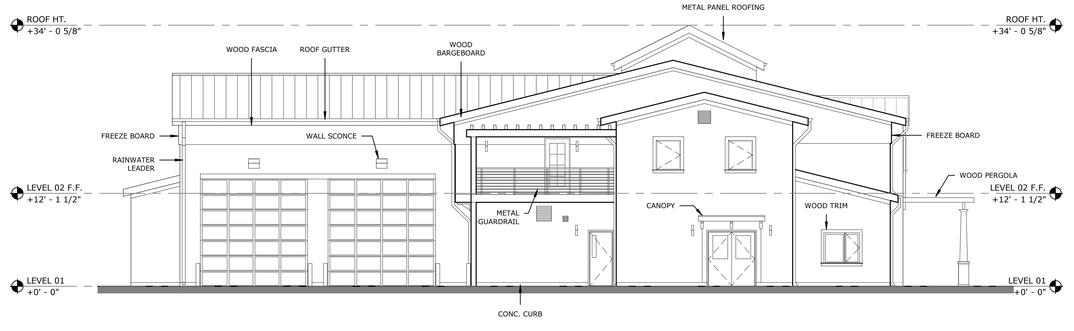
North Elevation

1/8" = 1'-0"



South Elevation

1/8" = 1'-0"



West Elevation

1/8" = 1'-0"

Dreyfuss+ Blackford architecture
3540 Folsom Blvd
Sacramento, CA
95816-6699
T 916.453.1234
dreyfussblackford.com

PDU PROJECT
DEVELOPMENT UNIT
COUNTY OF SAN MATEO

GENERAL NOTES

1. EXTERIOR MATERIAL TBD
2. ISSUED IN SUPPORT OF SMC LCP AMENDMENT #

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SCHEMATIC DESIGN

REVISION	BY	DATE

SAN MATEO COUNTY

PESCADERO FIRE STATION 59 RELOCATION PROJECT

LOCAL COASTAL PROGRAM AMENDMENT
Schematic Design Submission

EXTERIOR ELEVATIONS

NORTH

C0006.00
1/8" = 1'-0"
05/11/2020

A3.00

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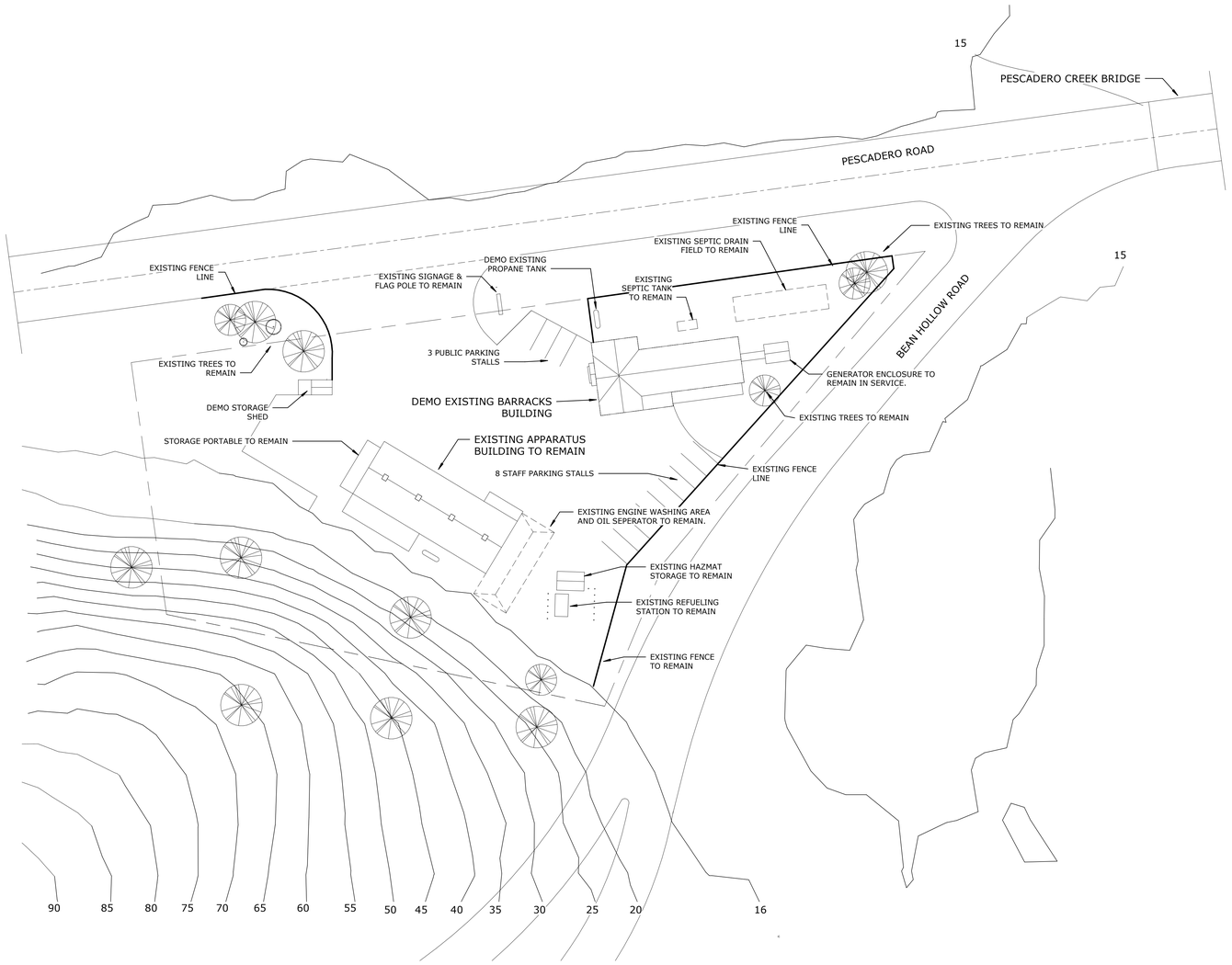

1 EXISTING SITE PLAN
1" = 30'-0"

THIS SITE PLAN IS ISSUED FOR INFORMAITON ONLY. THE INFORMATION CONTAINED HEREIN IS A REPRESENTATION ONLY. WHEREVER APPLICABLE REFER COUNTY OF SAN MATEO RECORDS FOR ASSOCIATED LEGAL MAPS AND SURVEYS.

PROJECT SITE, VICINITY MAP

SITE DATA:

CALFIRE PESCADERO STATION 59
1200 PESCADERO RD, PESCADERO, CA.
OWNER: SAN MATEO COUNTY
APN: 086-160-050.
SITE AREA: 1.28 ACRES

ZONING: PAD/ CD
LCP LAND USE: INSTITUTIONAL
VEHICULAR PARKING:
3 VISITOR
8 STAFF
TSUNAMI ZONE- NO
FLOOD ZONE: FLAT AREAS WITHIN ZONE AE. HILLSIDE IN ZONE X.

APPARATUS BUILDING AREA: 3128 GSF (INCLUDING 105 NSF LOFT)
STORAGE SHED: 80 NSF
STORAGE CONTAINER: 160 NSF
HAZMAT SHED: 176 NSF
BARRACKS BUILDING; AREA: 2175 GSF
GENERATOR SHED: 85 SF

FIRE STATION 59 RELOCATION PROJECT DESCRIPTION:

PARTIAL DEMO OF EXISTING FIRE STATION 59 TO INCLUDE:

- DEMO BARRACKS BUILDING. PROVIDE GRAVEL PARKING SURFACE AT LOCATION.
- DEMO PROPANE TANK AND ALL CONNECTIONS.
- DEMO STORAGE SHED.

RETAIN AND KEEP IN SERVICE THE FOLLOWING SITE ELEMENTS:

- APPARATUS BUILDING.
- HAZMAT STORATE SHED.
- STORAGE CONTAINER.
- REFUELING STATION.
- GENERATOR SHED. RELOCATE PANELS ON BARRACKS BUILDING AND DISTRIBUTION WIRING AS REQUIRED TO MAINTAIN SERVICE TO ALL RETAINED BUILDINGS, SERVICES AND OUTDOOR EQUIPMENT. POTENTIAL RELOCATION TO INCLUDE EXISTING UTILITY POLE, OVER HEAD LINES AND ANY EXISTING OR PROPOSED UNDERGROUND SERVICE.
- CSA-11 WATER SERVICE FOR DOMESTIC WATER TO BE DISCONNECTED. PROVIDE POTABLE DOMESTIC WATER STORAGE AND TREATMENT SYSTEM TO SERVE APPARATUS BUILDING AND ALL ASSOCIATED FUNCTIONS.
- RETAIN EXISTING SEPTIC SYSTEM. MAKE GOOD ALL EXISTING CONNECTIONS TO APPARATUS BUILDING AND OIL SEPARATOR. SYSTEM VIABILITY TO BE DETERMINED. OPTION TO RELOCATE SEPTIC SYSTEM TO BE VERIFIED IN THE FIELD.

Dreyfuss+ Blackford architecture
3540 Folsom Blvd
Sacramento, CA
95816-6699
T 916.453.1234
dreyfussblackford.com

PDU PROJECT DEVELOPMENT UNIT COUNTY OF SAN MATEO

THIS DRAWING IS NOT FINAL OR TO BE USED FOR CONSTRUCTION UNTIL IT IS SIGNED BY THE ARCHITECT/ENGINEER

REVISION	BY	DATE

SAN MATEO COUNTY

PESCADERO FIRE STATION 59 RELOCATION PROJECT

LOCAL COASTAL PROGRAM AMENDMENT
Schematic Design Submission

EXISTING SITE PLAN - PARTIAL DEMO PLAN

NORTH

C0006.00
1" = 30'-0"
05/11/2020

A1.02

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EARTHWORK

CUT:	
PAVEMENT SECTIONS	1,000 CU-YD
BIORETENTION BASINS	100 CU-YD
STRUCTURAL FOUNDATIONS	350 CU-YD
ROUGH GRADING	620 CU-YD
SANITARY SEWER DRAINFIELD	1,100 CU-YD
	3,170 CU-YD
FILL:	
ROUGH GRADING	570 CU-YD
	570 CU-YD
BALANCE:	
CUT	3,170 CU-YD
FILL	570 CU-YD
	2,600 CU-YD (CUT)

EARTHWORK QUALITIES ARE APPROXIMATELY QUANTITIES AND ARE FURNISHED FOR PLANNING SUPPOSES ONLY. THE ACTUAL AMOUNT OF EARTH MOVED WILL VARY DEPENDING ON THE PROPERTIES OF THE SOILS ENCOUNTERED, THE CONTRACTOR'S METHOD OF OPERATION, ETC. BIDDERS ARE RESPONSIBLE FOR DOING THEIR OWN QUANTITY TAKEOFF. ALL CUT/FILL CALCULATIONS DO NOT INCLUDE ANY SWELLING OR SHRINK FACTORS. QUANTITIES DO NOT INCLUDE OVER-EXCAVATION, TRENCHING, STRUCTURAL FOUNDATION OR PIERS (IF ANY).

NOTES

1. STORMWATER HAS BEEN SCHEMATICALLY SHOWN TO ADHERE TO THE SAN MATEO COUNTY DRAINAGE REQUIREMENTS. THIS PROJECT WILL BE SUBJECT TO THE BASIC DRAINAGE REVIEW FOR THE COUNTY PLANNING OR BUILDING PERMIT. THE CURRENT SITE SHOWS 33,781 SF OF IMPERVIOUS AREA, AND THE PROJECT WILL UTILIZE BIORETENTION RAIN GARDENS WITH INFILTRATION TO ADHERE TO TREATMENT REQUIREMENTS, AND THE PEAK FLOW AND VOLUME CONTROL DESIGN CRITERIA. THE SITE HAS BEEN SHOWN TO INFILTRATE AT A RATE OF 7.44 IN/HR.
2. THE SANITARY SEWER DRAIN FIELD HAS BEEN SCHEMATICALLY SHOWN TO ACCOMMODATE 1,000 GAL/DAY, 77 GAL/DAY FOR 13 HABITANTS. THE DRAIN FIELD WILL A BE SHALLOW SEPTIC DRAIN FIELD.
3. A CSA-11 WATER MAIN EXTENSION IS PLANNED TO PROVIDE SERVICE TO THE SITE AT BUTANO ROAD.
4. POWER POLE LOCATIONS ARE APPROXIMATE. A GROUND TOPOGRAPHIC SURVEY IS REQUIRED TO VERIFY EXACT LOCATIONS.

ABBREVIATIONS

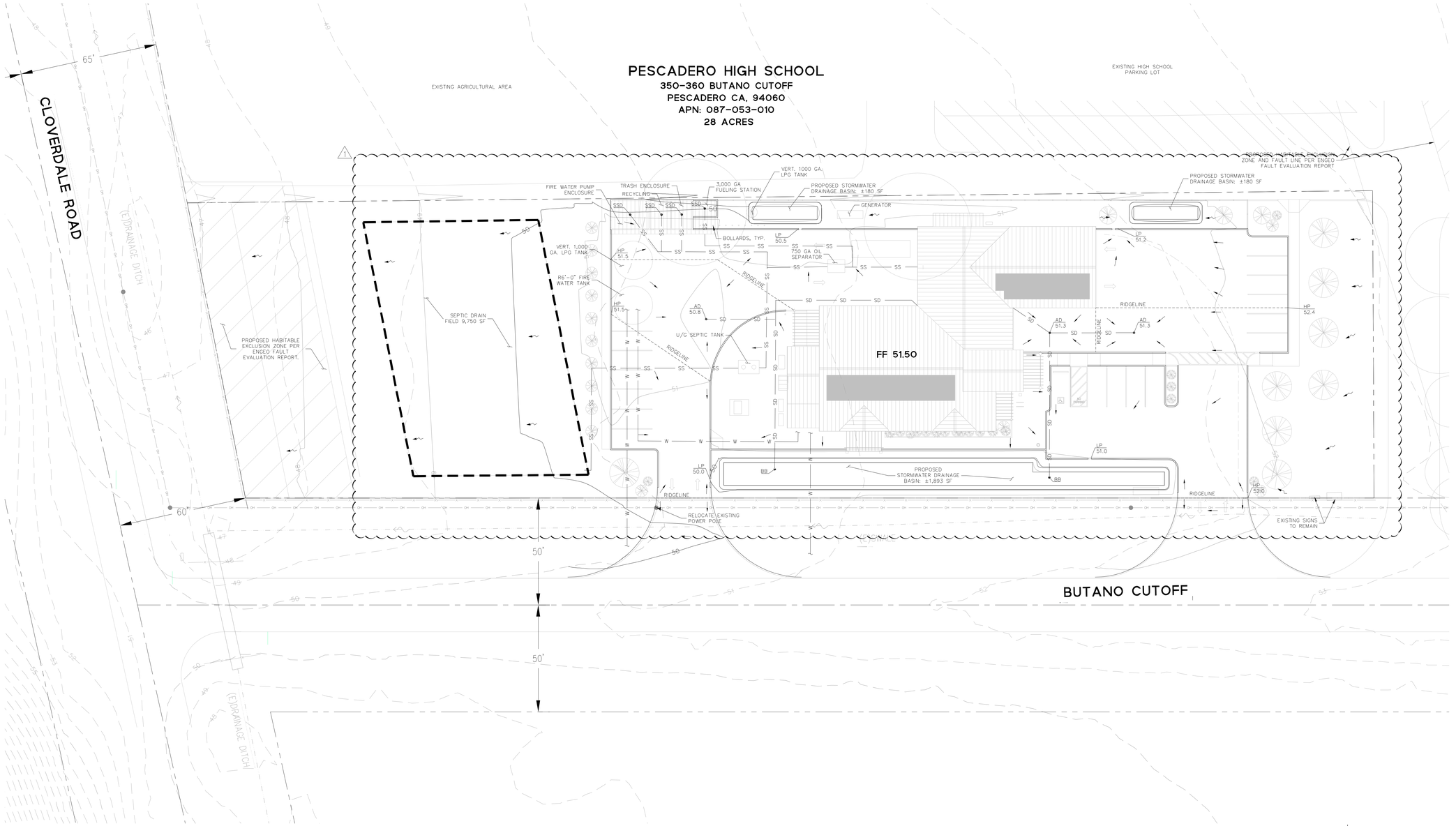
AD	AREA DRAIN
BB	BUBBLER BOX
HP	HIGH POINT
LP	LOW POINT
SD	STORM DRAIN
SS	SANITARY SEWER
W	WATER

LEGEND

- PROPERTY LINE
- ADJACENT LOT LINE
- EASEMENT LINE
- PODIUM WALL
- SD — STORM DRAIN LINE
- SS — SANITARY SEWER LINE
- W — DOMESTIC WATER LINE
- OH — OVERHANG LINE
- STORM DRAIN AREA DRAIN (AD)
- STORM DRAIN BUBBLER BOX (BB)
- SANITARY SEWER DRAIN (SSD)
- TREATMENT BASIN
- 40 — PROPOSED MAJOR CONTOUR
- 41 — PROPOSED MINOR CONTOUR
- 40 — EXISTING MAJOR CONTOUR
- 41 — EXISTING MINOR CONTOUR

PESCADERO HIGH SCHOOL

350-360 BUTANO CUTOFF
PESCADERO CA, 94060
APN: 087-053-010
28 ACRES



GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

1"=20'

NORTH

Dreyfuss+ Blackford architecture
3540 Folsom Blvd
Sacramento, CA
95816-6699
T 916.453.1234
dreyfussblackford.com

PDU PROJECT
DEVELOPMENT UNIT
COUNTY OF SAN MATEO

THIS DRAWING IS NOT FINAL OR TO BE USED FOR CONSTRUCTION UNTIL IT IS SIGNED BY THE ARCHITECT/ENGINEER

NO.	REVISION	DATE
1	SMC PDU REQUESTED REVISION	01/28/2022

SAN MATEO COUNTY

PESCADERO FIRE STATION 59 RELOCATION PROJECT

PESCADERO FIRE STATION 59 RELOCATION PROJECT

PRELIMINARY GRADING, DRAINAGE, AND UTLITY PLAN

20192026
1:20
01/26/2022

C2.0

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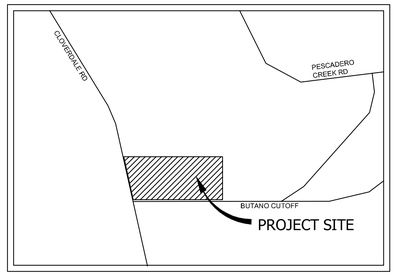
NOTES

1. THE BOUNDARY SHOWN IS DRAWN FROM RECORD INFORMATION, A FIELD SURVEY SHALL BE COMPLETED TO VERIFY THE SITE BOUNDARY.
2. 1 FT CONTOURS ARE SHOWN BASED ON USGS DATA.
3. EXISTING UTILITY INFORMATION IS SHOWN BASED ON VISIBLE FACILITIES ON AERIAL IMAGERY.



VICINITY MAP
NOT TO SCALE

LEGEND

- PROPERTY LINE
- ADJACENT LOT LINE
- ROAD RIGHT-OF-WAY
- ROAD CENTER LINE
- STORM DRAIN LINE
- SANITARY SEWER LINE
- DOMESTIC WATER LINE
- FLOW LINE/SWALE
- OVERHEAD LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

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

1" = 20'

NORTH

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PDU PROJECT DEVELOPMENT UNIT
COUNTY OF SAN MATEO

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REVISION	BY	DATE

SAN MATEO COUNTY

PESCADERO FIRE STATION 59 RELOCATION PROJECT

PESCADERO FIRE STATION 59 RELOCATION PROJECT

EXISTING CONDITIONS

20192026
1:20
06/02/2020

C1.0

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COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C

COUNTY OF SAN MATEO
CALIFORNIA

PESCADERO HIGH SCHOOL
CSA 11 WATER LINE EXTENSION
TOTAL PROJECT LENGTH APPROXIMATELY 1.27 MILES

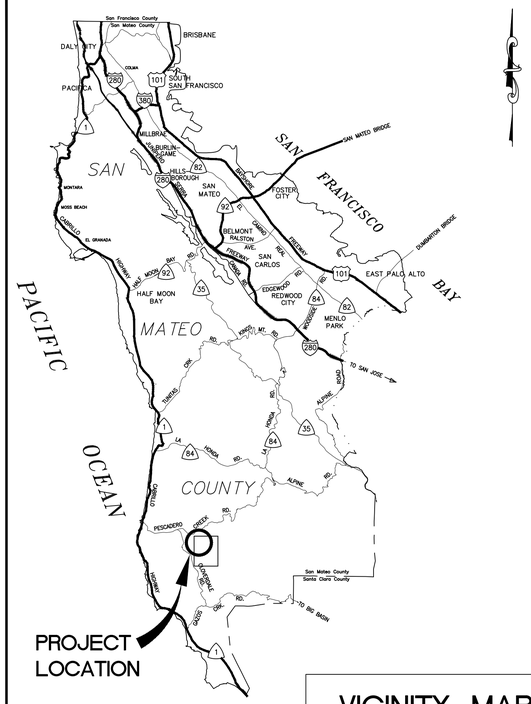
TO BE SUPPLEMENTED BY STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED MAY 2018 AND ADOPTED BY SAN MATEO COUNTY, FEBRUARY 11, 2020, BY RESOLUTION NO. 077277

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019



VICINITY MAP
NO SCALE

LOCATION MAP
NO SCALE

ABBREVIATIONS:

AB (CL.2)	AGGREGATE BASE (CLASS 2)
Abn	ABANDON
AC	ASPHALT CONCRETE
AC (TYPE B)	ASPHALT CONCRETE (TYPE B)
ACP	ASBESTOS CONCRETE PIPE
AGG	AGGREGATE
AV	AVENUE
BC	BACK OF CURB
BLB BOX	BUBBLE-UP BOX
BW	BACK OF WALK
CATV	CABLE TV
CONC	CONCRETE
C & G	CURB AND GUTTER
CL	CENTERLINE
CTN	CEMENT TREATED NATIVE
D	AVERAGE WIDTH OF DRIVEWAY RAMP
DI	DRAINAGE INLET, DROP INLET
DIP	DUCTILE IRON PIPE
D/W	DRIVEWAY
ELE	ELEVATION
ETW	EDGE OF TRAVEL WAY
EP	EDGE OF PAVEMENT
EX, EXIST	EXISTING
FD	FOUND
FG	FINISHED GROUND
FH	FIRE HYDRANT
FL	FLOW LINE
G	GAS LINE
GB	GRADE BREAK
GV	GAS VALVE
ID	INSIDE DIAMETER
INV	INVERT
JP	JOINT UTILITY POLE
LG, LIP	LIP OF GUTTER
LT, L	LEFT
LH	SANITARY SEWER LAMPHOLE
MAX	MAXIMUM
MB	MAILBOX
MB (#)	MAILBOXES (QUANTITY)
MIN	MINIMUM
MPH	MILES PER HOUR
N\S	NAIL & SHINER
O.G.	ORIGINAL GROUND, ON GRADE
PBMH	SBC/PAC BELL MANHOLE
PCC	PORTLAND CONCRETE CEMENT
PK	PARKER-KALON NAIL
PNT	POINT
PR	PROPOSED
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INFLECTION
RCP	REINFORCED CONCRETE PIPE
RT, R	RIGHT
R/W, ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SHT	SHEET
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSFI	SANITARY SEWER FLUSHING INLET
SSMH	SANITARY SEWER MANHOLE
ST	STREET
STA	STATION
T	TELEPHONE
TB	TOP OF BANK
TC	TOP OF CURB
TD	TOP OF DIKE
TG	TOP OF GRATE
TS	TOP OF SIDEWALK
TYP	TYPICAL
UD	UNDER DRAIN
UND	UNDERGROUND
UNK	UNKNOWN
VCP	VITRIFIED CLAY PIPE
VG	VALLEY GUTTER
WM	WATER METER
WM (#)	WATER METERS (QUANTITY)
WV	WATER VALVE
WV (#)	WATER VALVES (QUANTITY)
WW	WALKWAY
ø	DIAMETER

LEGEND:

- SD — STORM DRAIN LINE (EX) — SD
- STORM DRAIN LINE (EX) PROFILE
- SS — SANITARY SEWER LINE "ACTIVE" — SS
- SANITARY SEWER LINE "ACTIVE" PROFILE
- W — WATER LINE "ACTIVE" — W
- WATER LINE "ACTIVE" PROFILE
- \W\ — ACP WATER LINE (Abn) — \W\
- ACP WATER LINE (Abn) PROFILE
- \G\ — GAS LINE (Abn) — \G\
- GAS LINE (Abn) PROFILE
- G — GAS LINE "ACTIVE" — G
- GAS LINE "ACTIVE" PROFILE
- JT — JOINT COMMUNICATION LINE (EX) — JT
- JOINT COMMUNICATION LINE (EX) PROFILE
- OHE — JOINT COMMUNICATION LINE (EX) — OHE
- RIGHT OF WAY
- CONTRACTOR STAGING AREA
- PROPOSED PIPE
- NATIVE BACKFILL
- CLASS 2 AGGREGATE BASE – AB (CL. 2) (GRAVEL)
- CLASS 3 CONCRETE
- MISCELLANEOUS ASPHALT CONCRETE
- DEEP LIFT AREAS (0.50' DEEP ASPHALT CONCRETE)
- ROCK SWALE AND FRENCH DRAIN

LEGEND:

- FH — FIRE HYDRANT
- FH — FIRE HYDRANT MARKERS
- MB — MAILBOX
- SIGN
- MONUMENT
- BM — BENCHMARK
- 101 — SURVEY CONTROL POINT
- 1 — DRIVEWAY NUMBER
- 000 — HOUSE NUMBER ADDRESS
- A/0 — DETAIL NUMBER AND SHEET
- EXISTING TREE
- x — x — FENCE / WALL
- N/W — NAIL AND WASHER
- (XXX.XX) = EXISTING ELEVATION
- XXX.XX = PROPOSED ELEVATION
- +0.00 / (00.00) 00.00 = STATION / (EXIST ELE) PR ELE AT LIP OF GUTTER
- WM — WATER METER
- WV — WATER VALVE
- (N) BLOWOFF VALVE
- GV — GAS VALVE
- JOINT UTILITY POLE
- TELEPHONE POLE
- GUY WIRE ANCHOR
- SSMH — SANITARY SEWER MANHOLE
- SSCO — SANITARY SEWER CLEANOUT
- SSFI — SANITARY SEWER FLUSHING INLET
- SDMH — STORM DRAIN MANHOLE
- UD — UNDERDRAIN
- BBLBX — BUBBLE-UP BOX
- MH — UNKNOWN MANHOLE

NOTES:

1. CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES WITHIN THE PROJECT LIMITS, CONSISTING OF ROAD RIGHT-OF-WAY, RIGHTS OF ENTRY AND/OR PROJECT CONFORMS, AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.
2. CONTINUOUS DUST CONTROL SHALL BE PROVIDED AS REQUIRED BY SECTION 17 OF THE SPECIAL PROVISIONS AND AS DIRECTED BY THE ENGINEER.
3. LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE UTILITIES TO DETERMINE EXACT LOCATIONS AND DEPTHS. CONTRACTOR SHALL CALL USA NORTH 811 (USA) UNDERGROUND SERVICE ALERT A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY EXCAVATION OR TRENCHING WORK. USA MAY BE CONTACTED EITHER ON-LINE AT USANORTH811.ORG OR BY PHONE BY DIALING (800) 227-2600 OR 811. WHEN CALLING, BE PREPARED TO GIVE LOCATION AND NATURE OF WORK, START DATE, COMPANY NAME, ADDRESS AND TELEPHONE NUMBER.
4. PLANS MAY NOT SHOW ALL EXISTING WATER, GAS OR SANITARY SEWER LATERALS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND PRESERVATION OF ALL SUCH FACILITIES WHICH ARE NOT TO BE RELOCATED.
5. CONTRACTOR IS ADVISED THAT EXCAVATION MAY CONFLICT WITH SANITARY SEWER LATERALS, GAS LINES, WATER LINES AND OTHER UNDERGROUND UTILITIES. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. DRIVEWAY OPENINGS AND CONFORM LOCATIONS SHOWN ARE APPROXIMATE ONLY. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER. SURFACED SHOULDER CONFORM LIMITS ARE AS INDICATED AT 3 FEET FROM OUTSIDE EDGE OF THE GUTTER, UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR OTHERWISE NOTED ON THE PLANS.
7. NO TREES, VEGETATION OR IMPROVEMENTS (INCLUDING FENCES) SHALL BE REMOVED WITHOUT THE PRIOR WRITTEN CONSENT AND APPROVAL OF THE ENGINEER. VEGETATION AND IMPROVEMENTS WHICH ARE DESIGNATED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. REFER TO PROJECT SPECIAL PROVISIONS SECTION 16 REGARDING REQUIREMENTS FOR ADVANCE NOTIFICATION OF PROPERTY OWNERS.
8. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 5-1.07 OF THE STANDARD SPECIFICATIONS. THE SURVEY AND ASSOCIATED STAKING SHALL BE IN CONFORMANCE WITH SECTION 100, CONSTRUCTION STAKING AND LAYOUT OF THE SPECIAL PROVISIONS.
9. WHEN DIRECTED BY THE ENGINEER, CUT AND FILL SLOPE RATIOS SHALL BE VARIED TO AVOID TREES OR OTHER EXISTING IMPROVEMENTS.
10. CONTRACTOR SHALL EXERCISE CARE WHEN EXCAVATING NEAR TREES AND ROOTS OF TREES TO REMAIN. SEE SECTION 19 OF THE SPECIAL PROVISIONS.
11. ANY DAMAGE, AS A RESULT OF THE CONTRACTOR'S OPERATION, TO PAVEMENT AND BASE MATERIAL THAT IS TO REMAIN SHALL BE REPAIRED, OR REMOVED AND REPLACED WITH SAME TYPE OF MATERIAL OR APPROVED EQUAL, AS DIRECTED BY THE ENGINEER, AND AT THE SOLE EXPENSE OF THE CONTRACTOR. THE ENGINEER SHALL BE THE SOLE JUDGE OF THE ADEQUACY OF THE COMPLETED REMEDIAL WORK.

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-0001.DWG (G-001)

NOT FOR CONSTRUCTION

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

REGISTERED PROFESSIONAL ENGINEER DILLON J. MORRA No. C 79186 Exp. 3-31-21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

		DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL TITLE SHEET, VICINITY MAP AND LOCATION MAP
		CHECKED BY: DM	
		DRAWN BY: CB	
REVISION	DATE	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

G-001
SHEET 1 OF 23

LIST OF DRAWINGS

#	DRAWING	FILE	TITLE	30%	90%
GENERAL					
1	G–001	1/49##	TITLE SHEET, VICINITY MAP, AND LOCATION MAP	X	X
2	G–002	1/49##	LIST OF DRAWINGS	X	X
3	G–003	1/49##	CONSTRUCTION BEST MANAGEMENT PRACTICES	X	X
4	G–101	1/49##	KEY MAP & SURVEY CONTROL DIAGRAM	X	X
5	G–102	1/49##	POTHOLE SCHEDULE & GEOTECHNICAL BORINGS		X
CIVIL & PIPELINE					
6	C–101	1/49##	PESCADERO CREEK ROAD – PLAN AND PROFILE 1	X	X
7	C–102	1/49##	PESCADERO CREEK ROAD – PLAN AND PROFILE 2	X	X
8	C–103	1/49##	PESCADERO CREEK ROAD – PLAN AND PROFILE 3	X	X
9	C–104	1/49##	PESCADERO CREEK ROAD – PLAN AND PROFILE 4	X	X
10	C–105	1/49##	PESCADERO CREEK ROAD – PLAN AND PROFILE 5	X	X
11	C–106	1/49##	CLOVERDALE ROAD – PLAN AND PROFILE 6	X	X
12	C–107	1/49##	CLOVERDALE ROAD – PLAN AND PROFILE 7	X	X
13	C–108	1/49##	CLOVERDALE ROAD – PLAN AND PROFILE 8	X	X
14	C–109	1/49##	CLOVERDALE ROAD – PLAN AND PROFILE 9	X	X
15	C–110	1/49##	CLOVERDALE ROAD – PLAN AND PROFILE 10	X	X
16	C–111	1/49##	CLOVERDALE ROAD – PLAN AND PROFILE 11	X	X
17	C–112	1/49##	BUTANO CUTOFF – PLAN AND PROFILE 12	X	X
18	C–113	1/49##	BUTANO CUTOFF – PLAN AND PROFILE 13	X	X
19	C–114	1/49##	BUTANO CUTOFF – PLAN AND PROFILE 14	X	X
20	C–115	1/49##	HS SERVICE CONNECTION PLAN	X	X
21	C–501	1/49##	CIVIL DETAILS 1		X
22	C–502	1/49##	CIVIL DETAILS 2		X
23	C–503	1/49##	SAN MATEO COUNTY STANDARD DRAWINGS		

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12–31–2019

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964–G002.DWG (G–002)

NOT FOR CONSTRUCTION

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03–31–2021	

REGISTERED PROFESSIONAL ENGINEER
DILLON J. MORRA
No. C 79186
Exp. 3-31-21
Civil
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL **LIST OF DRAWINGS**
		CHECKED BY: DM	
		DRAWN BY: CB	
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12–17–2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

G-002
SHEET 2 OF 23

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

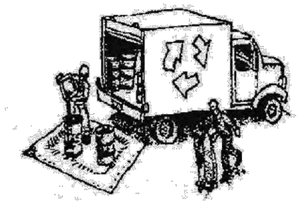
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

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

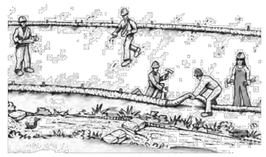
Maintenance and Parking

- ❑ 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.

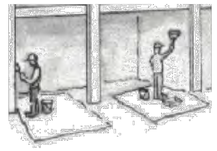
Concrete, Grout & Mortar Application

- ❑ 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 chips 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 your 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!

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-G003.DWG (G-003)

NOT FOR CONSTRUCTION

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

REGISTERED PROFESSIONAL ENGINEER
DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL **CONSTRUCTION BEST MANAGEMENT PRACTICES**
		CHECKED BY: DM	
		DRAWN BY: CB	
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

G-003
SHEET 3 OF 23

APPROVED:

DATE: _____

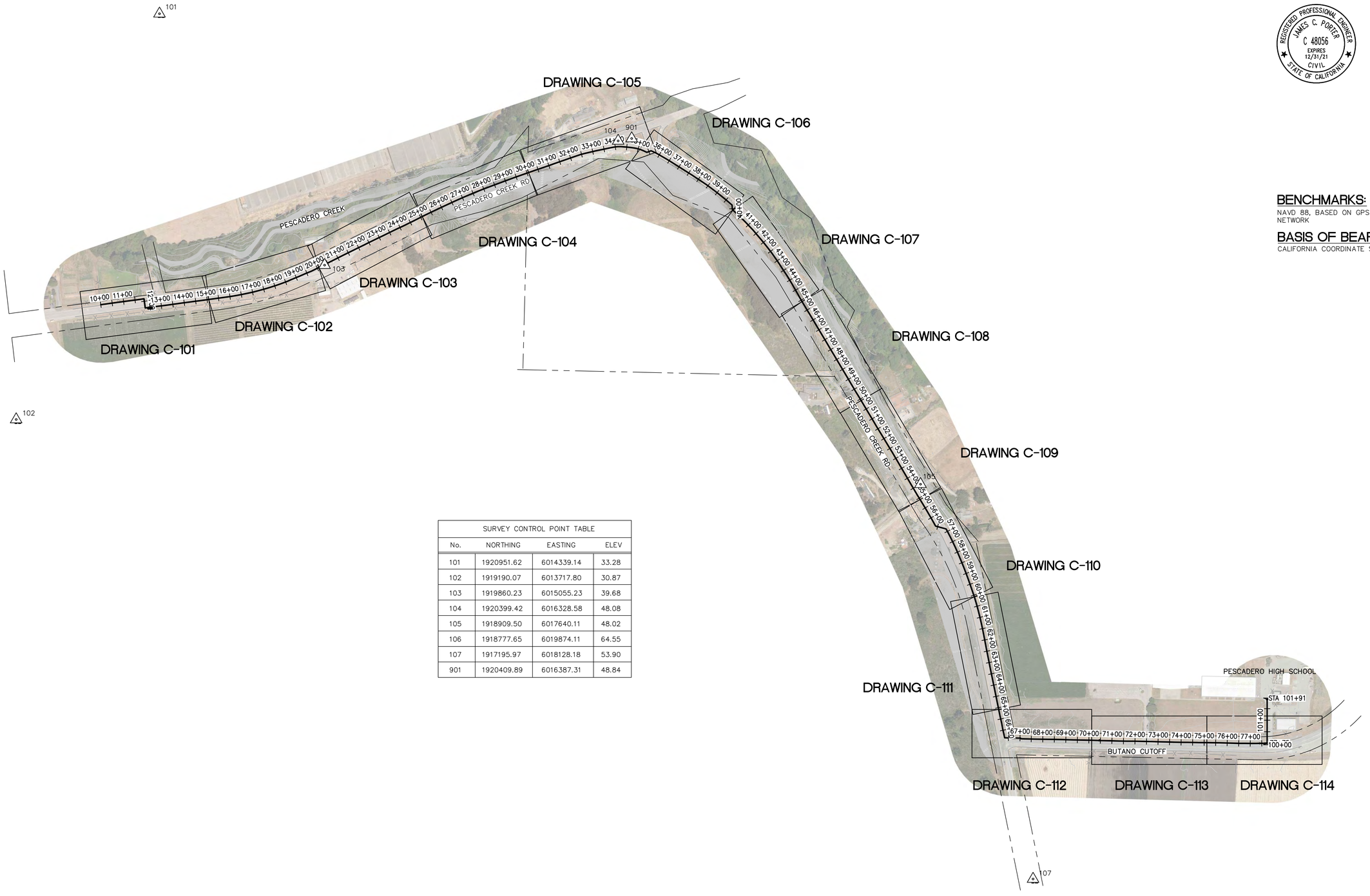
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

BENCHMARKS:

NAVD 88, BASED ON GPS OBSERVATIONS USING THE CSDS VSN NETWORK

BASIS OF BEARINGS:

CALIFORNIA COORDINATE SYSTEM NAD83, ZONE 3



SURVEY CONTROL POINT TABLE			
No.	NORTHING	EASTING	ELEV
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102	1919190.07	6013717.80	30.87
103	1919860.23	6015055.23	39.68
104	1920399.42	6016328.58	48.08
105	1918909.50	6017640.11	48.02
106	1918777.65	6019874.11	64.55
107	1917195.97	6018128.18	53.90
901	1920409.89	6016387.31	48.84

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APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

REGISTERED PROFESSIONAL ENGINEER — DILLON J. MORRA — No. C 79186 Exp. 3-31-21 — CIVIL — STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: DM
CHECKED BY: DM
DRAWN BY: CB

COUNTY OF SAN MATEO
PESCADERO HIGH SCHOOL
KEY MAP AND SURVEY CONTROL DIAGRAM

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

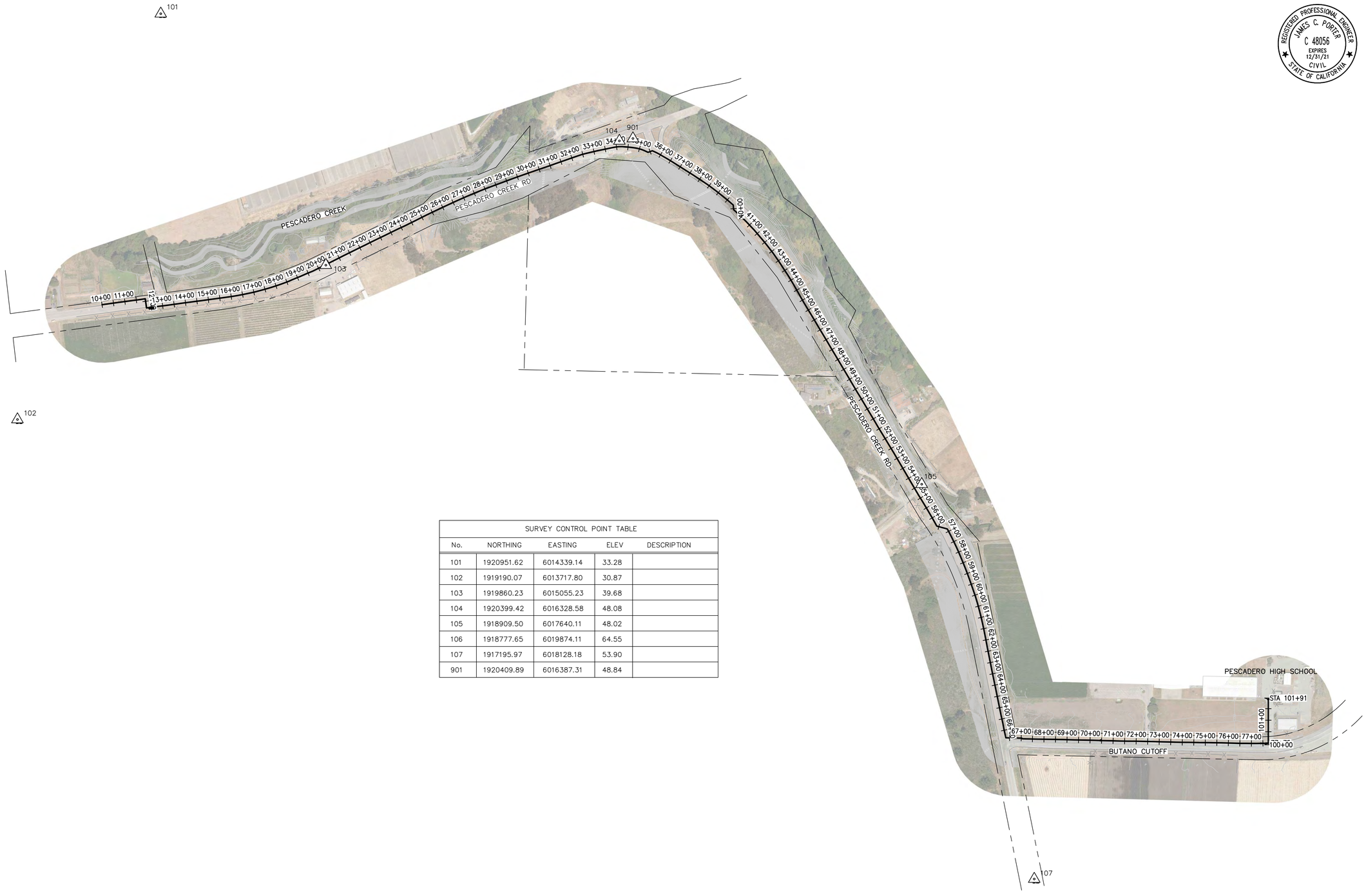
555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

G-101
SHEET 4 OF 23

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-G101.DWG (G-101)



SURVEY CONTROL POINT TABLE				
No.	NORTHING	EASTING	ELEV	DESCRIPTION
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103	1919860.23	6015055.23	39.68	
104	1920399.42	6016328.58	48.08	
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106	1918777.65	6019874.11	64.55	
107	1917195.97	6018128.18	53.90	
901	1920409.89	6016387.31	48.84	

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

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Dillon J. Morra	
GHD, Inc.	
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DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

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DRAWN BY: CB

COUNTY OF SAN MATEO
PESCADERO HIGH SCHOOL
POTHOLE SCHEDULE AND GEOTECHNICAL BORINGS

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
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G-102
SHEET 5 OF 23

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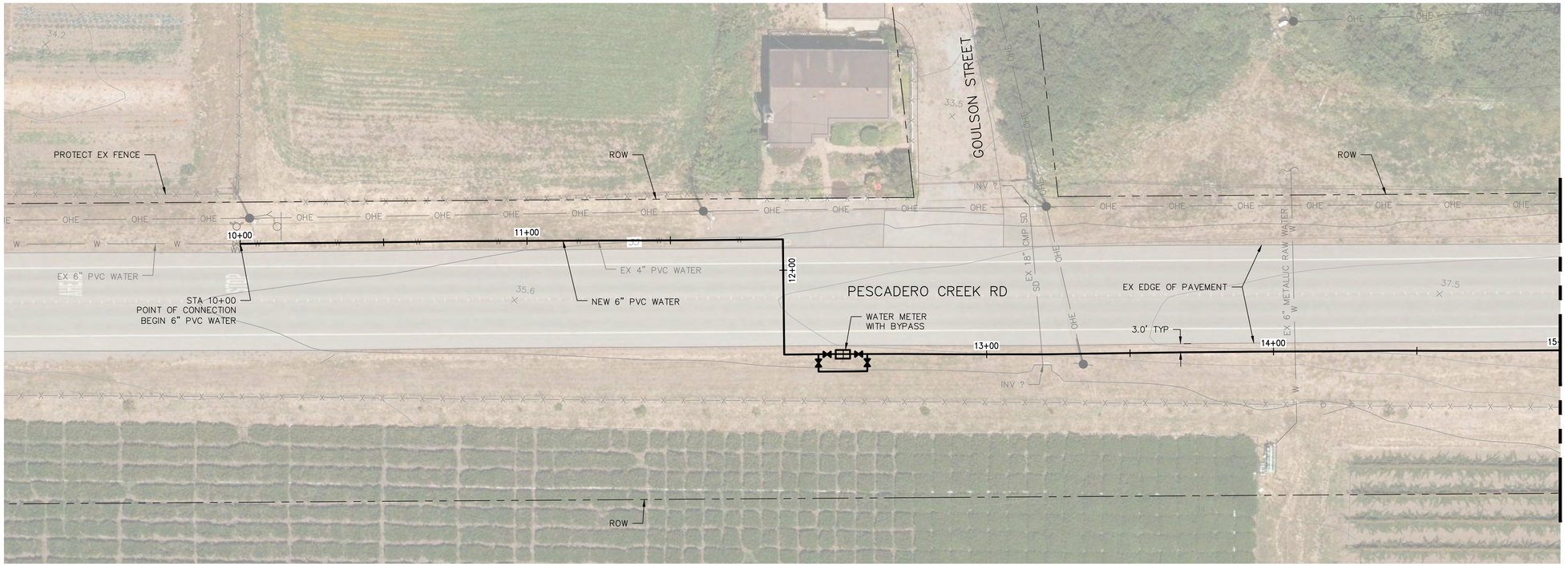

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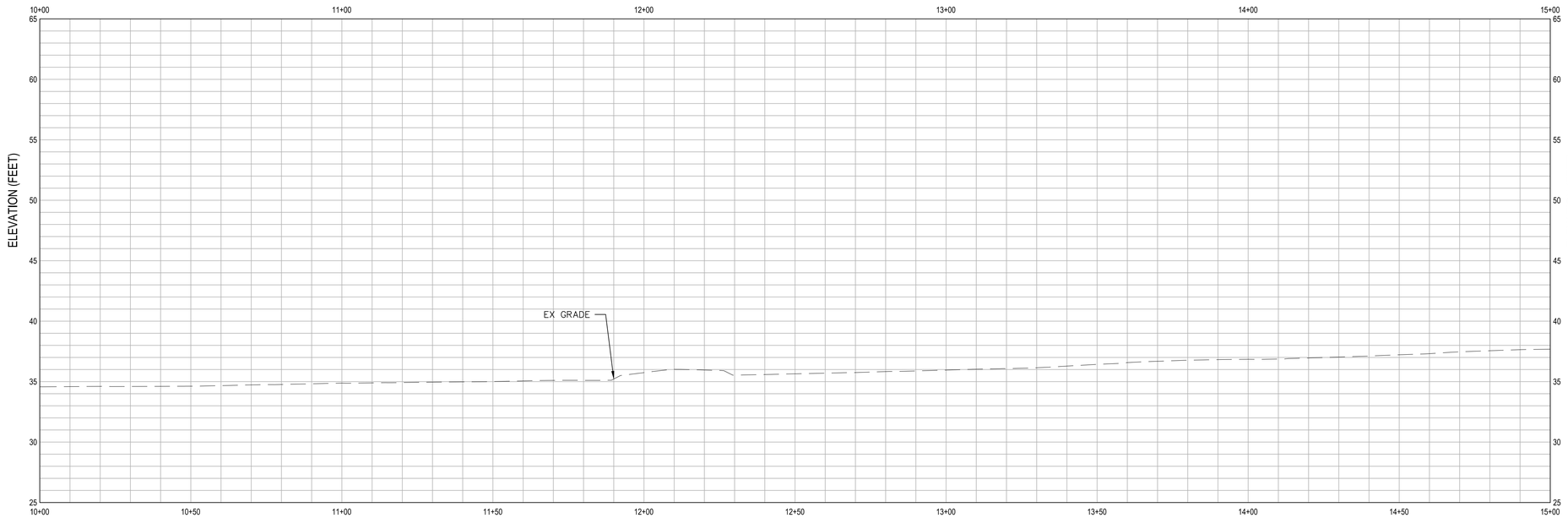

PROFILE
SCALE 1"=20' HZ, 1"=5' VT

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

1.

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APPROVED DATE:

Dillon J. Morra
GHD, Inc.
R.C.E. # 79186 / EXPIRES 03-31-2021

		DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL
		CHECKED BY: DM	**PESCADERO CREEK RD - PLAN AND PROFILE 1**
		DRAWN BY: CB	
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE		

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

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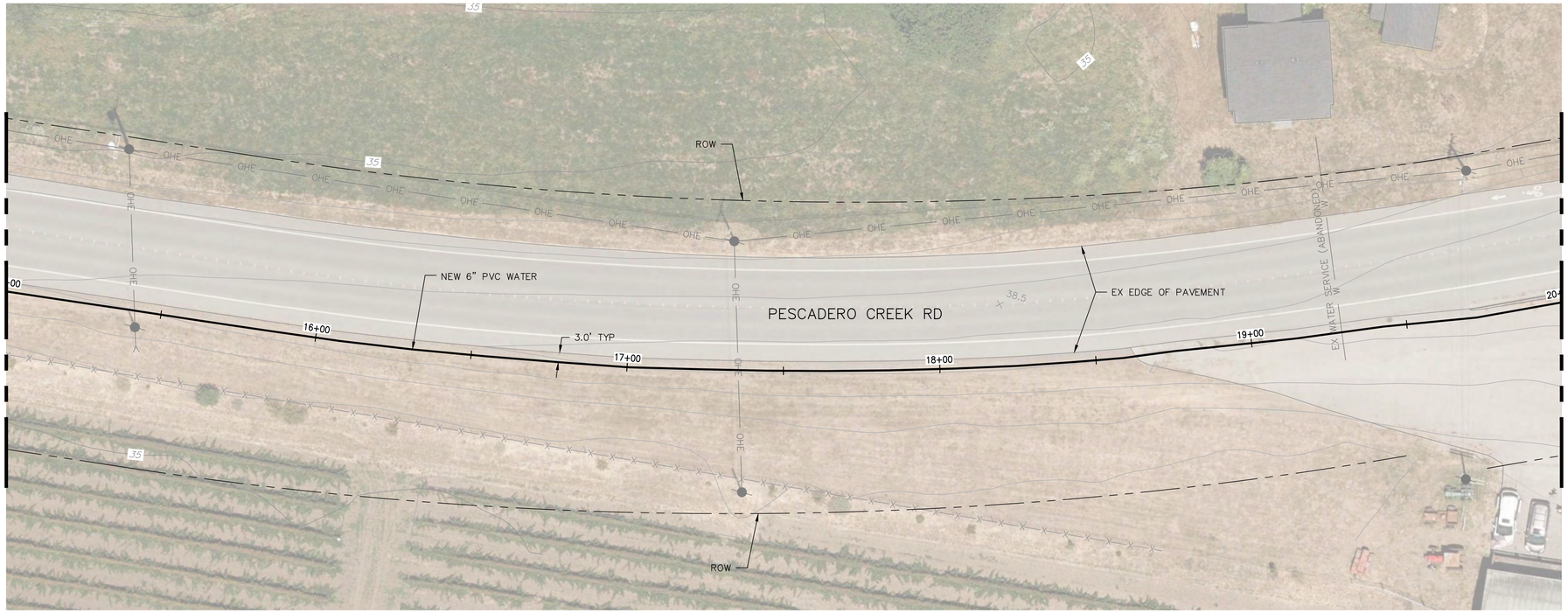
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C-101
SHEET 6 OF 23

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C101.DWG (C-101)



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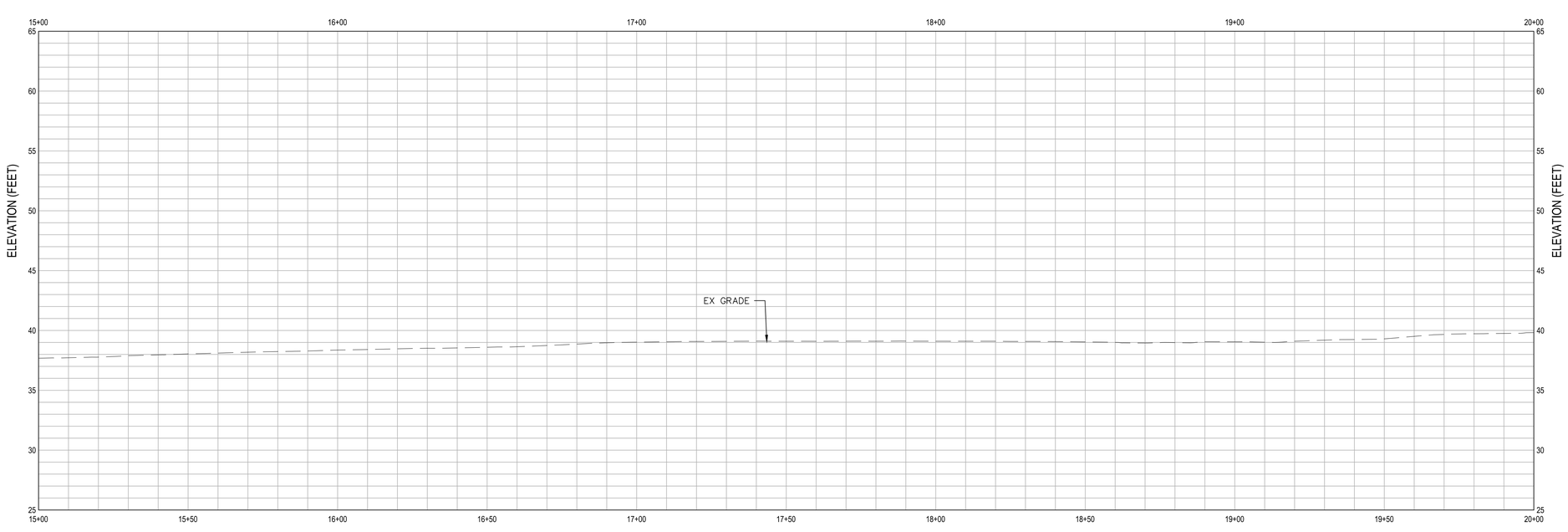

PROFILE
SCALE 1"=20' HZ, 1"=5' VT

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JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

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R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

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SHEET KEYNOTES

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FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C102.DWG (C-102)

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DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

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COUNTY OF SAN MATEO
PESCADERO HIGH SCHOOL
PESCADERO CREEK RD - PLAN AND PROFILE 2

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

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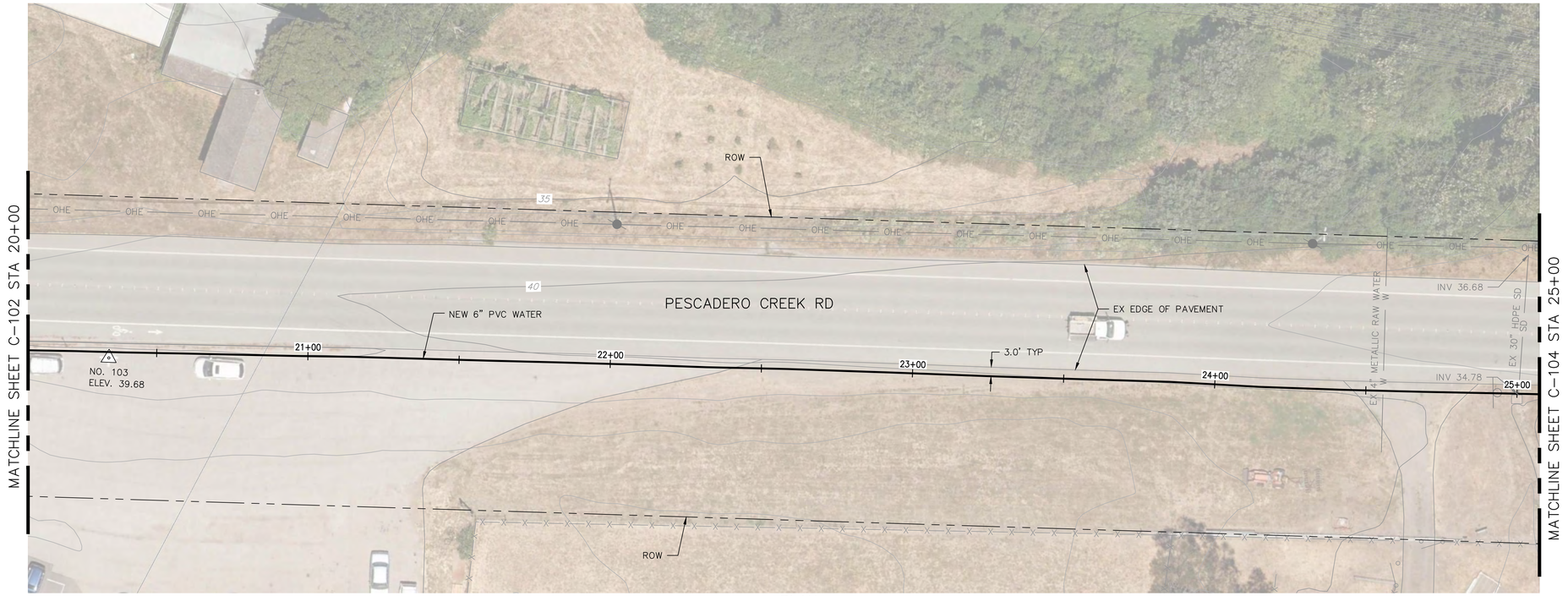
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C-102
SHEET 7 OF 23



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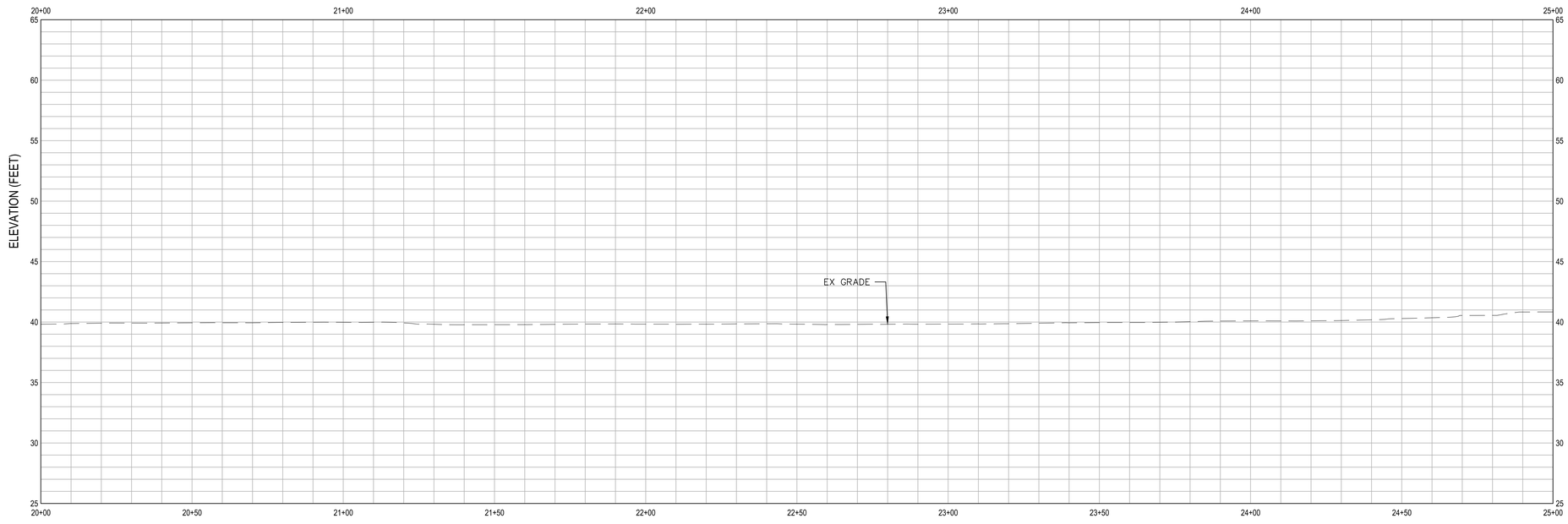

PROFILE
SCALE 1"=20' HZ, 1"=5' VT

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C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

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JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

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SHEET KEYNOTES

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FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C103.DWG (C-103)

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COUNTY OF SAN MATEO PUBLIC WORKS

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COUNTY OF SAN MATEO
PESCADERO HIGH SCHOOL
PESCADERO CREEK RD - PLAN AND PROFILE 3

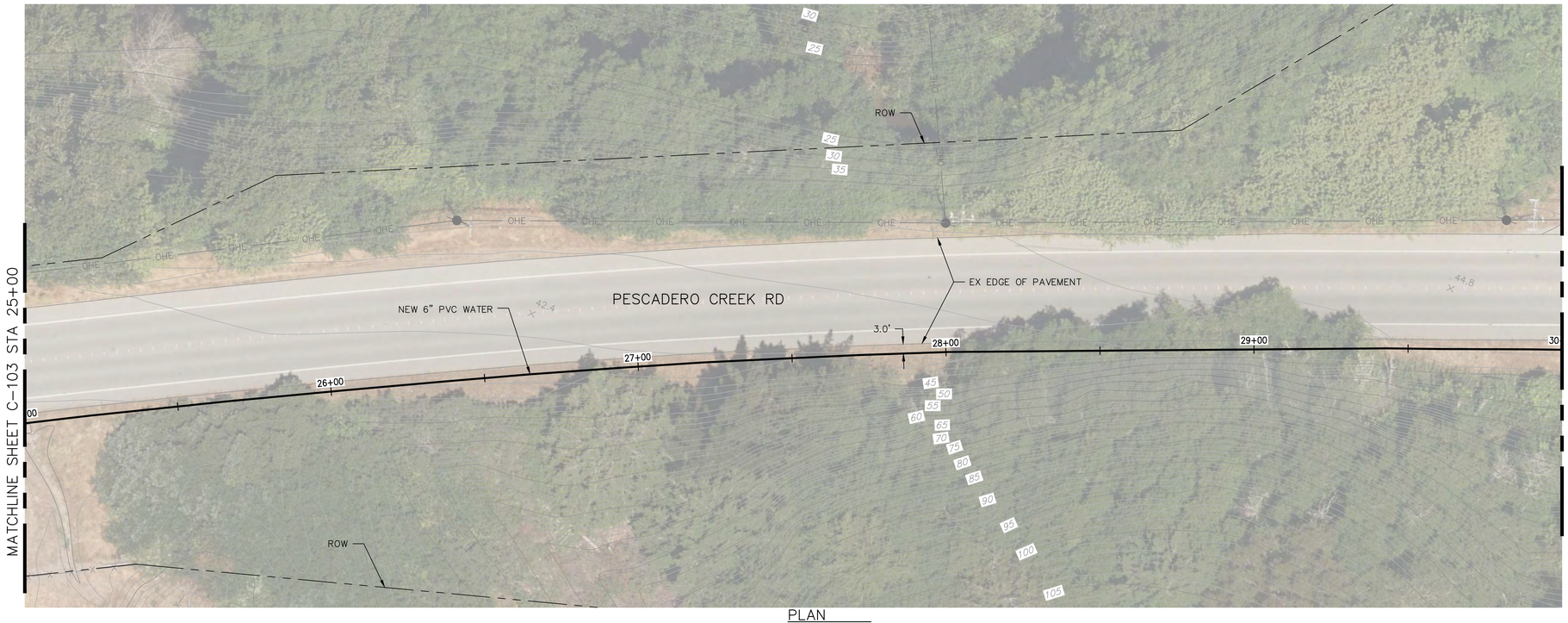
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C-103
SHEET 8 OF 23



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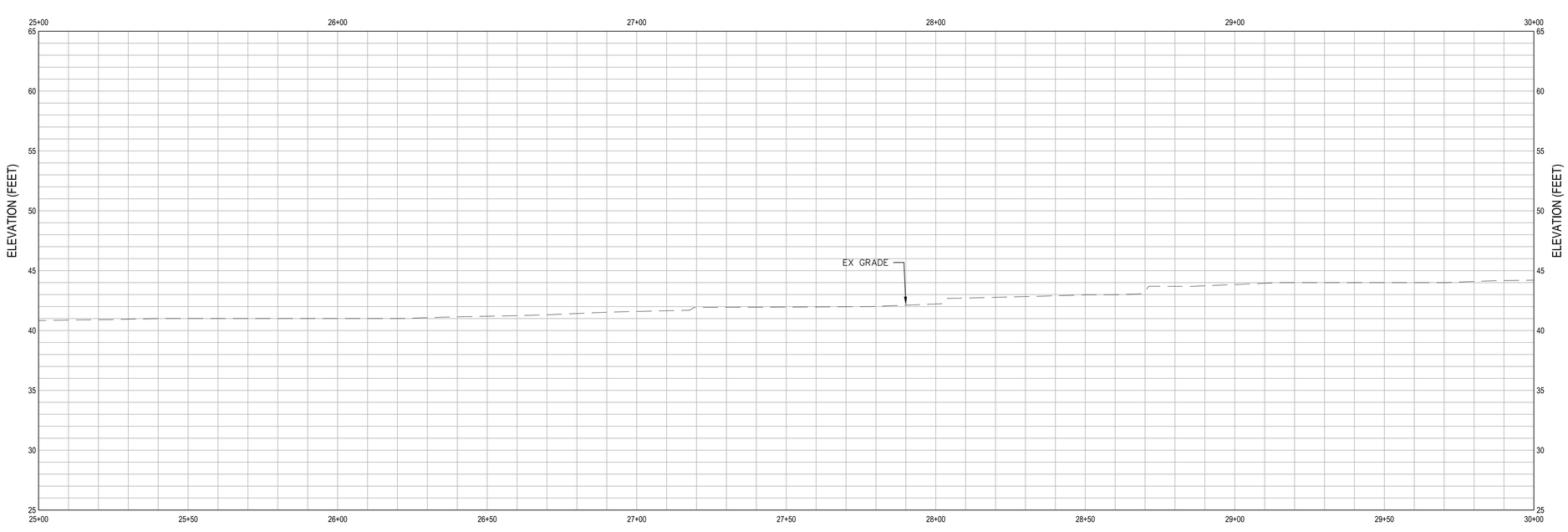

PROFILE
SCALE 1"=20' HZ, 1"=5' VT

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

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1"=20'

NOT FOR CONSTRUCTION

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C104.DWG (C-104)

APPROVED DATE:	
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R.C.E. # 79186 / EXPIRES 03-31-2021	

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DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: DM	COUNTY OF SAN MATEO
		CHECKED BY: DM	PESCADERO HIGH SCHOOL
		DRAWN BY: CB	PESCADERO CREEK RD - PLAN AND PROFILE 4
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

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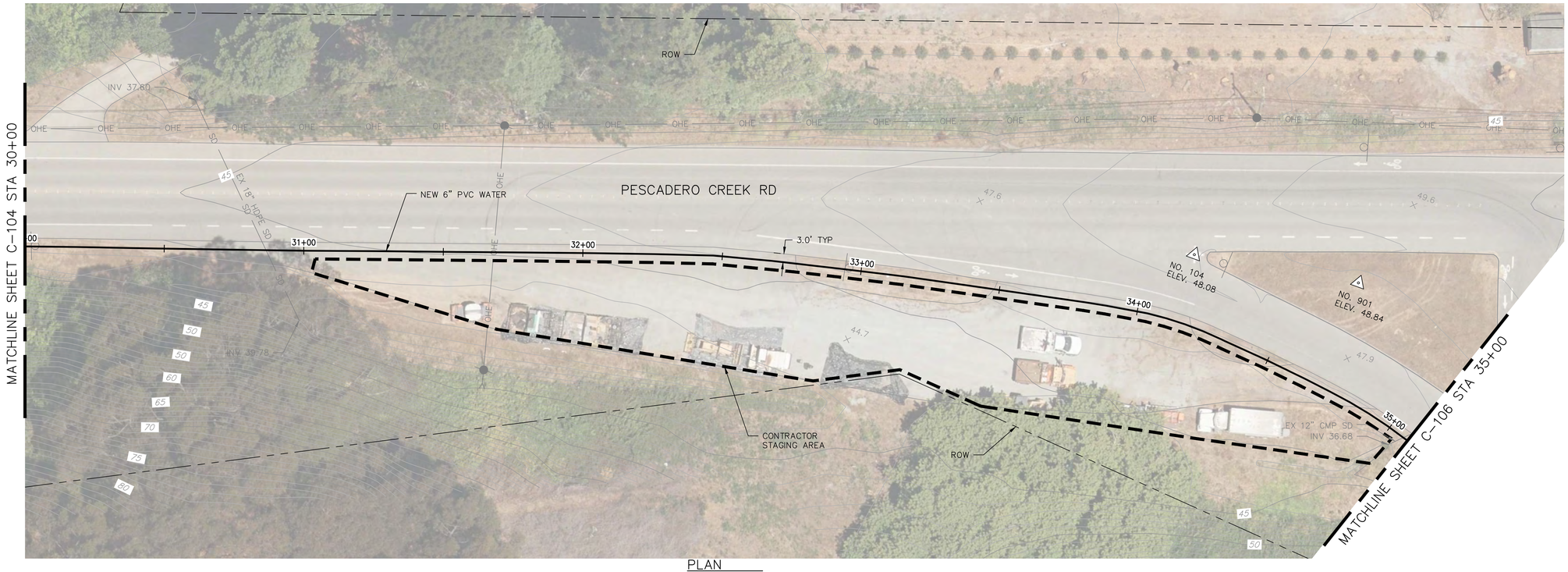
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C-104
SHEET 9 OF 23



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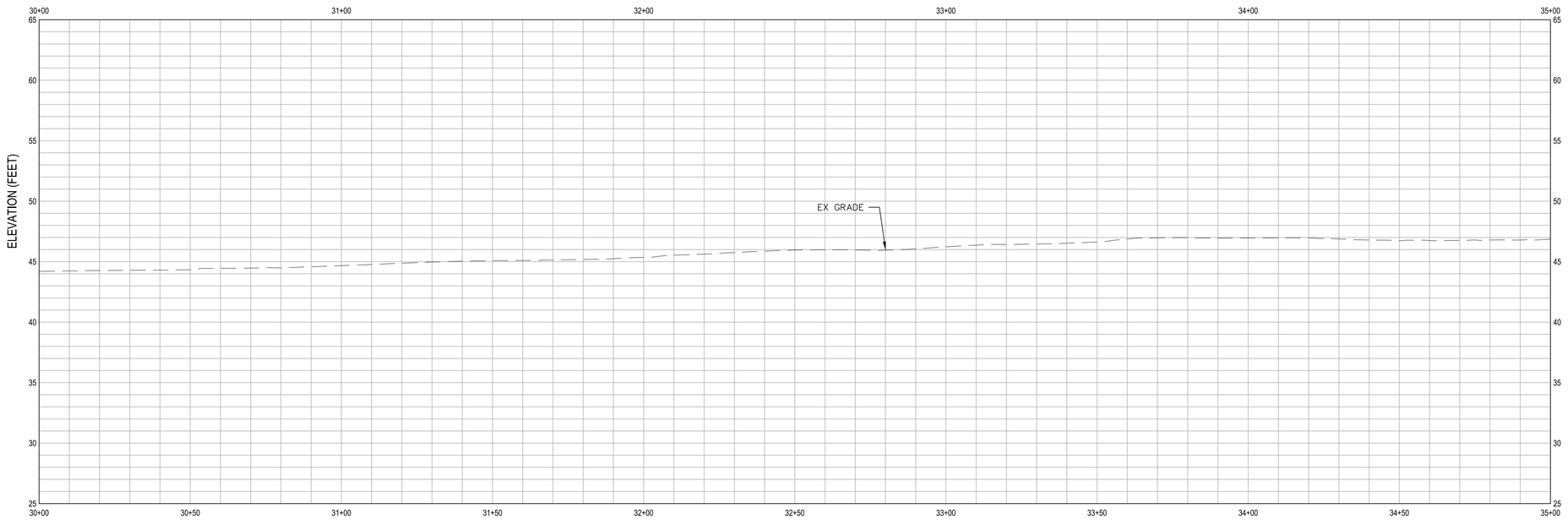

PROFILE
SCALE 1"=20' HZ, 1"=5' VT

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

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SHEET KEYNOTES

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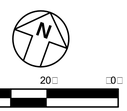

NOT FOR CONSTRUCTION

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APPROVED DATE:

Dillon J. Morra
GHD, Inc.
R.C.E. # 79186 / EXPIRES 03-31-2021

REGISTERED PROFESSIONAL ENGINEER
DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

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DRAWN BY: CB

COUNTY OF SAN MATEO
PESCADERO HIGH SCHOOL
PESCADERO CREEK RD - PLAN AND PROFILE 5

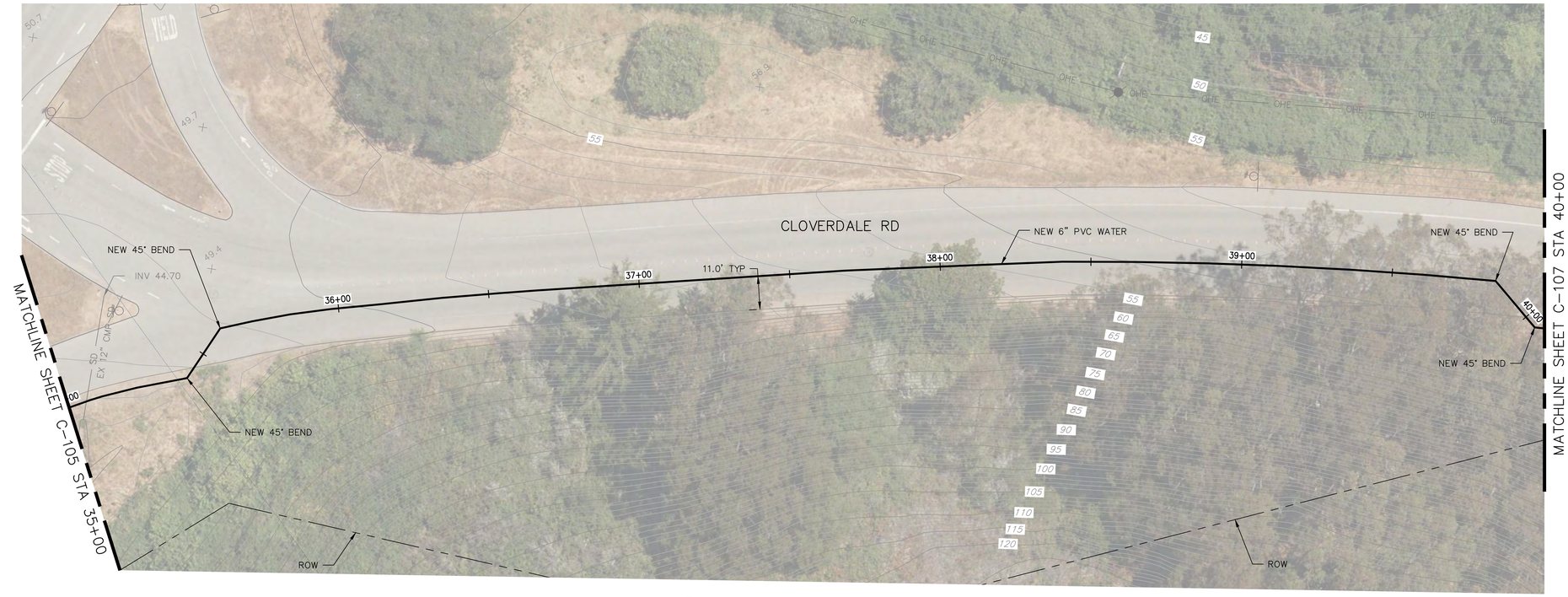
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

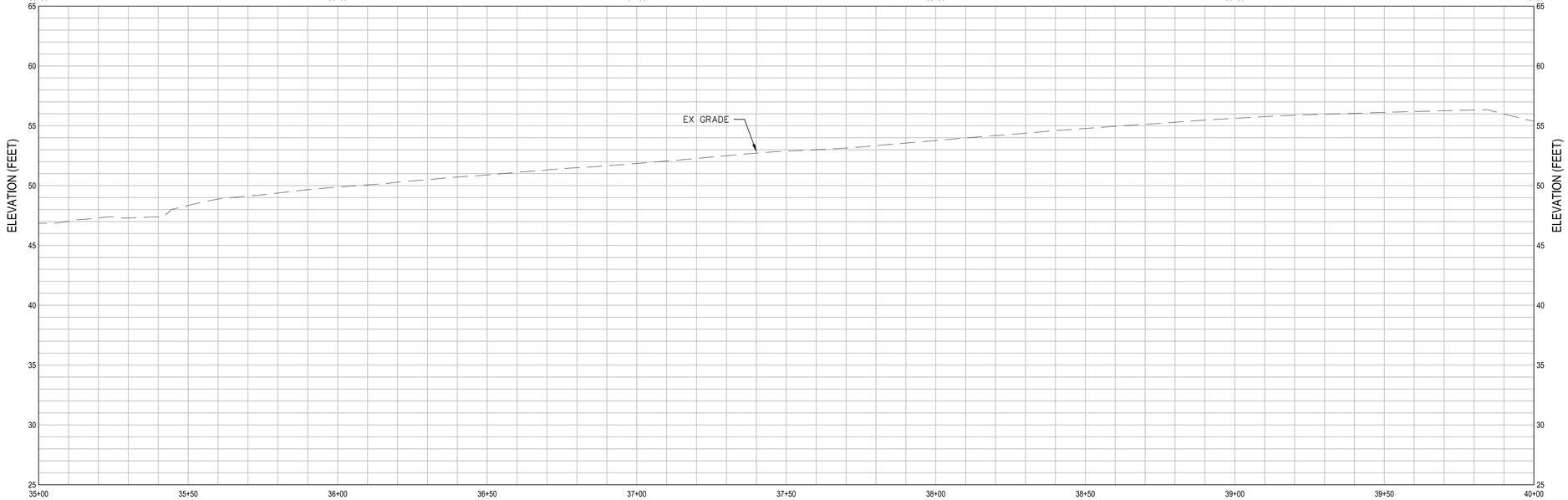
SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

C-105
SHEET 10 OF 23



PLAN
SCALE 1"=20'



PROFILE
SCALE 1"=20' HZ, 1"=5' VT

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

1.

N

1"=20': 0 20' 40'

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C106.DWG (C-106)

NOT FOR CONSTRUCTION

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

REGISTERED PROFESSIONAL ENGINEER
DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: DM
CHECKED BY: DM
DRAWN BY: CB

COUNTY OF SAN MATEO
PESCADERO HIGH SCHOOL
CLOVERDALE RD - PLAN AND PROFILE 6

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

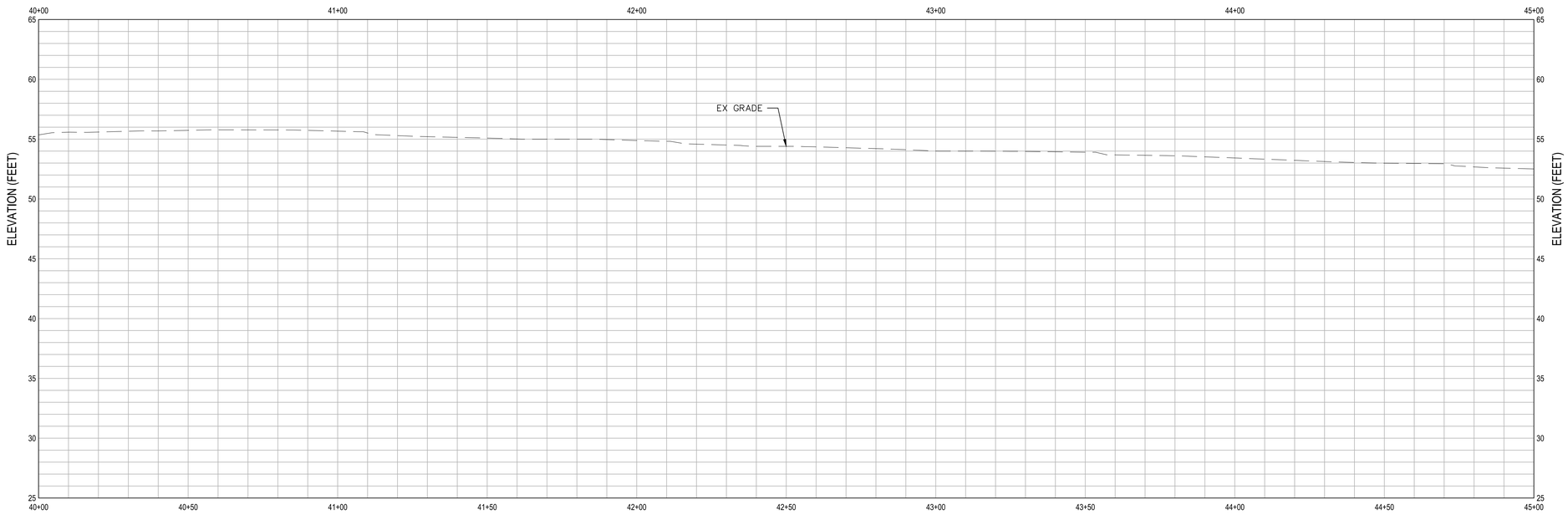
555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C-106
SHEET 11 OF 23

PLAN
SCALE 1"=20'



PROFILE
SCALE 1"=20' HZ, 1"=5' VT

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

1.

1"=20'

NOT FOR CONSTRUCTION

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C107.DWG (C-107)

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

REGISTERED PROFESSIONAL ENGINEER
DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
PUBLIC WORKS

REVISION	DATE

DESIGNED BY: DM
CHECKED BY: DM
DRAWN BY: CB

COUNTY OF SAN MATEO
PESCADERO HIGH SCHOOL
CLOVERDALE RD - PLAN AND PROFILE 7

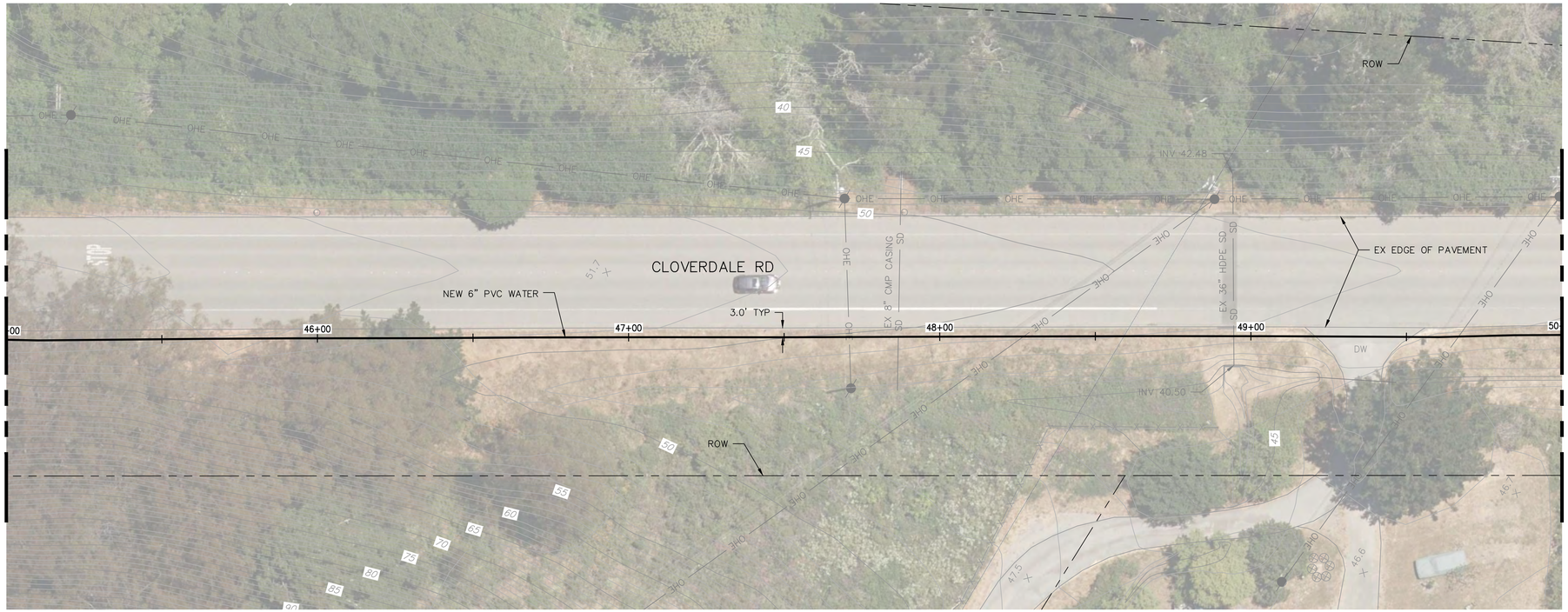
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

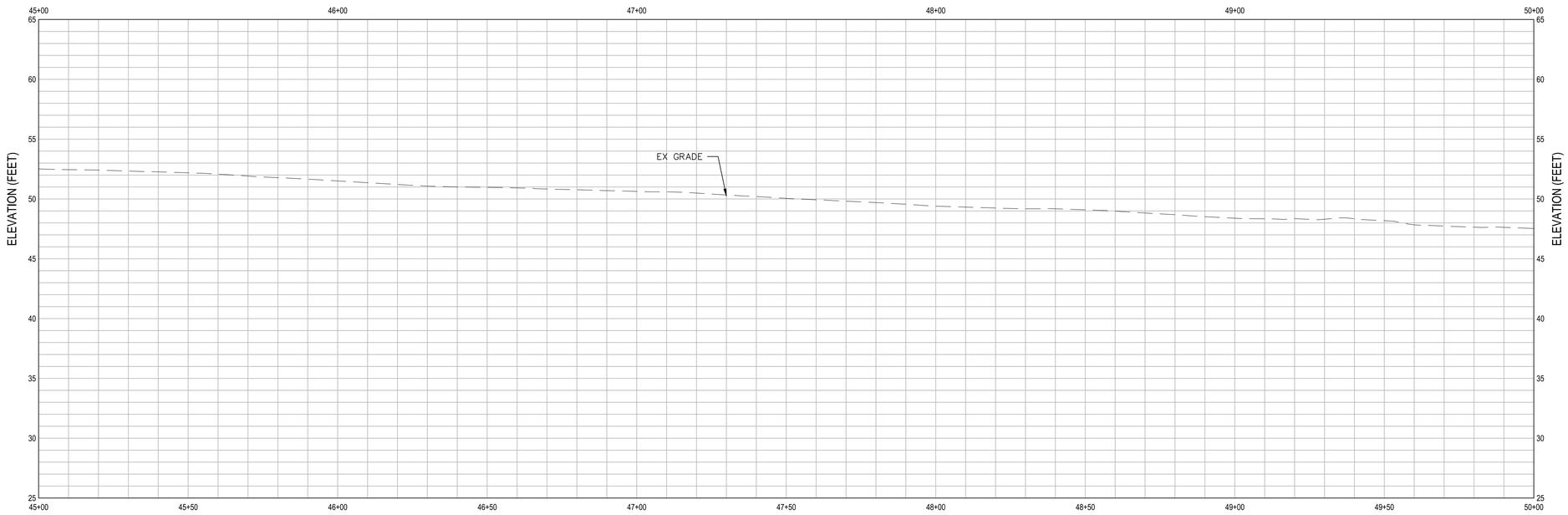
SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

C-107
SHEET 12 OF 23



PLAN
SCALE 1"=20'



PROFILE
SCALE 1"=20' HZ, 1"=5' VT

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

1.

1"=20' 0 20 40

NOT FOR CONSTRUCTION

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C108.DWG (C-108)

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

REGISTERED PROFESSIONAL ENGINEER
DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

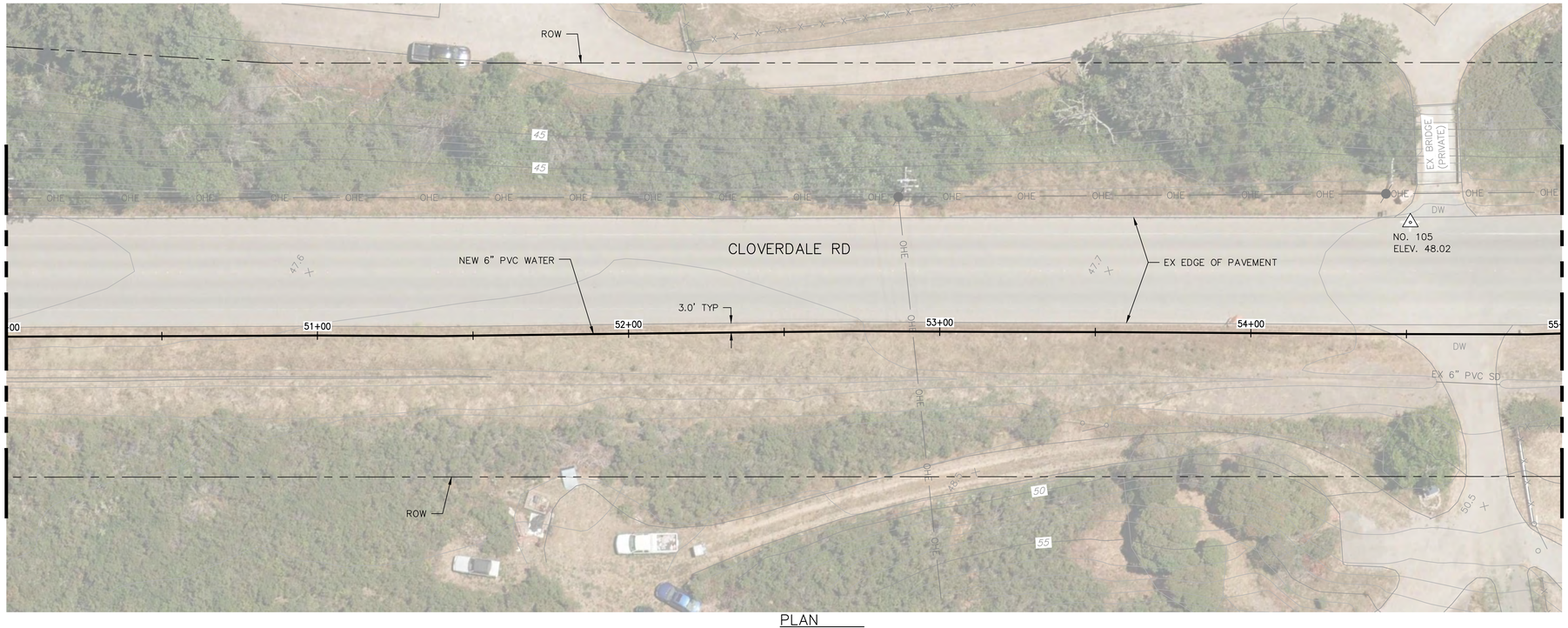
COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL **CLOVERDALE RD - PLAN AND PROFILE 8**
		CHECKED BY: DM	
		DRAWN BY: CB	
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

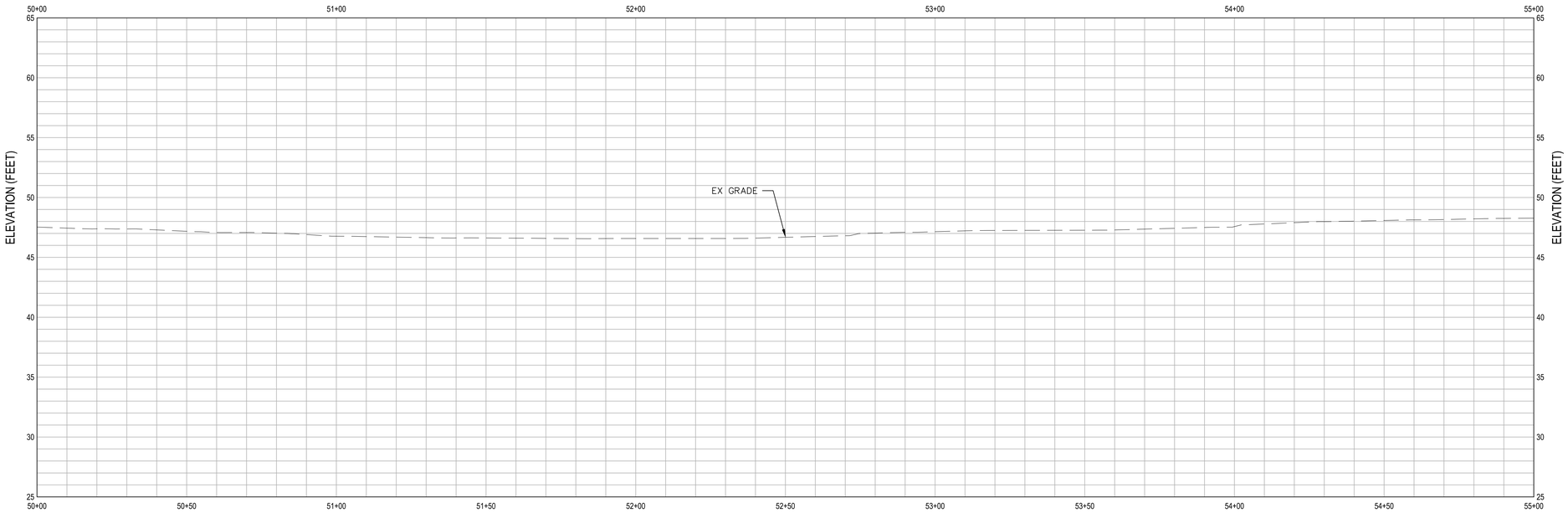
SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C-108
SHEET 13 OF 23



PLAN
SCALE 1"=20'



PROFILE
SCALE 1"=20' HZ, 1"=5' VT

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

1.

0 20□ □0□
1"□20□

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C109.DWG (C-109)

NOT FOR CONSTRUCTION

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

REGISTERED PROFESSIONAL ENGINEER
DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

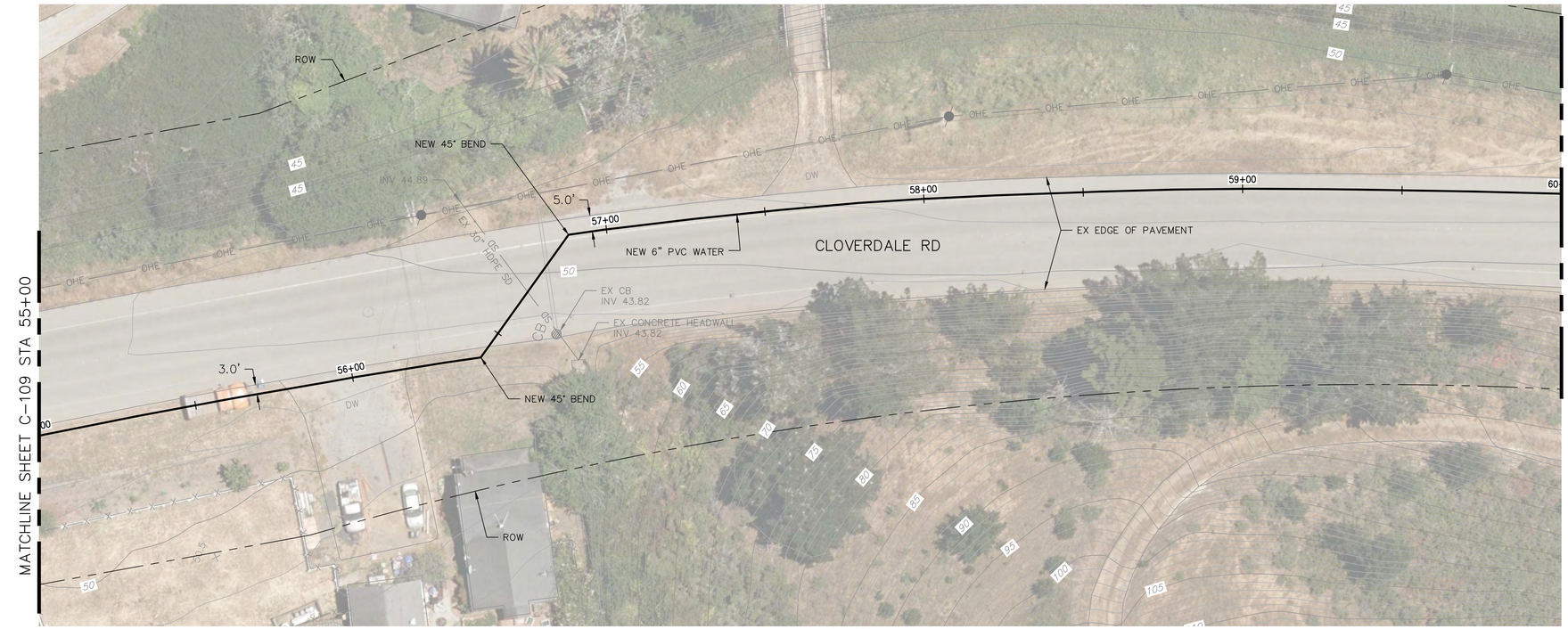
COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL **CLOVERDALE RD - PLAN AND PROFILE 9**
		CHECKED BY: DM	
		DRAWN BY: CB	
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

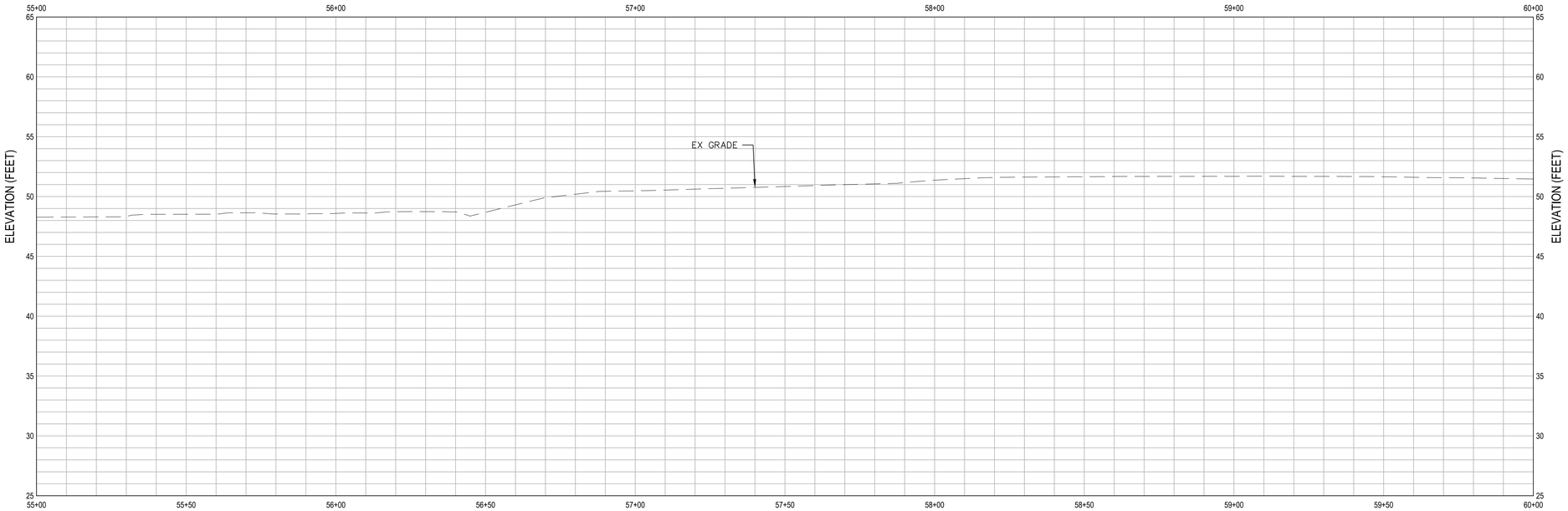
SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

C-109
SHEET 14 OF 23



PLAN
SCALE 1"=20'



PROFILE
SCALE 1"=20' HZ, 1"=5' VT

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

1.

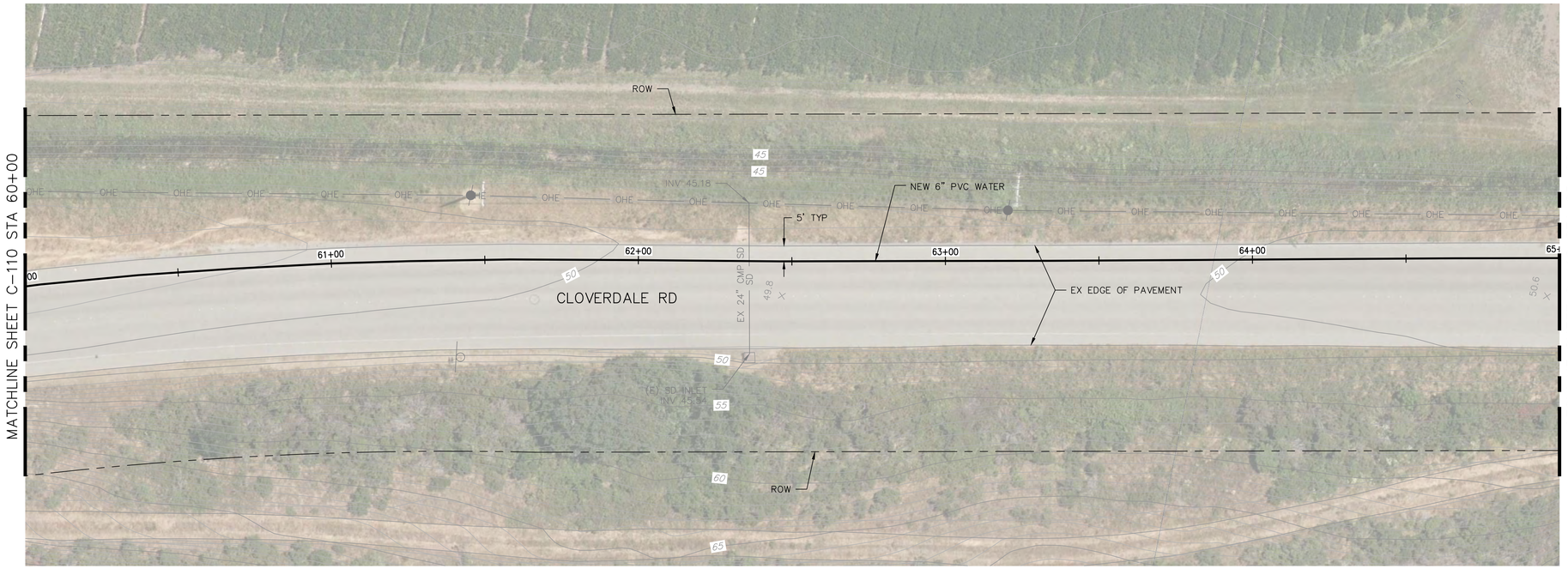
NOT FOR CONSTRUCTION

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

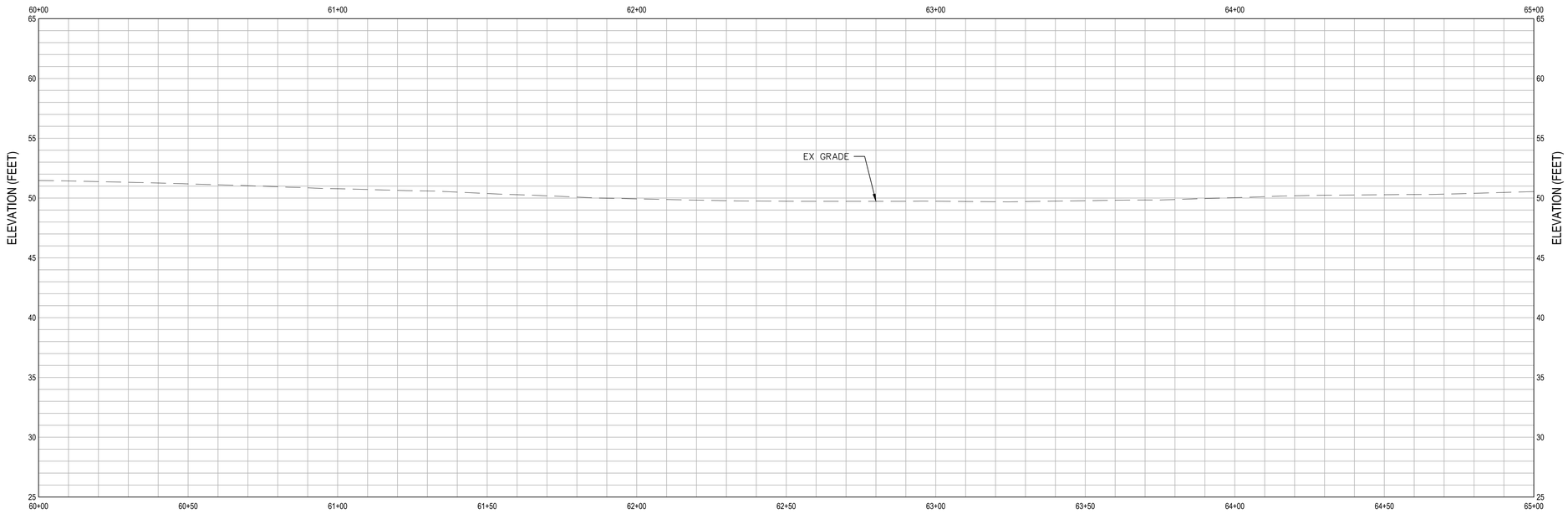
		DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL CLOVERDALE RD - PLAN AND PROFILE 10	SCALE: AS SHOWN
		CHECKED BY: DM		DATE: 12-17-2020
		DRAWN BY: CB		FILE NO.: 1/49##
REVISION	DATE	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3 4				C-110 SHEET 15 OF 23

1"=20'

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\61\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C110.DWG (C-110)



PLAN
SCALE 1"=20'



PROFILE
SCALE 1"=20' HZ, 1"=5' VT

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

1.

N

1"=20' 0 20 40

NOT FOR CONSTRUCTION

APPROVED DATE:

Dillon J. Morra
GHD, Inc.
R.C.E. # 79186 / EXPIRES 03-31-2021

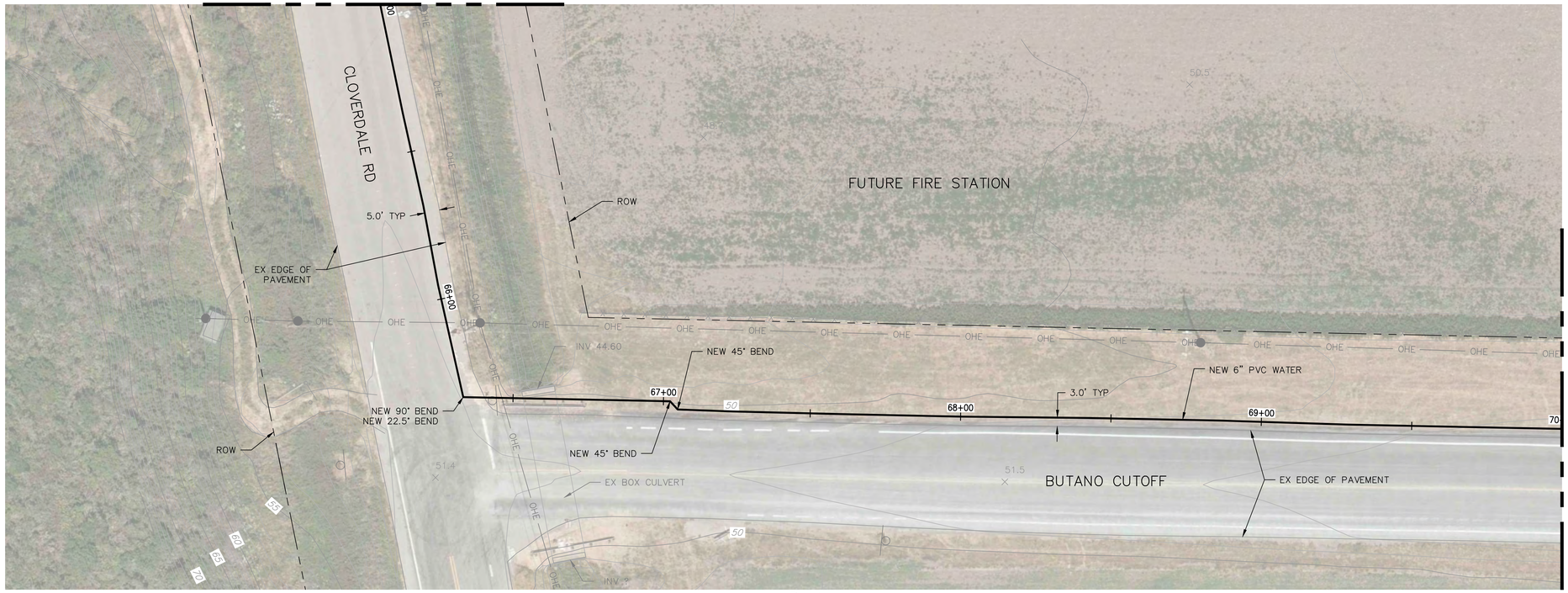
		DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL **CLOVERDALE RD - PLAN AND PROFILE 11**
		CHECKED BY: DM	
		DRAWN BY: CB	
REVISION	DATE	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

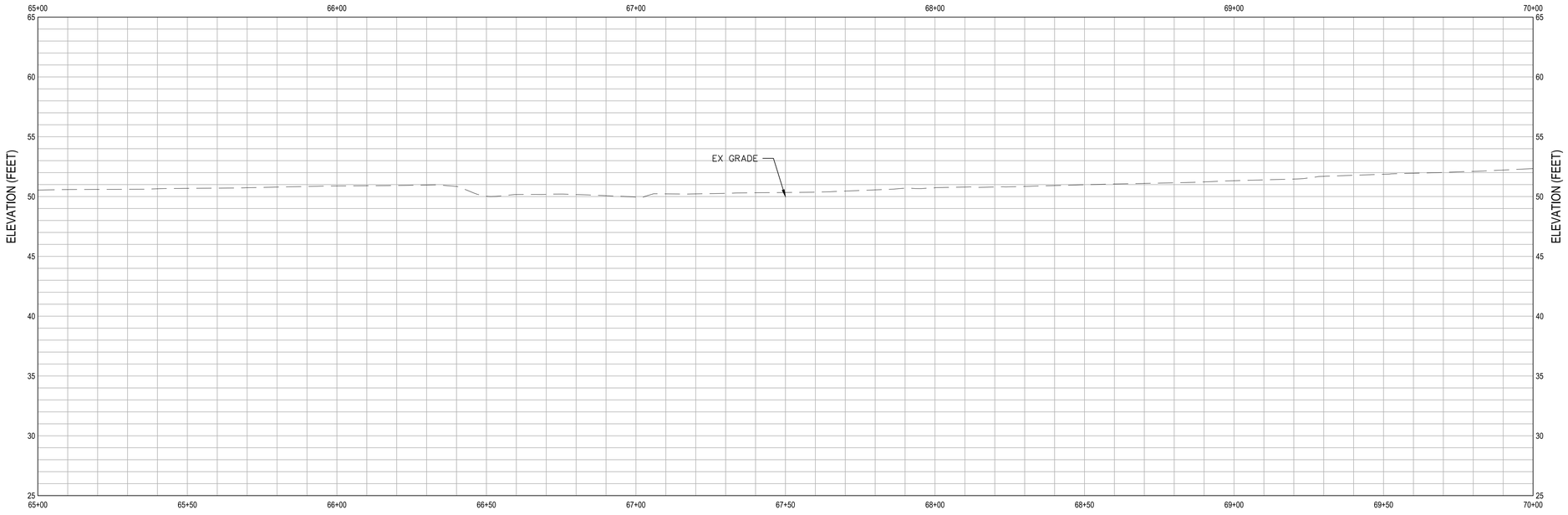
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C-111
SHEET 16 OF 23

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C111.DWG (C-111)



PLAN
SCALE 1"=20'



PROFILE
SCALE 1"=20' HZ, 1"=5' VT

REGISTERED PROFESSIONAL ENGINEER JAMES C. PORTER C 48056 EXPIRES 12/31/21 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE: _____

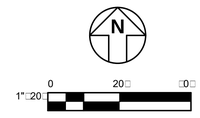
JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

1.



NOT FOR CONSTRUCTION

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

REGISTERED PROFESSIONAL ENGINEER DILLON J. MORRA No. C 79186 Exp. 3-31-21 CIVIL STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE

DESIGNED BY: DM
CHECKED BY: DM
DRAWN BY: CB

COUNTY OF SAN MATEO
PESCADERO HIGH SCHOOL
BUTANO CUTOFF - PLAN AND PROFILE 12

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
SAN MATEO COUNTY

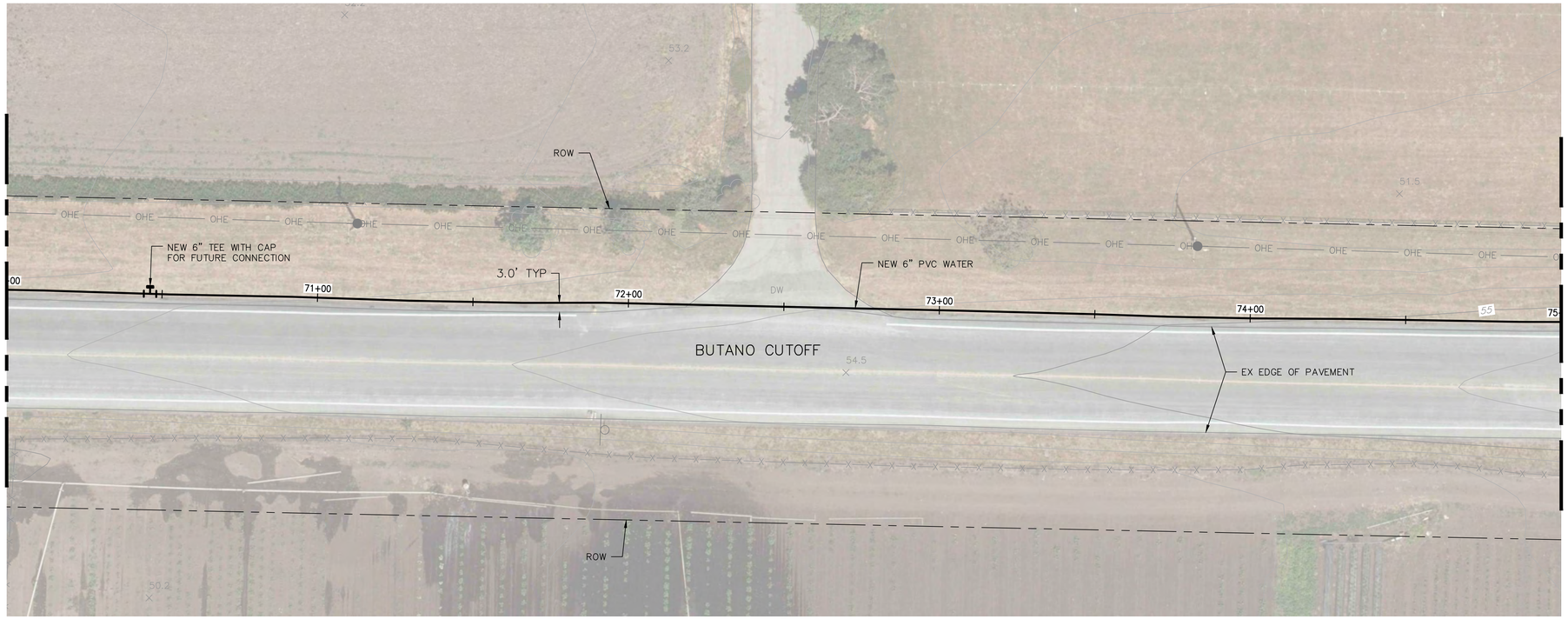
555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

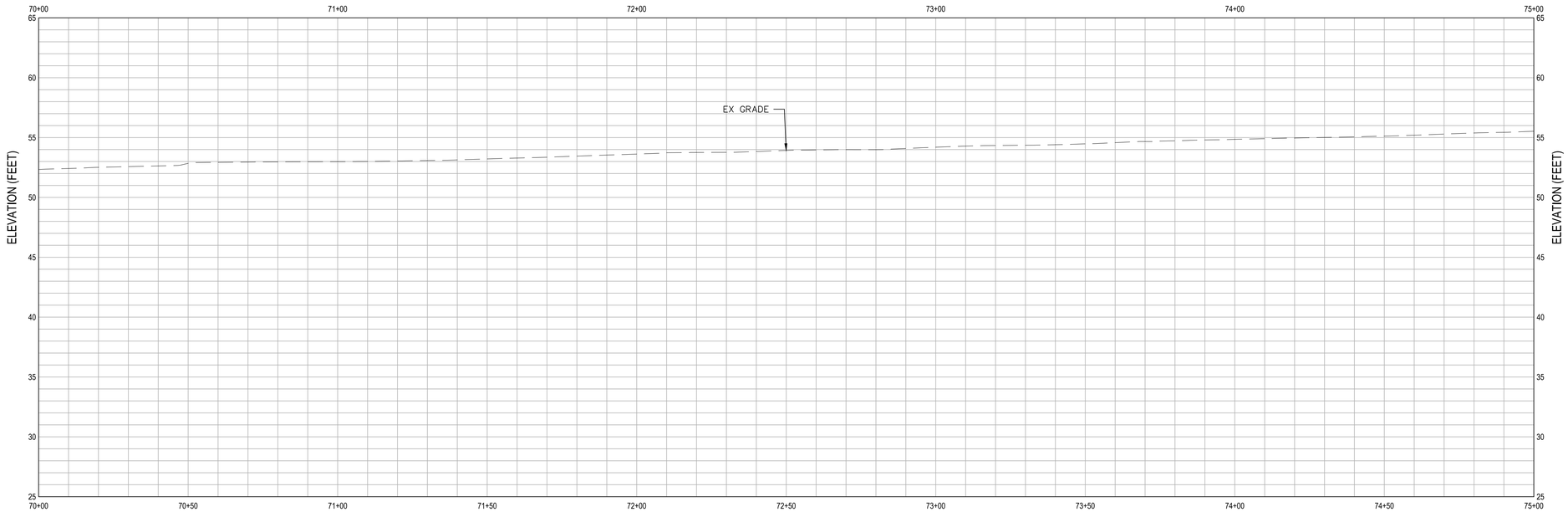
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

C-112
SHEET 17 OF 23

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C112.DWG (C-112)



PLAN
SCALE 1"=20'



PROFILE
SCALE 1"=20' HZ, 1"=5' VT

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

1.

N

1"=20'

0 20' 40'

NOT FOR CONSTRUCTION

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

REVISION	DATE	DESIGNED BY: DM	CHECKED BY: DM	DRAWN BY: CB	JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY

COUNTY OF SAN MATEO
PESCADERO HIGH SCHOOL
BUTANO CUTOFF - PLAN AND PROFILE 13

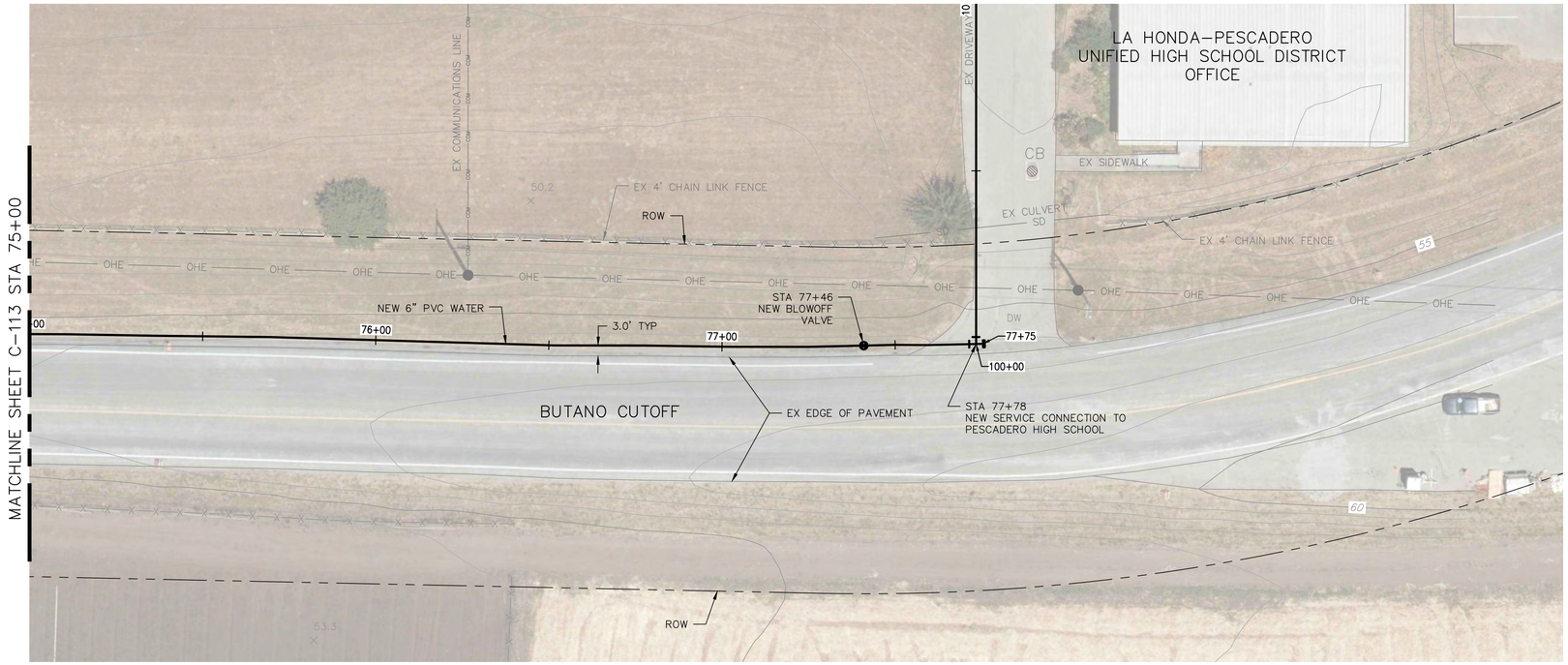
555 COUNTY CENTER, 5th FLOOR
REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

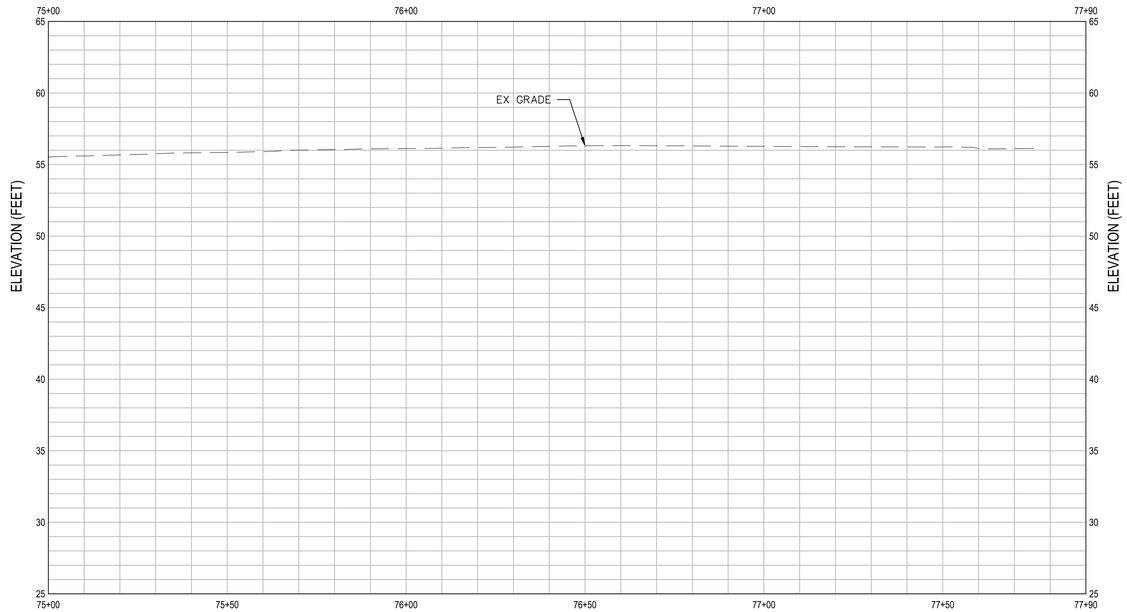
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C-113
SHEET 18 OF 23

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C113.DWG (C-113)



PLAN
SCALE 1"=20'



PROFILE
SCALE 1"=20' HZ, 1"=5' VT

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

1.

SHEET KEYNOTES

1.

N

1"=20' 0 20□ □□

NOT FOR CONSTRUCTION

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\61\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C114.DWG (C-114)

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

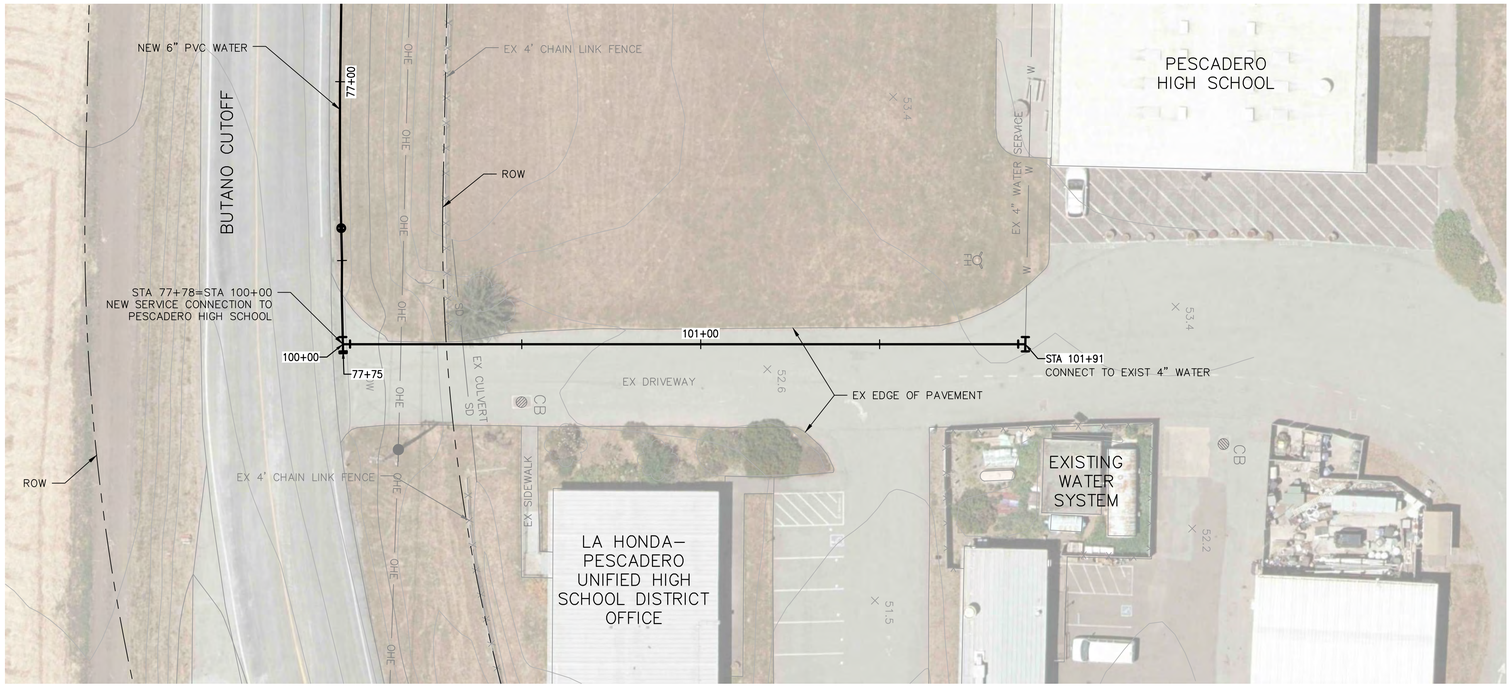
REGISTERED PROFESSIONAL ENGINEER
DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE	DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL **BUTANO CUTOFF - PLAN AND PROFILE 14**	SCALE: AS SHOWN
		CHECKED BY: DM		DATE: 12-17-2020
		DRAWN BY: CB		FILE NO.: 1/49##
			JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C-114
SHEET 19 OF 23



PLAN
SCALE 1"=20'

REGISTERED PROFESSIONAL ENGINEER
JAMES C. PORTER
C 48056
EXPIRES 12/31/21
CIVIL
STATE OF CALIFORNIA

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

SHEET GENERAL NOTES

1. POINT OF CONNECTION TO SCHOOL TO BE CONFIRMED BY POTHOLING DURING FINAL DESIGN.

SHEET KEYNOTES

1.

N

0 20□ □0□
1"□20□

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\61\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C115.DWG (C-115)

NOT FOR CONSTRUCTION

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	

REGISTERED PROFESSIONAL ENGINEER
DILLON J. MORRA
No. C 79186
Exp. 3-31-21
CIVIL
STATE OF CALIFORNIA

COUNTY OF SAN MATEO PUBLIC WORKS

REVISION	DATE		
		DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL **HS SERVICE CONNECTION PLAN**
		CHECKED BY: DM	
		DRAWN BY: CB	
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN
DATE: 12-17-2020
FILE NO.: 1/49##

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3 4

C-115
SHEET 20 OF 23

APPROVED:

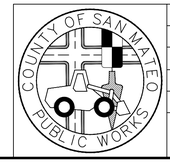
DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

FILENAME: \\GHDNET\GHD\US\EMERYVILLE\PROJECTS\561\11213964\DIGITAL_DESIGN\ACAD 2018\SHEETS\11213964-C501.DWG (C-501)

NOT FOR CONSTRUCTION

APPROVED DATE:	
Dillon J. Morra	
GHD, Inc.	
R.C.E. # 79186 / EXPIRES 03-31-2021	



		DESIGNED BY: DM	COUNTY OF SAN MATEO PESCADERO HIGH SCHOOL **CIVIL DETAILS**	SCALE: AS SHOWN
		CHECKED BY: DM		DATE: 12-17-2020
		DRAWN BY: CB		FILE NO.: 1/49##
		JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS SAN MATEO COUNTY		555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE			

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3 4

C-501
SHEET 21 OF 23

APPROVED:

DATE: _____

JAMES C. PORTER, DIRECTOR OF PUBLIC WORKS
R. C. E. # 48056 / EXPIRES 12-31-2019

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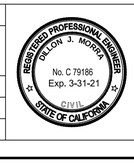

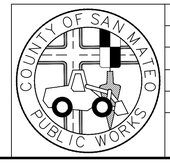

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REVISION	DATE			

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C-502
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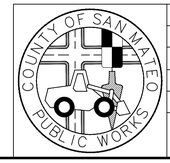

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C-503
SHEET 23 OF 23

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT D

TOWN OF PESCADERO (CSA-11) WATER SUPPLY YIELD AND SUSTAINABILITY

DRAFT

January 22, 2021

TODD GROUNDWATER

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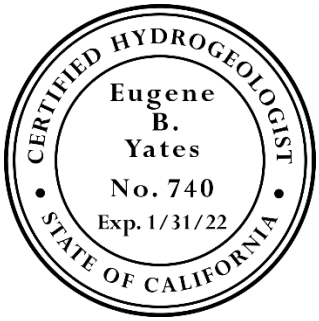

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1. INTRODUCTION

San Mateo County Service Area 11 (CSA-11) provides municipal water service to the community of Pescadero and has had capacity issues for many years. Pescadero is a small town (population 643 in 2010) on the San Mateo County (County) coast, 14 miles south of Half Moon Bay (**Figure 1**). Since 1992, the municipal water supply has been from wells located on Butano Ridge, a fault-bounded hill between the town and the Pacific Ocean. Water levels in the two original supply wells (Well No. 1 and Well No. 2) steadily declined from 1992 to the present. In 2018, a third well screened at greater depth (Well No. 3) was constructed, which will extend the useful life of the well field but not change the local water balance of the groundwater system.

The County is considering several changes in water demand served by the CSA-11 system. One is connecting a new fire station that will be built to replace the existing station located at the intersection of Pescadero Road and Bean Hollow Road (Figure 1). After the new station is built, the existing station would be used only during fire emergencies. A second potential new demand on the system would be to connect Pescadero Middle/High School. An extension of the water distribution system would need to be built to serve the school, which is located a little over 1 mile east of town (Figure 1). Finally, the County's Local Coastal Program (LCP) updated in 2013 included projected water demands for future development in Pescadero that would effectively double existing demand. Under an LCP buildout scenario, current water supply system may be unsustainable and additional water sources would need to be developed.

The purpose of this study is to: 1) audit existing water use to identify potential unauthorized uses or leaks in the distribution system, and 2) evaluate the adequacy of the current CSA-11 water system under existing and potential additional water demand conditions. A third objective of this study is to evaluate potential alternative water sources in the Pescadero area; the scope and results of this third task will be documented in a separate technical memorandum submitted to the county later this year.

1.1. Water System Characteristics

Previous studies of the local hydrogeology, well and water supply system characteristics, and sustainability of the CSA-11 water system were performed in 2002 and 2018 by Todd Engineers and Todd Groundwater (herein Todd). CSA-11 Well Nos. 1, 2 and 3 are located within a few tens of feet of each other near the top of Butano Ridge. The ground surface elevation of the wells is approximately 270 feet above mean sea level (ft amsl). Wells Nos. 1 and 2 are 260 and 247 feet deep, respectively, with screened intervals of 210 to 250 and 207 to 247 feet below ground surface (ft bgs), respectively. Static depth to groundwater in Well No. 1 during 2020 was approximately 200 ft bgs, or near the top of the well screen. From 1992 to 2020, Well No. 1 was the primary supply well, with a pumping rate of 60-70 gallons per minute (gpm). Well No. 2 has always served as a standby well for use in case Well No. 1 is out of service. New Well No. 3 was installed during summer 2018 and is completed to a total depth of 360 ft bgs, with a screened interval of 250 to 350 ft bgs. During test pumping ,

Well No. 3 appeared capable of pumping at a rate of 100 gpm or more on a sustained basis (Todd Groundwater, 2019). It was put into service as the primary supply well in fall 2020.

The wells pump into two storage tanks located partway down the ridge. The two tanks have a combined storage capacity of approximately 298,000 gallons. The tanks are connected by a pipe that is normally kept open, so the water level is the same in both tanks. A float switch in one of the tanks maintains water levels within a 2-foot range, activating the well to replenish storage whenever the water level drops to 2 feet below its normal high level. The normal high level corresponds to approximately 191,000 gallons (Todd Groundwater, 2019).

Flow is metered at the wells, but outflow from the tanks into the water distribution system is not metered. Water flows through a pipeline that runs from the tanks down to Pescadero Road and continues east with branches to serve customers on several streets. There currently are 101 active customers, and water use at each customer turnout is metered. Metered customer water use during 2015-2019 averaged 19,442 gallons per day.

Groundwater levels in Well Nos. 1 and 2 have declined continuously since 1992. During 2015-2019 the rate of decline was steady at about 0.5 foot per year. The long-term decline indicates that groundwater pumping consistently exceeds the sustainable yield of the groundwater system beneath Butano Ridge.

1.2. Scope of Work

This study evaluates current water usage patterns and options for achieving a sustainable water supply under three demand conditions:

- Current water demand served by the CSA-11 distribution system,
- Current demand plus demand from the new fire station and middle/high school if those facilities are connected to the distribution system, and
- Future demand if growth projected in the Local Coastal Plan occurs.

This report is organized around eight specific tasks defined by the County in the original scope of work, as follows:

Task 1. Audit existing water connections to CSA-11 to identify non-allowable current uses and system water leaks.

Task 2. Analyze the short-term yield (based on last 5 years) of the CSA-11 wells with the addition of the fire station and school to the system and partial demolition of existing fire station: how does short-term yield compare to both average and peak daily demand on the system? Analysis will incorporate water usage by the "average daily water use during the two months of the highest water use in the year" as a metric.

Task 3. Analyze the long-term impact (including drought and non-drought years) to CSA-11 groundwater supply of the addition of fire station and school: What is the estimated longevity of the wells with the addition of the two new facilities? How much would the two

new facilities accelerate aquifer drawdown compared to findings of June 2019 Todd Groundwater report?

Task 4. Identify any potential water quality impacts associated with CSA-11 extension to the fire station and school.

Task 5. Evaluate potential effects of Local Coastal Program (LCP) residential and commercial buildout and increased water demand as shown in LCP Table 2.16 Estimate of Water Consumption Demand at Land Use Plan Buildout for the Town of Pescadero.

Task 6. Account for anticipated water usage associated with retention of the apparatus bay and any other facilities at the existing fire station site.

Task 7. Update any climate change modeling/assumptions and any known increases in private groundwater uses that would impact CSA-11's supply longevity.

Task 8. Identify existing and anticipated non-revenue water as the lines age over the approximate 1-mile CSA-11 extension to ensure that loss would not be a significant factor. (Non-revenue water is water that is "lost" from source before it reaches the customer, e.g. leaks.) Identify existing technology that could be implemented with the CSA-11 extension to mitigate impact of non-revenue water to current customers (e.g. automatic shutoff feature to the main extension to prevent leaks from depressurizing the larger system).

Additional Task 9 – Evaluate potential additional sources of supply. This task is currently in-progress, and will be documented in a separate memorandum prepared later this year.

2. ANALYSIS AND RESULTS BY TASK

2.1. Task 1. Audit Existing Water Connections

The objective of this task is to determine whether various conservation strategies might be capable of decreasing water demand to below the sustainable yield of the groundwater system. This involved estimating irrigation use, quantifying unmetered uses, and measuring leakage from the distribution system.

2.1.1. Non-Allowable Uses – Metering Uncertainty

Water production and delivery are both metered in CSA-11. Production is metered at each well for Well Nos. 1 through 3. Water use is also metered at the turnout to each customer. Meters are currently read on a bimonthly schedule. **Figure 2** shows A. metered water use for 2004-2019 and B. semiannual well production and metered customer consumption for 2012-2019. As shown in the lower graph, well production was consistently less than the sum of the customer meter readings until 2016, when the meter on Well No. 1 was replaced. Since then, the two data sets have matched more closely. The sum of the customer meters has generally been about 20 percent lower than the metered well production since then. Water meters tend to under-record as they age, which could be causing some of the recent

discrepancy. Leaks or unmetered uses in the distribution system could also contribute to the discrepancy. In any case, the obvious effect of changing the well meter in 2016 underscores the fact that even metered water use data are subject to uncertainty.

Review of the upper graph indicates that total system-wide water use during calendar years 2015-2019 averaged 19,442 gallons per day (gpd)[1], as measured by customer meters at the 101 active connections.

2.1.2. Non-Allowable Uses

Customer water use records were examined for indications of irrigation use, some of which might not be allowed. The current water supply and distribution system was authorized by Coastal Development Permit 90-62. One of the conditions of approval was that delivered water be used only for specified uses including "limited landscape irrigation". Irrigation use can often be detected by regular seasonal variations in water use, as illustrated in the sample customer account usage record shown in **Figure 3**. Water use by this customer is highest in summer, corresponding with seasonal irrigation demand. Tourism also peaks in summer, and customer accounts of tourist-serving businesses were not counted as irrigated where they could be identified.

Of the 101 active customer accounts, 36 had average usage exceeding 180 gallons per day (gpd). Usage at those accounts was reviewed individually, and 11 of them were found to have an irrigation pattern. The presence of irrigated landscaping was confirmed at most of those accounts during a site visit on September 18, 2020. The amount of irrigation use was estimated using the curve separation technique, which assumes that water use during the minimum-use month of the year is all indoor use and that additional use in other months is for irrigation. By interpolating between these seasonal low points over the entire hydrograph period, indoor use (below the green line in **Figure 3**) was separated from irrigation use (above the line). By this method, average annual irrigation use during 2015-2019 by the 11 accounts with an irrigation pattern amounted to 1,516 gpd, or 8 percent of total water use by all accounts.

These results indicate that a strict prohibition on landscape irrigation probably would not be sufficient by itself to eliminate the long-term water-level declines, as discussed below. Accounts with smaller amounts of usage might also include some irrigation use, but that usage is probably small relative to the amounts detected in the high-use accounts.

[1] To facilitate comparison, flow rates in this report are mostly expressed as gallons per day. To convert to other units, divide by 1,440 to obtain gallons per minute, multiply by 30.4 to obtain gallons per month, multiply by 365.25 to obtain gallons per year, and multiply by 0.00112 to obtain acre-feet per year. Conversions from daily or annual data to monthly data assume 30.4 days per month.

2.1.3. Leaks from the Distribution System

Customer meters and inflow from the storage tanks to the distribution system were both investigated for signs of leakage from the water distribution system. The customer meters are equipped each with a highly sensitive spinner dial capable of detecting small flows, typically down to approximately 0.1 gallon per minute (Pietrosanto and others, 2020). Slow rotation of the spinner dial indicates a possible leak. During the September 18, 2020 site visit, thirty meters were read around the middle of the day. The spinner dial on all of them came to a complete stop while being observed, even ones that initially had some movement. Therefore, none of those accounts appeared to have a plumbing leak downstream of the meter.

The contractor that reads the meters (Bracewell Engineering) looks for spinner dial movement, high water usage or a sudden increase in water usage during each bimonthly meter reading event and notifies the landowner of the possibility of a leak. This is a standard water conservation best management practice and provides additional assurance that leaks on the customer sides of meters are not large or common.

Leaks below the detection level of the spinner dials can be cumulatively large. For example, if all of the 101 customers had leaks at 0.05 gpm (half of the flow meter detection limit), the leaks would amount to 7,272 gpd, or about 37 percent of average daily system-wide water use.

Total leakage from the distribution system—including leaks from water mains and from pipes beyond the customer meters—was investigated by measuring overnight flow out of the storage tanks. This was accomplished by placing a Hobo brand pressure transducer/data logger with 0.005 ft accuracy and barometric correction into one of the two storage tanks for a week (November 24-December 2, 2020). Steady water-level declines late at night are an indication of possible leaks from the distribution system because other water uses are low at that time.

The tank levels, recorded at 10-minute intervals, are shown in the upper plot in **Figure 4**. Float switches control the operation of the well pump. When water levels drop about 2 ft below the high level, the pump is activated and runs until the water level is returned to the high level. Refilling events happened three times during the week, or about every two days. The red circles indicate the late-night periods (1:00 a.m. to 4:00 a.m.) that were used in the leak analysis.

The lower plot in **Figure 4** shows an expanded view of water-level declines during 1:00-4:00 a.m. on seven days during the monitoring period, normalized to a level of zero at 1:00 a.m. The lines are not perfectly straight, which may be due to accuracy limitations of the pressure transducer and/or potential non-uniform late night water use. The slopes are also not identical for the seven days. Pipe leaks are a function of pressure in the pipe and are normally constant. There might be variable leakage due to faucets left dripping, toilet flap valves that occasionally do not seat properly, or daily differences in other late-night water uses such as toilet flushing and irrigation. The minimum decline over the 3-hour period was

about 0.010 foot (upper three curves), and the average was 0.021 foot (all curves). The water-level decline was converted to a volume by multiplying by the area of the storage tanks. The tanks are connected by an open pipe and have the same level. The tank diameters are 38 and 41 ft, corresponding to a combined area of 2,454 square feet. The minimum and average 3-hour volume declines were 184 and 386 gallons, respectively.

The late-night storage decline might not all be due to leakage. Possible non-leakage water uses include toilet flushing and drip irrigation systems operated by a timer. An approximate but plausible estimate of systemwide toilet flushing volume between 1:00 and 4:00 a.m. is 258 gallons, which assumes one 2.5 gallon flush during that period for each of the 101 active connections. Drip irrigation use is more speculative. If on any given night five customers have drip systems with thirty 1-gph emitters that operate throughout the 1:00-4:00 a.m. period, the 3-hour irrigation volume would be 450 gallons. Thus, potentially all of the late-night water use indicated by the storage tank levels might be attributable to toilet flushing and/or irrigation.

Extrapolating to 24 hours, the minimum and average late-night water use corresponds to flow rates of 1,470 and 3,080 gpd. These flows equal 8 percent and 16 percent of average daily systemwide water use. This represents a high range of estimated leakage. To the extent that some or all of the late-night water use is for toilet flushing or irrigation, the leakage flow is correspondingly lower. Unfortunately, available data do not support a breakdown of total late-night water use into its component parts, and there is no straightforward way to obtain that information.

A leakage rate equal to 7 percent of total water use is not unusual for municipal water supply systems (Lahlou, 2005). In a supply-constrained system such as this one, however, loss of 8-16 percent of the supply to leaks is significant. The locations of leaks in water mains (upstream of the customer meters) can usually be found by acoustical methods. Specialty contractors that provide leak detection services are available in the Bay Area. Leaks on the customer side of the meters are most commonly from plumbing fixtures and are addressed through customer awareness programs.

2.1.4. Water Main and Fire Hydrant Flushing

In many municipal water supply systems, unmetered water uses include exercising of fire hydrants and flushing of water mains. According to fire department staff, hydrants are not currently tested to ensure functionality (“exercised”), primarily due to community sensitivity to apparent water waste. Five dead-end water mains in the water distribution system are flushed of accumulated sediment by opening a valve at the end of the stub line for about 30 seconds. The flow rate is on the order of 200 gpm. This was formerly done quarterly, but the frequency has been reduced to annual due to community concerns over water waste (Brennan, 2020). The amount of water used for this purpose is approximately 500 gallons per year. Averaged over a year, it is equivalent to a flow of 1.4 gpd or 0.007 percent of average annual system-wide water use.

2.2. Task 2. Analyze the Short-Term Effects on CSA-11 Yield with the Addition of the Fire Station and Middle/High School to the System

Two community facilities are proposed for connection to the CSA-11 water distribution system: Pescadero Middle/High School and a new fire station that would largely replace the existing fire station at the intersection of Pescadero Road and Bean Hollow Road (**Figure 1**). The impact of these new demands on system supplies was investigated by comparing the new uses with total existing use and well pumping capacity on an average annual, maximum-month and maximum-day basis.

2.2.1. **Water Use at Pescadero Middle/High Schoo**l

Non-potable water use at Pescadero Middle/High School is presently supplied by an on-site well, and its production is metered. During 2014-2016, the amount of water produced averaged 736 gpd, as shown in **Figure 5**. This is the period of record readily available from the California Division of Drinking Water on-line database. School staff confirmed that in 2019 water use was "about 25,000 gallons per month", or 822 gpd (Lagow, 2020). This rate is within 12 percent of the 2014-2016 average. The maximum monthly use during 2014-2016 was 35,500 gal/mo (1,168 gpd), or 1.42 times greater than average use during 2014-2016. This reflects recent but pre-Covid-19 use, which is the appropriate basis for long-term planning.

Groundwater produced by the school well reportedly has elevated nitrate concentrations that excel State Maximum Contaminant Limits (MCLs) for drinking water. About three years ago, the school began purchasing bottled water for drinking. Detailed records for a 6-month period in 2017-2018 indicated a fairly steady consumption averaging 13.1 gpd (over all days of the month during the school year) (Lagow, 2020). This represents less than 0.07 percent of total water use by existing CSA-11 customers.

Non-potable uses at the school could continue to be supplied by the school's well after potable uses have been switched to the CSA-11 system. These include infrequent water use for storage tank cleaning, pressure tank maintenance, bus washing, initial irrigation for establishing turf, and filling fire trucks. During 2012-2016 those uses corresponded to an average daily use of 123 gpd (Lagow, 2017). Landscaping on the front side of the school is not irrigated. The playing field behind the school building is flood irrigated once in spring by pumping out of Pescadero Creek. The baseball infield was formerly irrigated but is no longer (Lagow, 2020). Although toilet flushing is a non-potable use, it could be expensive to separate the toilet supply from the rest of the building supply. That use is conservatively included in the demand that would be switched to the CSA-11 supply. In 2019 there were about 165 students and 33 staff. Men's bathroom urinals are flushless.

The total new demand placed on the CSA-11 system by connecting the school would average about 835 gpd, which corresponds to an increase of 4.3 percent. This estimate is conservatively high because it uses the higher of the two estimates of average monthly use and includes some infrequent non-potable uses that in the future likely could continue to be supplied by the well (historically on the order of 120 gpd).

2.2.2. Water Use at Current and New Fire Stations

The current fire station is served by a well and by the CSA-11 distribution system. The well supplies the "apparatus bay" building, which houses an office, toilet, sink, clothes washer and three fire trucks. Water use for the toilet, sink, and clothes washer is 20-25 gallons per day according to the station captain (Cunningham, 2020). The barracks building is already connected to the CSA-11 distribution system (since at least 2012), and water use is metered. This use includes washing of fire trucks. During non-emergency periods, fire trucks are filled with water from the CSA-11 system, but typically from an off-site hydrant. That use is not metered but is estimated to be less than 5,000 gallons per year (equivalent to less than 14 gpd). However, a single major fire event can use more than 10,000 gallons (Gregg, 2020). Average annual use of CSA-11 water at the fire station has been fairly steady at 326 gpd since 2012. The maximum bimonthly use recorded during that period was 836 gpd, or 2.56 times greater than average annual use.

One of the leading sites under consideration for the new station is next to Pescadero Middle/High School. Potable uses would be served by the municipal distribution system extension to the school (same as potable uses at the existing station). The number of staff at the new facility is expected to be the same as at the existing fire station. Some non-potable water uses such as filling of fire trucks and truck washing could be supplied by the existing fire station well. Those uses are supplied by the CSA-11 system at present. Thus, CSA-11 water use at the new station is expected to be the same or slightly less than current CSA-11 water use at the existing station.

After the move, the existing fire station would be staffed only during emergencies, or an estimated 5-8 days per year (Mintier, 2020). A conservatively high estimate of average monthly use in the future would be the current daily use at the barracks (326 gpd) multiplied by 8 days per year and divided by 365 days, which is 8.0 gpd. This assumes future emergency staffing would have as many people on-site as current routine staffing. If the emergency staff are in addition to the normal staff at the new fire station, this use would be an increase of 0.04 percent in total annual system demand.

2.2.3. Peak Demand and Yield of Water System

The maximum measured water use over a bimonthly measurement period for the entire system during 2015-2019 was 24,164 gpd during June-July 2016. This is 1.24 times the average use during 2015-2019 (19,442 gpd). The average and maximum water use amounts are equivalent to flows of 13.5 gallons per minute (gpm) and 16.8 gpm, respectively. Well No. 1 pumps at a rate of 60-70 gpm. To keep up with average demand, Well No. 1 pumps approximately 5.0 hours/day into the storage tanks. During the maximum month, it needed to pump approximately 6.2 hours/day. To supply the additional maximum-month demands from the middle/high school (1,168 gpd), the well would need to operate an additional 17 minutes per day. To supply the future water demand at the existing fire station when it is staffed during an emergency (326 gpd), the well would need to operate an additional 5 minutes per day. New CSA-11 Well No. 3 has a sustainable pumping rate greater than 100

gpm. Therefore, the daily operating times required to meet the aforementioned demands will be less than the operating times for Well No. 1.

Well No. 1 or Well No. 3 could easily supply the average and maximum demands associated with the middle/high school and fire station simply by operating a few additional minutes per day. Total well operating time for either well would remain less than 7 hours per day (even less for Well No. 3), which is comfortably sustainable. Under peak demand periods, wells can operate up to 24 hours per day without adverse effect, although 12 hours per day is often used as a target long-term duty cycle.

The storage tanks provide sufficient buffer to accommodate maximum day and peak hour demands. Tank No. 1 has a capacity of 140,000 gallons, which could supply average demand for 7 days. Tank No. 2 is slightly larger and could supply average demand for 8.5 days, although its contents are designated for emergency use only (Todd Groundwater, 2019). Maximum day demand for municipal water systems in California is commonly on the order of 2.0 times average day demand (West Yost & Associates, 2014; Black & Veatch, 2018). The maximum day demand factor is probably smaller in Pescadero because the factor correlates with the amount of irrigation, which is a small percentage of total use in Pescadero. Conservatively assuming a maximum day demand factor of 2.0, the additional water needed on the maximum day could be obtained by temporarily using one-seventh of the storage capacity of Tank No. 1 or by running the supply well by an additional 3-4 hours. Peak hour demands involve smaller volumes of water that are easily absorbed by tank storage. Thus, between the storage capacity of the tanks and the additional operating time available for the wells, the system can easily supply maximum day and peak hour demands.

2.2.4. Current Condition of Existing Fire Station Well

The fire station well is located on the hillside behind the station, about halfway between the station and the CSA-11 storage tanks. The output of the well has reportedly been declining in recent years (Cunningham, 2020). A well completion report (driller's log) is not available for the well. A field inspection of the well was made on November 24, 2020. According to labeling on the pump control box, the well is 160 feet deep and the pump is set at a depth of 150 feet. The pump is a Franklin Electric FPS4400 Tri-Seal series pump, Model No. 7FA05S4-PE that was installed on August 11, 2018. The power supply/pump controller was installed in 2013 and delivers 230V single-phase AC current. According to the pump performance curve on the manufacturer's website the pump should be capable of pumping 10.5 gpm against a total head of 100 feet, decreasing to 7 gpm at 200 feet. The static depth to water was 91.1 ft. The well pumps into a covered, concrete above-ground cistern about 25 ft away. The cistern is approximately 10 feet in diameter and 6 feet high (above-ground height). A float switch in the tank turns the well pump on when the water level is about 3 ft below the top of the cistern and turns it off when the water level is about 2 ft below the top.

A short-duration pumping test of the well was performed during the site visit, and the pumping rate, water level, and specific capacity were measured over a 30-minute period. Flow was measured by bucket and stopwatch from a ball-valve spigot on a 1-inch tee at the well head. Water levels were measured by a steel tape through a small opening in the well

top plate. The discharge decreased from 4.58 gpm at the start of the test to 4.46 gpm after 10 minutes, then declined to 1.67 gpm after 30 minutes. Meanwhile, the water level dropped to 106.3 ft after 10 minutes and to 117.7 ft after 30 minutes. Specific capacity is obtained by dividing the pumping rate by the amount of drawdown. It decreased during the test, from 0.29 gpm/ft after 10 minutes of pumping to 0.06 gpm/ft after 30 minutes.

The notable results from this test are that the pump was not producing flow at anywhere near the pump performance curve and that the specific capacity of the well is small. The well has a 6-inch diameter steel casing, and approximately 37 percent of the cumulative discharge during the 30-minute test was from storage in the casing. This probably explains some of the decrease in flow rate during the test. Even without pumping at its full rated capacity, the pump is powerful relative to the yield of the well. If pumping had continued another hour, the water level might have dropped to near the level of the pump intake. The relative capacities of the pump and well explain why the pump is set near the bottom of the well and why the discharge pipe into the cistern has a cap with a small orifice about 0.5 inch in diameter. The small orifice produces back pressure on the pump and lowers its flow rate.

The average discharge rate during the test was about 3.53 gpm. However, water level recovery was not measured and might have taken much longer than 30 minutes. If recovery takes three times longer than drawdown, then the effective time-averaged pumping rate would be about 0.88 gpm. This would mean the well could produce about 1,270 gallons over a 24-hour period. This is roughly 50 times more than the current water use for the sink, toilet and clothes washer in the apparatus bay. If the “full” water depth in the cistern is 4 feet, the corresponding storage is 2,350 gallons, and the amount of storage fluctuation between the high and low positions of the float switch is roughly 590 gallons. Thus, the well capacity and storage tank volume are both much larger than current daily demand.

In summary, the fire station well appears to be in good working order. The limitation on yield appears to be the well itself. The storage tank provides sufficient capacity to supply one-time demands of up to 2,350 gallons, but the well might need to operate for two days to replenish that volume. It is not known whether the pump has a low-level cut-off switch, which would turn the pump off for 30 minutes or more if the water level in the well dropped to the level of the pump. Allowing the water level to reach the pump intake would damage the pump. A low-level cut-off switch would protect the pump from damage under conditions of sustained pumping to replenish high water use events.

2.3. Task 3. Evaluate Long-Term Demand and Supply Effects of Connecting Middle/High School and Fire Station to CSA-11 System

The effect of connecting Pescadero Middle/High School and the proposed replacement fire station to the CSA-11 water distribution system depends on how much they would increase existing overdraft. The steady long-term decline in water levels at the CSA-11 wells since 1992 shows that pumping has consistently exceeded recharge. Some of the pumping is supplied by recharge, and the remainder is overdraft. There are no nearby head-dependent boundaries to the Butano Ridge groundwater system, so any increase in pumping would

cause an equal increase in overdraft. The first step in evaluating the effect of the new connections is to separate existing pumping into sustainable yield and overdraft.

2.3.1. Current Sustainable Yield

Water levels at CSA-11 Well No. 1 continue to decline, as they have since 1992 when the first CSA-11 well began operating. Measured water levels since 2002 are shown in **Figure 6**. The hydrograph includes three intervals of relatively steady rates of decline: -0.74 feet per year (ft/yr) during 2002-2011, -0.10 ft/yr during 2012-2014, and -0.5 ft/yr during 2015-2019. The smaller rate of decline during 2012-2014 drought could have been caused by drought-related water conservation efforts and decreased pumping.

It is less likely that the change in rate of decline was caused by changes in recharge. Recharge on Butano Ridge is from rainfall and irrigation return flow. The latter does not vary much from year to year, whereas rainfall recharge is highly variable. The cumulative departure of annual precipitation in Half Moon Bay during 1940-2020—which is shown in **Figure 7**—indicates that 2015-2019 was slightly drier overall than 2002-2011: 94 percent versus 105 percent of the long-term average. The 2012-2014 period was much drier than the other two periods (58 percent of long-term average precipitation). Based on rainfall, recharge was probably lowest during 2012-2014 and greatest during 2002-2011. If water levels reflected current recharge, one would expect the rate of water-level decline to be greatest during 2012-2014 and lowest during 2002-2011, but that was opposite of the observed pattern. The reason is probably that water levels do not respond rapidly to variations in recharge at the ground surface. Annual variations in recharge are attenuated by flow through the thick unsaturated zone (approximately 200 feet in the area of the CSA-11 wells) and through fractures between the water table and the well screen depth. As a result, recharge arrives at the screened interval at a relatively steady rate, consistent with the steady rate of decline in measured water levels.

The relationship between annual pumping and annual change in water level can theoretically be used to estimate the sustainable yield, which is the amount of pumping associated with zero change in water level. Three methods were tested to apply this concept, none with accurate results. The first method was to create a scatterplot of annual net water-level change versus annual pumping. When tested with the Pescadero data set, the points were too scattered to infer a linear relationship between the variables and thereby calculate the sustainable yield. A variation of this approach was tried in which the data were averaged over longer time periods. This reduced the data to two points: average water use and water-level decline during 2004-2011 and average water use and water-level decline during 2015-2019. These represent the initial and final slopes of the hydrograph for Well No. 1 (Figure 6). The results are shown in **Figure 8**. Extrapolating the line connecting the two data points up to where it crosses the X axis (zero annual water-level change) produces an estimate of sustainable yield. By this method, the estimated sustainable yield is 7,457 AFY, or only 38 percent of average annual pumping. This method is not very accurate because of the long projection distance from the data points to the X axis. A small change in the plotting position of either of the two data points results in a large change in the estimate of sustainable yield. If this yield estimate is correct, then two-thirds of current pumping

(about 12,000 gpd) is supplied by storage depletion, which is not indefinitely sustainable. It is also implausible with respect to specific yield and the area over which water levels might be declining, as described below.

The second method of estimating sustainable yield applied a well drawdown function to see how much storage depletion would match the observed water-level decline. Using the average 2015-2019 storage depletion rate from the first yield estimating method (9 gpm), it was not possible to obtain the observed drawdown of 2 feet after 4 years using the range of hydraulic conductivity calculated from tests of Well No. 3 in 2018. A smaller conductivity was required. Also, the drawdown equation results in drawdown that occurs almost entirely during the first year, whereas the observed decline in water level was steady over the four years. This method failed to produce a reliable estimate of sustainable yield and casts doubt on the large amount of storage depletion estimated by the first method.

The third method of estimating sustainable yield assumed that the observed water-level declines resulted from steady dewatering of a finite block of aquifer. It is unlikely that the dewatered region would extend more than 1,500 feet to the east (the eastern escarpment of Butano Ridge) although a larger distance is plausible to the west. Assuming the dewatered area extends an average distance of 2,000 feet from Well No. 1 and that the specific yield of the aquifer is 0.02 (dimensionless)—which is reasonable for a productive fractured-rock aquifer—a water-level decline of 0.5 ft/yr would produce 2.9 acre-feet per year of water, equivalent to a constant rate of 2,570 gpd. This equals 13 percent of total pumping. The remaining 87 percent of the pumped water was therefore sustainably derived from recharge, or 16,872 gpd. Although this estimate of sustainable yield also involves uncertain assumptions, it is probably the best of the three attempted yield estimates.

2.3.2. Projected Effects of Connecting School and Fire Station

Figure 9 shows static (non-pumping) water levels in Well No. 1 projected to 2100 under various scenarios. If the current 0.5 ft/yr rate of water level decline continues, the water level will drop below the top of the Well No. 1 well screen around 2039 (solid blue line). It would not reach the pump intake in Well No. 3 until approximately 2105. Adding the demand from the school and fire station would shorten those time frames to about 2035 and 2074, respectively (dashed orange line). These results are sensitive to the estimate of sustainable yield because a small percent change in the yield estimate creates a much larger percent change in the overdraft estimate. For example, if the current estimate of yield is increased or decreased by 10 percent, the projected water-level trends for current demand (without the school and fire station) are shown as the blue dot-dashed line and dashed magenta line, respectively. This range of uncertainty is larger than the effect of adding the school and fire station.

The above analysis is for static water levels. Based on the measured specific capacity and likely pumping rate (100 gpm) of Well No. 3, pumping water levels are 24 feet lower than static water levels. This means that the pump in Well No. 3 could break suction 48 years sooner than shown on the figure, or in approximately 2057.

At that point, the pump could be lowered. It is presently 10 feet above the top of the screen, and the screen extends for another 100 feet. With some modification to the pump to ensure adequate cooling of the pump motor, the pump can be set within the screened interval. If that option is pursued, the limiting factor for water level decline could be the risk of sea water intrusion or depletion of flow in Butano Creek if water levels declined 70 feet from their current elevation. At that point, however, static and pumping levels would be below the top of the screen, which could decrease well output and cause air entrainment in the well water that would potentially damage the pump.

All of this analysis assumes that aquifer specific yield and hydraulic conductivity do not vary with depth in the aquifer. If ongoing overdraft is considered acceptable, water supply problems are not imminent. Well No. 3 could supply current demand plus the school and fire station demand for at least 20-30 years. To serve as a fully capable standby well, the pump in Well No. 1 likely will need to be lowered again, and possible upsized to accommodate the higher lifts, and possibly additional hours of operation each day.

2.4. Task 4. Identify any potential water quality impacts associated with CSA-11 extension to the fire station and school

There has been no historical correlation between groundwater levels and water quality at the CSA-11 well field. Todd Engineers (2002) found no relationship between water levels and water quality in Wells 1 and 2. Water quality data for the CSA-11 wells since 2004 were obtained from the California Division of Drinking Water and plotted as time series to look for trends correlated with the declining trend in groundwater levels. Plots for 23 physical parameters and chemical constituents are shown in **Figure 10**. Although a few of the variables such as turbidity and barium have occasional high values, none of the parameters exhibit an increasing or decreasing trend over time. Nitrate might be an exception, with a possible decreasing trend since 2004. Overall, water quality does not appear to be dependent on groundwater levels. Therefore, connecting the middle/high school and fire station to the CSA-11 system is not expected to affect the quality of water delivered to customers.

The water quality of Well No. 1 meets all drinking water standards. Of the constituents shown in the figure, sixteen are regulated under primary (health-based) drinking water standards and three under secondary (aesthetic) drinking water standards. All but one of the measured concentrations were less than half of the primary or secondary maximum contaminant level (MCL), including nitrate at 5-26 percent of the primary MCL. Total dissolved solids was the exception at 63-72 percent of the long-term secondary MCL (500 mg/L).

2.5. Task 5. Incorporate anticipated Local Coastal Program (LCP) residential and commercial growth as shown in LCP Table 2.16 Estimate of Water Consumption Demand at Land Use Plan Buildout for the Town of Pescadero

Table 2.16 of the 2013 Local Coastal Program (LCP) lists estimated annual water demands for existing and proposed land development categories in Pescadero. Those estimates are listed in the left half of **Table 1**. Buildout demand equals the sum of the existing and proposed water demands. The right side of the table shows revisions made for this study based on actual water use during 2015-2019. The LCP estimates for existing conditions were high in terms of number of connections and water use per connection. For example, the LCP estimated that there are 125 residential connections each with 3.5 residents using 70-110 gallons per capita per day (gpcd). The actual number of residential connections is 90. If there are 3.5 residents per household, per-capita use is 48 gpcd. Commercial use is similarly smaller than the LCP estimate with respect to number of connections and water use per connection. For the third category, the LCP recognized that there is one fire station, but metered use of CSA-11 water at the station has been only one-third the LCP estimate. Overall actual water use during 2015-2019 has averaged 19,442 gpd, or only 34-53 percent of the LCP estimate.

In the lower-right part of **Table 1**, actual water usage per connection during 2015-2019 is applied to the LCP estimate of the number of additional future connections to obtain a revised estimate of future total water use. Estimated total water use with the additional connections plus the middle/high school (a demand that was not anticipated in the LCP) is 48,544 gpd, or 43-68 percent of the LCP estimate. It is 29,102 gpd greater than existing total water demand.

If the additional future water demand were supplied by the existing CSA-11 wells, water level declines would accelerate rapidly, as indicated by the downward-curving dashed green line in Figure 9. That curve reflects an assumption of a linear increase from existing demand to buildout demand over a 50-year period. Water levels would decline to the Well No. 3 pump intake by 2044 and to the top of the screen by 2047. Clearly, new water supplies would be needed to support the growth envisioned in the LCP.

2.6. Task 6. Account for anticipated water usage associated with retention of the apparatus bay and any other facilities at the existing fire station site

This topic was addressed in Section 2.2 “Water Use at Current and New Fire Stations”. To reiterate, the existing fire station well could supply all non-potable uses at the apparatus bay, which are currently negligible but could include equipment washing during future emergency periods. The existing fire station would be staffed only during emergencies, or an estimated 5-8 days per year (Mintier, 2020), which corresponds to a conservatively high estimate of average daily use over the year of 8 gpd. This assumes future emergency staffing would have as many people on-site as current routine staffing and that those workers would be in addition to the staff at the new fire station.

2.7. Task 7. Update any climate change modeling/assumptions and any known increases in private groundwater uses that would impact CSA-11's supply longevity

The California Department of Water Resources has developed statewide grids of climate change factors representing anticipated precipitation and reference evapotranspiration (ETo) conditions in 2030 and 2070. The factors are sets of 1,164 monthly multipliers to be applied to historical rainfall and ETo data for 1915-2011 to estimate the amounts that would have occurred under 2030 or 2070 global climatic conditions. Pescadero is located at the boundary between grid cells 5658 and 5746. The monthly multipliers for 2070 conditions were obtained for both cells, and average values for each month of the year were calculated. The results are shown in **Figure 11**. The ETo multipliers are greater than 1.0 in all months of the year, which means that plant ET and irrigation demand would both be greater under 2070 climate conditions. Precipitation multipliers have two seasonal peaks, one of which is in summer. However, precipitation is negligible in that season, so that peak has negligible effects on recharge and demand. Of primary importance are the multipliers for the peak in the wet season months of December-March, all of which are greater than 1.0. This means that rainfall and hence groundwater recharge are expected to be greater under 2070 climate conditions, which at least partly offsets the effect of increased ET on water supply. Thus, the warmer but wetter climate expected by 2070 would not likely cause a large net increase or decrease in net water consumption.

Land use on Butano Ridge has been stable over the past 28 years, based on Google Earth aerial imagery. There are approximately 520 acres of cropland, and the most common crop at present is flowers. Of critical importance to CSA-11 sustainable yield is that the agricultural fields are not irrigated by local groundwater but rather by surface water pumped from Lucerne Lake and Bean Hollow Lakes on Arroyo de los Frijoles, south of Butano Ridge (see **Figure 1**). The use of imported water for irrigation was deduced from the small specific capacities of other wells on Butano Ridge (Todd Groundwater, 2019) and confirmed by local growers (Cevasco, 2020). The median specific capacity of 20 wells on Butano Ridge (other than CSA-11 wells) is 0.10 gpm/ft. Even if 100 ft of drawdown is tolerated, a well of that specific capacity would produce only 10 gpm, which could apply 1 inch of water in 24 hours to only 0.53 acres. Clearly, such a well is too small to be of practical use for commercial irrigated agriculture. Lucerne Lake and Bean Hollow Lakes are supplied in part by diversions from Little Butano Creek located east of the coastal ridge and are used to irrigate all agricultural lands on Butano Ridge and along Highway 1 for about 5 miles south of Pescadero Creek (Cevasco, 2020). Residences along Bean Hollow Road are supplied by domestic wells, but the total use is small and there is no sign of new development. The greatest risk to CSA-11 yield would be if cropland on Butano Ridge went out of production, because that would eliminate groundwater recharge from deep percolation of irrigation water, which is probably a significant source of recharge. However, land use on Butano Ridge has been stable for many years, and there are no indications of any imminent change.

2.8. Task 8. Identify existing and anticipated non-revenue water as the lines age over the approximate 1-mile CSA-11 extension. Identify existing technology that could be implemented with the CSA-11 extension to mitigate impact of non-revenue water to current customers (e.g. automatic shutoff feature to the main extension to prevent leaks from depressurizing the larger system)

Nationwide research has found that water main leaks are a function of pipeline material and age (Folkman, 2018). Based on data for 198,000 miles of water mains operated by 308 water utilities in North America, PVC pipes experience 2.3 detectable breaks per 100-mile-years of pipe, compared to 10.4 for asbestos cement and 34.8 for cast iron. If the 1.3-mile water main extension to the middle/high school will be constructed with PVC pipe, the above factor indicates that the probability of a break occurring in any year would be less than 3 percent, or on average once in more than 33 years. It is more likely that future breaks would be in existing water mains, which are older and probably not constructed of PVC.

The most economical approach to detecting large, new water main leaks would probably be to monitor nighttime water-level trends in the CSA-11 storage tanks with pressure transducers connected to the existing SCADA system monitoring equipment housed at the tank site. Because the distribution system is pressurized, water main leaks occur at a continuous steady rate. A persistent increase in nighttime water use would indicate that a leak has probably developed.

3. CONCLUSIONS AND RECOMMENDATIONS

- Average annual water use during 2015-2019 was 19,442 gpd.
- Irrigation use was estimated based on seasonality of water use exhibited in individual customer account records. Average annual irrigation use estimated for 11 customer accounts with suspected irrigation was 8 percent of total use by all accounts.
- Overall leakage from the CSA-11 distribution system may be as much as 8-16 percent of annual production, based on measured system-wide water usage during late-night hours. To the extent that some late-night use is for toilet flushing or drip irrigation systems, leakage losses are less than 8-16 percent.
- Customer water meters are capable of detecting leaks as small as about 0.1 gpm. Leaks less than that rate are individually small but collectively can be much larger.
- Water levels in CSA-11 Well No. 1 declined an average of 0.50 feet per year during 2015-2019. This is slightly less than the trend prior to 2012, which was 0.74 feet per year.
- The chronic water-level declines indicate that the aquifer is in overdraft and that CSA-11 pumping exceeds the sustainable yield. The sustainable yield is difficult to estimate from available data. Two estimation methods failed to produce reliable results. A third method—based on assumptions about the aquifer area and specific yield where water levels are declining—produced an estimate of 16,872 gpd, or 87

percent of current pumping. The declining water levels are caused by the remaining 13 percent of pumping (2,570 gpd).

- Connecting Pescadero Middle/High School to the CSA-11 water system would increase annual water use by an estimated 835 gpd (4.3 percent of existing use). Almost all water use at the existing fire station is already supplied by CSA-11. Connecting the new fire station to the CSA-11 system would only increase water use by the amount used for staffing the old station during emergencies, which is estimated to average 8 gpd over the course of a year (0.04 percent of existing use).
- If existing water-level declines continue, static (non-pumping) water levels would drop below the top of the Well No. 1 screen around 2039. Static water levels would not reach the Well No. 3 pump intake until around 2105, but pumping water levels could reach that elevation 48 years sooner (2057). Adding the demands from the middle/high school and fire station would advance that date to around 2048.
- The existing school well could continue to supply some non-potable uses at the facility. Ones that are easily separable from a plumbing standpoint (outdoor uses) have historically amounted to around 120 gpd.
- The fire station well is in reasonable condition and could probably supply uses of up to 1,270 gallons over a 24-hour period, or about fifty times the amount of water presently used. If use of the well were increased substantially, a low-level cutoff switch could be installed that would insert intermittent breaks in a prolonged pumping cycle to prevent drawdown in the well from reaching the pump intake and damaging the pump. It is not known whether the well is already equipped with such a switch.
- Water use estimates for Pescadero in the 2013 Local Coastal Program are higher than recent actual use in terms of both number of connections and water use per connection. Updating Table 2.16 in the LCP to reflect actual numbers of connections and per-connection water use, and applying the per-connection use factors to the LCP-projected future number of connections produces an estimate of total future "buildout" water use that is 43-68 percent of the LCP estimate.
- Water demand for future growth would accelerate the rate of water-level declines at the CSA-11 wells. Assuming the LCP-projected growth is implemented gradually over the next 50 years, pumping water water levels would reach the Well No. 3 pump intake around 2034 and the top of the Well No. 3 screen four years later.
- Future climate is expected to be warmer and wetter, with increased rainfall recharge at least partially offsetting increased evapotranspiration and irrigation demand. Irrigation of cropland on Butano Ridge near the CSA-11 wells is supplied by off-site surface water reservoirs. Therefore, an increase in irrigation demand would not adversely affect the sustainable groundwater yield available to CSA-11. Conversely, a decrease in irrigation on Butano Ridge would reduce the sustainable yield due to a decrease in irrigation return flow.
- The water main extension to the middle/high school is not as likely to be a source of system leakage as the existing water mains, particularly if the extension is constructed with PVC pipe. A detectable leak in the extension might be expected on the order of once in 33 years.

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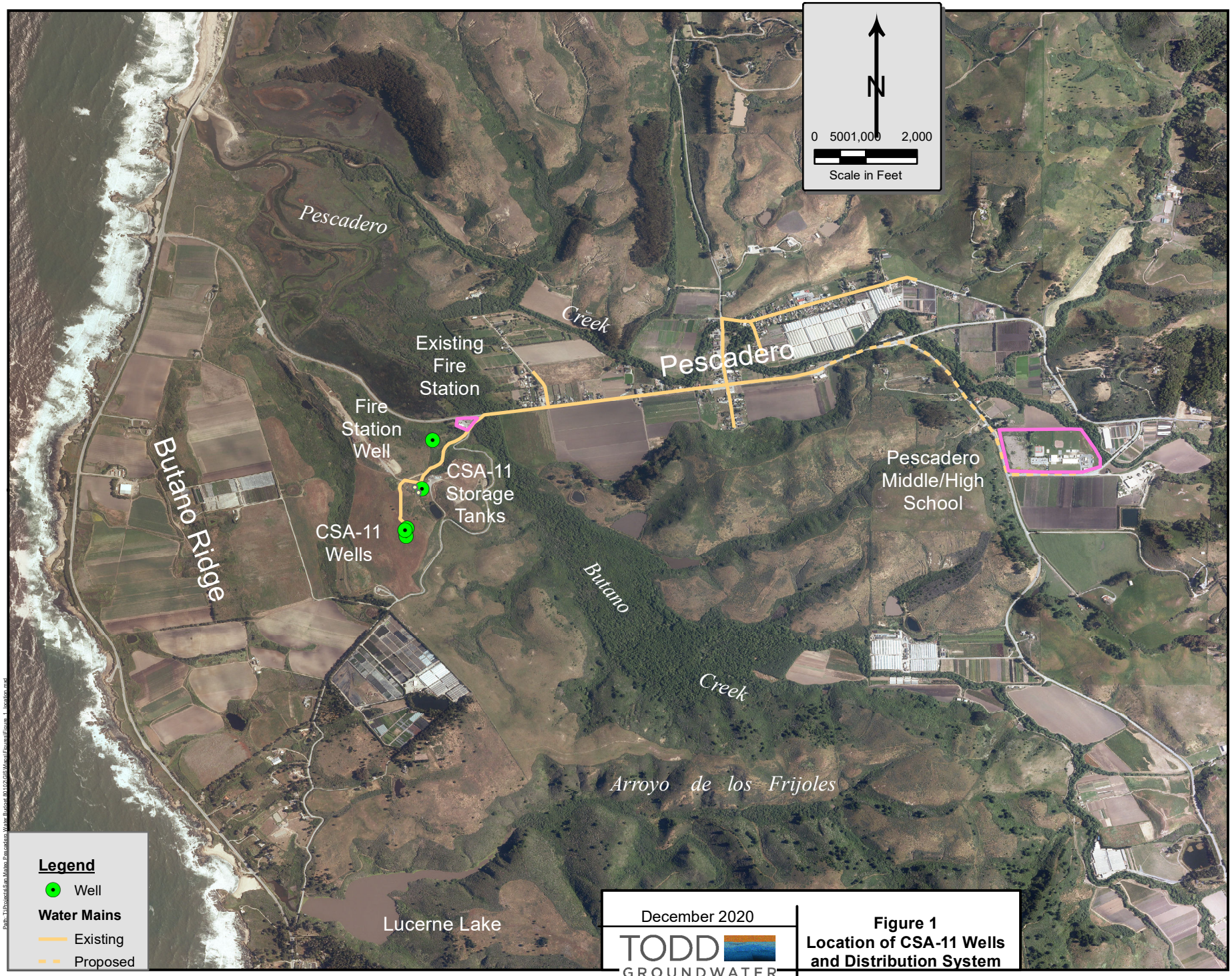
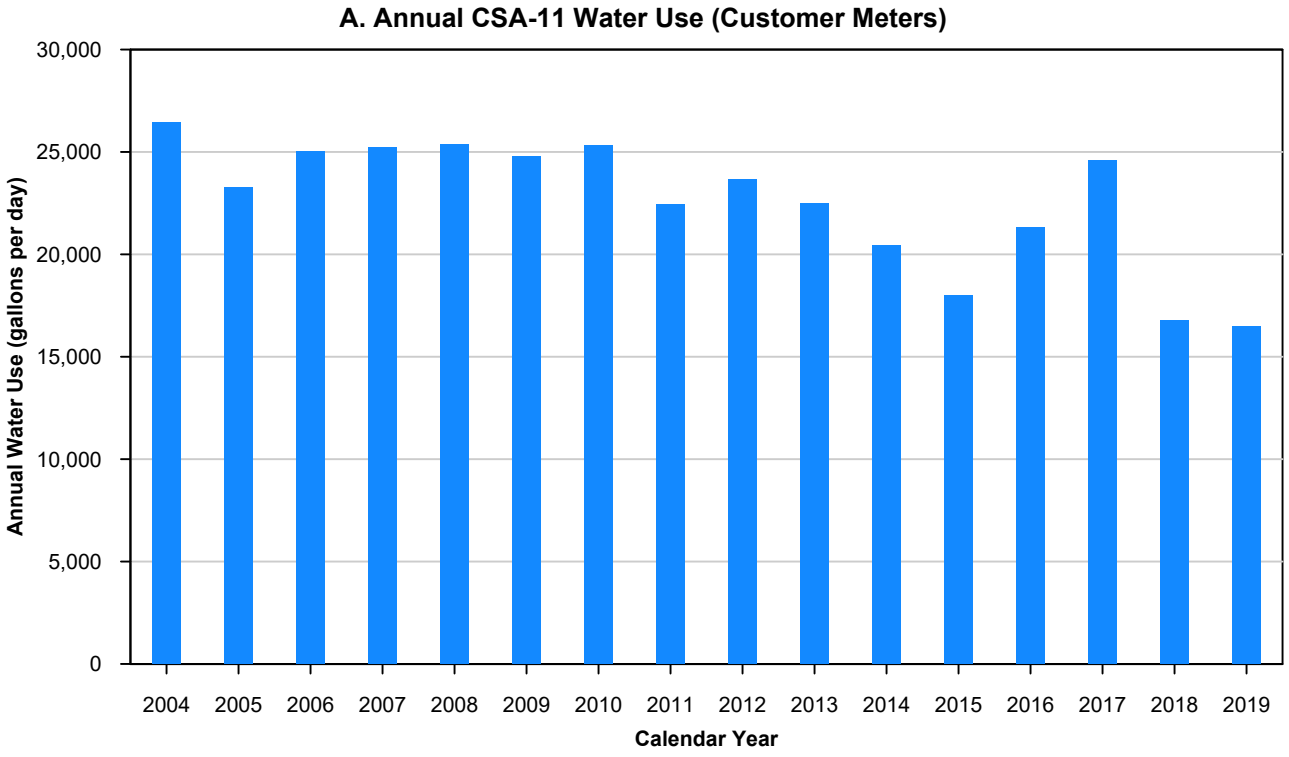
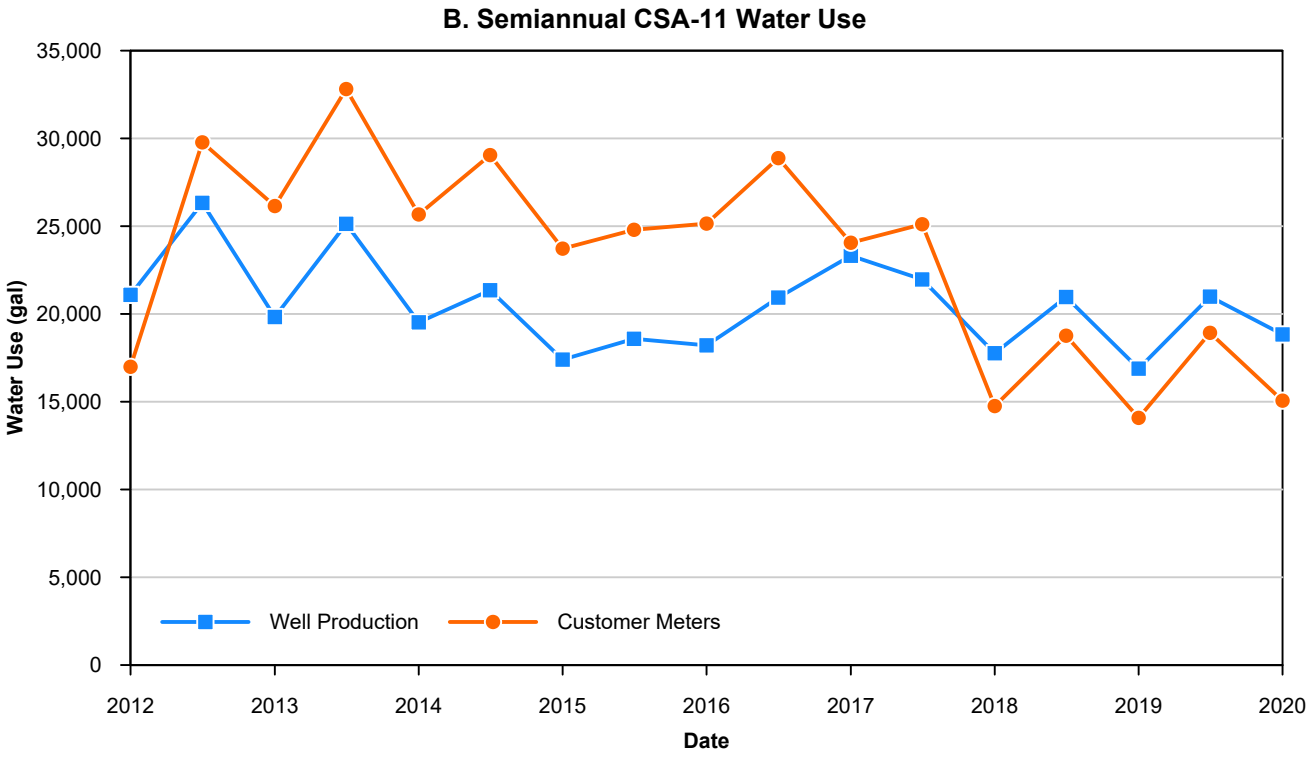


December 2020

TODD GROUNDWATER

Figure 1
Location of CSA-11 Wells and Distribution System





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January 2021

TODD GROUNDWATER

Figure 2
Well Production and Metered Customer Use

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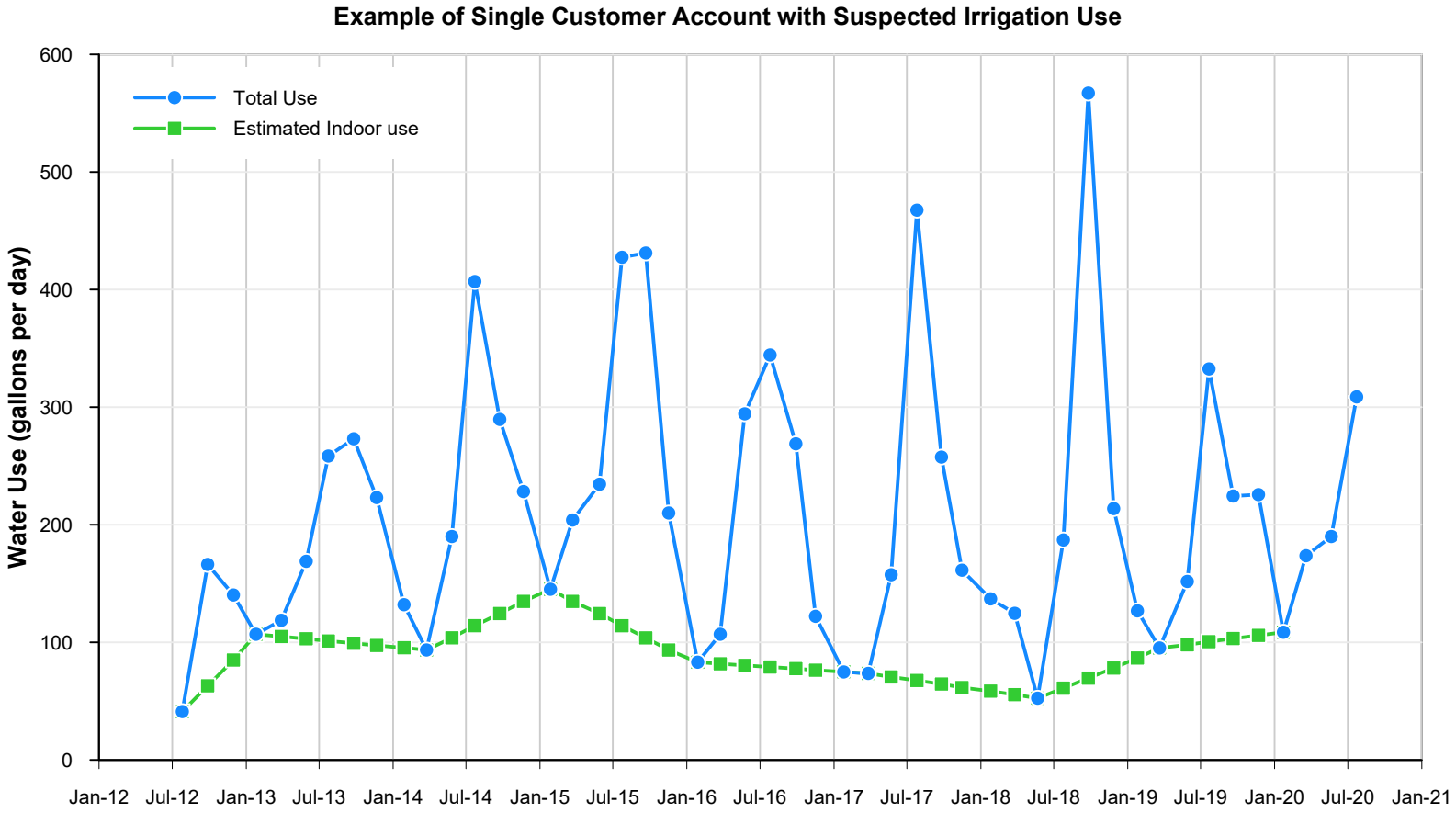

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January 2021

TODD GROUNDWATER

Figure 3
Customer Account with Suspected Irrigation Use

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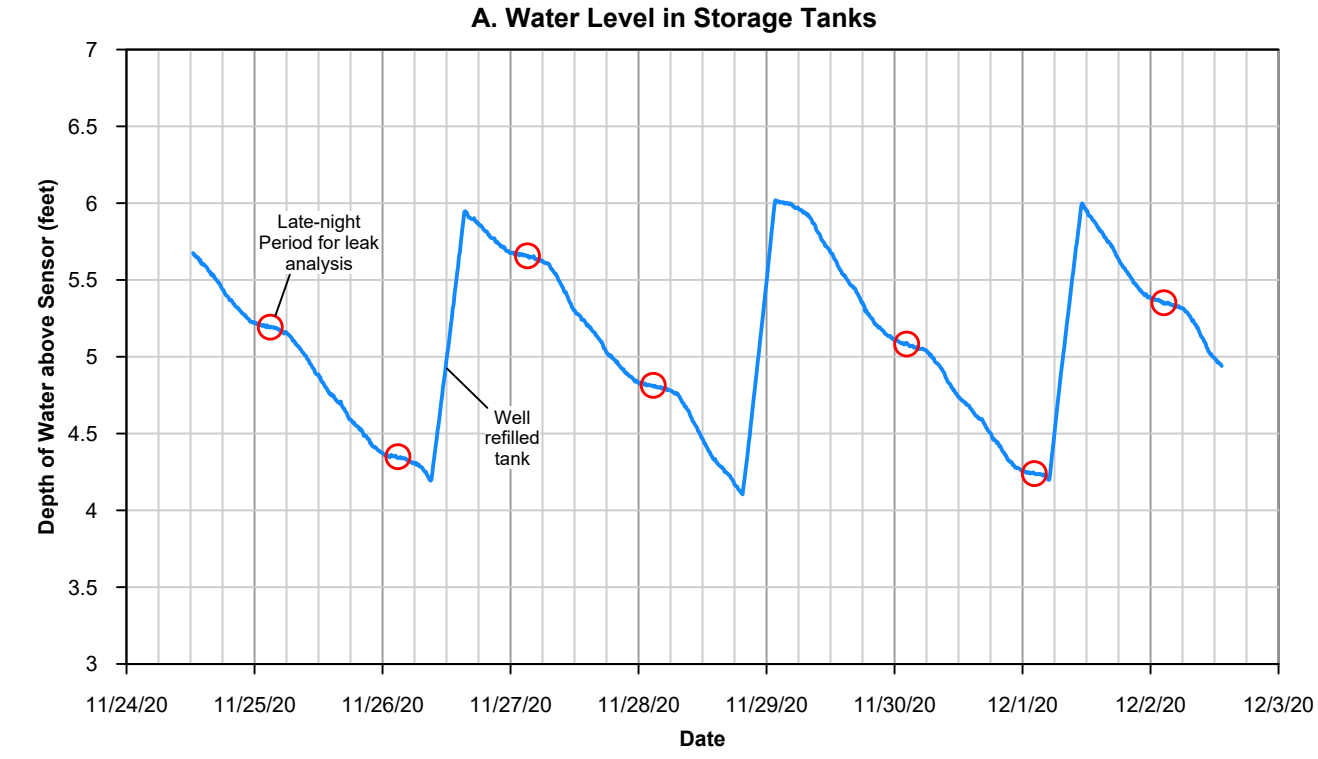

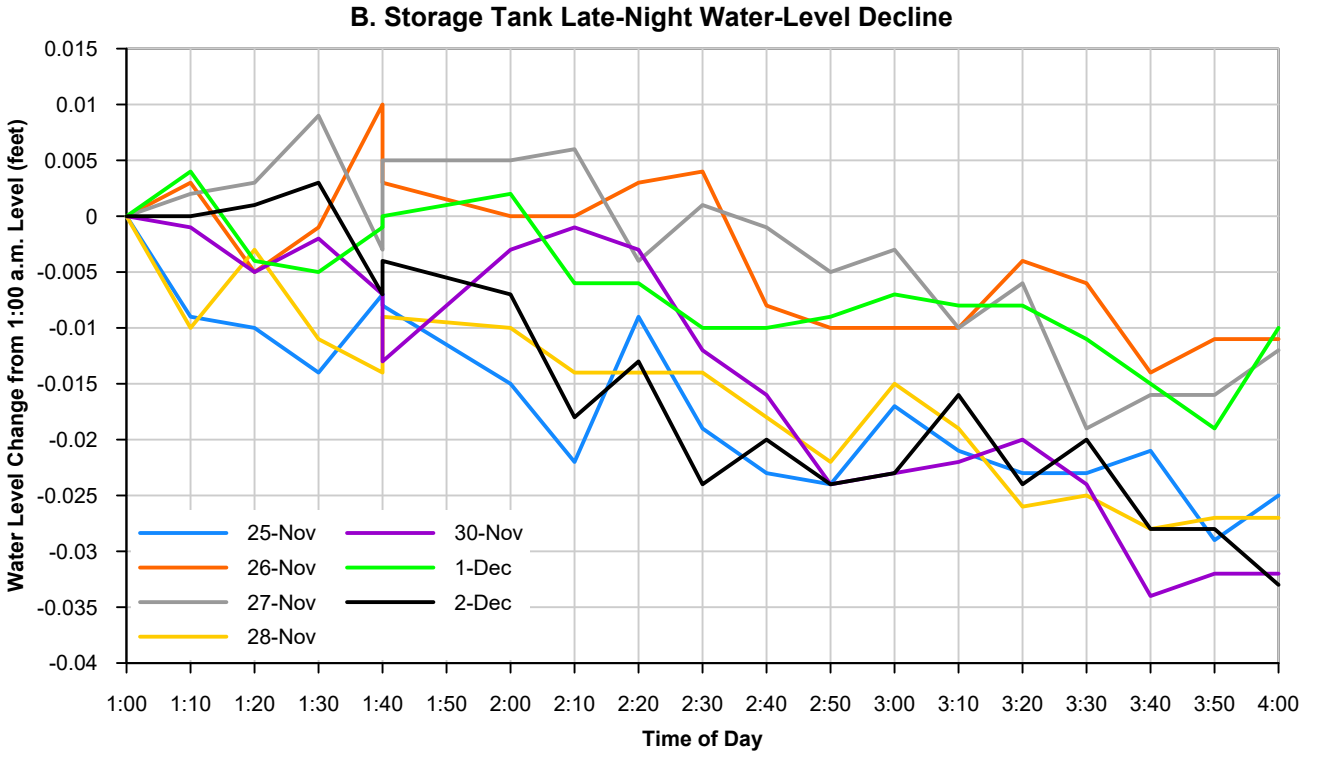

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January 2021

TODD GROUNDWATER

Figure 4
Storage Tank Water Levels

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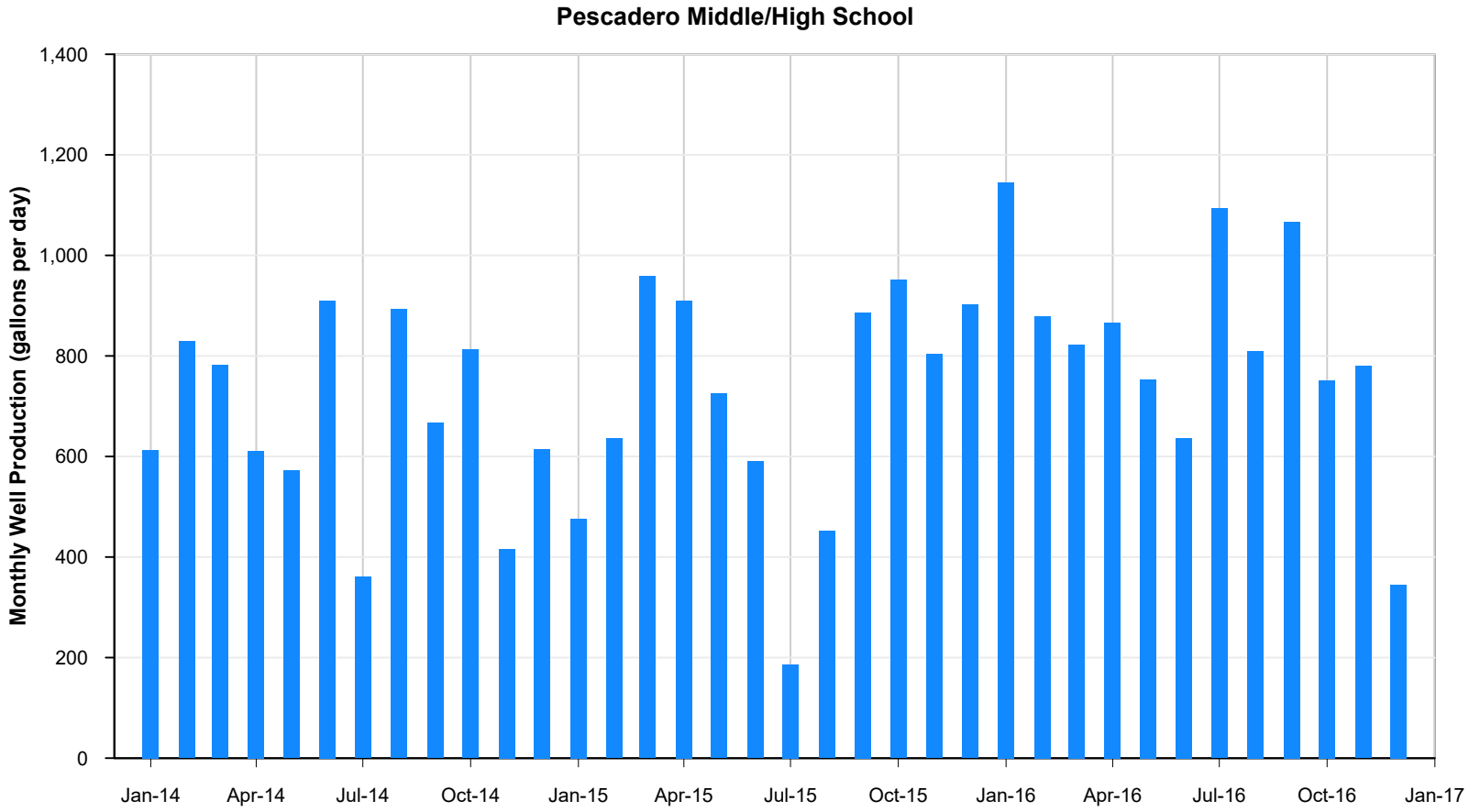


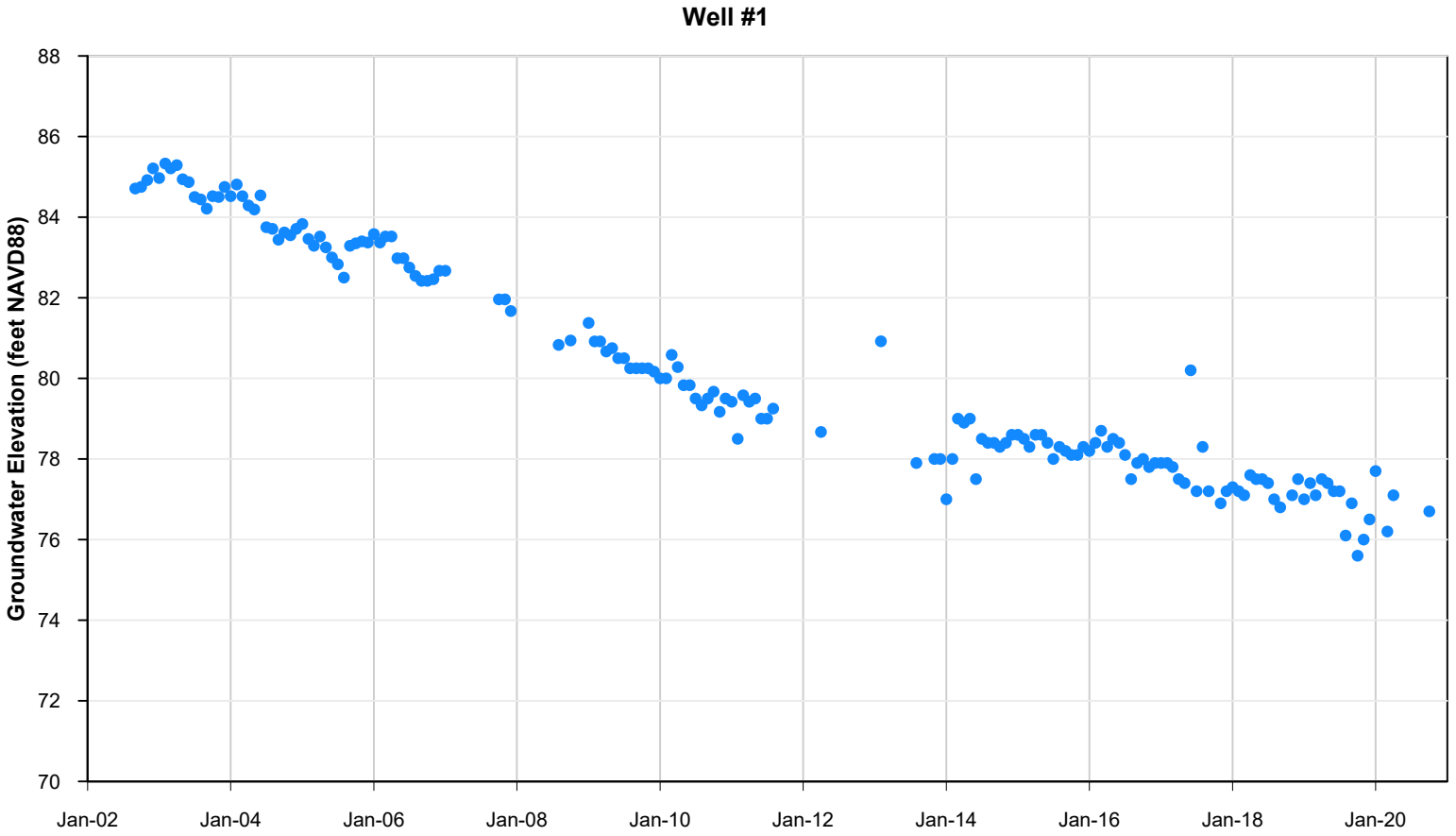
Data:
T:\Projects\San Mateo Pescadero Water Budget 80102\Data\High School\Well_production_monthly_2014-2016.xlsx

January 2021

TODD GROUNDWATER

Figure 5
Monthly Water Use at Pescadero Middle/High School

Path: T:\Projects\San Mateo Pescadero Water Budget 80102\GRAPHICS\Figure 5 Monthly Water Use at Pescadero Middle High School.gpj



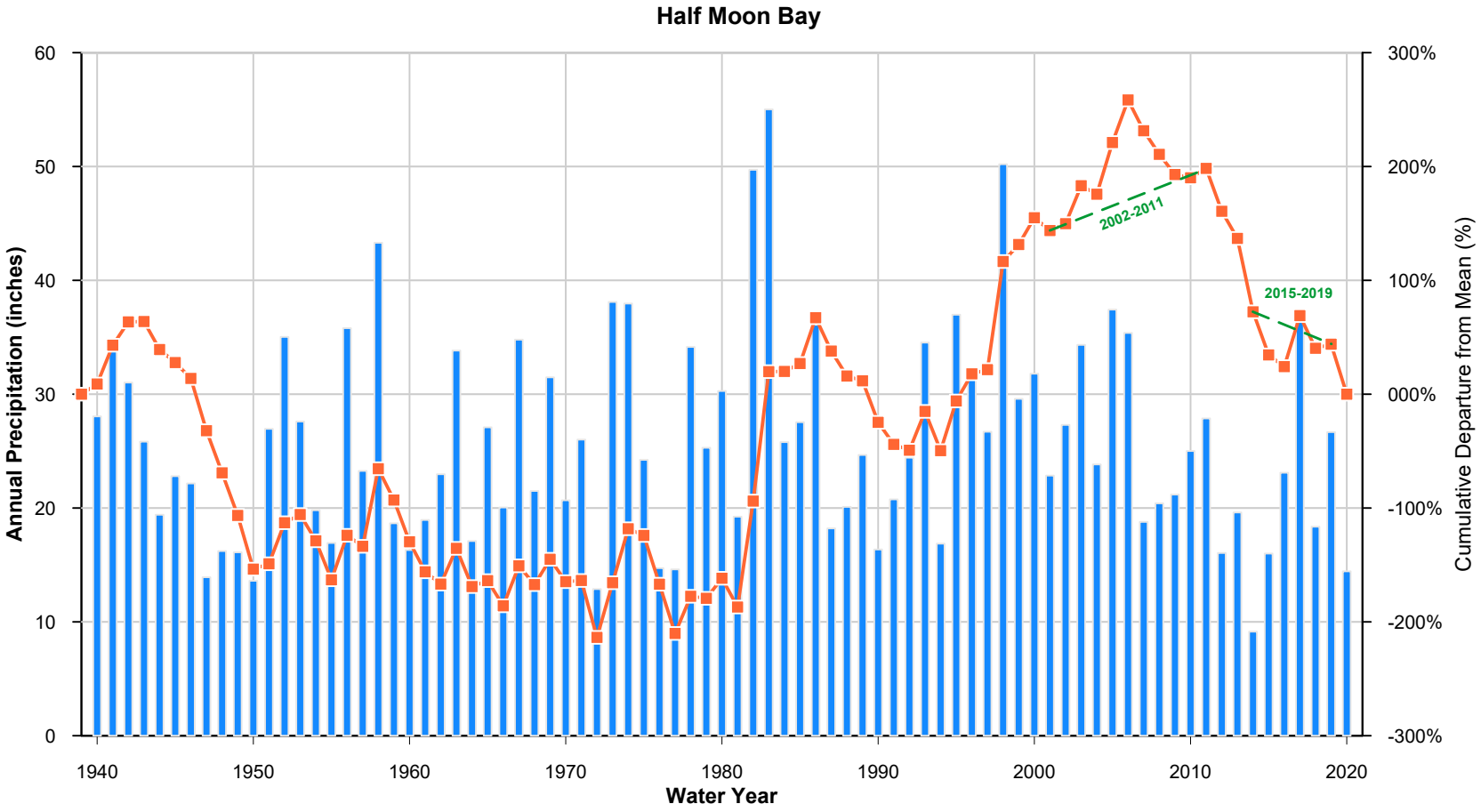
Data:
T:\Projects\San Mateo Pescadero Water Budget 80102\Data\Monthly Reports and CCRs 2017-2020\WaterUse2012-2020.xlsx

January 2021

TODD GROUNDWATER

Figure 6
Well No.1
Water Levels
2002-2020

Path: T:\Projects\San Mateo Pescadero Water Budget 80102\GRAPHICS\Figure 6 Well No 1 Water Levels 2002-2020.gpj



Data:
T:\Projects\San Mateo Pescadero Water Budget 80102\Data\Climate Change\CumDep_Half_Moon_Bay.xlsx

January 2021

TODD GROUNDWATER

Figure 7
Cumulative Departure of Annual Precipitation

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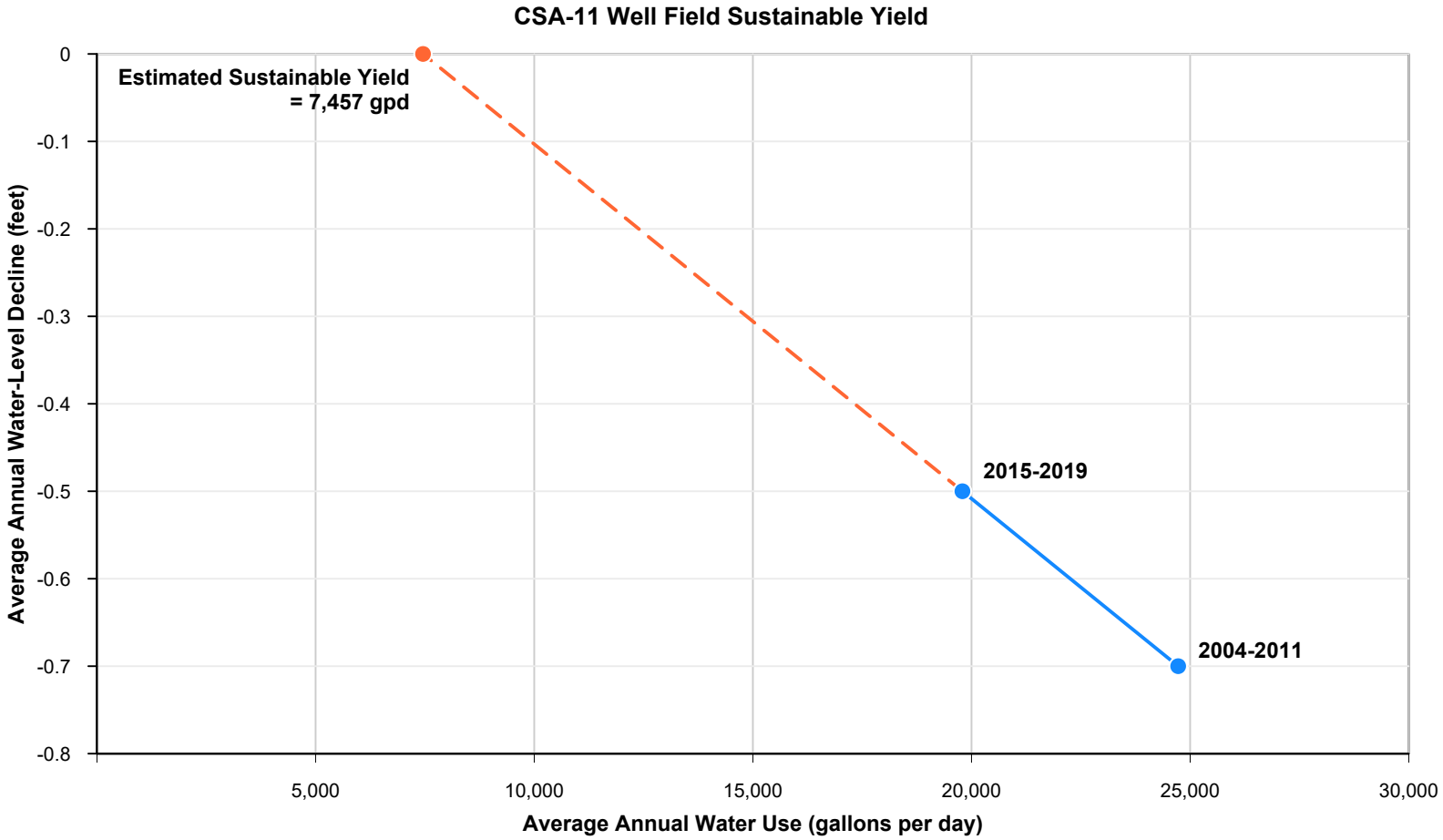

Data:
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January 2021

TODD GROUNDWATER

Figure 8
First Estimate of Sustainable Yield

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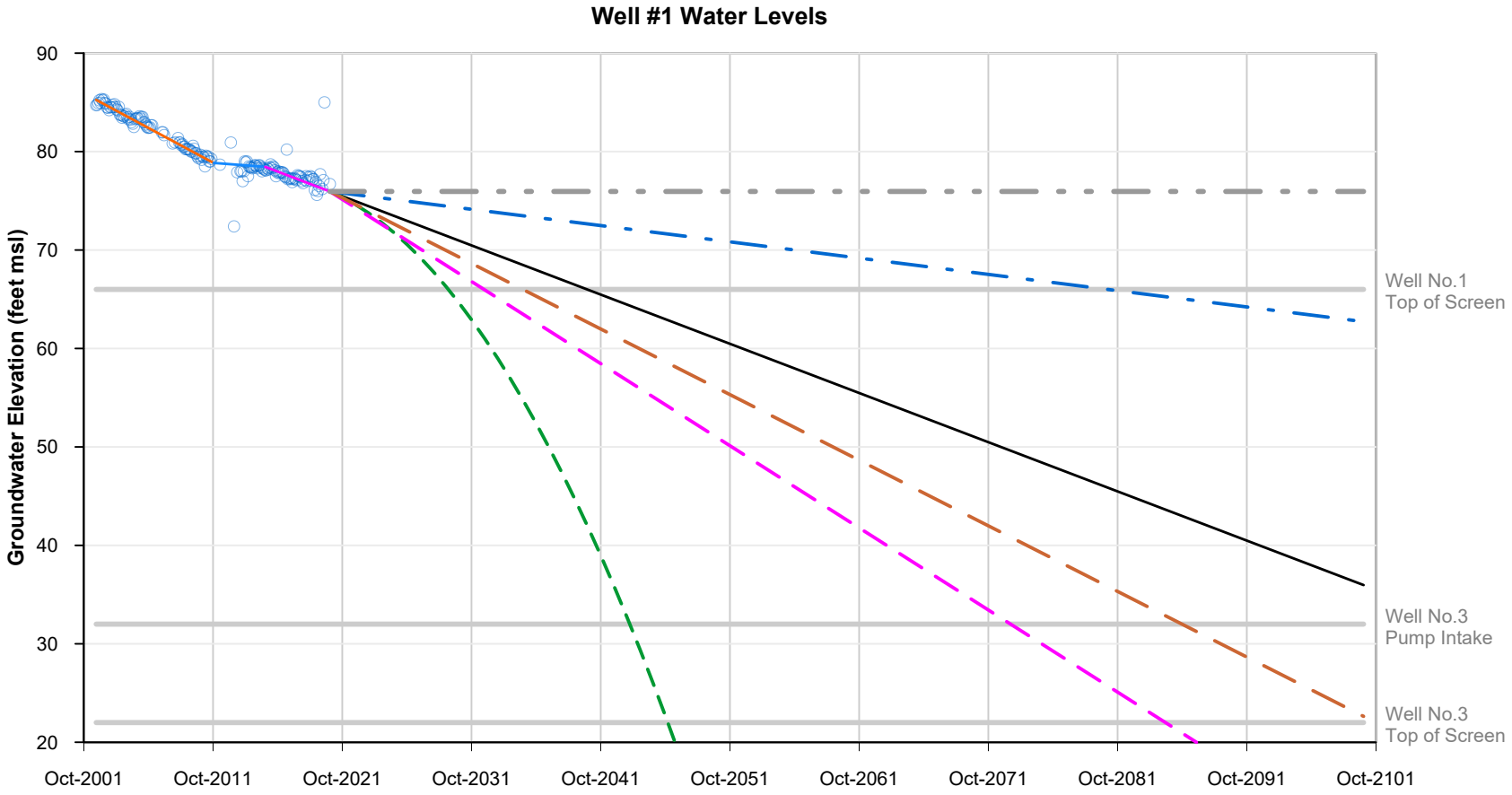

Well No.1 Top of Screen
Well No.3 Pump Intake
Well No.3 Top of Screen
Historical
Trend 2002-2011
Trend 2012-2014
Trend 2015-2019
Existing Trend
Growth to Buildout
Existing Pumping 90% Yield
Existing + School + Fire
Existing Pumping
Pumping = Sustainable Yield

Data:
T:\Projects\San Mateo Pescadero Water Budget 80102\Data\Water Levels\Well Water Elevation.xlsx

January 2021

TODD GROUNDWATER

Figure 9
Projected Future Water Levels

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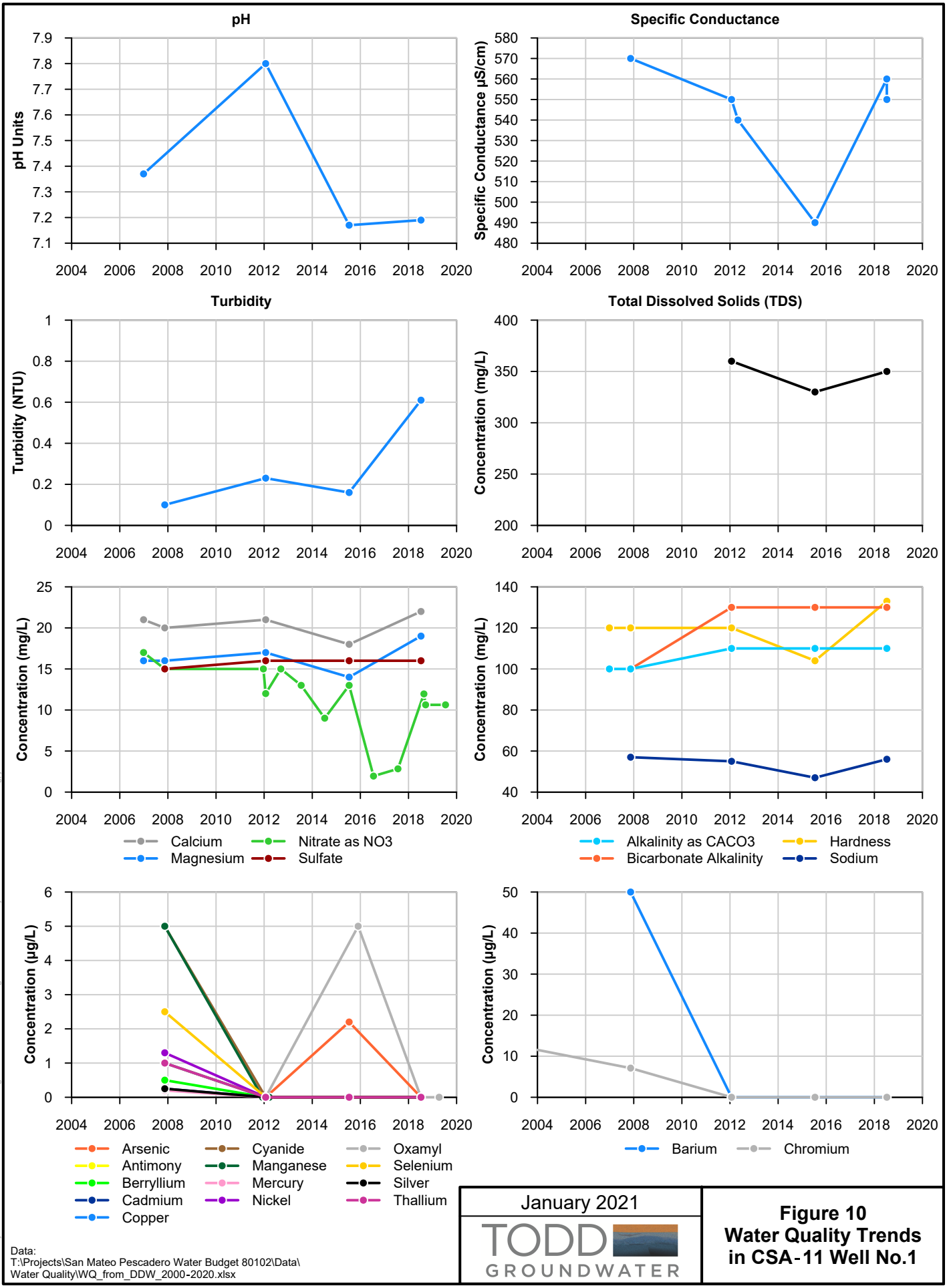

Data:
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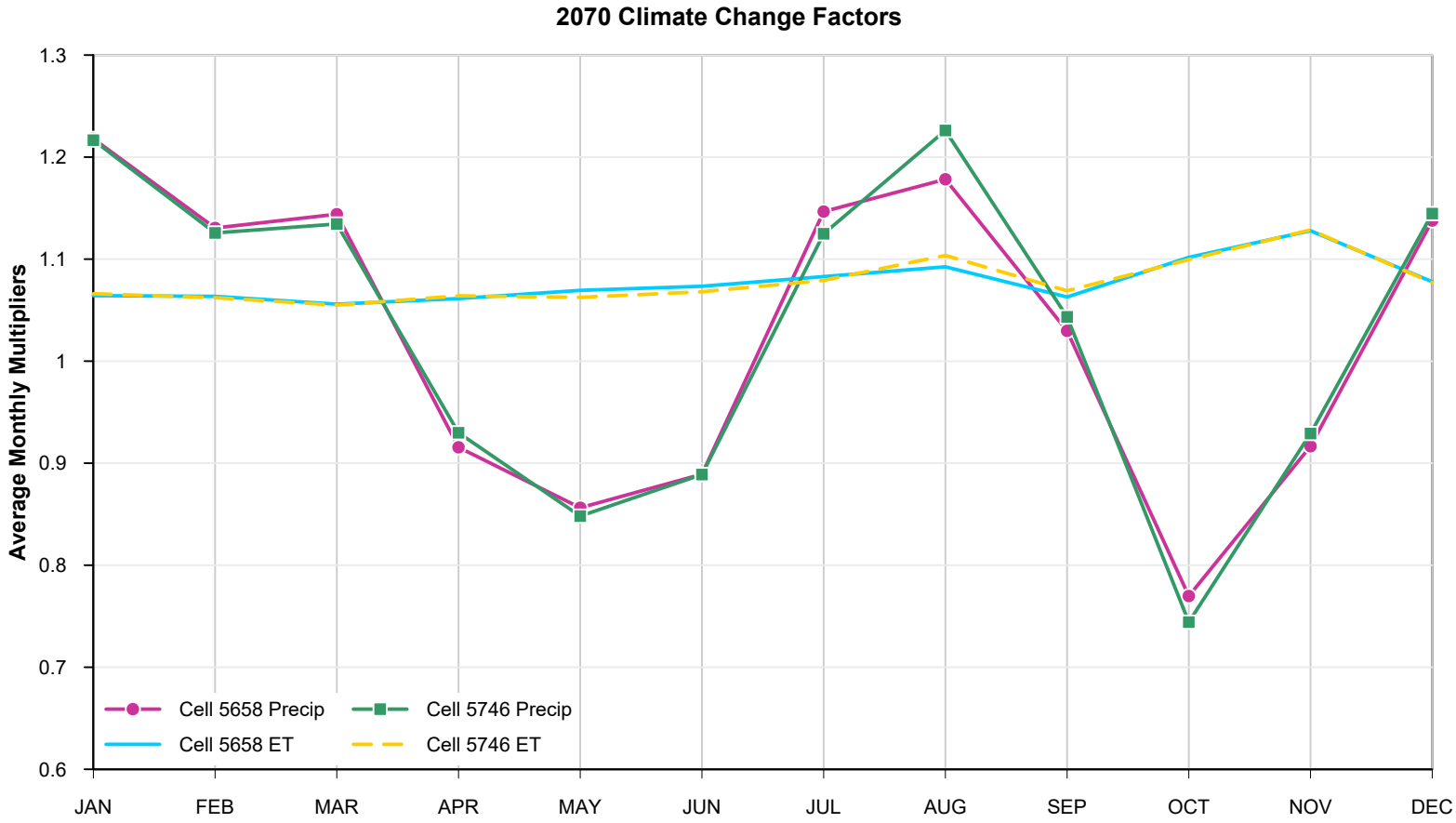
Water Quality\WQ_from_DDW_2000-2020.xlsx

January 2021

TODD GROUNDWATER

Figure 10
Water Quality Trends in CSA-11 Well No.1

Path: T:\Projects\San Mateo Pescadero Water Budget 80102\GRAPHICS\Figure 10 Water Quality Trends in CSA-11 Well No1.gpj



Data:
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January 2021

TODD GROUNDWATER

Figure 11
Precipitation and ETo Multipliers for 2070 Climate Conditions

Path: T:\Projects\San Mateo Pescadero Water Budget 80102\GRAPHICS\Figure 11 Precipitation and ETo Multipliers for 2070 Climate Conditions.grj

Table 1. Estimates of Existing and Future CSA-11 Water Demand

Water Use Category	Local Coastal Program Table 2.16		Revised Based on Actual 2015-2019	
	Number of Connections	Gallons/Day	Number of Connections	Gallons/Day
Existing Uses				
Dwelling units	125	30,625-48,500	90	15,128
Commercial outlets	20	4,600-7,760	11	3,988
Pescadero fire station	1	1,000	1	326
Subtotal	146	36,500-57,260	102	19,442
Additional Proposed Uses				
Dwelling units	125	30,625-48,500	125	21,011
Commercial outlets	20	4,600-7,760	20	7,251
Pescadero fire station[1]	1	1,000	1	8
Middle/high school	n.a.	n.a.	1	832
Subtotal	146	36,500-57,260	147	29,102
Total Buildout Use		**72,050-113,520**		**48,544**

Notes:

[1] The existing fire station use is expected to transfer to a new station that will also be connected to the CSA-11 system. The existing station will generate new use when occupied by additional firefighters during emergency operations.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT E

San Mateo County

Department of Public Works

Pescadero Fire Station

1200 Pescadero Creek Road
Pescadero, California 94060

Site Assessment

January 13, 2014

RATCLIFF

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1. Team

San Mateo County Public Works

Cal Fire

Design Team

Architectural

Ratcliff

Structural

Degenkolb Engineers

Civil

CSW/Stuber-Stroeh Engineering Group, Inc.

Mechanical/Electrical/Plumbing

NBA Engineering, Inc.

Cost Analysis

Tbd Consultants

2. Project Description – Service Area

INCIDENT RESPONSE DIRECTION – EXAMINED

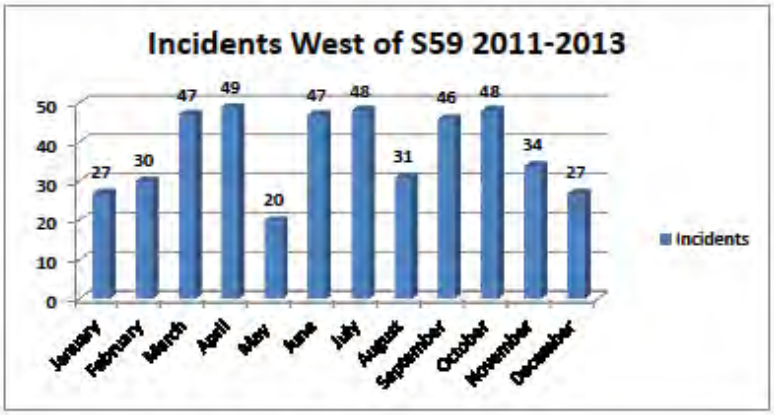
A three-year study investigated the direction to which Station 59 responded most often. The result of the study indicated an essentially equal number of responses in both directions. Consequently, the location of a new station in relationship to either the town or the coast was not informed by this study.

By choosing a position to the east of the flood-prone area, on Pescadero Creek Road, at the creek bridge and closer to Town would allow Community Room access to a greater number of area residents, if such a room were included in the New Fire Station program.

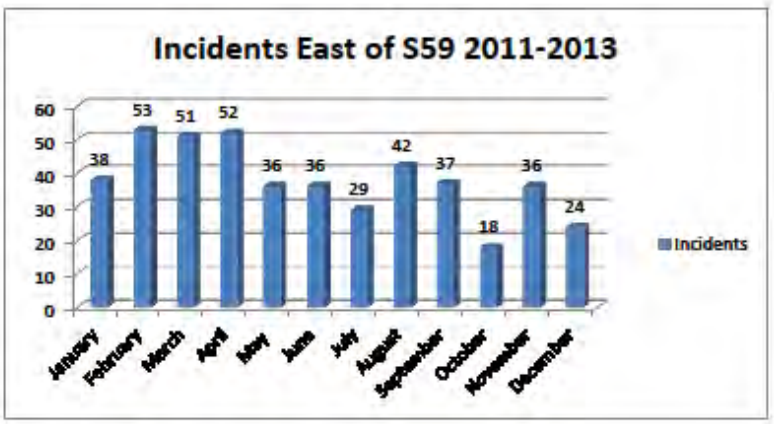
Business and commercial access between the town and the coast makes adopting the flooding resolution as critical to the Town's livelyhood as the other routes out of town.Stage Road to the north and Cloverdale Road to the south—both of which are long and circuitous-- impede tourism and commerce as well as firefighting response time.

one area on Pescadero Creek Rd at the Creek bridge and closer to Town would allow a better use of the Community Room if it were included in the program to develop a New Fire Station.

January	27
February	30
March	47
April	49
May	20
June	47
July	48
August	31
September	46
October	48
November	34
December	27
TOTAL	454



January	38
February	53
March	51
April	52
May	36
June	36
July	29
August	42
September	37
October	18
November	36
December	24
TOTAL	452



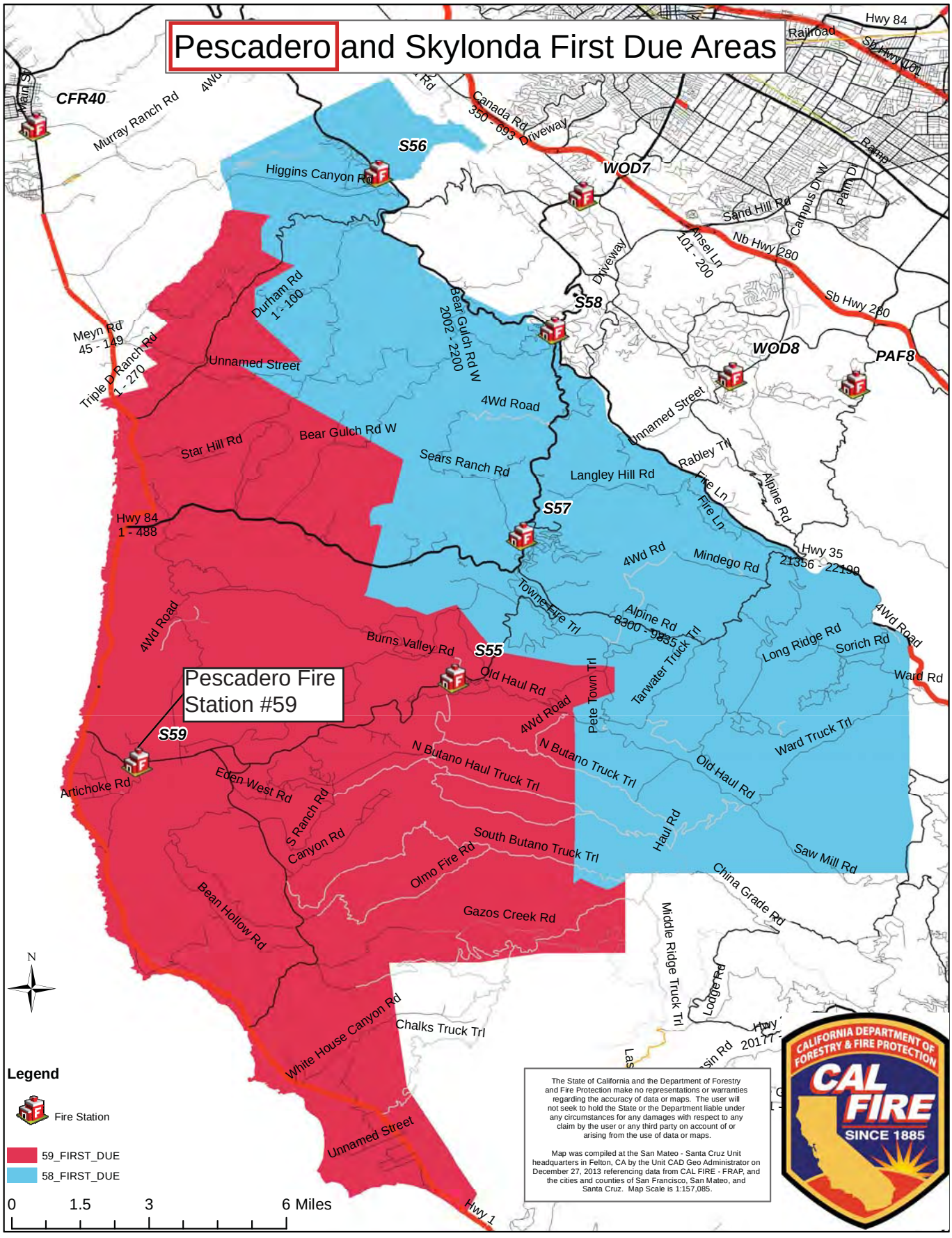


EXHIBIT A. PESCADERO SERVICE AREA

3. Executive Summary and Recommendations

The Team has interviewed the staff at the Fire Station and reviewed the conditions of the existing Pescadero Fire Station to gain an understanding of the current conditions of the facility, its mission and the Service Area.

The service area is indicated in Exhibit A.

There are three full-time firefighters on staff, increasing to 8 or 9 during fire season.

The team has explored several options to mitigate the known water risks at the existing site and bring the facility up to current requirements for its mission.

The options that were considered range from:

Option A: Provides for a new fire station to meet all current criteria by locating an acceptable site near the Town of Pescadero and rebuilding a new, code-compliant, and efficiently operated facility. This site should not be located in the flood plain or in the Tsunami Inundation Zone, as well as outside the limits of 50 year predicted sea level rise (and ideally beyond this limit) in order to protect the investment in the improved facility and properly uphold the public safety mission of the station (see Section 3.1).

Option B: Provides for a new Living Quarter and Command Office area adjacent to a remodeled Apparatus Building, while working within the existing site as it remains open and occupied as a fire station. This appears to provide the most cost effective way to improve the facility's ability to support its mission, but with the understanding that all water risks cannot be mitigated (see Section 3.2).

Option C: Provides for a new Living Quarter and Command Office area adjacent to a remodeled Apparatus Building after temporarily relocating the firefighting services and staff to a location at Pescadero High School Working within the existing site, site provides the most easily constructed improvements project, Again, we emphasize that all water risks cannot be mitigated. This option appears to be more expensive than Option B and was not developed.

Variations of this Option B to save the current site were considered, but it appears that a two phased approach to improvements can be made while allowing staff and equipment to remain on-site. This is the lowest cost approach for this theme. This concept should be verified with a qualified, licensed general contractor to consider all implications of a phased construction sequence that meets all safety requirements for the station, the staff, and the mission should this option be selected to pursue further. It appears that a site access plan for firefighters and the contractor—as well as appropriate construction staging areas—could be developed.

3.1 Option A: New Site.

After completion of Improvements Planning and Cost Analysis for Option B (work with the existing site) and its variations, the team developed the ideas for a new site (location TBD) with the right sized and code compliant station best suited for an efficient operation.

The Team arrived at an optimal space and equipment program after an intensive daylong programming session at the fire station which involved senior firefighter and County Public Works staff. Minor growth in staffing was concluded on, with slow growth in structures predicted for this service area. No apparatus growth was assumed to be necessary at this time, though the placement of the water tender at this site may increase the need for a 4th vehicle bay. This possibility was considered in the conceptual cost estimating and planning by moving the physical training area into a space that had been set aside for a Community Room option that is not present in the current station. This community space was considered a strong asset of consideration if a new station development is to be undertaken. If the water tender is to be kept at this site AND the Community Room option is to be pursued, the programmed area should be increased and reflected in an increased construction budget. This topic needs further discussion.

The station allows for a second floor Living Quarters housed over Command Center, staff offices and the Community Room, both located on the ground level. All spaces are contiguous for an efficient operation. The attached (2) deep apparatus high bays have dual sided access through bi-folding doors and house (3) vehicles and space for physical training and a work shop, convertible to (4) vehicles. The site can park up to (12) staff autos, and (12) public autos. The site can turn around a firefighting vehicle with a 55-foot turning radius, though the maximum radius needed is probably less.

The project consists of a new two-story 8,900 SF fire station with living quarters over offices adjacent to apparatus bays. Sitework includes vehicular and pedestrian paving, landscaping, site lighting and drainage, new emergency generator and fuel storage tanks. Utilities include incoming City water, storm drain and electrical service. Sewer is provided by an onsite septic system, gas is provided by propane tanks.

The projected New Station criteria:
Minimum Site Area: 39,775 SF
Minimum Building Area: 8,100 GSF
Massing: Two-story Living Quarters over Command Center and Offices
Emergency Operations design criteria met.
Programmed area includes room for indoors housing of up to:

- 12 firefighters
- 3 firefighting vehicles
- Community Room (doubles as area needed to meet EOC criteria).
- Design Character (see Zoning requirements in Section 6.1 Architectural)
- Patterned after a Rural Agricultural Structure.
- Clean simple lines
- Steep pitched roof
- Symmetrical opening where possible
- Metal Siding and Roofing or other durable material.

Projected Construction Cost: $5,139,058 (without land cost)

See Section 6. Diagrams:
Site Plan: SK A1
Floor Plans: SK A2

3.2 Option B: Existing Site, with Programmatic Improvements.

The Team arrived at an appropriate space and equipment program after an intensive daylong programming session at the fire station which involved senior firefighter and County Public Works staff. Minor growth in staffing was concluded on, with only slow growth in structures predicted in this service area. Apparatus growth was assumed unnecessary at this time, though the placement of the water tender at this site may increase the need for a 4th vehicle bay. See additional notes in Option A.

The station allows for a second floor Living Quarters to be housed over the command center, staff offices and the community room on the ground level. All spaces are contiguous for an efficient operation.

The original apparatus building steel frame and concrete pad remains. All other aspects of the facility are demolished as they are not code compliant or are at the end of useful life, For details, see Section 5. Site Assessment Reports and Section 8. Appendices.

The existing detached apparatus high bays [would]have single sided access through new bi-folding doors and house (3) vehicles, with space for physical training and a work shop. It is convertible to (4) vehicles. The site can park up to (12) staff autos, and (9) public autos. The site cannot turn around a firefighting vehicle with a 55’ turning radius though the maximum radius needed is probably less.

Project consists of replacing existing living quarters building with a new two-story 5,508 SF Living Quarters building, complete interior/exterior renovation to the existing 2,400 SF apparatus building, including a new 1,100 SF addition. Sitework includes vehicular and pedestrian paving, landscaping, site lighting, drainage, and replacement of the existing emergency generator and fuel storage tanks. Utilities include septic system replacement and connecting existing utilities to new buildings.

The projected Station Programmatic Improvements criteria:
Current Site Area: 56,062 SF
Minimum Building Area: 8,900 GSF
Massing: 2 story Living Quarters over Command Center and Offices,
Adjacent to existing 1 story Apparatus Building with rear addition.
Emergency Operations design criteria met.
Programmed area includes room for indoors housing of up to:

- 12 firefighters
- 3 firefighting vehicles
- Community Room (doubles as area needed to meet EOC criteria).

Design Character (see Zoning requirements in Section 6.1 Architectural)

- Patterned after a Rural Agricultural Structure.
- Clean simple lines

- Steep pitched roof
- Symmetrical openings where possible
- Metal Siding and Roofing or other durable material.

Projected Construction Cost: $5,728,568

Option B - Site Phasing:

Firefighting Operations remain active on site during construction.

Phase 1: build New 2 Story Addition:
- Demo or relocate temporarily storage containers and sheds on west side
- Demo AC driveway and, possibly, (2) Monterey Pine trees
- Relocate utilities as needed
- Build (2) story New Addition, with Living Quarters over the Offices
- Build New Patio 12'x20' with cover roof to west and outdoor BBQ.

Phase 2A: Move staff into New Addition:
- Relocate new command center from Apparatus Building into New Addition offices on first level
- Move into Living Quarters and Offices
- Demo existing Living Quarters.

Phase 2B: Renovate Apparatus Building.
- Relocate vehicles to paved yard, possibly under tent structures
- Relocate turnout gear and supplies to storage mods or into first floor of New Addition
- Demo all interior construction in eastern most bay of Apparatus Building
- Demo rear wood frame addition of Apparatus Building
- Demo Apparatus Building exterior siding and roof
- Build Apparatus Building New Addition: 10' wide, full length of the rear of existing steel prefab bldg. Metal stud on-slab, on-grade construction, same skin and roof as below. 10' min height, 3/12 pitch
- Verify site drainage to hillside cut on south side. Provide additional cut and hillside stabilization, with a keystone wall if required.
- Apply new exterior walls to Apparatus Building (sheet metal siding over sheathing, membrane, new metal studs, interior gyp board)
- Rebuild Apparatus Building roof (sheet metal siding over sheathing, membrane, new plywood, verify existing framing)
- Provide (4) new bi-fold vehicle garage doors on auto operators
- Provide new floor seal for all Apparatus Building. areas, "gym flooring" at west bay, and new, 1-hour rated gyp board on metal stud partition walls to separate new physical training area from new shop and apparatus bays. Include rated doors.
- Provide all new MEP for the Apparatus Building. New Heat/Vent/Vehicle exhaust snorkels/no AC. All new lighting, power, and AV.

3.2 Option B: Existing Site, with Programmatic Improvements – VARIATIONS

The current site could possibly be isolated from Hwy 1 and the coastal areas it serves if a Tsunami

or flooding occurs during an incident requiring emergency response. A separate study for the consideration of a mobile command center of this site should be undertaken.

For the variety of situations that could be faced in this remote fire station, this type of vehicle may be more useful than additional real estate, which would need to be maintained. New real estate would become a fixed asset in a large service area with multiple potential risk types. A custom command vehicle that can house up to 3-4 firefighters, rescue equipment, and wireless communications should be programmed and priced for further consideration before a remote mini-station project is under taken.

4. Process and Participants

San Mateo County

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Cal Fire

Scott Ernest, Cal Fire

Robert Pierson, Cal Fire

Andy Cope, Cal Fire

Scott Jalbert, Cal Fire, Santa Cruz Unit Chief

Ratcliff Architects

Bill Blessing, Principal Architect

Nina Pakanant, Designer

Dan Johnson, Designer

TBD Consultants

Gary Holland, Senior Estimator

CSW/Stuber-Stroeh Engineering Group, Inc.

Kerry Ettinger, PE Civil

NBA Engineering, Inc.

Natalie Alavi, PE

5. Existing Site Analysis

5.0 Water risks Assessment

The Pescadero Fire Station Assessment Study is driven by the known water risks associated with its location on the Pescaedro and Butano Creek drainage plains and its proximity to the Pacific Ocean Coast. These risks include: seasonal flooding caused by proximity to the Creeks, which could be worsened by rising sea levels due to climate change (see Appendix 8.0), and/or a tsunami event (see Appendix 8.0) due to the potential of earthquake events.

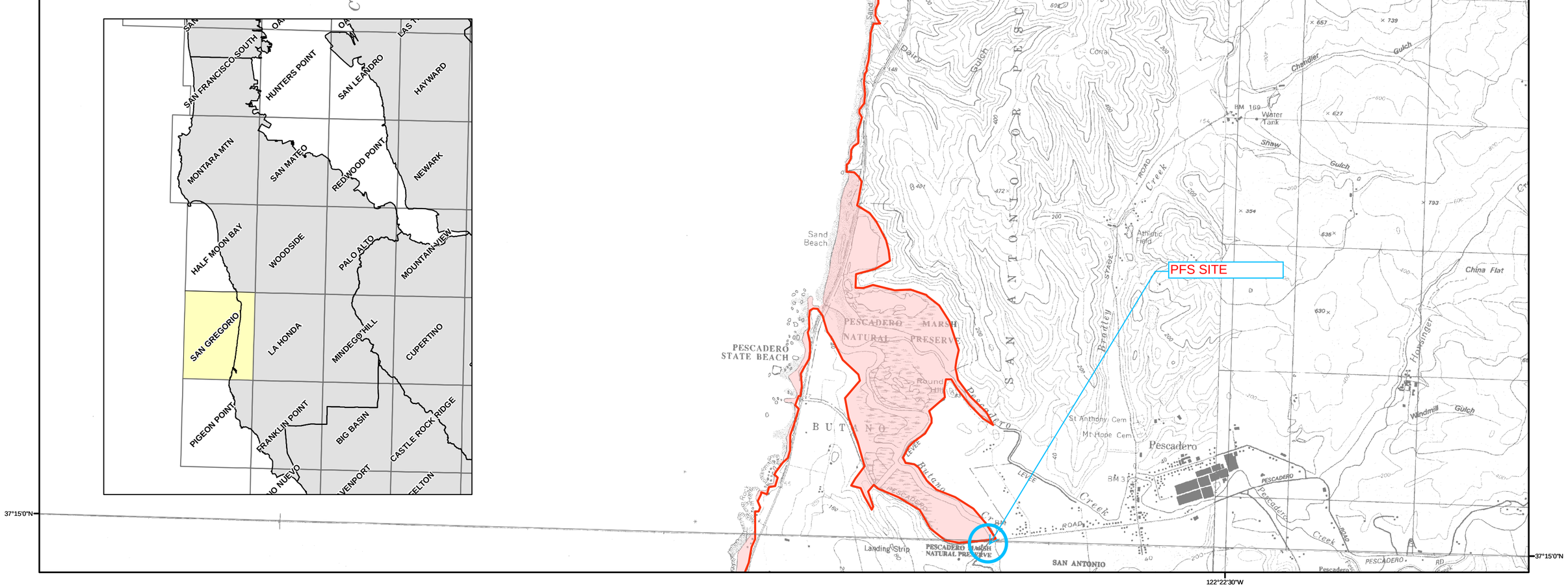
The latter two pose risk categories unto themselves and both have ongoing research with still-indeterminate predictions, but remain as known risks to this site.

The working area of this site (developed for buildings and emergency vehicles) is currently between elevation +13 and +16 ft above mean Sea level. A portion of the site on the SW corner rises up a hill and is not useable for general re-development of the fire station.

After reviewing current studies on the three types of water risks (see Appendices), it appears that the seasonal flooding of the site is most the controllable of the three and yet is mired in determining the final mitigation solution and permitting process (see Appendices). A solution could entail an extensive first Phase of study of the civil engineering within the drainage plain systems and with possible adjacent road work. This study needs to be completed before an additional study as to what affect this first Phase will have on the correct direction for the Fire Station site on Pescadero Creek Road.

In lieu of these studies, the current Assessment Report has taken the approach that the site cannot be easily raised, without a companion work scope that also raises the adjacent roads or other solution in the creek drainage plain. This variable has been set aside and our Team has completed a standalone review of the existing facilities for appropriateness to their firefighting/emergency response mission in terms of operations and their physical condition. The results have then been used to predict what would be needed to bring them into compliance for their intended mission, pending a solution to the seasonal flooding risk which is believed to be achievable. What is missing then is: at what elevation will the new work at the site be set? While this question remains unanswered, within the context of the entire Assessment Report, we still can recommend not continuing to develop this site due to all the water risks associated with this site.

If the seasonal flooding risk is mitigated at this site, it still does not diminish the other two important water risks: rising seal levels and tsunami events, which make vulnerable this site serving its mission.



METHOD OF PREPARATION

Initial tsunami modeling was performed by the University of Southern California (USC) Tsunami Research Center funded through the California Emergency Management Agency (CalEMA) by the National Tsunami Hazard Mitigation Program. The tsunami modeling process utilized the MOST (Method of Splitting Tsunamis) computational program (Version 0), which allows for wave evolution over a variable bathymetry and topography used for the inundation mapping (Titov and Gonzalez, 1997; Titov and Synolakis, 1998).

The bathymetric/topographic data that were used in the tsunami models consist of a series of nested grids. Near-shore grids with a 3 arc-second (75- to 90-meters) resolution or higher, were adjusted to "Mean High Water" sea-level conditions, representing a conservative sea level for the intended use of the tsunami modeling and mapping.

A suite of tsunami source events was selected for modeling, representing realistic local and distant earthquakes and hypothetical extreme undersea, near-shore landslides (Table 1). Local tsunami sources that were considered include offshore reverse-thrust faults, restraining bends on strike-slip fault zones and large submarine landslides capable of significant seafloor displacement and tsunami generation. Distant tsunami sources that were considered include great subduction zone events that are known to have occurred historically (1960 Chile and 1964 Alaska earthquakes) and others which can occur around the Pacific Ocean "Ring of Fire."

In order to enhance the result from the 75- to 90-meter inundation grid data, a method was developed utilizing higher-resolution digital topographic data (3- to 10-meters resolution) that better defines the location of the maximum inundation line (U.S. Geological Survey, 1993; Intermap, 2003; NOAA, 2004). The location of the enhanced inundation line was determined by using digital imagery and terrain data on a GIS platform with consideration given to historic inundation information (Lander, et al., 1993). This information was verified, where possible, by field work coordinated with local county personnel.

The accuracy of the inundation line shown on these maps is subject to limitations in the accuracy and completeness of available terrain and tsunami source information, and the current understanding of tsunami generation and propagation phenomena as expressed in the models. Thus, although an attempt has been made to identify a credible upper bound to inundation at any location along the coastline, it remains possible that actual inundation could be greater in a major tsunami event.

This map does not represent inundation from a single scenario event. It was created by combining inundation results for an ensemble of source events affecting a given region (Table 1). For this reason, all of the inundation region in a particular area will not likely be inundated during a single tsunami event.

References:

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U.S. Geological Survey, 1993, Digital Elevation Models: National Mapping Program, Technical Instructions, Data Users Guide 5, 48 p.

TSUNAMI INUNDATION MAP FOR EMERGENCY PLANNING

State of California ~ County of San Mateo

SAN GREGORIO QUADRANGLE

June 15, 2009

SCALE 1:24,000

0.5 0.25 0 0.5 1 Miles

1,000 500 0 1,000 2,000 3,000 4,000 5,000 Feet

0.5 0.25 0 0.5 1 Kilometers

Table 1: Tsunami sources modeled for the San Mateo County coastline.

Sources (M = moment magnitude used in modeled event)		Areas of Inundation Map Coverage and Sources Used	
		San Francisco Bay	Pescadero
Local Sources	Point Reyes Thrust Fault	X	
	Rodgers Creek-Hayward Faults	X	
	San Gregorio Fault	X	
Distant Sources	Cascadia Subduction Zone-full rupture (M9.0)	X	
	Central Aleutians Subduction Zone #1 (M8.9)	X	X
	Central Aleutians Subduction Zone #2 (M8.9)	X	
	Central Aleutians Subduction Zone #3 (M9.2)	X	X
	Chile North Subduction Zone (M9.4)	X	
	1960 Chile Earthquake (M9.3)	X	
	1964 Alaska Earthquake (M9.2)	X	X
	Japan Subduction Zone #2 (M8.8)	X	
	Kuril Islands Subduction Zone #2 (M8.8)	X	
	Kuril Islands Subduction Zone #3 (M8.8)	X	
	Kuril Islands Subduction Zone #4 (M8.8)	X	
	Marianas Subduction Zone (M8.6)	X	X

Cal EMA CALIFORNIA EMERGENCY MANAGEMENT AGENCY

CGS CALIFORNIA GEOLOGICAL SURVEY

USC UNIVERSITY OF SOUTHERN CALIFORNIA

MAP EXPLANATION

Tsunami Inundation Line

Tsunami Inundation Area

PURPOSE OF THIS MAP

This tsunami inundation map was prepared to assist cities and counties in identifying their tsunami hazard. It is intended for local jurisdictional, coastal evacuation planning uses only. This map, and the information presented herein, is not a legal document and does not meet disclosure requirements for real estate transactions nor for any other regulatory purpose.

The inundation map has been compiled with best currently available scientific information. The inundation line represents the maximum considered tsunami runup from a number of extreme, yet realistic, tsunami sources. Tsunamis are rare events; due to a lack of known occurrences in the historical record, this map includes no information about the probability of any tsunami affecting any area within a specific period of time.

Please refer to the following websites for additional information on the construction and/or intended use of the tsunami inundation map:

State of California Emergency Management Agency, Earthquake and Tsunami Program: http://www.oes.ca.gov/WebPage/oeswebsite.nsf/Content/B1EC51BA215931768825741F005E8D80?OpenDocument

University of Southern California – Tsunami Research Center: http://www.usc.edu/dept/tsunamis/2005/index.php

State of California Geological Survey Tsunami Information: http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/index.htm

National Oceanic and Atmospheric Agency Center for Tsunami Research (MOST model): http://nctr.pmel.noaa.gov/time/background/models.html

MAP BASE

Topographic base maps prepared by U.S. Geological Survey as part of the 7.5-minute Quadrangle Map Series (originally 1:24,000 scale). Tsunami inundation line boundaries may reflect updated digital orthophotographic and topographic data that can differ significantly from contours shown on the base map.

DISCLAIMER

The California Emergency Management Agency (CalEMA), the University of Southern California (USC), and the California Geological Survey (CGS) make no representation or warranties regarding the accuracy of this inundation map nor the data from which the map was derived. Neither the State of California nor USC shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.

5.1 Architectural Assessment

SITE:
CALFIRE / Pescadero Fire Station, San Mateo County Fire Department
1200 Pescadero Creek Road, Pescadero, Ca 94060
(corner of Pescadero Creek Road and Bean Hollow Rd.)

SITE FACTS:

APN: 086160050

SITE AREA: 56,062 sqft.

ASSESSOR LEGAL DESCRIPTION:
1.287 AC MOL ON SLY LN OF PESCADERO RD BEING PTN OF LOT 13 & PTN OF RESERVED PARCEL PENINSULA FARMS CO SUB NO 1 RSM 11/18

GENERAL PLAN (1986)
http://planning.smcgov.org/documents/local-coastal-program-lcp

Local Coastal Program Area (1980), Rural Service Centers
DESIGNATION: Institutional Land Use
Bounded by General Open Space (OS), Public Recreation (marsh), Private lands

Local Coastal Program (LCP)
All development in the Coastal Zone requires either a Coastal Development Permit or an exemption from Coastal Development Permit requirements. For a permit to be issued, the development must comply with the policies of the Local Coastal Program (LCP) and those ordinances adopted to implement the LCP. The project must also comply with other provisions of the County Ordinance Code, such as zoning, building and health regulations.

LOCAL COASTAL PROGRAM POLICIES (verify):
http://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/SMC_Midcoast_LCP_2013.pdf

> *LOCATING AND PLANNING NEW DEVELOPMENT COMPONENT*
> *DEVELOPMENT REVIEW*
> *1.1 Coastal Development Permits*
> *After certification of the Local Coastal Program (LCP), require a Coastal Development Permit for all development in the Coastal Zone subject to certain exemptions.*
>
> *1.2 Definition of Development*
> *As stated in Section 30106 of the Coastal Act, define development to mean:*
> *On land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not*

limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511).

As used in this section, "structure" includes, but is not limited to, any buildings, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line.

ITEMS to be verified include:

Appendix 1.A
Minimum Stormwater Pollution Prevention Requirements
Pages 1.27 thru 1.30

Items Apply to PFS: 3.c; 3.e, 3.f, 3.j
Verify that current septic field location would not be allowed by this standard: Items 3.i and 3.j.

3. Developments of Special Concern
j. On-site sewage treatment systems (septic systems) shall be sited away from areas that have poorly or excessively drained soils, shallow water tables or high seasonal water tables that are within floodplains or where effluent cannot be adequately treated before it reaches streams or the ocean. New development with conventional or alternative on-site sewage treatment systems shall include protective setbacks from surface waters, wetlands and floodplains, as well as appropriate separation distances between on-site sewage treatment system components, building components, property lines, and groundwater as required by the Regional Board. Under no conditions shall the bottom of the effluent dispersal system be within five (5) feet of groundwater.

SENSITIVE HABITATS
WETLANDS:
Page 7.5
Site is adjacent to protected Wetland.

7.15 Designation of Wetlands
a. Designate the following as wetlands requiring protection: Pescadero Marsh,…

Page 7.6
Verify if current site and proposed development in Option B are outside of required

Buffer Zone.

7.18 Establishment of Buffer Zones
Buffer zones shall extend a minimum of 100 feet landward from the outermost line of wetland vegetation. This setback may be reduced to no less than 50 feet only where: (1) no alternative development site or design is possible; and (2) adequacy of the alternative setback to protect wetland resources is conclusively demonstrated by a professional biologist to the satisfaction of the County and the State Department of Fish and Game. A larger setback shall be required as necessary to maintain the functional capacity of the wetland ecosystem.)

Page 7.7
7.21 Management of Pescadero Marsh

Other items may apply.

VISUAL RESOURCES:

Verify if these Design Guidelines apply to institutional buildings constructed after April 29, 1998 at this site for proposed development in Option B:

Provisional Appendix - In-Progress Development Proposals Not Affected
by the LCP Amendments Certified by the
Coastal Commission on April 29, 1998 .....PA.1-PA.13

8.13 Special Design Guidelines for Coastal Communities Pages PA.9 thru PA.13
d. Pescadero
Encourage new buildings to incorporate architectural design features found in the historic buildings of the community (see inventory listing), i.e., clean and simple lines, precise detailing, steep roof slopes, symmetrical relationship of windows and doors, wood construction, white paint, etc.
Require remodeling of existing buildings to retain and respect their traditional architectural features, if any.

Note:
Other items may apply if the Option A - New Site approach is determined and defined.

ZONING INFORMATION, Unincorporated Areas
http://planning.smcgov.org/sites/planning.smcgov.org/files/2012_ZoneRegs%5BFINAL%5D_0.pdf

ZONING MAP
https://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/smc_zoning.pdf

DESIGNATION: PAD/CD (combined districts)
Planned Agricultural Districts/Coastal Development Districts

Items Apply:

CHAPTER 20A.2. DEVELOPMENT REVIEW CRITERIA

(applicable sections, partial list)

- SECTION 6325.2. PRIMARY FISH AND WILDLIFE HABITAT AREAS CRITERIA.
- SECTION 6325.7. PRIMARY NATURAL VEGETATIVE AREAS CRITERIA.
- SECTION 6326. SUPPLEMENTARY REVIEW CRITERIA FOR SPECIAL HAZARD
- SECTION 6326.1. FLOOD PLAIN AREA CRITERIA.

Verify that Option B development is permitted per:

- SECTION 6326.2. TSUNAMI INUNDATION AREA CRITERIA. The following criteria shall apply within all areas defined as Tsunami Inundation Hazard Areas. (a) The following uses, structures, and development shall not be permitted: publicly owned buildings intended for human occupancy other than park and recreational facilities; schools, hospitals, nursing homes, or other buildings or development used primarily by children or physically or mentally infirm persons.
- SECTION 6326.3. SEISMIC FAULT/FRACTURE AREA CRITERIA.

CHAPTER 20B. "CD" DISTRICT

(COASTAL DEVELOPMENT DISTRICT)

SECTION 6328.4. REQUIREMENT FOR COASTAL DEVELOPMENT PERMIT.

Except as provided by Section 6328.5, any person, partnership, corporation or state or local government agency wishing to undertake any project, as defined in Section 6328.3(r), in the "CD" District, shall obtain a Coastal Development Permit in accordance with the provisions of this Chapter, in addition to any other permit required by law. Development undertaken pursuant to a Coastal Development Permit shall conform to the plans, specifications, terms and conditions approved or imposed in granting the permit.

SECTION 6328.5. EXEMPTIONS.

The projects listed below shall be exempt from the requirement for a Coastal Development Permit. Requirements for any other permit are unaffected by this section.

(b) The maintenance, alteration, or addition to existing structures other than single family dwellings and public works facilities; however, the following classes of development shall require a permit because they involve a risk of adverse environmental impact:

(3) The expansion or construction of water wells or septic systems.

(4) On property located between the sea and the first public road paralleling the sea or within 300 feet of the inland intent of any beach or of the mean high tide of the sea where there is no beach, whichever is the greater distance, or in scenic road corridors, an improvement that would result in an increase of 10% or more of external floor area of the existing structure, and/or the construction of an additional story (including lofts) in

an existing structure.

CHAPTER 21A. "PAD" DISTRICT
(PLANNED AGRICULTURAL DISTRICT)
This chapter has sections that may apply to Option A - New Site development location.

SECTION 6353. USES PERMITTED SUBJECT TO THE ISSUANCE OF A PLANNED AGRICULTURAL PERMIT.

The following uses are permitted in the PAD subject to the issuance of a Planned Agricultural Permit, which shall be issued in accordance with the criteria set forth in Section 6355 of this ordinance. Applications for Planned Agricultural Permits shall be made to the County Planning Commission and shall be considered in accordance with the procedures prescribed by the San Mateo County Zoning Ordinance for the issuance of use permits and shall be subject to the same fees prescribed therefore.

B. On Lands Suitable for Agriculture and Other Lands

6. Fire stations.

Site Visit

The Architectural Team worked on October 28, 2012 and the entire A+E Consultant Team worked on November 20, 2013 to complete assessments on the PFS site at 1200 Pescadero Creek Road.

This included a brief tour of potential replacement or remote sites in and around the Town of Pescadero.

Existing site features

- The site is partially surrounded by a 6 foot high wood fence for visual screening.
- No security fence or gates are present.
- The site has a steep hill in the southwest corner.
- Site pavement generally consists of asphalt, depth and section is unknown.
- Concrete pavement is found at the vehicle wash area, fuel station and certain pedestrian building access points; sections are unknown.
- No recent site survey was performed or is currently available through the SM County
- GIS system.

Relative topo information was located here:

- smc-400 Scale Contour-grid-22D.pdf (SM Cty GIS system).

Additional relative topo information was taken from Google Earth Pro:

- Pescadero Cr_els at 1200 & 5631.pdf

The site has Monterey Pine trees – see Google Earth map.

Existing structures

- Living Quarters (barracks), dated: 1/7/1957

    - 2175 GSF
    - 1789 ASF
    - Wood frame, Type 5 construction
    - Composition Shingle roof
    - Interiors are well-maintained but worn in the restrooms, kitchen and dining areas.
    - This building has been flooded more than 3 times in recent memory and has been repaired each time. Standing water and contaminated soil were visible in the crawl space the day of our inspection.
    - An addition was built by the station staff in the early 1980's to enclose the original porch to create additional space in the Dayroom ("recreation room" per original drawings).
    - ADA non-compliant.
    - Operationally, the ideal set up is to have the Living Quarters adjacent to the Command Office and Apparatus Building to improve response time and not across the service yard as is currently.
    - This building has no provision for Community space or interface - and is inadequate for training or as an Emergency Operations Center (EOC) by current standards.
    - Finish Floor elevation is approximately 15'.
- Apparatus Building (barracks), dated: 1/7/1957
    - 3128 GSF
    - 1789 ASF
    - Steel frame superstructure – non protected, wood frame infill, Type 5 construction, and not fire-sprinklered.
    - Sheet metal roof and stained wood siding appear well maintained.
    - Interiors are worn in all areas but Command Offices are well maintained.
    - The interior loft space above the Command Office is used for supplies storage and is only accessible by site built wooden wall ladder. This arrangement is unsafe and not per Code.
    - A rear wood frame addition was built in the early 1980's to create space for a physical training area. It is damp and cramped and not isolated from the apparatus bays and has shared air quality. It is not ideally sized and is without daylight, proper height and MEP systems appropriate to its function.
    - ADA non-compliant
    - Operationally, the ideal set up is to have the Apparatus Building adjacent to the Command Office/ Living Quarters to improve response time and not across the service yard as is currently.
    - This building has no provision for Community space or interface - and is inadequate for training or as an Emergency Operations Center (EOC) by current standards.
    - Finish Floor elevation is approximately 16'.

- Equipment Sheds – to create additional covered and secure storage capacity.
    - 335 GSF
    - 325 ASF
    - Steel shipping container (190 GSF) (age ?)
    - Wood frame, prefab – non protected, Type 5 construction (80 GSF), w/a rear, wood-frame addition – non protected, Type 5 construction (64 G)

        - [appears to have been built in the 1990's (verify date)]
        - Composition Shingle roof (age : 20 yrs + ?)
    - ADA non-compliant
    - These structures are inadequate as part of an Emergency Operations Center (EOC) by current standards.
    - The wood siding and metal enclosure siding is worn and damaged by earth contact in places. These have no permanent foundations, lighting or HVAC systems.
    - Finish Floor elevations is approximately 16'.

- Hazardous Materials Shed
    - 113 GSF
    - 85 ASF
    - CMU walls, wood frame roof – non protected, Type 5 construction
    - Composition Shingle roof (age : 20 yrs + ?)
    - ADA non-compliant
    - Condition appears acceptable but should be re-sealed at exterior wall surfaces.
    - Finish Floor elevations is approximately 16'.

- Emergency Generator Shed
    - 102 GSF
    - 89 ASF
    - Wood frame – non protected, Type 5 construction
    - Appears to have been built in the early 1980's (verify date)
    - Composition Shingle roof (age : 20 yrs + ?)
    - Composition Shingle roof (age : 20 yrs + ?)
    - ADA non-compliant
    - Finish Floor elevations is approximately 14'.

Note:
For all structures, see Engineer Reports below for status of building systems.

5.2 Structural Assessment

Refer to Appendix 8.2 for complete consultant's report.

A building structural assessment per *ASCE 41: Seismic Rehabilitation of Existing Buildings* was conducted. Aspects of building performance that are considered include structural, nonstructural, and foundation/geologic hazard issues. Lifelines such as water, electrical, gas and waste, etc., beyond the perimeter of the building are not considered.

5.2.1 Barracks Building

An ASCE 41-13 Life Safety basic checklist evaluation identifies the structure as being predominately compliant. Unknown factors of liquefaction and surface fault rupture which need to be review by a Geotechnical engineer. The Barracks building is part of an emergency response facility. Therefore an Immediate Occupancy performance level is required. An ASCE 41-13 Immediate Occupancy checklist evaluation for W1 structures identified a number of noncompliant items. These identified issues are all minor in nature and could be retrofitted without significant cost.

The major compliance issue with achieving an Immediate Occupancy building performance level is the structure being located in an area subject to flooding. Flooding will damage the structure and will render the building inoperable during the period of the flood, which would make an Immediate Occupancy performance level difficult to achieve even after a structural retrofit.

5.2.2 Apparatus Building

An ASCE 41-13 Life Safety basic checklist evaluation identifies the structure as being predominately noncompliant or unknown. Some of these identified issues are a mezzanine structure not being independently braced and no confirmation that the original steel system has capacity for the various additions. The Apparatus building is part of an emergency response facility. Therefore an Immediate Occupancy performance level is required. An ASCE 41-13 Immediate Occupancy checklist evaluation for S3 structures identified a number of noncompliant items. It would be anticipated that the identified issues would be major in nature and could be a challenge to retrofit without significant cost.

Two additional compliance issues required to achieve an Immediate Occupancy building performance level are the structure being located in an area subject to flooding and being located adjacent to a slope.

5.3 Mechanical, Electrical, Plumbing, IT Assessment

Refer to Appendix 8.3 for complete consultant's report.

5.3.1 Electrical Systems Existing Conditions

Most of the electrical equipment, including the standby generator (see EE2), and automatic transfer switch (see EE3), has been in use for more than thirty years. The coastal climate, severe weather conditions, and some flooding have caused rusting of the enclosed outdoor service entrance equipment (see EE1). Many broken, inadequate, or unsafe electrical conditions are noted in the report (Appendix 8.3).

5.3.2 Plumbing and Mechanical Systems Existing Conditions

The septic tank floods periodically, requiring station personnel to rent and use portable toilet facilities when the septic system is being repaired and cleaned. Fuel tanks show rust and evidence of leakage. Mechanical ventilation to occupied spaces is missing or inadequate. Some rooms have not heat. The consultant recommends demolishing all existing mechanical, plumbing, fuel, and electrical systems.

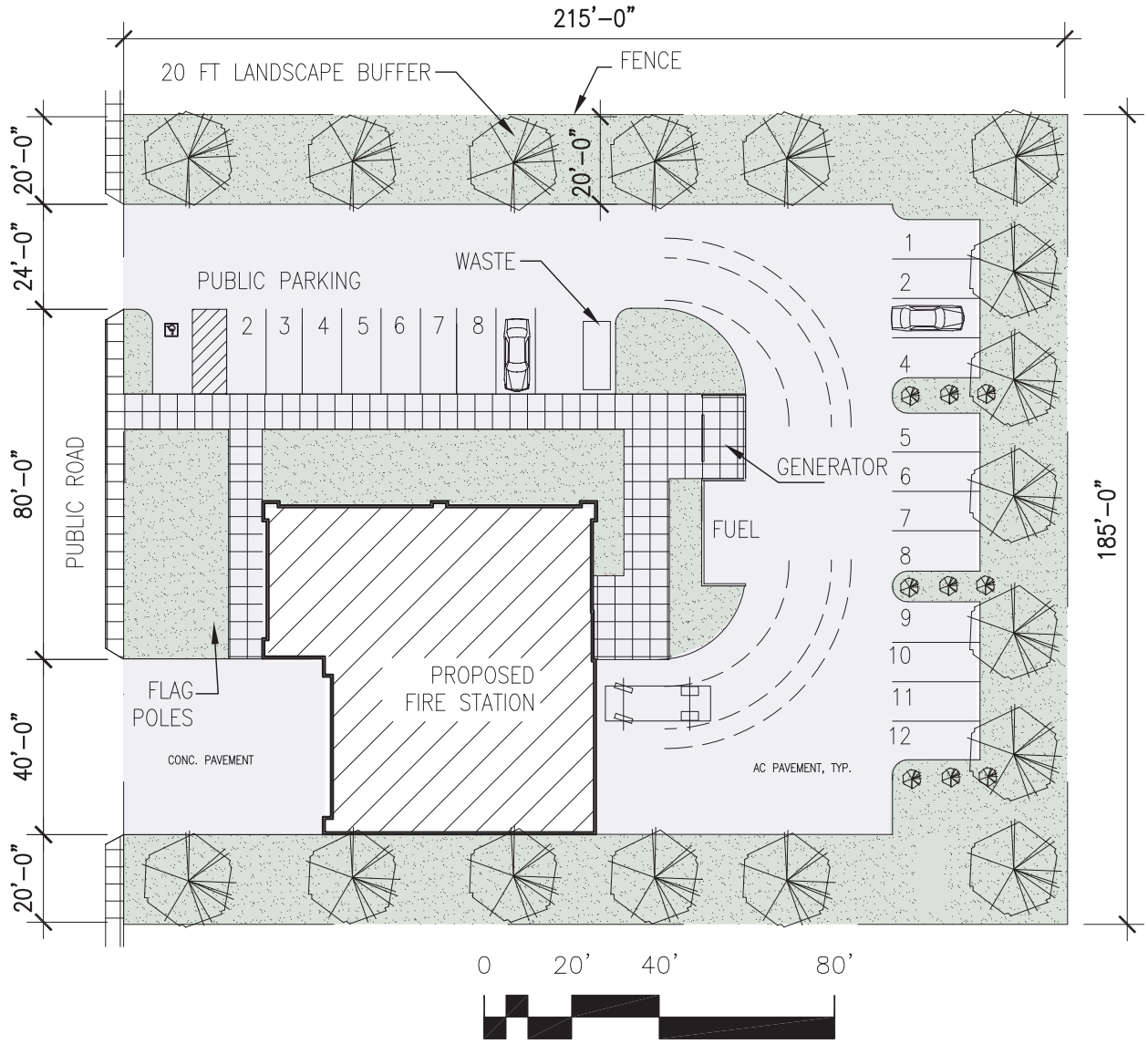
5.4 Civil Assessment

The site and buildings are outdated and in need of improvement, either at the existing site, or at a new site, in order to meet current standards and to adequately serve its community. The Pescadero Fire Sta. is located in the flood plain of the Butano Creek (see “Pescadero Floodway Map” attached, Appendix 8.4) The site is has experienced an increase in the occurrence of flooding since the mid 1980’s due to the accumulation of silt and debris in Butano Creek and Pescadero Marsh as a result of halted dredging operations.

Civil utilities on-site consist of domestic water served by the local water service municipality. The septic system is reported to back-up during flood events, which is to be expected. A new septic system will likely be required. Because the location of the existing system becomes inundated with water during flood events (see Appendix 8.4, Photo 1), it is unlikely that this location will meet code. As such, alternative locations on site should be considered.

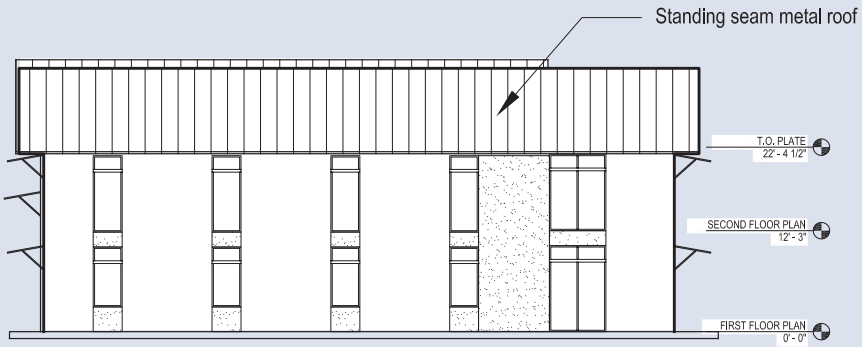
6. Diagrams

SK A1. (New site) Ideal Site Plan

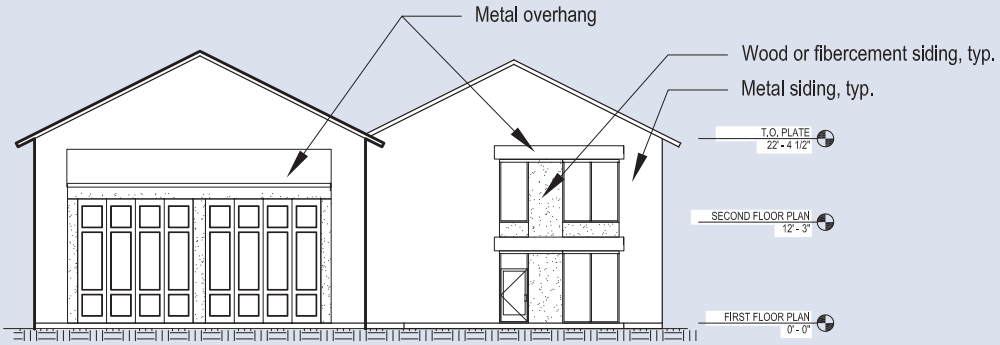


SK A2. (New site) Floor Plans

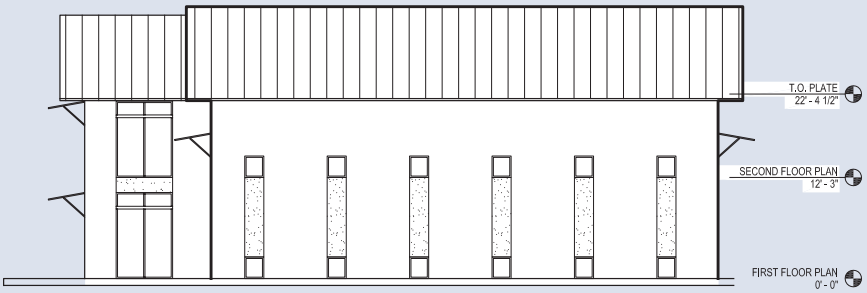
SK A3. (New site) Elevations



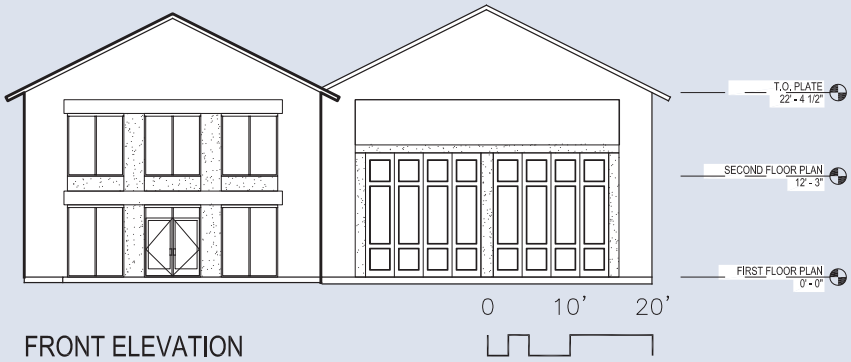
LEFT SIDE ELEVATION



BACK ELEVATION

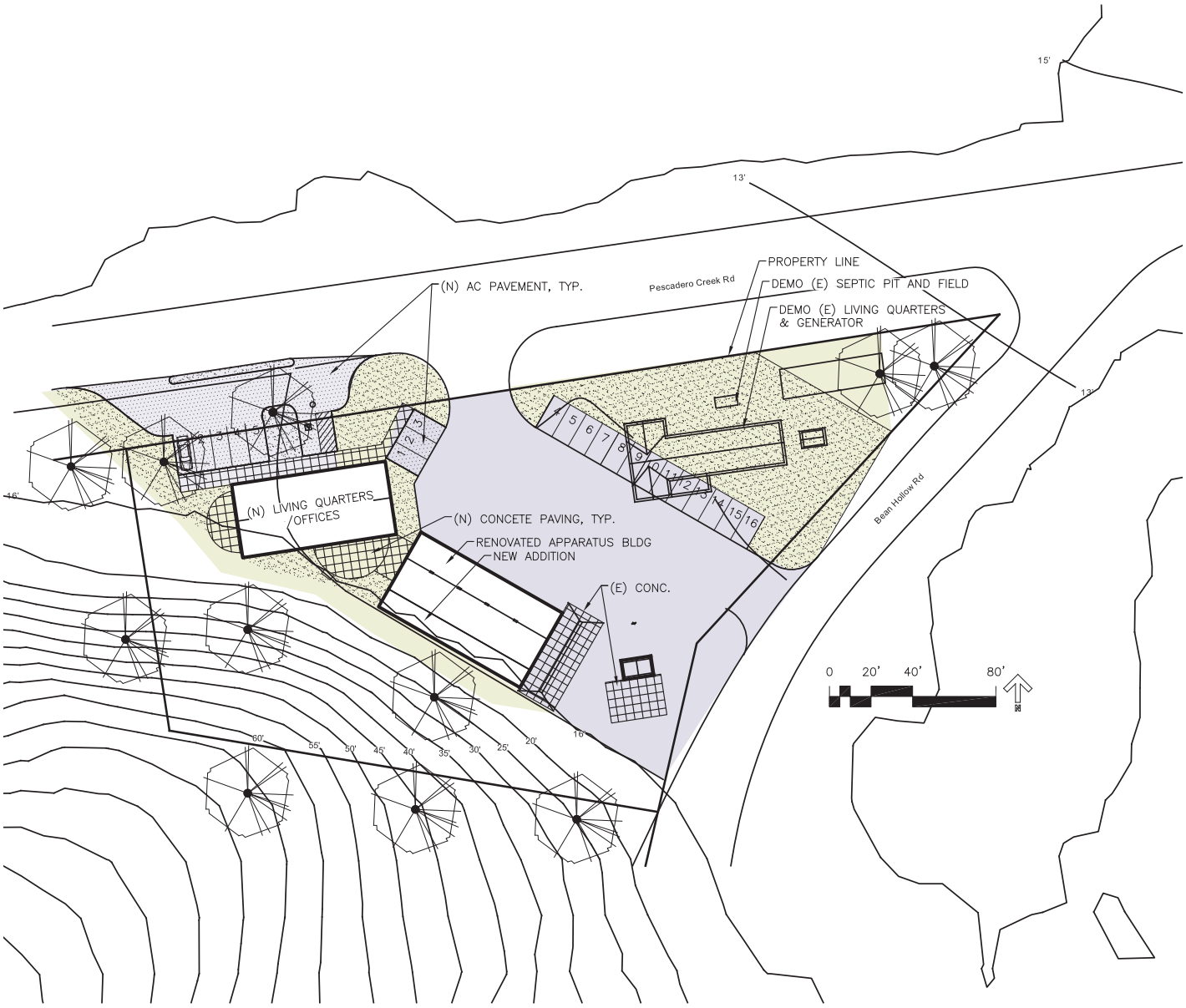


RIGHT SIDE ELEVATION

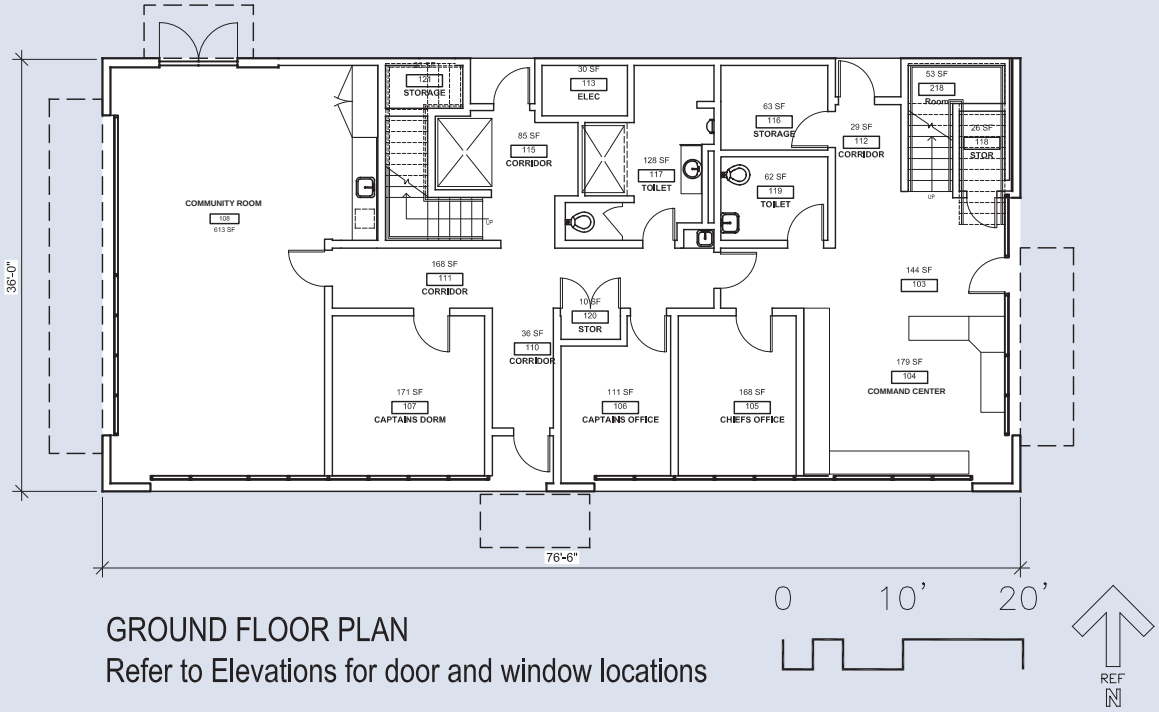


FRONT ELEVATION

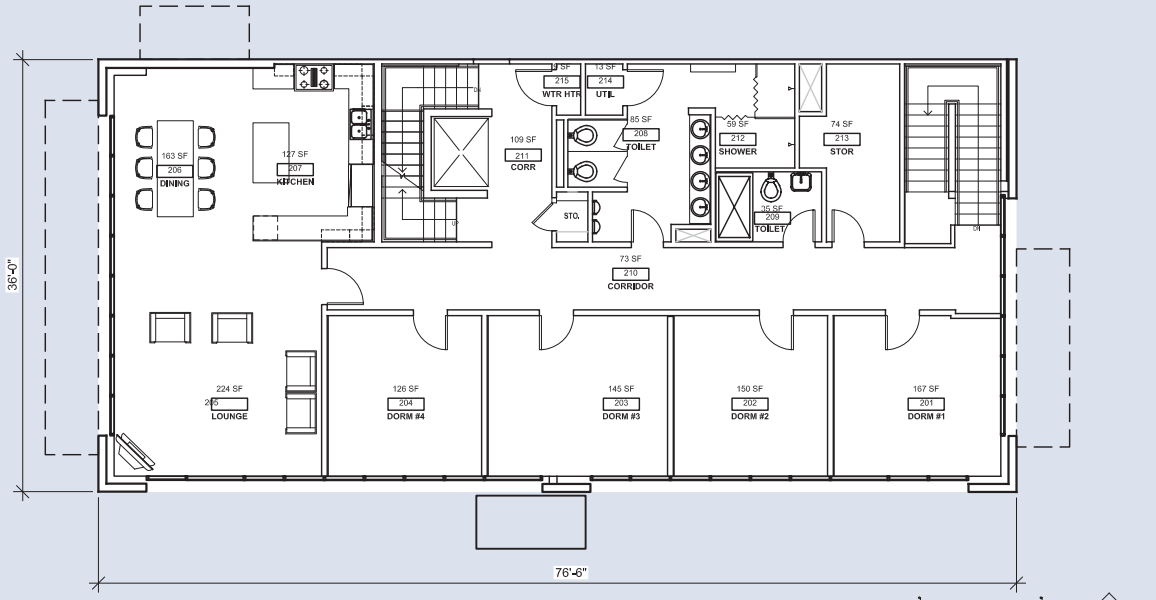
SK B1.0 (Existing site through Phase 2) Site Plan



SK B1.1 (Existing site, Phase 1) new Living Quarters floor plan

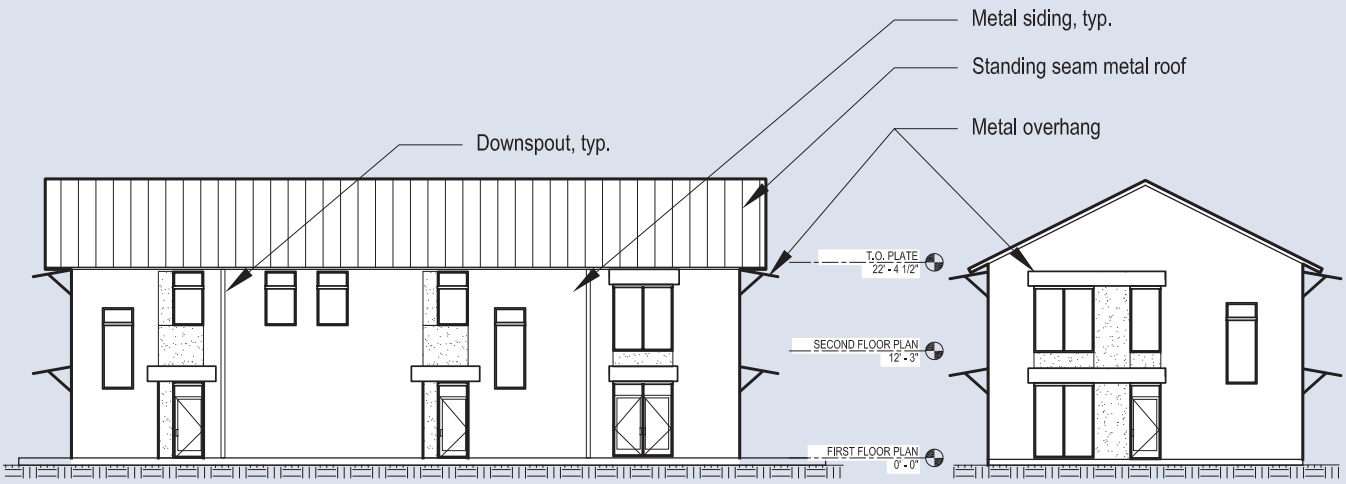


GROUND FLOOR PLAN
Refer to Elevations for door and window locations



UPPER FLOOR PLAN
Refer to Elevations for door and window locations

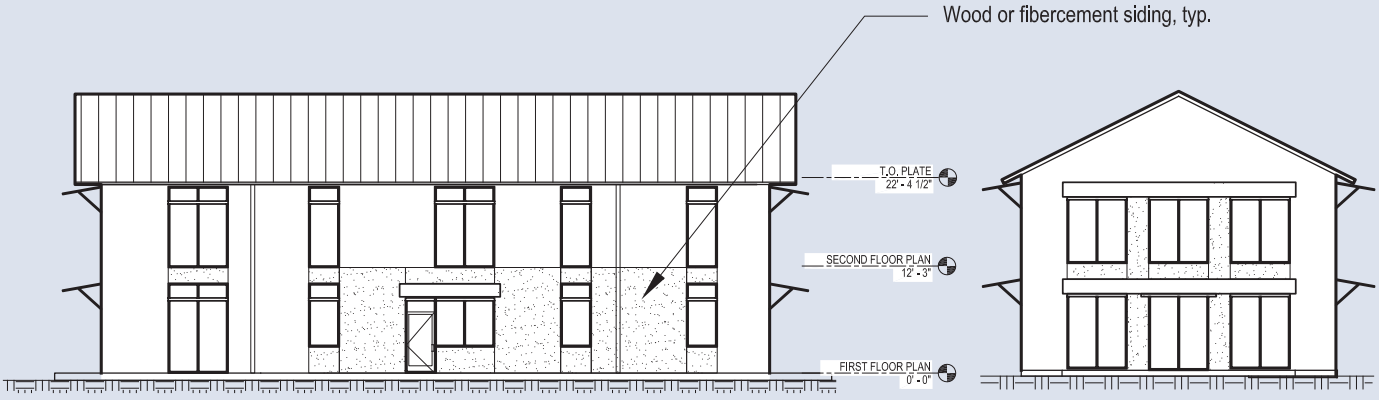
SK B1.2 (Existing site, Phase 1) new Living Quarters elevations



NORTH ELEVATION

0 10' 20'

EAST ELEVATION

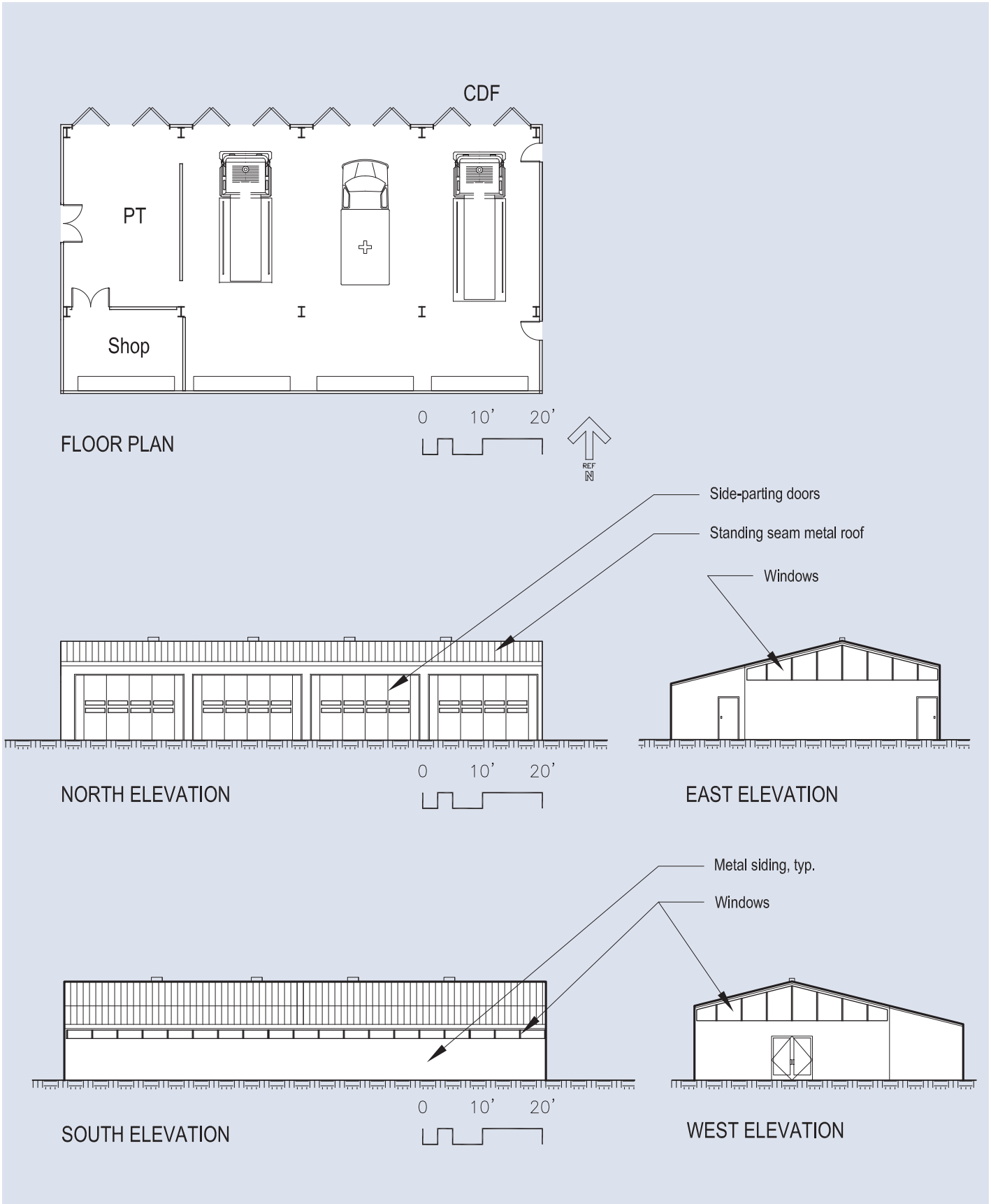


SOUTH ELEVATION

0 10' 20'

WEST ELEVATION

SK B2.1 (Existing site, Phase 2) Apparatus Building drawings



7. Cost Analysis

Options Analyzed

The project consists of Two Options:

Option A (New Site): Project consists of a new two-story 8,904 SF fire station with living quarters and apparatus bays. Sitework includes vehicular and pedestrian paving, landscaping, site lighting and drainage, new emergency generator and fuel storage tanks. Utilities include incoming water, storm drain and electrical service. Sewer is provide by an onsite septic system, gas is provided by propane tanks.

Option B (Existing Site): Project consists of replacing existing living quarters building with a new two-story 5,508 SF living quarters building, complete interior/exterior renovation to the existing 2,400 SF apparatus building, a new 1,100 SF addition to the existing apparatus building. Sitework includes vehicular and pedestrian paving, landscaping, site lighting and drainage, replacement of existing emergency generator and fuel storage tanks. Utilities include septic system replacement, distribution of utilities to buildings.

Cost summaries extracted from the full report are given on the following pages.

Basis for Pricing

Refer to full analysis given in Appendix 8.1. This estimate reflects the fair construction value for this project and should not be construed as a prediction of low bid. Subcontractor's markups have been included in each line item unit price. Subcontractor's markups typically range from 15% to 25% of the unit price depending on market conditions. This cost estimate is based on standard industry practice, professional experience and knowledge of the local construction market costs.

OVERALL SUMMARY OPTION A - NEW FIRESTATION AND SITE

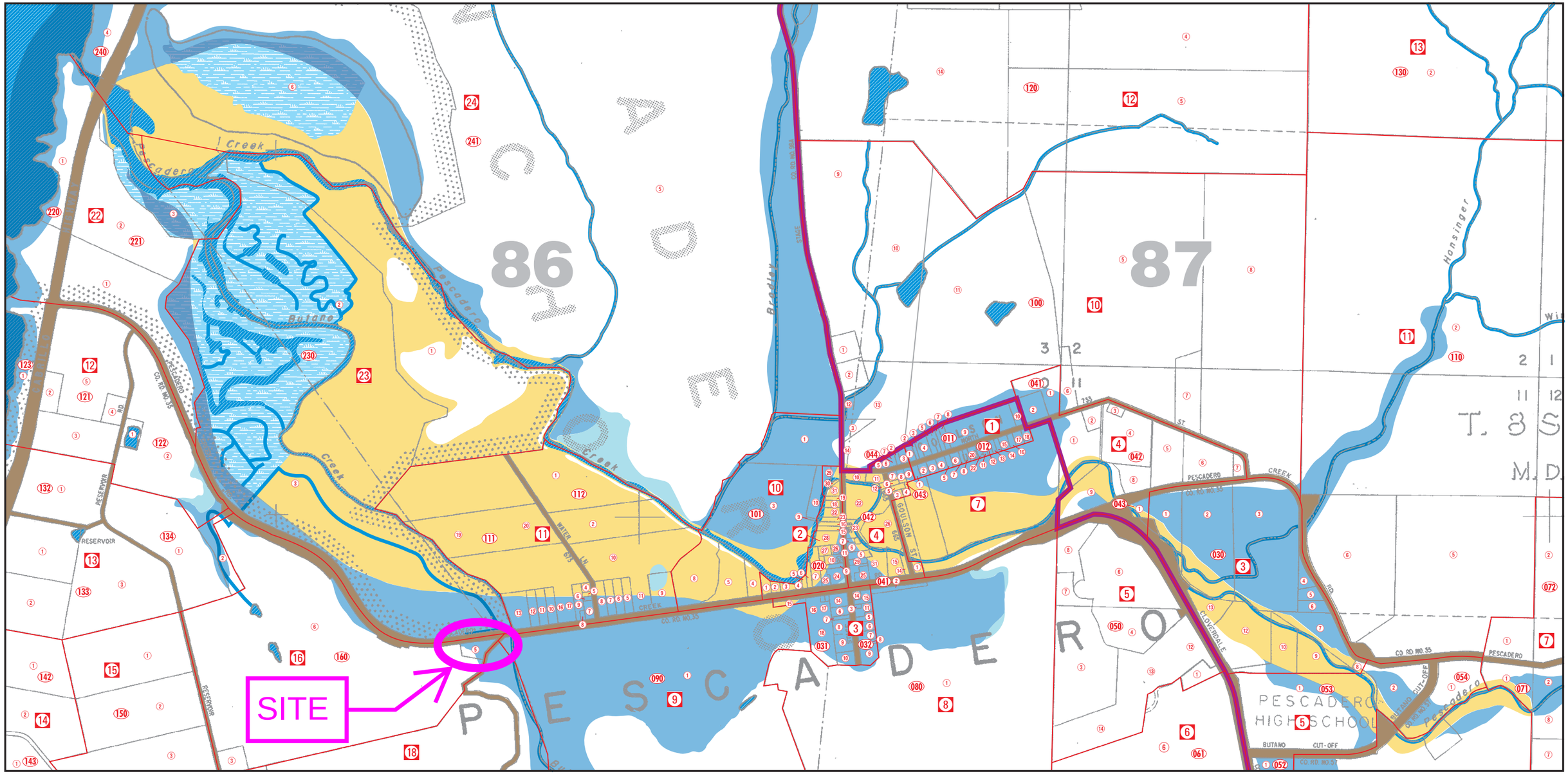
BUILDING			
Fire Station and Apparatus Bays	8,104	SF	2,779,194
Furniture, Fixtures and Equipment (FF&E)			See FF&E Budget
SITEWORK			
Site Preparation, Development and Utilities	1	LS	836,240
DIRECT COSTS SUB-TOTAL			**3,615,434**
SITE REQUIREMENTS AND JOBSITE MANAGEMENT (One Phase over 10 to 12 Months)		11.5%	415,775
ESTIMATE SUB-TOTAL			**4,031,209**
INSURANCE + BONDING		2.5%	100,780
FEE		3.0%	123,960
ESTIMATE SUB-TOTAL			**4,255,949**
DESIGN CONTINGENCY		15.0%	638,392
CONSTRUCTION CONTINGENCY		0.0%	Excluded
ESTIMATE SUB-TOTAL			**4,894,341**
ESCALATION (January 2015 start of Construction)		5.0%	**244,717**
ESTIMATE TOTAL			**5,139,058**

OVERALL SUMMARY OPTION B - EXISTING FIRE STATION AND SITE

BUILDINGS			
New Living Quarters	5,508	SF	1,759,001
Existing Apparatus Building Renovation	2,400	SF	867,100
Apparatus Building Addition	1,100	SF	259,600
Furniture, Fixtures and Equipment (FF&E)			See FF&E Budget
Subtotal - Buildings	9,008	SF	2,885,701
SITEWORK			
Site Preparation, Development and Utilities	1	LS	829,125
DIRECT COSTS SUB-TOTAL			**3,714,826**
SITE REQUIREMENTS AND JOBSITE MANAGEMENT (Two Phases over 18 Months)		17.0%	631,520
ESTIMATE SUB-TOTAL			**4,346,346**
INSURANCE + BONDING		2.5%	108,659
FEE		4.5%	200,475
ESTIMATE SUB-TOTAL			**4,655,480**
DESIGN CONTINGENCY		15.0%	698,322
CONSTRUCTION CONTINGENCY		0.0%	Excluded
ESTIMATE SUB-TOTAL			**5,353,802**
ESCALATION (January 2015 start on Construction)		7.0%	**374,766**
ESTIMATE TOTAL			**5,728,568**

8. Appendices

8.0 Water risks documentation



Pescadero Floodway Map

Disclaimer: The digital flood hazard data used on this map was derived from scanned and composited FEMA Floodway maps. The base cartographic map information was derived from a combination of Assessor and Public Works maps. For this reason and several others, including the scale or resolution that the information is displayed at, these maps should be considered an **advisory tool** for general hazard awareness, education, and flood plain management. This map is **not a legal document** to be used when making a single site flood hazard determination. That determination will have to be made by direct use of the FEMA FIRM or Floodway maps. (This is a non-archival inkjet print and is subject to fading when exposed to direct sunlight. Please store or display accordingly for maximum longevity.)

- Flood plain
- Floodway
- 500-yr Flood
- Lake
- Marshland
- Creeks; perenial
- Major Roads
- 87 Assessors book number
- Assessors book boundary
- Assessors page boundary
- 6 Assessors page number
- 061 Assessors block number
- 6 Assessors parcel number

N

SOURCES: SMC General Plan Map, 1988; FEMA Floodway Map, July 1984 and Geological Survey USGS Map, 1978.
For visual reference only.

pescadero floodway map.cdr rp 11/21/00 disc. rev 2/19/03 rp

The Annual Flooding of Pescadero Creek Road

Issue | Background | Findings | Conclusions | Recommendations | Responses | Attachments

Issue

For over 25 years the main road into Pescadero has been blocked by the annual flooding of Butano Creek, jeopardizing public safety and impeding access by public safety officers and medical responders into and out of the Pescadero community. Why has the County not resolved this problem and how can it finally be fixed?

Summary

The blockage of Pescadero Creek Road, in the unincorporated community of Pescadero, happens one or more times each rainy season, often for days each time. Flooding jeopardizes the safety of local citizens in two primary ways: First, alternative routes into the Pescadero area are along much longer, narrower roadways requiring at least two to three times more driving time from the coastal highway. In the case of emergencies where the San Mateo County Sheriff, CAL FIRE or the California Highway Patrol is required, response time is critical and delays can impact personal safety of citizens and their property. Second, as the road floods, there are always some individuals who deliberately or inadvertently drive through the flooded road areas, sometimes successfully, sometimes not. A flooded road impacts local commerce, tourist traffic, and agribusiness in the area, and often leaves debris and silt to clean up.

The flooding is linked to decades of silt accumulation in the streambed, and excess vegetation growth and debris build-up along Butano Creek and in Pescadero Marsh. The drainage from the Marsh into the sea, and associated flushing of silt into the sea, is compromised by natural and man-made changes. These include logging debris, erosion, run-off, levees and channels built to facilitate agriculture, as well as certain now-abandoned modifications intended to correct watershed problems. The bottom line is that rains cannot be contained within Butano Creek's banks, resulting in predictable and dangerous road flooding.

The San Mateo County Civil Grand Jury recommends the removal of excess silt and clearance of vegetation overgrowth and debris from as much of the Butano Creek as necessary to eliminate the road flooding by October 1, 2012, before the 2012/2013 rainy season, using the regulatory framework of "Emergency" action if necessary.

Background

Since the 1880s, the town of Pescadero, population ~650, has been a farming and ranching community. The town is located at the upstream (eastern) edge of Pescadero Marsh, at the confluence of Pescadero and Butano Creeks, both of which empty into the Pacific.

The flooding of the Pescadero Creek Road at the Butano Creek Bridge closes the main route into and out of Pescadero, while simultaneously inundating privately owned farmlands. The road closure isolates the town and surrounding areas from its CAL FIRE Station, severely impacting emergency services. Alternate roads are small and winding through local hills. An ambulance, fire engine, or police vehicle could require an extra hour or more in transit time. In recent years, flooding has occurred several times during the rainy season, often for 24-48 hours at a time.

Several sources document the history and complexities of the Pescadero watershed. [1] The cause of the annual flooding includes progressive silt accumulation and vegetation overgrowth and debris build-up in Butano Creek up- and down-stream of the Bridge and beyond into the Marsh itself. Additionally, numerous property owners decades ago created levees and channels in the marsh for their land-uses, and several projects for the Coastal Highway have modified the seasonal sand-berm that affects the Butano Creek's flow from the Marsh to the Ocean. State regulations enacted beginning in the 1960s have prevented property owners from dredging and clearing creeks on their property and opening the sand-berm as they had historically done.[2]

Survey profiles demonstrate the silt build up. (*See*, Attachment A.) The streambed was ~12 feet below the bottom of the bridge in 1968.[3] Currently the bridge clears the silted creek bottom by only two feet. The creek has no capacity to handle rainstorm run-off; the water has nowhere to go but up and over the road.

The California Department of State Parks and Recreation began acquiring Marsh properties in the 1960s, and in 1993 started to implement extensive modifications to the Marsh area intended to address and resolve environmental concerns[4]. Modifications included adding and removing dikes, adding water-control gates and culverts, and re-contouring certain flow features. The added features were not maintained, and were subsequently abandoned.[5] The reasons for this abandonment have not been identified. As a result, silt-up and vegetation overgrowth has reduced the capacity and impeded the water flow in the Creek. Fish-kills within the Marsh have also increased; agribusiness has suffered; sport fishing has all but disappeared; and negative effects on endangered wildlife are being documented.[6]

Interviewees from local citizens' groups including the Pescadero Municipal Advisory Group (PMAC), the California Alliance for Species Enhancement (CASE), and the San Mateo County Farm Bureau have stated that State Parks' modifications have exacerbated the flooding. Scientists are mostly in agreement.[7] For many years, citizens' groups have advocated County and State

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[1] IDC, from Sans, Director DPW, to San Mateo County Planning Commission May 8, 1992, "Flooding of Butano Creek at Pescadero Road", and to Pescadero Community Council Nov 10, 1992; Pescadero-Butano Watershed Assessment, Final Report March 5, 2004, Environmental Science Associates.

[2] *See, e.g.*, California Fish and Game Code §§ 1600-1602.

[3] *See*, Attachment A, "Silt-up Profiles."

[4] Website, C.A.S.E., caseforourenvironment.org, August 2011, Example of Jerry Smith's 201995/6 SJSU studies, prepared for State Parks.

[5] Interview, Biologist, NOAA / Fisheries.

[6] Website, C.A.S.E, caseforourenvironment.org, Conditions in Pescadero Marsh, Lennie Roberts report, 2004.

[7] Interview, scientist, California Dept. of Fish and Game.

action to provide relief from the flooding, and have proposed some immediate fixes. These included: dredging the streambed; raising the roadway at the bridge and especially at the low-point of the road; building a causeway and/or; installing a pump to move water from the upstream side of the bridge to a point downstream. None of these proposals have been implemented.

Permitting complexities can be additional barriers to immediate and broader County action. However, the Grand Jury is unaware that the County has actually applied for, or has been denied, any permits to address the road-flooding problem. The entities involved in permitting and advising permit issuance include State Parks, State Fish and Game, U.S. Fish and Wildlife Service, the Coastal Commission, and many others. (See, Attachment B: San Mateo County Public Works Permitting Flowchart.) A November 2010 letter from NOAA's National Marine Fisheries Service (NMFS) to California State Parks and Recreation and San Mateo County Public Works states that dredging may be a feasible solution to local road flooding, as well as alleviating the now encumbered fish passage (salmonids) until more extensive Marsh ecosystem recovery work is completed.[8] It also advises that dredging permits from the State (if necessary) should not be a hindrance and that NOAA stands ready to work with State Parks and the County on such an effort. (*See,* Attachment C: NOAA letter to California State Parks and San Mateo County Dept. of Public Works.)

The responsibility for Pescadero Creek Road and its maintenance belongs to San Mateo County Public Works. Public Works is also responsible for a 30-ft right-of-way on either side of the road. Silt re-deposition, vegetation overgrowth, and debris collection likely would require limited periodic clearing and clean-up efforts in future years. From interviews, the Grand Jury learned that action has not been taken in part because of other priorities, political and jurisdictional disputes with other levels of State and Federal government as well as potential permitting complexities.

County officials and advisors have discussed the concept of "Emergency" public works action with the Grand Jury.[9] The concept of "Emergency" action applies in two distinct circumstances. One is the declaration of a state of emergency by either a local government or the state, such as in 2010 when the San Bruno gas line exploded. The other involves conditions in which a local governmental entity, such as San Mateo County Public Works, can take emergency action to resolve an issue without the need to obtain prior permits to approve such actions. The permits in both circumstances may be resolved after the fact. Typically, Public Works has taken immediate action when necessary to repair roads/access due to slip-outs, rock-falls, flooding, under emergency authority, with permitting/remediation resolved after the fact.

California Government Code §21060.3 defines "Emergency" as a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency"

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[8] Attachment B, Letter, NOAA / Fisheries to Public Works, and State Parks, November 24, 2010.
[9] CEQA Cal Government Code §21060.3; Cal. Code of Regulations, §15269 (d).

includes such occurrences as fire, flood, earthquake or other soil or geologic movements, as well as such occurrences as riot, accident or sabotage.

The California Code of Regulations §15269 (Title 14, Ch. 3, Art. 18), Emergency Projects, exempts a series of emergency project types from the requirements of the California Environmental Quality Act (CEQA). Among them are:

> (c) Specific actions necessary to prevent or mitigate an emergency. This does not include long term actions undertaken for the purpose of preventing or mitigating a situation that has a low probability of occurrence in the short-term.

In addition to the California Government Code reference cited above, there are other emergency provisions for waiving permits, allowing immediate actions to address issues of protecting life and public property from imminent danger, including fill and dredging activities under emergency conditions. Applicable references include:

- California Coastal Act: Public Resources Code § 30611 Emergencies; waiver of permit
- Local Coastal Program: SMC Local Coastal Program 9.15 Emergency Provisions
- US Army Corps of Engineers Regional General Permit 5 (emergency defined according to CEQA)[10]
- California Dept. of Fish and Game Code §1610 (a)(b)[11]

Road flooding is one symptom of a deteriorating Marsh watershed. An integrated overall plan is necessary to identify engineering actions needed to address all the interactive elements of the Pescadero Marsh ecosystem. One initiative to develop an overall solution is now underway by the Resource Conservation District (RCD), chartered to advise the County on conservation and environmental issues. The RCD is a Special District of California and is appointed by and advisory to the San Mateo County Board of Supervisors. The RCD obtained funding in 2011 to conduct a study to explore lasting solutions for the Marsh watershed, including resolution of the road-flooding problem. The elapsed time for the RCD research study plus the resulting actual project work will take at least 5 years.

Investigation

To investigate Pescadero Creek flooding, the San Mateo Civil Grand Jury took site tours, reviewed documents and reports, and conducted interviews with Federal, State and County government personnel, and scientific and citizens' groups, including:

- San Mateo County Board of Supervisors
- San Mateo County Public Works
- San Mateo County Resource Conservation District (RCD)
- California State Fish and Game Department

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[10] http://www.spn.usace.army.mil/regulatory/RGP/28218s.pdf and http://ceres.ca.gov/ceqa/stat/Ch_2-5.html .

[11] http://www.dfg.ca.gov/habcon/1600/1600code.html .

- National Oceanic and Atmospheric Administration (NOAA / Fisheries)
- Committee for Green Foothills
- San Mateo County Farm Bureau
- Citizens Against Species Extinction (C.A.S.E.)
- Pescadero Municipal Advisory Council (PMAC)

Note that the Grand Jury attempted to interview two individuals from California State Parks and Recreation, the agency that owns the Marsh and is responsible for its management. The individuals first agreed, then later declined through their lawyers, to provide informational interviews to the Grand Jury on the subject of this Report. After substantial delay, the State's lawyers subsequently claimed that State Park and Recreation has "…very little specific knowledge about the impacts, the causes, or the responsibility for the flooding" and therefore would not allow its clients to be interviewed (even when written questions were tendered in advance). The Grand Jury is disappointed in the lack of cooperation and surprised by the claimed ignorance on the part of the public agency directly responsible for managing the Marsh. For the record, the Grand Jury considers the issuance of this Report to be only part of an open and continuing investigation of matters relating to road flooding, Butano Creek, and the Pescadero Marsh. The Grand Jury expressly reserves its right to request that a subpoena issue from the Superior Court compelling the attendance of and/or production of records before the Grand Jury from any witness. The Grand Jury continues to evaluate whether such steps are required in this matter.

Reference documents reviewed included public records and reports, relevant websites, County engineering and scientific documents and reports, and documents provided by or referenced by the interviewees.

Site tours included several walk-arounds of Butano Creek (at and around the Bridge) and the Marsh and its tributary creeks, as well as the estuary exit sand-berm along the coast.

Findings

The Grand Jury finds:

1. The Butano Creek overflows its banks and floods Pescadero Creek Road and surrounding farmland each year during periods of rains.

2. The flooding of Pescadero Creek Road at Butano Creek Bridge creates a dangerous setting and, when impassable, delays public safety access and virtually isolates a Pescadero community of approximately 650 people.

3. Silt accumulation, vegetation overgrowth, and debris have reduced flow capacity of Butano Creek and increased road flooding risk.

4. Butano Creek has not been thoroughly cleared of accumulated silt, vegetation overgrowth, or debris for decades.

5. California State Parks and Recreation, beginning in 1993, made extensive modifications in the Marsh to re-establish a "natural ecological environment." Some modifications have not been maintained (e.g., flood gates) and, according to several interviewees, are presently ineffective and have made road-flooding conditions worse.

6. Solutions proposed to San Mateo County Public Works to correct the flooding include a raised roadway or a causeway, over-road pumping, dredging, and brush and debris clearance. The County has not adopted any of these suggestions.

7. San Mateo County is responsible for maintaining Pescadero Creek Road and its 30-foot right of way and therefore for correcting the road-flooding situation.

8. Multiple agencies, each with its own specific interests, might normally have to approve or advise on approval of permits to make changes that would resolve the flooding problem. Currently, any one agency could stop the process.

9. Multiple sections of California and federal law, e.g. California Fish and Game Code §1601, CEQA, CA Gov't Code §21060.3, and Cal. Code of Regs. §15269(d), provide for emergency exceptions to the permitting restrictions that normally apply to stream bed changes and road repairs. These may be available to Public Works to expedite actions that would eliminate Pescadero Road flooding.

10. The Grand Jury is unaware that the County has ever applied for, or been denied, any permit(s) for actions that would address the road flooding.

11. A November 24, 2010 letter from the NOAA's National Marine Fisheries Service (NMFS) North Central Coast Office to California State Parks and San Mateo County Public Works expressed the view that the permits required to address the road flooding should not be a hindrance and that "NMFS stands ready to work with State Parks and the County toward the shared goal of resource protections while improving the safety of Pescadero Road."

12. The Resource Conservation District has funding to explore solutions to environmental quality issues in the Pescadero Marsh ecosystem and intends to address Pescadero Creek Road flooding as part of its efforts. Its time frame, however, does not address the immediate need.

Conclusions

The Grand Jury concludes:

1. The status quo of annual road flooding is unsafe and unacceptable. The annual flooding of the main road serving Pescadero seriously jeopardizes citizens' safety, and impedes commercial activity in the area.

2. The diminishing capacity of the Butano Creek due to accumulated silt, vegetation

overgrowth, and debris increases the risk of flooding with lesser rainfall. This annual flooding is predictable and correctable.

3. The Board of Supervisors and responsible County government entities are essentially nonresponsive, hampered by other priorities, jurisdictional disputes with various State and Federal agencies, permitting requirements, and insufficient political will to overcome these.

4. The difficulty of obtaining approval of permits to address road flooding cannot be substantiated because, to the Grand Jury's knowledge, none have ever been applied for, or denied.

5. The Grand Jury believes that the County could invoke the "emergency repair" concept, take remedial action, and immediately end the Pescadero Creek Road flooding.

6. The estimated five years timing for any flood-control relief resulting from RCD's efforts is unacceptable.

7. Immediate solutions to road flooding must be implemented. The most promising include removal of excess silt and clearance of vegetation overgrowth and debris from as much of the Butano Creek as necessary to eliminate the annual road flooding.

Recommendations

The Grand Jury recommends that the Board of Supervisors:

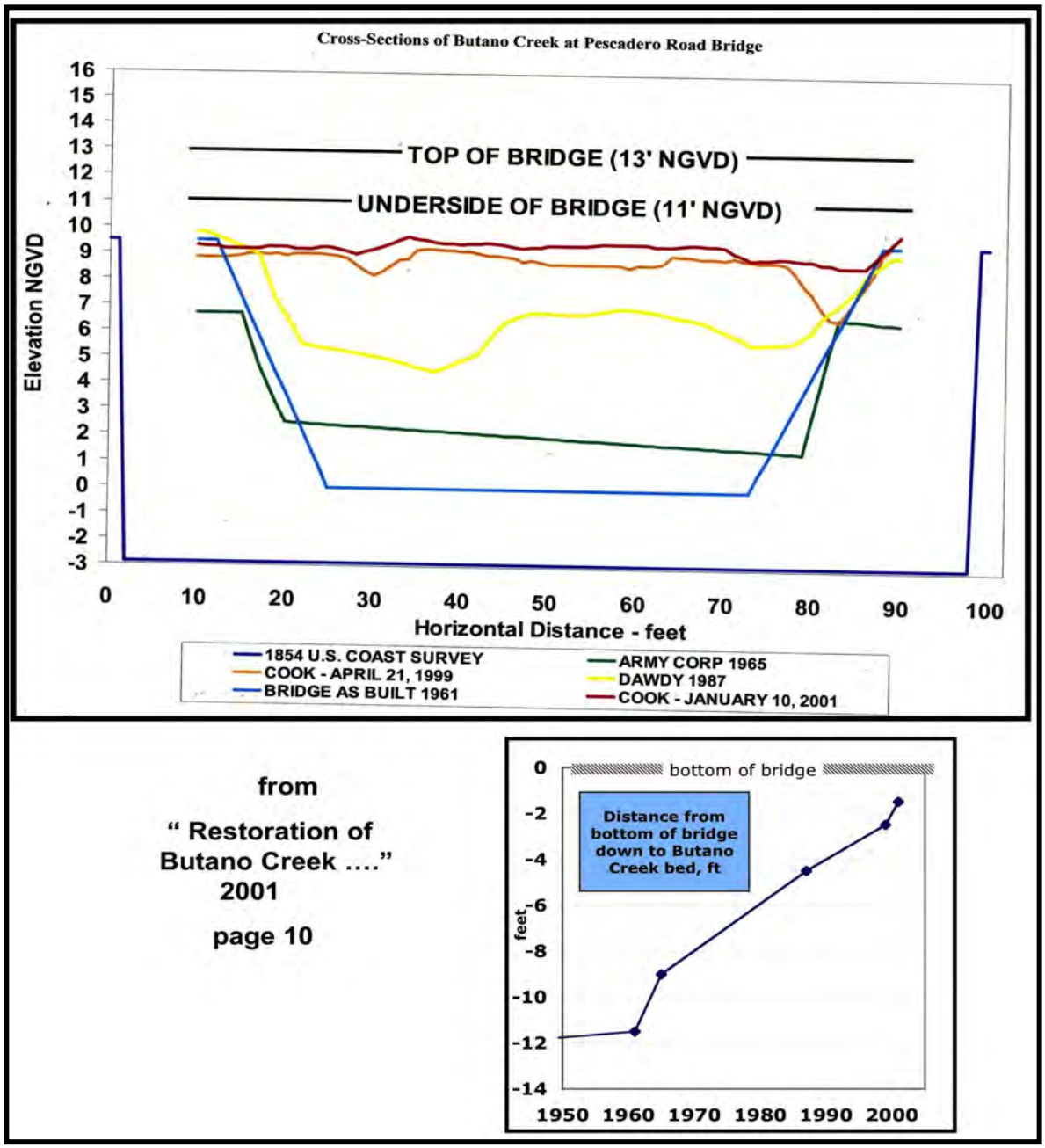
1. Immediately direct the County Department of Public Works to remove excess silt and clear vegetation overgrowth and debris from as much of the Butano Creek as necessary to eliminate the road flooding. The work should be completed as soon as possible, and in all circumstances before October 1, 2012, the start of the 2012-13 rainy season. The intended result of this work is to prevent flooding of Butano Creek onto and around Pescadero Creek Road and farmlands.

2. Review the NOAA (NMFS) Nov 24, 2010 letter (*See,* Attachment B), and consult with NOAA and the San Mateo County RCD on strategies for expediting permit approvals, if any are required, to accomplish the work described in Recommendation 1.

3. If needed to accomplish Recommendation Number 1, use San Mateo County's authority under the various emergency provisions of California and/or federal law to take actions mitigating flooding to protect life or property.

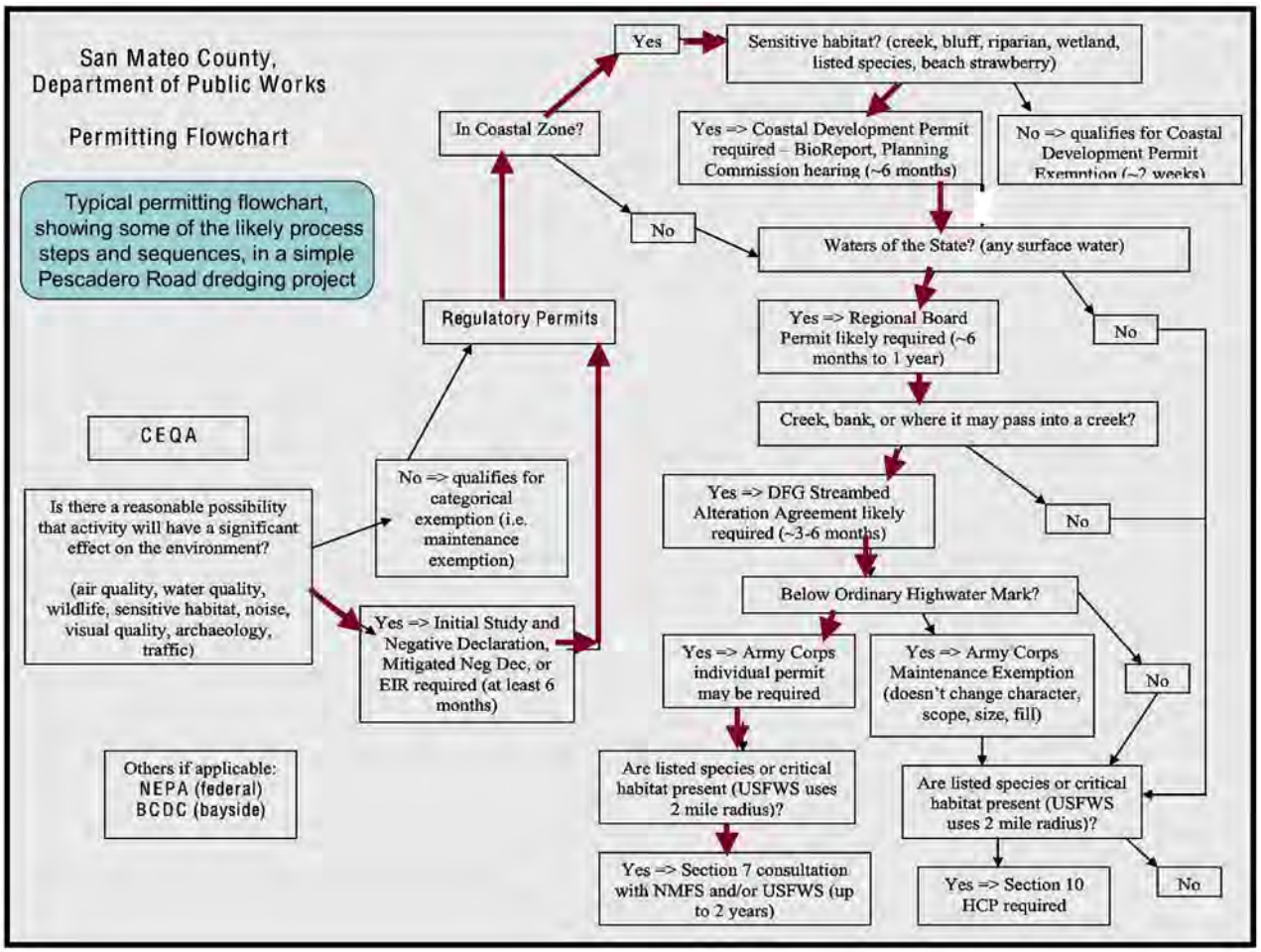
4. Direct the San Mateo County Department of Public Works to periodically clean new silt, vegetation overgrowth, and debris from Butano Creek as needed to maintain flows and eliminate the recurrence of Pescadero Creek Road flooding.

Attachment A: Silt-up Profiles of Butano Creek Bridge



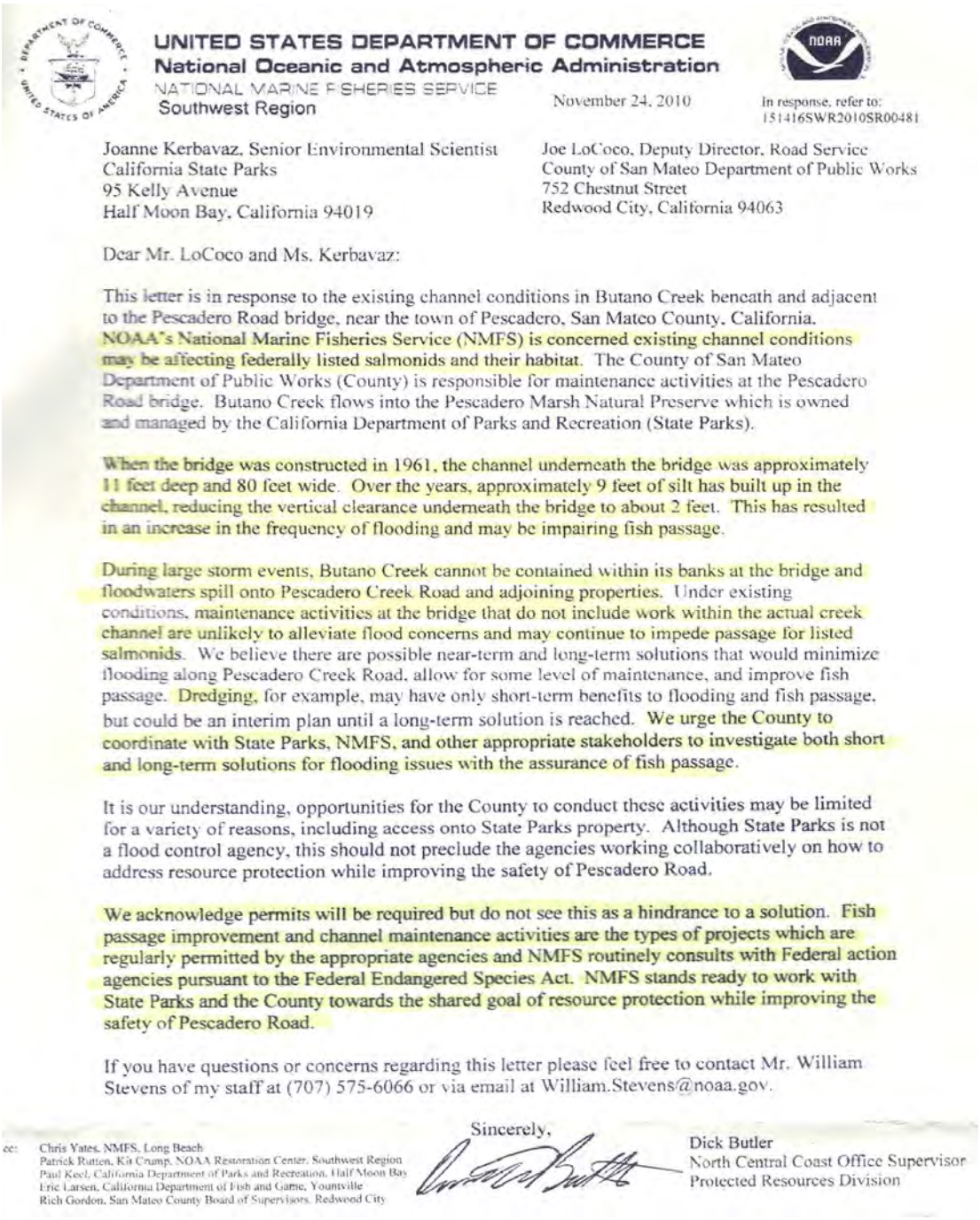
This image shows the profile of the Butano Creek streambed below the Pescadero Creek Road Bridge. Early surveys show the streambed some 12 feet below the bottom of the bridge. Today, the bridge clears the silted and debris-filled creek bottom by only 2 feet.

Attachment B:
San Mateo County Public Works Permitting Flowchart



This flowchart, prepared by the San Mateo County Department of Public Works, illustrates the path and sequence for obtaining permit approval for relatively straightforward projects. It does not show the additional entities that, as a matter of course, provide technical input and guidance to the indicated permitters.

Attachment C: NOAA / Fisheries Letter



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region

November 24, 2010

In response, refer to:
151416SWR2010SR00481

Joanne Kerbavaz, Senior Environmental Scientist
California State Parks
95 Kelly Avenue
Half Moon Bay, California 94019

Joe LoCoco, Deputy Director, Road Service
County of San Mateo Department of Public Works
752 Chestnut Street
Redwood City, California 94063

Dear Mr. LoCoco and Ms. Kerbavaz:

This letter is in response to the existing channel conditions in Butano Creek beneath and adjacent to the Pescadero Road bridge, near the town of Pescadero, San Mateo County, California. NOAA's National Marine Fisheries Service (NMFS) is concerned existing channel conditions may be affecting federally listed salmonids and their habitat. The County of San Mateo Department of Public Works (County) is responsible for maintenance activities at the Pescadero Road bridge. Butano Creek flows into the Pescadero Marsh Natural Preserve which is owned and managed by the California Department of Parks and Recreation (State Parks).

When the bridge was constructed in 1961, the channel underneath the bridge was approximately 11 feet deep and 80 feet wide. Over the years, approximately 9 feet of silt has built up in the channel, reducing the vertical clearance underneath the bridge to about 2 feet. This has resulted in an increase in the frequency of flooding and may be impairing fish passage.

During large storm events, Butano Creek cannot be contained within its banks at the bridge and floodwaters spill onto Pescadero Creek Road and adjoining properties. Under existing conditions, maintenance activities at the bridge that do not include work within the actual creek channel are unlikely to alleviate flood concerns and may continue to impede passage for listed salmonids. We believe there are possible near-term and long-term solutions that would minimize flooding along Pescadero Creek Road, allow for some level of maintenance, and improve fish passage. Dredging, for example, may have only short-term benefits to flooding and fish passage, but could be an interim plan until a long-term solution is reached. We urge the County to coordinate with State Parks, NMFS, and other appropriate stakeholders to investigate both short and long-term solutions for flooding issues with the assurance of fish passage.

It is our understanding, opportunities for the County to conduct these activities may be limited for a variety of reasons, including access onto State Parks property. Although State Parks is not a flood control agency, this should not preclude the agencies working collaboratively on how to address resource protection while improving the safety of Pescadero Road.

We acknowledge permits will be required but do not see this as a hindrance to a solution. Fish passage improvement and channel maintenance activities are the types of projects which are regularly permitted by the appropriate agencies and NMFS routinely consults with Federal action agencies pursuant to the Federal Endangered Species Act. NMFS stands ready to work with State Parks and the County towards the shared goal of resource protection while improving the safety of Pescadero Road.

If you have questions or concerns regarding this letter please feel free to contact Mr. William Stevens of my staff at (707) 575-6066 or via email at William.Stevens@noaa.gov.

Sincerely,

Dick Butler
North Central Coast Office Supervisor
Protected Resources Division

cc: Chris Yates, NMFS, Long Beach
Patrick Rutten, Kit Crump, NOAA Restoration Center, Southwest Region
Paul Keel, California Department of Parks and Recreation, Half Moon Bay
Eric Larsen, California Department of Fish and Game, Yountville
Rich Gordon, San Mateo County Board of Supervisors, Redwood City

This letter from Mr. Butler of NOAA/Marine Fisheries, dated November 24, 2010, summarizes the silt-up of the Butano Creek streambed and its association with the annual Pescadero Road flooding. It acknowledges the potential interim benefits of dredging. It urges the County to coordinate with stakeholders to investigate solutions and provides guidance and offers support in overcoming permitting issues. (*highlights supplied*).

COUNTY OF SAN MATEO
Inter-Departmental Correspondence
County Manager

Date: July 3, 2012
Board Meeting Date: July 24, 2012
Special Notice / Hearing: None
Vote Required: Majority

To: Honorable Board of Supervisors

From: John L. Maltbie

Subject: 2011-12 Grand Jury Response

RECOMMENDATION:
Approve the Board of Supervisors' response to the 2011-12 Grand Jury report titled: The Annual Flooding of Pescadero Creek Road.

BACKGROUND:
On March 1, 2012, the Grand Jury filed a report titled: The Annual Flooding of Pescadero Creek Road. A copy of the Grand Jury report is attached hereto and identified herein as Exhibit A. The Board of Supervisors is required to submit comments on the findings and recommendations pertaining to the matters under control of the County of San Mateo within ninety days. The County's response to the report is due to the Hon. Gerald J. Buchwald no later than July 30, 2012.

Acceptance of this report contributes to the Shared Vision 2025 outcome of a Collaborative Community by ensuring that all Grand Jury findings and recommendations are thoroughly reviewed by the appropriate County departments and that, when appropriate, process improvements are made to improve the quality and efficiency of services provided to the public and other agencies.

DISCUSSION:
The Annual Flooding of Pescadero Creek Road

Findings:

Grand Jury Finding Number 1. The Butano Creek overflows its banks and floods Pescadero Creek Road and surrounding farmland each year during periods of rains.

Response: Agree. Butano Creek (Creek) overflows its banks and floods Pescadero Creek Road in most years.

Grand Jury Finding Number 2. The flooding of Pescadero Creek Road at Butano Creek Bridge creates a dangerous setting and, when impassable, delays public safety access and virtually isolates a Pescadero community of approximately 650 people.

Response: Disagree in part. Depending on the severity of flooding, access to the community can be impacted. However, the community of Pescadero does not become isolated, as there are two additional, though more circuitous routes into and out of Pescadero that can be taken when Pescadero Creek Road is impacted. These routes include Stage Road, which provides access from the north, and Pescadero Creek Road which provides access from the east. In addition, prior to expected flood events, the County Fire engine at Pescadero moves from the station on the west side of the bridge to the east side, closer to town. Fire response and emergency response are therefore available to the community during flooding events.

Grand Jury Finding Number 3. Silt accumulation, vegetation overgrowth, and debris have reduced flow capacity of Butano Creek and increased road flooding risk.

Response: Disagree in part. It is not clear to what the "debris" reference refers to. Among other contributory flooding factors, silt accumulation and vegetation overgrowth within and adjacent to the Creek, have contributed to flow capacity restrictions within the channel. However, because the area downstream of the bridge and extending as far as the ocean is relatively flat, sediment will naturally accumulate along this section of Creek as long as a sediment source, such as the naturally occurring sandstone formations in the upper watershed, exists.

It is ultimately not clear to what extent these may be naturally occurring processes and to what extent they "have increased road flooding risk." It is also not clear whether downstream restoration efforts or modifications to the Creek system have contributed to any issues associated with flooding..

Grand Jury Finding Number 4. Butano Creek has not been thoroughly cleared of accumulated silt, vegetation overgrowth, or debris for decades.

Response: Disagree in part. The Creek is lengthy and the Finding is not specific to a specific section of Creek. The County performed silt removal work within the Creek and Pescadero Creek Road right-of-way during the 1980's and early 1990's. Additionally, we understand that members of the Pescadero community removed woody debris, including beaver dams, in early 2000's. The County of San Mateo has a limited road right of way along Pescadero Creek Road at the Creek, which is 100 feet wide, and is offset 40 feet approximately 40 feet at the middle of the bridge. With the right of way offset, the County actually has only approximately 60 feet of right of way that is uniformly under our control. Accounting for the width of the bridge (approx. 24 feet), we have full control of approximately 18 feet of channel on either side of the bridge. Silt removal performed by the County is generally limited to the section of Creek within the County's right of way.

Grand Jury Finding Number 5. California State Parks and Recreation, beginning in 1993, made extensive modifications in the Marsh to re-establish a "natural ecological environment." Some modifications have not been maintained (e.g., flood gates) and, according to several interviewees, are presently ineffective and have made road-flooding conditions worse.

Response: Disagree in part. California State Parks and Recreation has performed work within the Marsh. This includes installation of tidegates which we understand are not presently functioning. The specific interaction and effect of the Marsh on the Creek and flooding is not conclusive. Additionally, it has not been determined whether or not the tide gates have a direct effect on the flooding of Pescadero Creek Road.

Grand Jury Finding Number 6. Solutions proposed to San Mateo County Public Works to correct the flooding include a raised roadway or a causeway, over-road pumping, dredging, and brush and debris clearance. The County has not adopted any of these suggestions.

Response: Disagree in part. These have been "suggested solutions" communicated by the community. However, it has not been determined whether any of these "suggested solutions" would in fact eliminate the flooding of Pescadero Creek Road. A significant section of Pescadero Creek Road within the vicinity of the Creek is designated on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps as being subject to flooding. Flooding within the areas designated on the FEMA maps will always be a possibility.

Grand Jury Finding Number 7. San Mateo County is responsible for maintaining Pescadero Creek Road and its 30-foot right of way and therefore for correcting the road-flooding situation.

Response: Disagree. The County of San Mateo is responsible for maintaining constructed road infrastructure within the limits of its road right-of-way. The road right-of-way for Pescadero Creek Road is 100 feet wide at the bridge over the Creek and is offset by forty feet (40') creating right of way limits that vary on each side of the bridge and Creek. The County of San Mateo does not have responsibility for areas outside of its road right of way (upstream or downstream of the bridge over the Creek), nor does it have responsibility for private property drainage. This Finding infers that the County has the responsibility to clear sediment or debris from the Creek upstream and downstream of the bridge to ensure that Pescadero Creek Road will not flood, which is not the case.

Grand Jury Finding Number 8. Multiple agencies, each with its own specific interests, might normally have to approve or advise on approval of permits to make changes that would resolve the flooding problem. Currently, any one agency could stop the process.

Response: Agree. The flooding that occurs on Pescadero Creek Road is a complex, multi-agency, and jurisdictional issue, which may potentially involve State and Federal agencies, the County, and private land owners. Not only are downstream solutions to be evaluated, but upstream property owners and land use must also be considered because the upstream properties are the source of sediment.

Grand Jury Finding Number 9. Multiple sections of California and federal law, e.g. California Fish and Game Code §1601, CEQA, CA Gov't Code §21060.3, and Cal. Code of Regs. §15269(d), provide for emergency exceptions to the permitting restrictions that normally apply to stream bed changes and road repairs. These may be available to Public Works to expedite actions that would eliminate Pescadero Road flooding.

Response: Disagree in part. There are in fact emergency exemptions which allow for after the fact permitting and would allow for expedited work. However, these exemptions generally pertain to situations where there is an immediate threat to public safety as a result of extreme natural events. On-going drainage issues within a designated area of flooding are generally not considered to be eligible for emergency permitting exemptions and would not be applicable to the flooding of Pescadero Creek Road.

Grand Jury Finding Number 10. The Grand Jury is unaware that the County has ever applied for, or been denied, any permit(s) for actions that would address the road flooding.

Response: Disagree. While a solution to the flooding issue has not been determined, the County of San Mateo has in the past applied for permits that would improve or restore localized drainage. Within the past year, the County received a permit to clear a culvert (pipe) along the south side of Pescadero Creek Road that flows to the south side of the bridge over the Creek. In addition, the County currently has a permit application pending for restoring the culvert capacity leading to the north side of the bridge.

Grand Jury Finding Number 11. A November 24, 2010 letter from the NOAA's National Marine Fisheries Service (NMFS) North Central Coast Office to California State Parks and San Mateo County Public Works expressed the view that the permits required to address the road flooding should not be a hindrance and that "NMFS stands ready to work with State Parks and the County toward the shared goal of resource protections while improving the safety of Pescadero Road."

Response: Disagree in part. NMFS is one regulatory agency among several that would be required to approve work in the Creek. NMFS regulates impacts to marine and anadromous wildlife, such as steelhead and Coho. Other agencies that would need to permit sediment removal from the Creek include: California Dept. of Fish and Game (regulates streambed alteration and species protection), California Regional Water Quality Control Board (regulates impacts to "Waters of the State" under Section 401 of the Clean Water Act), U.S. Army Corps of Engineers (regulates dredge and fill work

under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act), and U.S. Fish and Wildlife Service (regulates terrestrial and freshwater species protection such as California red-legged frog and San Francisco garter snake). All agencies have agreed to work with the County and State Parks towards expediting permits once a project has been proposed. However, this does not mean that the regulatory agencies would allow the County or State Parks to do whatever is necessary to dredge the Creek. Any dredging of the Creek beyond the County road right-of-way would have potentially high impacts to existing dense riparian and wetland habitats, water quality, and endangered species. Any proposed dredging would require working closely with regulatory agencies to develop a plan to minimize those impacts to the maximum extent possible and mitigation for any impacts would likely be required.

Grand Jury Finding Number 12. The Resource Conservation District has funding to explore solutions to environmental quality issues in the Pescadero Marsh ecosystem and intends to address Pescadero Creek Road flooding as part of its efforts. Its time frame, however, does not address the immediate need.

Response: Disagree. The San Mateo County Resource Conservation District (SMCRCD) does not have funding to explore solutions to environmental quality issues in the Pescadero Marsh ecosystem. The SMCRCD provided the Pescadero Municipal Advisory Council, at their April 10, 2012 meeting, with a written description of the SMCRCD work as funded by a $75,000 grant from the Bay Area Integrated Regional Water Management Plan through Proposition 84. The following includes excerpts from the written description as shown below in quotation marks.

“This project is to do the required analysis (most likely hydrology, hydraulics, refined sediment budget - not anything that has already been done but in some cases refining what has been done to a resolution required for permits) and develop consensus around an option or suite of options so that it is permit-ready and implementation-ready.”

“What it can do: Develop conceptual designs that are broadly supported by community members, landowners, and resource agencies, do the preliminary work for permit-readiness, include climate change considerations.”

“What it will not do: address flooding from mainstem Pescadero, complete designs, complete permits, construct solutions, presuppose a solution before the analysis has been completed.”

Recommendations:

1. Immediately direct the County Department of Public Works to remove excess silt and clear vegetation overgrowth and debris from as much of the Butano Creek as necessary to eliminate the road flooding. The work should be completed as soon as possible, and in all circumstances before October 1, 2012, the start of the 2012-13 rainy season. The

intended result of this work is to prevent flooding of Butano Creek onto and around Pescadero Creek Road and farmlands.

Response:
This recommendation requires further analysis, as it has not been determined how dredging would affect riparian and wetland habitat, sensitive species, or adjacent properties. Furthermore, the County of San Mateo has no authority to enter onto private property to perform work of any kind absent a mutual agreement to do so with landowners, and we do not believe that dredging within the 100 feet of County right of way will relieve flooding.

It has also not been determined that dredging is the optimal solution to preventing flooding of Pescadero Creek Road from the Creek. While dredging the Creek has been suggested, there has been no analysis of the impacts of dredging on surrounding lands. It has been reported that the Creek does not have a defined channel approximately 1,000 feet downstream of the Pescadero Creek Road Bridge. Thus, it is not clear whether it is possible to dredge "as much of the Butano Creek as necessary to eliminate the road flooding." The fact that the area is in a defined flood plain suggests that dredging of the creek to eliminate flooding is not in fact achievable. We also do not believe an October 1, 2012 timeframe is plausible for any work involving the Creek. Our experience has been that permit approvals can be expected to take more than one year to obtain in instances such as these where many permit approvals are required to assure that the water quality, sensitive habitats, and protected species are not adversely impacted.

As mentioned above in the Response to Finding 12, the SMCRCD is currently working on a grant funded project which would provide additional site analysis. It is believed that such an analysis will help establish potential solutions to the localized flooding. The County has been in contact with the SMCRCD regarding the possibility of supporting an expanded study by the SMCRCD that would include an analysis of the impacts associated with Creek dredging efforts.

In addition, County staff are working on ways to reduce the danger to the community during flooding by posting electronic message signs on either side of the flood prone area near the bridge. This will not solve the long term flooding problem, but will clearly inform the drivers that the bridge is flooded and hopefully reduce the danger to drivers in the near term. (Are these the measures being considered?)

2. Review the NOAA (NMFS) Nov 24, 2010 letter (See, Attachment B), and consult with NOAA and the San Mateo County RCD on strategies for expediting permit approvals, if any are required, to accomplish the work described in Recommendation 1.

Response:
This recommendation requires further analysis; however, the County has been in contact with NMFS, the SMCRCD, other pertinent regulatory agencies, and State representatives regarding the issues surrounding the Creek, Pescadero Creek Road,

and the Marsh. As stated in the Response to Finding 11, multiple permits or approvals would be required to perform dredging or any work in or near the Creek. The additional site analysis which is to be performed by the SMCRCD through the grant funding is generally considered the next key step in identifying potential flood mitigation solutions. To the extent that the SMCRCD study could be expanded to include levels of detail that would allow for a complete site analysis, the County intends to prepare a comprehensive report during FY 2012/13 which can be utilized as a baseline for the development of solutions to reduce the flooding of Pescadero Creek Road from the Creek. Through discussions with the various permitting agencies, there has been general agreement among the agencies to expedite their reviews.

3. If needed to accomplish Recommendation Number 1, use San Mateo County's authority under the various emergency provisions of California and/or federal law to take actions mitigating flooding to protect life or property.

Response:
This recommendation will not be implemented because it is not feasible. The County's Department of Public Works, works closely with regulatory agencies on numerous projects every year and has had discussions with the various agencies with respect to this and other projects. We have confirmed at several levels that work within the Creek channel would not be considered by the regulatory agencies as emergency work and would therefore require standard reviews and permit approvals. We are, however, continuing to investigate whether there may be FEMA funding opportunities through CalEMA and whether these programs offer opportunities for expedited work approvals.

4. Direct the San Mateo County Department of Public Works to periodically clean new silt, vegetation overgrowth, and debris from Butano Creek as needed to maintain flows and eliminate the recurrence of Pescadero Creek Road flooding.

Response:
This recommendation requires further analysis. As noted in the Response to Recommendation 1, it has not been determined that dredging the Creek is a feasible short term or long term solution to flooding. The County currently has plans to perform an engineering analysis that would consider the effectiveness of potential alternatives, including dredging within the Pescadero Creek Road right-of-way and beyond. We are planning on prioritizing such studies and anticipate that they will be completed within the next fiscal year. Regular and periodic removal of silt, vegetation, and debris from the Creek would require permits from the regulatory agencies.

FISCAL IMPACT:
There is no Net County Cost associated with accepting this report.

8.1 Cost Analysis

Pescadero Fire Station
Pescadero, California

January 14, 2014

tbd consultants

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Roseville, CA 95661
(916) 742-1770
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BASIS OF ESTIMATE

PROJECT DESCRIPTION

The project consists of Two Options:

Option A (New Site): Project consists of a new two-story 8,104 SF fire station with living quarters and apparatus bays. Sitework includes vehicular and pedestrian paving, landscaping, site lighting and drainage, new emergency generator and fuel storage tanks. Utilities include incoming water, storm drain and electrical service. Sewer is provide by an onsite septic system, gas is provided by propane tanks.

Option B (Existing Site): Project consists of replacing existing living quarters building with a new two-story 5,508 SF living quarters building, complete interior/exterior renovation to the existing 2,400 SF apparatus building, a new 1,100 SF addition to the existing apparatus building. Sitework includes vehicular and pedestrian paving, landscaping, site lighting and drainage, replacement of existing emergency generator and fuel storage tanks. Utilities include septic system replacement, distribution of utilities to buildings.

REFERENCE DOCUMENTATION

Documents provided by Ratcliff Architects and their Design Team.

SITE VISIT

Meeting and site visit November 20, 2013.

BASIS FOR PRICING

This estimate reflects the fair construction value for this project and should not be construed as a prediction of low bid. Prices are based on local prevailing wage construction costs at the time the estimate was prepared. Pricing assumes a procurement process with competitive bidding for all sub-trades of the construction work, which is to mean a minimum of 3 bids for all subcontractors and materials/equipment suppliers. If fewer bids are solicited or received, prices can be expected to be higher.

Subcontractor's markups have been included in each line item unit price. Markups cover the cost of field overhead, home office overhead and subcontractor’s profit. Subcontractor's markups typically range from 15% to 25% of the unit price depending on market conditions.

General Contractor’s/Construction Manager's Site Requirement costs are calculated on a percentage basis. General Contractor’s/Construction Manager's Jobsite Management costs are also calculated on a percentage basis.

General Contractor’s/Construction Manager's overhead and fees are based on a percentage of the total direct costs plus general conditions, and covers the contractor’s bond, insurance, site office overheads and profit.

Unless identified otherwise, the cost of such items as overtime, shift premiums and construction phasing are not included in the line item unit price.

BASIS OF ESTIMATE

This cost estimate is based on standard industry practice, professional experience and knowledge of the local construction market costs. TBD Consultants have no control over the material and labor costs, contractors methods of establishing prices or the market and bidding conditions at the time of bid. Therefore TBD Consultants do not guarantee that the bids received will not vary from this cost estimate.

CONTINGENCY

Design Contingency ***15%***

The Design Contingency is carried to cover scope that lacks definition and scope that is *anticipated* to be added to the Design. As the Design becomes more complete the Design Contingency will reduce.

Construction Contingency ***0%*** ***to be carried elsewhere in Owner's Budget***

The Construction Contingency is carried to cover the unforeseen during construction execution and Risks that do not currently have mitigation plans. As Risks are mitigated, Construction Contingency can be reduce, but should not be eliminated.

ESCALATION

Escalation has been included based on a January 2015 start of construction.

EXCLUSIONS

- Land acquisition, feasibility, and financing costs
- All Owner soft costs
- All professional fees and insurance
- Construction Manager or Agency Costs
- Site or existing condition survey investigation costs, including determination of subsoil conditions
- Hazardous materials inspection costs, or accommodations in construction for hazardous materials.
- Owners Construction Contingency for scope changes and market conditions at time of bid
- Permits

ITEMS THAT MAY AFFECT THIS ESTIMATE

Such items include, but are not limited to the following:

Modifications to the scope of work subsequent to the preparation of this estimate
Unforeseen existing conditions
Compression of planned construction schedule
Special requirements for site access or off-hours work
Restrictive technical specifications, excessive contract or non-competitive bid conditions
Sole source specifications for materials, products or equipment
Bid approvals delayed beyond the anticipated project schedule

OVERALL SUMMARY OPTION A - NEW FIRESTATION AND SITE

BUILDING			
Fire Station and Apparatus Bays	8,104	SF	2,779,194
Furniture, Fixtures and Equipment (FF&E)			See FF&E Budget
SITEWORK			
Site Preparation, Development and Utilities	1	LS	836,240
DIRECT COSTS SUB-TOTAL			**3,615,434**
SITE REQUIREMENTS AND JOBSITE MANAGEMENT (One Phase over 10 to 12 Months)		11.5%	415,775
ESTIMATE SUB-TOTAL			**4,031,209**
INSURANCE + BONDING		2.5%	100,780
FEE		3.0%	123,960
ESTIMATE SUB-TOTAL			**4,255,949**
DESIGN CONTINGENCY		15.0%	638,392
CONSTRUCTION CONTINGENCY		0.0%	Excluded
ESTIMATE SUB-TOTAL			**4,894,341**
ESCALATION (January 2015 start of Construction)		5.0%	**244,717**
ESTIMATE TOTAL			**5,139,058**

OVERALL SUMMARY OPTION B - EXISTING FIRE STATION AND SITE

BUILDINGS			
New Living Quarters	5,508	SF	1,759,001
Existing Apparatus Building Renovation	2,400	SF	867,100
Apparatus Building Addition	1,100	SF	259,600
Furniture, Fixtures and Equipment (FF&E)			See FF&E Budget
Subtotal - Buildings	9,008	SF	2,885,701
SITEWORK			
Site Preparation, Development and Utilities	1	LS	829,125
DIRECT COSTS SUB-TOTAL			**3,714,826**
SITE REQUIREMENTS AND JOBSITE MANAGEMENT (Two Phases over 18 Months)		17.0%	631,520
ESTIMATE SUB-TOTAL			**4,346,346**
INSURANCE + BONDING		2.5%	108,659
FEE		4.5%	200,475
ESTIMATE SUB-TOTAL			**4,655,480**
DESIGN CONTINGENCY		15.0%	698,322
CONSTRUCTION CONTINGENCY		0.0%	Excluded
ESTIMATE SUB-TOTAL			**5,353,802**
ESCALATION (January 2015 start on Construction)		7.0%	**374,766**
ESTIMATE TOTAL			**5,728,568**

New Fire Station (8,904 SF)

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	STRUCTURE					
	Building Pad					
	Built-up building pad - allow	7,200	SF	2.50	18,000	
	Foundations					
	Perimeter wall footing	340	LF	100.00	34,000	
	Column footings	30	EA	650.00	19,500	
	Interior grade beams - allow	1	LS	10,000.00	10,000	
	Elevator pit - single	1	EA	10,000.00	10,000	
	Vertical Structure					
	Steel columns and moment frames - allow					
	6.00#/SF	25	TN	4,500.00	112,500	
	Floor and Roof Structure					
	Slab on grade including base					
	Living quarters	2,754	SF	10.00	27,540	
	Apparatus	2,596	SF	14.00	36,344	
	Steel framed floor structure including metal					
	decking and concrete topping - allow 8.00#/SF	2,754	SF	30.00	82,620	
	Steel framed pitched roof structure and roof					
	overhangs including metal decking - allow					
	Living quarters	3,360	SF	25.00	84,000	
	Apparatus - long span	3,100	SF	30.00	93,000	
	Wall curbs, equipment pads and curbs	1	LS	10,000.00	10,000	
	Miscellaneous metals and rough carpentry	8,104	SF	3.00	24,312	
	Seismic joints between living quarters and					
	apparatus building	1	LS	10,000.00	10,000	
	Fireproofing steelwork - not required				NIC	
	STRUCTURE				**571,816**	
	EXTERIOR WALLS AND ROOFING					
	Exterior Walls					
	Steel stud framed exterior walls with plywood					
	sheathing	6,900	SF	16.00	110,400	
	Metal/wood siding, batt insulation, gypsum board					
	and paint to interior face of exterior wall	6,900	SF	25.00	172,500	
	Operable windows (allow 25% of exterior walls)	1,700	SF	80.00	136,000	
	Shade structures at windows - allow	1	LS	10,000.00	10,000	
	Soffits/roof overhangs	1,200	SF	25.00	30,000	
	Entrance doors and service doors	1	LS	20,000.00	20,000	
	Apparatus bi-fold doors - motorized	4	EA	30,000.00	120,000	
	Fascia's, trim and ornamentation	1	LS	20,000.00	20,000	
	Entrance canopy or covered porch	1	LS	10,000.00	10,000	
	Louvers and vents	1	LS	3,000.00	3,000	
	Outdoor Patio					
	Concrete paving	240	SF	15.00	3,600	
	Roof structure including structure and metal					
	roofing	240	SF	75.00	18,000	
	Roofing					
	Metal roofing including insulation and flashing	6,460	SF	25.00	161,500	
	Gutters and downspouts	1	LS	10,000.00	10,000	
	Miscellaneous flashing, caulking and sealants	1	LS	8,000.00	8,000	
	Skylights - not required				NIC	
	EXTERIOR WALLS AND ROOFING				**833,000**	

New Fire Station (8,904 SF)

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	INTERIOR CONSTRUCTION					
	Interior Partitions					
	Metal stud partitions including sound insulation,					
	gypsum board and paint finish	4,200	SF	15.00	63,000	
	Interior doors -allow	26	EA	2,000.00	52,000	
	Interior Finishes					
	Flooring including base					
	Carpet and vinyl	5,108	SF	8.00	40,864	
	Ceramic tile	400	SF	22.00	8,800	
	Sealer	2,596	SF	2.50	6,490	
	Walls					
	Ceramic tile	1,200	SF	20.00	24,000	
	Painted plywood panels at apparatus room	1,500	SF	8.00	12,000	
	Miscellaneous wall finishes - allow	1	LS	15,000.00	15,000	
	Ceilings					
	Suspended acoustical tile and gypsum board					
	ceilings	8,104	SF	10.00	81,040	
	Equipment					
	Kitchen					
	Base cabinet including countertop	30	LF	450.00	13,500	
	Upper wall cabinet	20	LF	200.00	4,000	
	Island	1	EA	3,000.00	3,000	
	Appliances	1	LS	20,000.00	20,000	
	Restrooms					
	Vanities	10	LF	300.00	3,000	
	Shower stalls	3	EA	1,500.00	4,500	
	Partitions and accessories	1	LS	6,000.00	6,000	
	Offices, meeting room and training room					
	Built-in casework - allow	1	LS	10,000.00	10,000	
	Equipment and accessories	1	LS	10,000.00	10,000	
	Wardrobe lockers - allow	13	EA	1,200.00	15,600	
	Restroom lockers - allow	13	EA	600.00	7,800	
	Turn-out lockers - allow	24	EA	800.00	19,200	
	Casework and workbench at apparatus room	1	LS	10,000.00	10,000	
	Laundry room casework, washer and dryer	1	LS	6,000.00	6,000	
	Shelving, wall guards and corner guards	1	LS	5,000.00	5,000	
	Window blinds or shades	1,700	SF	7.00	11,900	
	Signage and graphics (interior and exterior)	1	LS	10,000.00	10,000	
	Miscellaneous equipment and accessories	1	LS	15,000.00	15,000	
	Furniture, beds and moveable furnishings -					
	FF&E Budget				FF&E Budget	
	Vertical Transportation					
	Elevator- two stop hydraulic including shaft walls					
	and associated mechanical and electrical					
	requirements	1	EA	100,000.00	100,000	
	Stair including railings	2	EA	15,000.00	30,000	
	INTERIOR CONSTRUCTION				**607,694**	
	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION					
	Plumbing					
	Plumbing system	8,104	SF	18.50	149,924	
	Heating and Ventilation					
	Heating and ventilation system (no air conditioning)	8,104	SF	16.00	129,664	
	Vehicle exhaust system (2 bays)	1	LS	90,000.00	90,000	
	Electrical					
	Electrical system including power, lighting, alarm					
	systems and communications	8,104	SF	44.00	356,576	

New Fire Station (8,904 SF)

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	Fire Protection					
	Fire sprinkler system	8,104	SF	5.00	40,520	
	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION				**766,684**	
	SELECTIVE BUILDING DEMOLITION / TEMPORARY WORK					
	No work anticipated					
	SELECTIVE BUILDING DEMOLITION / TEMPORARY WORK					
	SITE WORK					
	See Site Work Estimate				Site Work	
	SITE WORK					
	DIRECT COSTS SUB-TOTAL				**2,779,194**	

Two-Story Living Quarters Building (5,508 SF)

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	STRUCTURE					
	Building Pad					
	Built-up building pad - allow	4,000	SF	3.00	12,000	
	Foundations					
	Perimeter wall footing	220	LF	100.00	22,000	
	Column footings	15	EA	650.00	9,750	
	Interior grade beams - allow	1	LS	5,000.00	5,000	
	Elevator pit - single	1	EA	10,000.00	10,000	
	Vertical Structure					
	Steel columns and moment frames - allow					
	6.00#/SF	17	EA	4,500.00	76,500	
	Floor and Roof Structure					
	Slab on grade including base	2,754	SF	10.00	27,540	
	Steel framed floor structure including metal					
	decking and concrete topping - allow 8.00#/SF	2,754	SF	30.00	82,620	
	Steel framed pitched roof structure and roof					
	overhangs including metal decking - allow 8.00#/SF	3,360	SF	25.00	84,000	
	Miscellaneous metals and rough carpentry	5,508	SF	3.00	16,524	
	Wall curbs, equipment pads and curbs	1	LS	5,000.00	5,000	
	Fireproofing steelwork - not required				NIC	
	STRUCTURE				**350,934**	
	EXTERIOR WALLS AND ROOFING					
	Exterior Walls					
	Steel stud framed exterior walls with plywood					
	sheathing	4,500	SF	16.00	72,000	
	Metal/wood siding, batt insulation, gypsum board					
	and paint to interior face of exterior wall	4,500	SF	25.00	112,500	
	Operable windows (allow 25% of exterior walls)	1,125	SF	80.00	90,000	
	Shade structures at windows - allow	1	LS	10,000.00	10,000	
	Soffits/roof overhangs	600	SF	25.00	15,000	
	Entrance doors and service doors	1	LS	15,000.00	15,000	
	Fascia's, trim and ornamentation	1	LS	10,000.00	10,000	
	Entrance canopy or covered porch	1	LS	10,000.00	10,000	
	Outdoor Patio					
	Concrete paving	240	SF	15.00	3,600	
	Roof structure including structure and metal					
	roofing	240	SF	75.00	18,000	
	Roofing					
	Metal roofing including insulation and flashing	3,360	SF	25.00	84,000	
	Gutters and downspouts	1	LS	8,000.00	8,000	
	Miscellaneous flashing, caulking and sealants	1	LS	5,000.00	5,000	
	Skylights - not required				NIC	
	EXTERIOR WALLS AND ROOFING				**453,100**	

Two-Story Living Quarters Building (5,508 SF)

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	INTERIOR CONSTRUCTION					
	Interior Partitions					
	Metal stud partitions including sound insulation,					
	gypsum board and paint finish	3,200	SF	15.00	48,000	
	Interior doors -allow	22	EA	2,000.00	44,000	
	Interior Finishes					
	Flooring including base					
	Carpet and vinyl	5,108	SF	8.00	40,864	
	Ceramic tile	400	SF	22.00	8,800	
	Walls					
	Ceramic tile	1,200	SF	20.00	24,000	
	Miscellaneous wall finishes - allow	1	LS	15,000.00	15,000	
	Ceilings					
	Suspended acoustical tile and gypsum board					
	ceilings	5,508	SF	10.00	55,080	
	Equipment					
	Kitchen					
	Base cabinet including countertop	30	LF	450.00	13,500	
	Upper wall cabinet	20	LF	200.00	4,000	
	Island	1	EA	3,000.00	3,000	
	Appliances	1	LS	20,000.00	20,000	
	Restrooms					
	Vanities	10	LF	300.00	3,000	
	Shower stalls	3	EA	1,500.00	4,500	
	Partitions and accessories	1	LS	6,000.00	6,000	
	Offices, meeting room and training room					
	Built-in casework - allow	1	LS	10,000.00	10,000	
	Equipment and accessories	1	LS	10,000.00	10,000	
	Wardrobe lockers - allow	13	EA	1,200.00	15,600	
	Restroom lockers - allow	16	EA	600.00	9,600	
	Laundry room casework, washer and dryer	1	LS	6,000.00	6,000	
	Window blinds or shades	1,125	SF	7.00	7,875	
	Shelving, wall guards and corner guards	1	LS	5,000.00	5,000	
	Signage and graphics (interior and exterior)	1	LS	5,000.00	5,000	
	Miscellaneous equipment and accessories	1	LS	10,000.00	10,000	
	Furniture, beds and moveable furnishings -					
	FF&E Budget				FF&E Budget	
	Vertical Transportation					
	Elevator- two stop hydraulic including shaft walls					
	and associated mechanical and electrical					
	requirements	1	EA	100,000.00	100,000	
	Stair including railings	2	EA	15,000.00	30,000	
	INTERIOR CONSTRUCTION				**498,819**	
	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION					
	Plumbing					
	Plumbing system	5,508	SF	23.00	126,684	
	Heating and Ventilation					
	Heating and ventilation system (no air conditioning)	5,508	SF	20.00	110,160	
	Electrical					
	Electrical system including power, lighting, alarm					
	systems and communications	5,508	SF	32.00	176,256	
	Fire Protection					
	Fire sprinkler system	5,508	SF	6.00	33,048	
	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION				**446,148**	

Two-Story Living Quarters Building (5,508 SF)

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	SELECTIVE BUILDING DEMOLITION / TEMPORARY WORK					
	Clear site for building pad	5,000	SF	2.00	10,000	
	SELECTIVE BUILDING DEMOLITION / TEMPORARY WORK				**10,000**	
	SITE WORK					
	See Site Work Estimate				Site Work	
	SITE WORK					
DIRECT COSTS SUB-TOTAL					**1,759,001**	

Existing Apparatus Building (2,400 SF)

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	STRUCTURE					
	Existing Foundations					
	Foundation work at new moment frames - allow	110	LF	150.00	16,500	
	Existing Bent Frame Structure					
	Allowance for miscellaneous structural modifications to bring existing structure up to current codes - allow	2,400	SF	5.00	12,000	
	Moment frames at overhead doors	3	EA	12,000.00	36,000	
	Moment frames at exterior walls	2	EA	12,000.00	24,000	
	Floor and Roof Structure					
	Patch and repair existing concrete slab on grade	2,400	SF	4.00	9,600	
	Steel joist roof structure including plywood decking	2,600	SF	13.00	33,800	
	Wall curbs, equipment pads and curbs	1	LS	5,000.00	5,000	
	Miscellaneous metals and rough carpentry	2,400	SF	5.00	12,000	
	STRUCTURE				**148,900**	
	EXTERIOR WALLS AND ROOFING					
	Exterior Walls					
	steel stud wall framed exterior walls including plywood sheathing	2,400	SF	16.00	38,400	
	Metal/wood siding, batt insulation, gypsum board and paint to interior face of exterior wall	2,400	SF	25.00	60,000	
	Operable windows - allow	200	SF	80.00	16,000	
	Soffits/roof overhangs	200	SF	25.00	5,000	
	Louvers and vents	1	LS	3,000.00	3,000	
	Entrance doors and service doors	1	LS	10,000.00	10,000	
	Overhead doors - motorized	3	EA	12,000.00	36,000	
	Fascia's, trim and ornamentation	1	LS	5,000.00	5,000	
	Entrance canopy or covered porch	1	LS	5,000.00	5,000	
	Roofing					
	Metal roofing including insulation and flashing	2,600	SF	25.00	65,000	
	Gutters and downspouts	1	LS	6,000.00	6,000	
	Miscellaneous flashing, caulking and sealants	1	LS	5,000.00	5,000	
	Skylights - not required				NIC	
	EXTERIOR WALLS AND ROOFING				**254,400**	
	INTERIOR CONSTRUCTION					
	Interior Partitions					
	Interior partition and door allowance	1	LS	10,000.00	10,000	
	Interior Finishes					
	Flooring					
	Gym flooring	600	SF	15.00	9,000	
	Concrete sealer	1,800	SF	2.00	3,600	
	Steel structure - paint	2,400	SF	2.00	4,800	
	Walls					
	Painted plywood panels	1,500	SF	8.00	12,000	
	Ceiling - paint exposed structure and services	2,400	SF	2.00	4,800	

Existing Apparatus Building (2,400 SF)

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	Equipment					
	Special equipment - allow	1	LS	10,000.00	10,000	
	Bollards at overhead doors	6	EA	1,000.00	6,000	
	Turn-out lockers - allow	24	EA	800.00	19,200	
	Casework and workbench at apparatus room	1	LS	10,000.00	10,000	
	Window blinds or shades	200	SF	7.00	1,400	
	Signage and graphics (interior and exterior)	1	LS	5,000.00	5,000	
	Miscellaneous equipment and accessories	1	LS	10,000.00	10,000	
	Furniture and moveable furnishings - FF&E Budget				FF&E Budget	
	INTERIOR CONSTRUCTION				**105,800**	
	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION					
	Plumbing					
	Plumbing system	2,400	SF	3.50	8,400	
	Heating and Ventilation					
	Heating and ventilation system (no air conditioning)	2,400	SF	8.00	19,200	
	Vehicle exhaust system (3 bays)	1	LS	120,000.00	120,000	
	Electrical					
	Electrical system including power, lighting, alarm systems and communications	2,400	SF	50.00	120,000	
	Fire Protection					
	Fire sprinkler system	2,400	SF	4.00	9,600	
	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION				**277,200**	
	SELECTIVE BUILDING DEMOLITION / TEMPORARY WORK					
	Selective Building Demolition					
	Remove interior construction, exterior walls, mezzanine, roofing, mechanical and electrical systems	2,400	SF	12.00	28,800	
	Hazardous material abatement or removal - excluded				NIC	
	Temporary Construction					
	Temporary enclosure/shelter to house vehicles, lockers and equipment during renovation of the apparatus building - allow	8	MO	5,000.00	40,000	
	Shoring and bracing of existing structure during construction	2,400	SF	5.00	12,000	
	SELECTIVE BUILDING DEMOLITION / TEMPORARY WORK				**80,800**	
	SITE WORK					
	See Site Work Estimate				Site Work	
	SITE WORK					
	DIRECT COSTS SUB-TOTAL				**867,100**	

Apparatus Building Addition (1,100 SF)

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	STRUCTURE					
	Building Pad					
	Built-up building pad - allow	1,500	SF	3.00	4,500	
	Foundations					
	Perimeter wall footing	120	LF	100.00	12,000	
	Vertical Structure					
	Steel stud framed exterior walls with plywood sheathing (load bearing and shearwalls)	1,000	SF	16.00	16,000	
	Floor and Roof Structure					
	Slab on grade including base and dowels to existing slab	1,100	SF	12.00	13,200	
	Steel joist roof structure including plywood decking	1,200	SF	15.00	18,000	
	Steel ledger at existing building for roof framing	80	LF	75.00	6,000	
	Wall curbs, equipment pads and curbs	1	LS	3,000.00	3,000	
	Miscellaneous metals and rough carpentry	1,100	SF	3.00	3,300	
	STRUCTURE				**76,000**	
	EXTERIOR WALLS AND ROOFING					
	Exterior Walls					
	Metal/wood siding, batt insulation, gypsum board and paint to interior face of exterior wall	1,000	SF	25.00	25,000	
	Operable windows - allow	100	SF	80.00	8,000	
	Soffits/roof overhangs	100	SF	25.00	2,500	
	Entrance doors and service doors	1	LS	5,000.00	5,000	
	Roofing					
	Metal roofing including insulation and flashing	1,200	SF	25.00	30,000	
	Gutters and downspouts	1	LS	3,000.00	3,000	
	Miscellaneous flashing, caulking and sealants	1	LS	2,000.00	2,000	
	Expansion joint covers (walls and roof)	1	LS	5,000.00	5,000	
	Skylights - not required				NIC	
	EXTERIOR WALLS AND ROOFING				**80,500**	
	INTERIOR CONSTRUCTION					
	Interior Partitions					
	Interior partition and door allowance	1	LS	5,000.00	5,000	
	Interior Finishes					
	Flooring including base					
	Concrete sealer	1,100	SF	3.00	3,300	
	Ceilings					
	Gypsum board and paint to underside of roof framing	1,100	SF	12.00	13,200	
	Equipment					
	Restroom accessories	1	LS	1,000.00	1,000	
	Window blinds or shades	100	SF	7.00	700	
	Miscellaneous equipment and accessories	1	LS	5,000.00	5,000	
	Furniture and moveable furnishings - FF&E Budget				FF&E Budget	
	INTERIOR CONSTRUCTION				**28,200**	

Apparatus Building Addition (1,100 SF)

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION					
	Plumbing					
	Plumbing system	1,100	SF	9.00	9,900	
	Heating and Ventilation					
	Heating and ventilation system (no air conditioning)	1,100	SF	15.00	16,500	
	Electrical					
	Electrical system including power, lighting, alarm systems and communications	1,100	SF	35.00	38,500	
	Fire Protection					
	Fire sprinkler system	1,100	SF	5.00	5,500	
	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION				**70,400**	
	SELECTIVE BUILDING DEMOLITION / TEMPORARY WORK					
	Clear site for building pad	1,500	SF	3.00	4,500	
	SELECTIVE BUILDING DEMOLITION / TEMPORARY WORK				**4,500**	
	SITE WORK					
	See Site Work Estimate				Site Work	
	SITE WORK					
DIRECT COSTS SUB-TOTAL					**259,600**	

New Site

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	SITE PREPARATION					
	Building Demolition					
	No work required				NIC	
	Site Demolition					
	Miscellaneous site demolition - allow	1	LS	5,000.00	5,000	
	Site Clearing and Grading					
	General clearing, grading and compaction	40,000	SF	1.00	40,000	
	Building pad - see building estimate				Building	
	Erosion control and site drainage during construction	1	LS	20,000.00	20,000	
	SITE PREPARATION				**65,000**	
	SITE DEVELOPMENT					
	Vehicular Paving					
	Concrete driveway including curbs and gutters	1,760	SF	15.00	26,400	
	Asphalt paving including curbs and gutters	13,880	SF	10.00	138,800	
	Striping, signage and graphics	1	LS	5,000.00	5,000	
	Pedestrian Paving					
	Concrete paving and walkways	2,680	SF	10.00	26,800	
	Patio - see building estimate				Building	
	Site Structures and Features					
	Trash enclosure	1	LS	10,000.00	10,000	
	Fuel storage system including containment - allow	1	LS	35,000.00	35,000	
	Monument sign, site signage and flagpoles	1	LS	15,000.00	15,000	
	Benches, planters, screen walls and bollards	1	LS	25,000.00	25,000	
	Perimeter fencing and gates					
	Wood fencing - allow	600	LF	35.00	21,000	
	Vehicle gate - motorized	1	EA	20,000.00	20,000	
	Site Lighting and Power					
	Generator enclosure - allow	1	LS	25,000.00	25,000	
	Emergency generator - see electrical utilities				Electrical Utilities	
	Site lighting and miscellaneous power					
	Paved areas	18,320	SF	1.50	27,480	
	Landscape areas	16,240	SF	0.50	8,120	
	Site Drainage					
	Site drainage					
	Paved areas	18,320	SF	1.00	18,320	
	Landscape areas	16,240	SF	0.50	8,120	
	Vehicle wash area containment and filters - allow	1	LS	15,000.00	15,000	
	Landscaping and Irrigation					
	Soil preparation, planting and irrigation system	16,240	SF	5.00	81,200	
	Trees - allow	1	LS	10,000.00	10,000	
	SITE DEVELOPMENT				**516,240**	

New Site

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	UTILITIES ON SITE					
	Mechanical Utilities (allow 100 LF)					
	Water					
	Water service to building	1	LS	10,000.00	10,000	
	Fire water					
	Water service to building including riser assembly	1	LS	20,000.00	20,000	
	Sanitary sewer					
	Septic system including distribution piping to building	1	LS	50,000.00	50,000	
	Storm drainage					
	Included with site drainage				Site Drainage	
	Natural gas					
	Propane tanks - by Propane Company				Propane Company	
	Piping to building	1	LS	5,000.00	5,000	
	Electrical Utilities (allow 100 LF)					
	Power and communications					
	Incoming service to building	1	LS	20,000.00	20,000	
	Emergency generator, switchboard, automatic transfer switch and day tank (allow 150 KVA)	1	LS	150,000.00	150,000	
	Radio system - by Owner				Owner	
	UTILITIES ON SITE				**255,000**	
	DIRECT COSTS SUB-TOTAL				**836,240**	

Existing Site

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	SITE PREPARATION					
	Building Demolition					
	Living quarters building	2,175	SF	7.00	15,225	
	Apparatus building addition and slab	200	SF	20.00	4,000	
	Emergency generator building and generator	1	LS	10,000.00	10,000	
	Site Demolition					
	Fuel storage system	1	LS	10,000.00	10,000	
	Septic system	1	LS	5,000.00	5,000	
	Miscellaneous site demolition	1	LS	5,000.00	5,000	
	Site Clearing and Grading					
	General clearing, grading and compaction	22,000	SF	1.00	22,000	
	Building pad - see building estimate				Building	
	Erosion control and site drainage during construction	1	LS	15,000.00	15,000	
	SITE PREPARATION				**86,225**	
	SITE DEVELOPMENT					
	Vehicular Paving					
	Concrete driveways including curbs and gutters	1,100	SF	15.00	16,500	
	Asphalt paving including curbs and gutters	6,800	SF	10.00	68,000	
	Patch and repair existing asphalt paving - allow	13,000	SF	1.00	13,000	
	Striping, signage and graphics	1	LS	5,000.00	5,000	
	Pedestrian Paving					
	Concrete paving and walkways	1,800	SF	10.00	18,000	
	Patio - see building estimate				Building	
	Site Structures and Features					
	Retaining walls at hillside behind new living quarters and apparatus building additions - allow	100	LF	200.00	20,000	
	Trash enclosure	1	LS	10,000.00	10,000	
	Fuel storage system including containment - allow	1	LS	35,000.00	35,000	
	Monument sign, site signage and flagpoles	1	LS	15,000.00	15,000	
	Benches, planters, screen walls and bollards	1	LS	15,000.00	15,000	
	Perimeter fencing and gates					
	Wood fencing - allow	850	LF	35.00	29,750	
	Vehicle gates - motorized	2	EA	20,000.00	40,000	
	Site Lighting and Power					
	Generator enclosure - allow	1	LS	25,000.00	25,000	
	Emergency generator - see electrical utilities				Electrical Utilities	
	Site lighting and miscellaneous power					
	Paved areas - new and existing	22,700	SF	1.50	34,050	
	Landscape areas - new and existing	11,900	SF	0.50	5,950	
	Site Drainage					
	Site drainage					
	Paved areas - new and existing	22,700	SF	1.00	22,700	
	Landscape areas - new and existing	11,900	SF	0.50	5,950	
	Culvert at new driveway	1	LS	10,000.00	10,000	
	Vehicle wash area containment and filters - allow	1	LS	15,000.00	15,000	
	Landscaping and Irrigation					
	Soil preparation, planting and irrigation system	9,200	SF	5.00	46,000	
	Patch and repair existing planting areas	1	LS	5,000.00	5,000	
	Trees - allow	1	LS	5,000.00	5,000	
	SITE DEVELOPMENT				**459,900**	

Existing Site

REF	DESCRIPTION	QUANTITY	UoM	UNIT RATE	TOTAL	COMMENTS
	UTILITIES ON SITE					
	Mechanical Utilities					
	Water					
	Water service to site - existing				Existing	
	Distribution to buildings (allow 300 LF)	1	LS	10,000.00	10,000	
	Fire Protection					
	Water service to site - existing				Existing	
	Distribution to buildings (allow 250 LF plus					
	riser assemblies)	1	LS	25,000.00	25,000	
	Sanitary sewer					
	Septic system including 300 LF of distribution					
	piping to buildings	1	LS	60,000.00	60,000	
	Storm drainage					
	Included with site drainage				Site Drainage	
	Natural gas					
	Propane tanks - existing to remain				Existing	
	Relocate propane tanks - by Propane Company				Propane Company	
	Distribution to buildings (allow 200 LF)	1	LS	8,000.00	8,000	
	Electrical Utilities					
	Power and communications					
	Incoming service - existing				Existing	
	Distribution to buildings	1	LS	15,000.00	15,000	
	Emergency generator, switchboard, automatic					
	transfer switch and day tank (allow 150 KVA)	1	LS	150,000.00	150,000	
	Emergency power distribution to buildings	1	LS	15,000.00	15,000	
	Radio system - by Owner				Owner	
	UTILITIES ON SITE				**283,000**	
DIRECT COSTS SUB-TOTAL					**829,125**	

8.2 Structural report

I. Structural Assessment of Existing Site

Introduction

This report presents the findings of building structural assessments per *ASCE 41: Seismic Rehabilitation of Existing Buildings.* Aspects of building performance that are considered include structural, nonstructural, and foundation/geologic hazard issues. Lifelines such as water, electrical, gas and waste, etc., beyond the perimeter of the building are not considered.

The ASCE 41 process has 3 tiers or levels of evaluation. A Tier 1 evaluation is considered a preliminary phase with the purpose of screening out buildings that are compliant and quickly identifying buildings with potential seismic deficiencies. A Tier 2 evaluation is an analysis of the building that addresses the potential seismic deficiencies identified in Tier 1 screening. A Tier 3 evaluation is a detailed and complete analysis of the building. For this evaluation, a Tier 1 screening was performed.

The structural elements including foundations and the nonstructural elements are evaluated with a choice of three main performance objectives: Collapse Prevention, Life-safety or Immediate Occupancy. In evaluating the fire station site, the life-safety and immediate occupancy damage states were considered. However because the fire station is an emergency facility the ultimate performance objective should be immediate occupancy.

Life-safe structural performance is the post-earthquake damage state in which significant damage to the structure has occurred, but some margin against the onset of partial or total collapse remains. Some structural elements and components are severely damaged, but this does not result in large falling debris hazards, either within or outside the building. Injuries may occur during the earthquake; however overall risk of life-threatening injury as a result of structural damage is expected to be low. It should be possible to repair the structure; however, for economic reasons this may not be practical. While the damaged structure is not an imminent collapse risk, it would be prudent to implement structural repairs or install temporary bracing prior to re-occupancy. Immediate Occupancy structural performance is the post-earthquake damage state to both structural and non-structural components such that damage is not life-threatening so as to permit immediate occupancy of the building after a design earthquake. Damage is repairable while the building is occupied.

The scope of work for the structural building assessments included the following tasks:

1. Reviewing available original construction documents.
2. Making a site visit to confirm that the available drawings properly identify the extent of the building, to observe whether significant building modifications have occurred, and to observe the nonstructural systems bracing and anchorage.
3. Performing the required calculations as required by ASCE 31.
4. Preparing a report summarizing our findings.

Barracks Building

The Barracks building is a single-story, light wood framed structure. The structural system matches that of a single family dwelling. The foundation consists of raised wood floor construction with a continuous concrete perimeter footing and isolated interior concrete piers. The floor and roof framing consist of short spanning, wood members not spaced more than 24 inches apart. The exterior walls and roof have plywood sheathing, while interior walls are sheathed with plaster or gypsum board. Multiple undocumented additions and modifications were observed. In general the additions and modifications consisted of wood construction similar to original construction type.

ASCE 41-13 Seismic Rehabilitation of Existing Buildings describes this structure as Building Type W1. In general this type of structure is ductile and tends to perform well in seismic events.

An ASCE 41-13 Life Safety basic checklist evaluation identifies the structure as being predominately compliant. The main exceptions were unknown factors of liquefaction and surface fault rupture which need to be review by a Geotechnical engineer. In addition the structural load path needs to be confirmed since the original documents do not clearly state how various concealed connections are constructed.

The Barracks building is part of an emergency response facility. Therefore an Immediate Occupancy performance level is required. An ASCE 41-13 Immediate Occupancy checklist evaluation for W1 structures identified a number of noncompliant items. These items must be addressed during a retrofit to comply with CBC requirements for Emergency Faculties. Some of these issues are no Hold-down anchors at shear walls, discontinuous chords and collectors, excessive unblocked diaphragms ratios if only exterior walls are considered part of the lateral resisting elements, interior shear walls with no footings or plywood sheathing if interior walls are considered part of the lateral system, as well as the items identified in the Life Safety check list. These identified issues are all minor in nature and could be retrofitted without significant cost.

The major compliance issue with achieving an Immediate Occupancy building performance level is the structure being located in an area subject to flooding. The structure has been subject to flood waters three times in recent years. In one of those events the structure experienced flood water levels three feet above the finished floor line of the building. Flooding will damage the structure and will render the building inoperable during the period of the flood, which would make an Immediate Occupancy performance level difficult to achieve even after a structural retrofit.

Apparatus Building

The original, main portion of the Apparatus building is a single-story, pre-engineered and pre-fabricated steel building. The structure consists of rigid steel frames in the transverse direction and rod bracing in the longitudinal direction on one side of the structure. There is no lateral system in the longitudinal direction where the large equipment doors are located. The foundation is a concrete slab-on-grade system with spread footings around the perimeter and under the steel frame locations. The walls are constructed with wood studs attached to steel frames and horizontal girts. The roof framing consists of steel joists with lightweight metal roofing. The diaphragm consists of rod bracing in alignment with the vertical rod bracing lateral system locations. An addition and modifications were observed during the site visit. In general the addition and modifications consist of wood construction and are not similar to the pre-manufactured steel building they are connected too.

ASCE 41-13 describes this steel building portion of the structure as Building Type S3. In general this type of system is designed for maximum efficiency of material and cost and not for a high performance during seismic events.

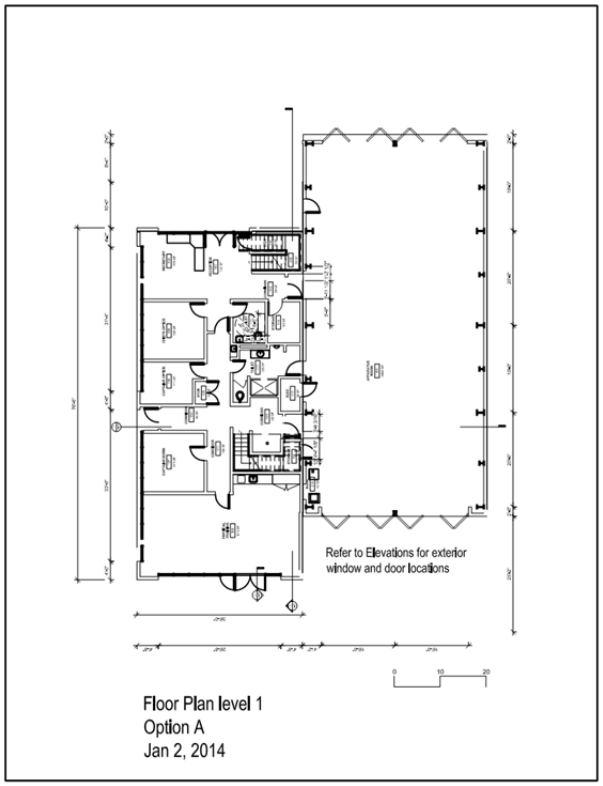
An ASCE 41-13 Life Safety basic checklist evaluation identifies the structure as being predominately noncompliant or unknown. Some of these identified issues are a mezzanine structure not being independently braced from the main building, load path issues related to the various additions, and no confirmation that the original, economically designed steel system has the additional capacity to resist the added demands from the various additions. The unknown factors of liquefaction and surface fault rupture also exist and need to be review by a Geotechnical engineer.

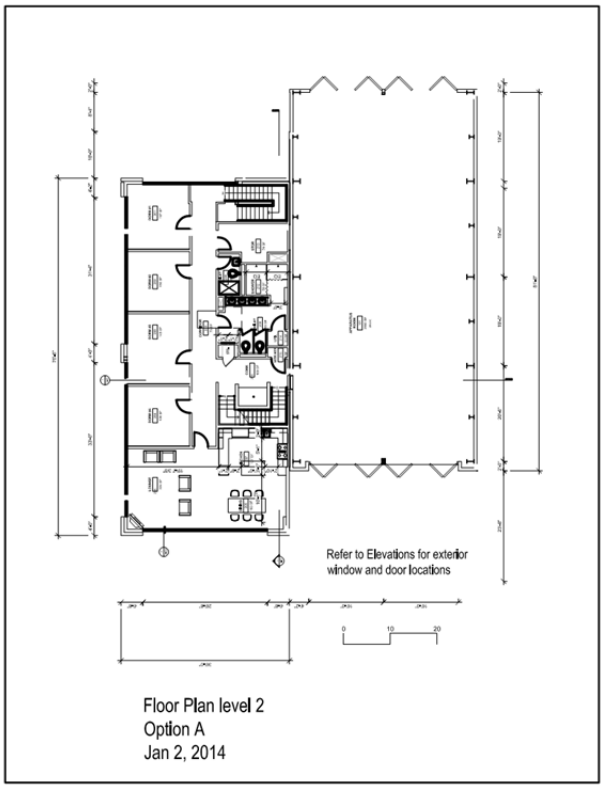
The Apparatus building is part of an emergency response facility. Therefore an Immediate Occupancy performance level is required. An ASCE 41-13 Immediate Occupancy checklist evaluation for S3 structures identified a number of noncompliant items which would need to be addressed during a retrofit to comply with CBC requirements for Emergency Faculties. Most of these noncompliant issues relate to the steel frame ductility checks. Since this type of steel system is typically designed for economy and not performance it would be anticipated that the identified issues would be major in nature and could be a challenge to retrofit without significant cost. The items identified in the Life Safety check list would also need to be addressed by the retrofit.

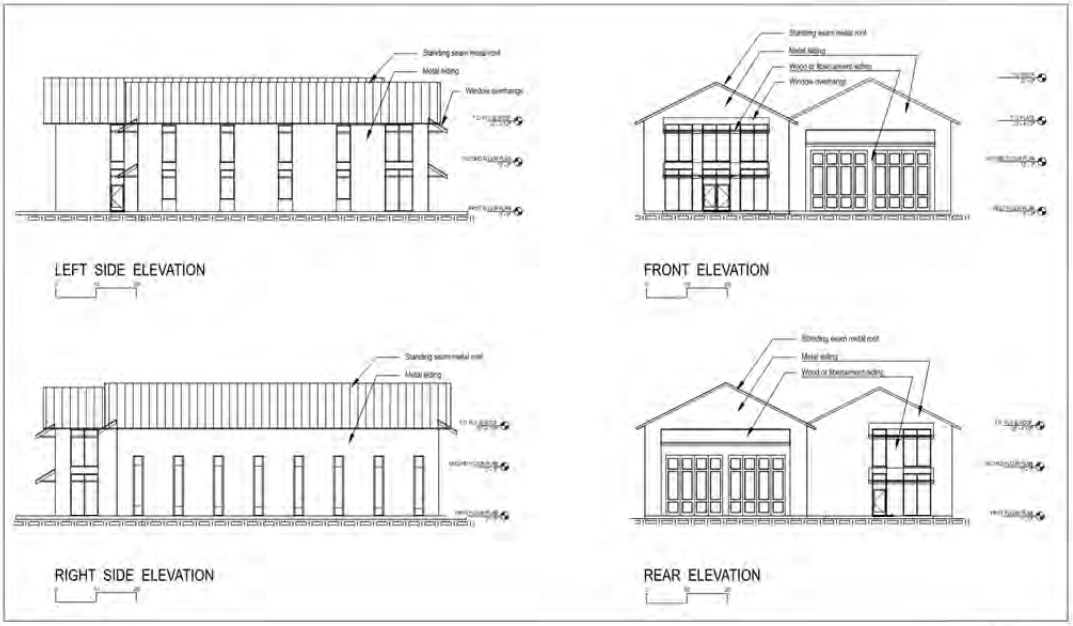
Two additional compliance issues required to achieve an Immediate Occupancy building performance level are the structure being located in an area subject to flooding and being located adjacent to a slope. In recent years the property has flooded numerous times. Although this structure has not been flooded, access into and out of the emergency facility during a flood event was impeded and would need to be evaluated and addressed. Due to the building being located within close proximity to an adjacent slope a Geotechnical engineer must evaluate the risk of slope failure and rock falls.

II. Option A: New Fire Station, Idealized Site

The structural system narrative is based on the concept architectural plans for a new apparatus building adjacent to an office and living quarters building as shown below. The two structures will be separate by a seismic joint.







The structural gravity system for the apparatus structure consists of steel beams in the transverse direction and along the perimeter supported on steel columns. Light gauge or wood roof framing members span between the steel beams to form the roof system. Exterior cladding is composed of either light gauge steel studs or wood studs spanning from the foundation to the roof framing level. The lateral system consists of steel moment frames in the transverse direction and plywood shear walls in the longitudinal direction. Reinforced masonry shear walls is an option to the plywood walls in the longitudinal direction. A plywood roof diaphragm is used to transfer seismic forces to the lateral system.

The structural gravity system for the Office/Living Quarters structure consists of light gauge or wood joists at the roof and floor levels. The joists at both levels are supported by light gauge or wood stud interior and exterior bearing walls. Roof joists span the transverse direction and are supported on interior corridor walls as required. The direction of floor joists framing is dependent on the Level One wall layout. As an alternate to roof and floor joists, trusses can be utilized at both levels. The lateral system in both transverse and longitudinal directions consists of plywood shear walls. Plywood roof and floor diaphragms are used to transfer seismic forces to the lateral system. For both gravity and lateral systems to be implemented efficiently, a series of interior walls in both the longitudinal and transverse direction must be “stacked” between the first and second levels to provide continuous load paths to the foundation. In addition at the front and rear exterior walls one or more of the wall segments must have a height to width ratio no greater than 2:1 between each framing level for plywood shear walls to be utilized.

The ideal site for these types of structures is a relatively flat site with soils suitable for typical continuous shallow reinforced concrete footings with a concrete slab-on-grade. Sites with expansive or liquefiable soils should be avoided if possible. Sites subject to flooding should be avoided.

III. Option B: New Living Quarters/Offices Building and Renovate Apparatus Building at Prescadero Creek Road Site

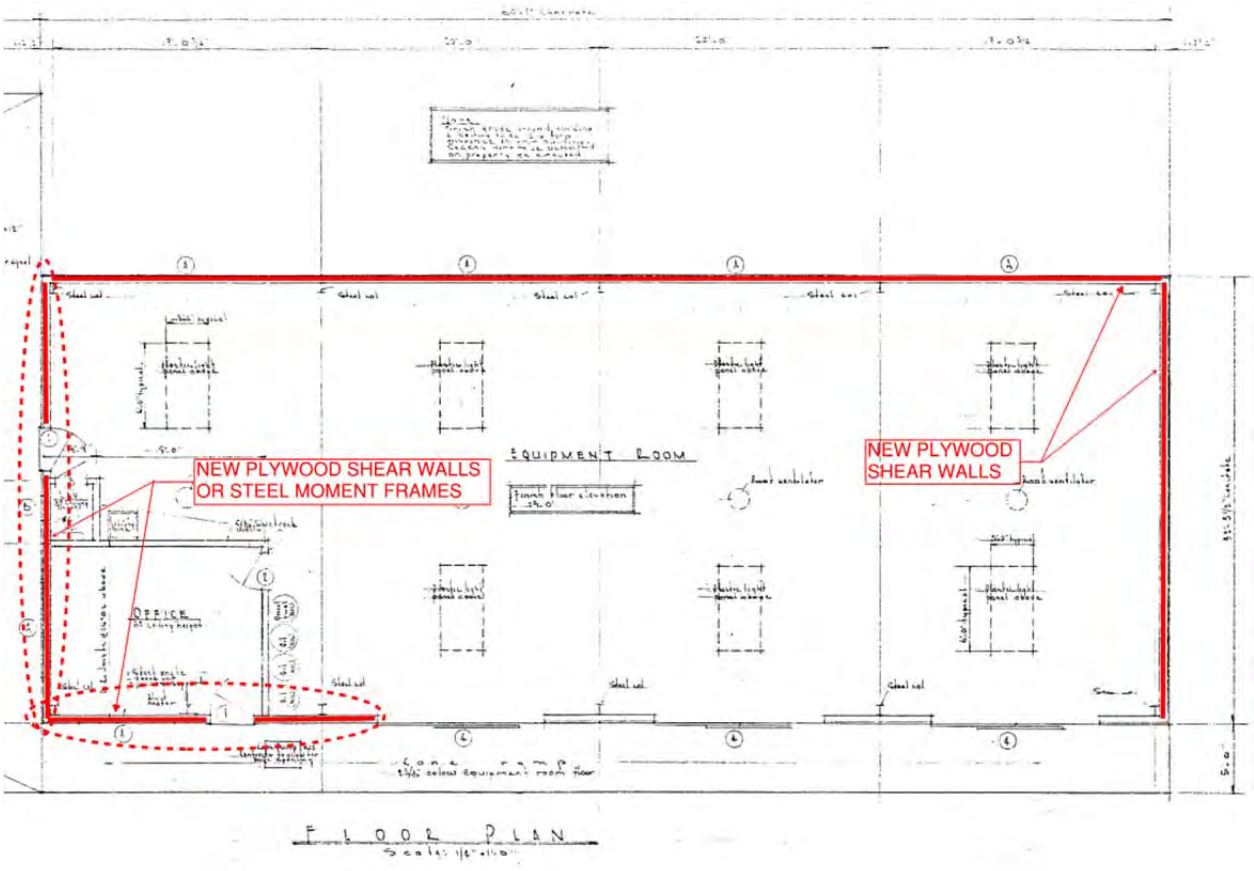
The structural system narrative is based on the concept architectural plans shown on this page. The new Living Quarters/Office portion of the structure is assumed to be the same layout as Option A.

The station would consist of two separate building structures: new Office/Living Quarters and renovated Apparatus.

The structural gravity system for the Office/Living Quarters structure consists of light gauge or wood joists at the roof and floor levels. The joists at both levels are supported by light gauge or wood stud interior and exterior bearing walls. Roof joists span the transverse direction and are supported on interior corridor walls as required. The direction of floor joists framing is dependent on the Level One wall layout. As an alternate to roof and floor joists, trusses can be utilized at both levels. The lateral system in both transverse and longitudinal directions consists of plywood shear walls. Plywood roof and floor diaphragms are used to transfer seismic forces to the lateral system. For both gravity and lateral systems to be implemented efficiently, a series of interior walls in both the longitudinal and transverse direction must be “stacked” between the first and second levels to provide continuous load paths to the foundation. In addition at the front and rear exterior walls one or more of the wall segments must have a height to width ratio no greater than 2:1 between each framing level for plywood shear walls to be utilized.

With minor modifications the existing apparatus building should have a gravity system capability of meeting the requirements for Immediate Occupancy as described previously. However, the existing

structure lacks a lateral system adequate to meet the requirements of Immediate Occupancy for Emergency Response building occupancies. As described in the existing apparatus building evaluation the structure is a single-story, pre-engineered and pre-fabricated steel building. In general this type of system is designed for maximum efficiency of material and cost and not for a high performance during seismic events. Therefore, the existing lateral system will be abandoned in place and allowing the steel frames to remain as the primary gravity system only. A new lateral system will supersede the existing system. The new system will consist of plywood shear walls on as many as four sides of the structure over new light gauge or wood stud exterior walls. Depending on the height to width ratios of the new shear walls, the existing foundation may be determined to be adequate if the ends of the walls terminate at steel column locations. At the front and left side of the structure new steel moment frames may need to be installed to resist lateral forces if the existing window and door openings cannot be modified to allow for plywood shear walls to be utilized. New foundation elements will be required at steel moment frame locations. Plywood roof diaphragm will be used to transfer seismic forces to the new lateral system.



8.3 Mechanical, electrical, and plumbing report

NBA ENGINEERING, INC.

San Francisco * Oakland * Los Angeles

Fire Station at 1200 Pescadero Creek Rd, Pescadero, CA
Investigative Study for Mechanical & Electrical Systems

Bill Blessing
Ratcliff Architects
5856 Doyle Street
Emeryville, CA 94608

I. Existing Conditions:

A. Electrical Systems Existing Conditions

Currently, the fire station consists of four buildings: the Living Quarters, the Apparatus Building, the Pump Room, and the Generator Room. The entire station's power is provided by a pole-mounted, PG&E 15KVA, single-phase transformer. The service to the four buildings is a 120/240V, 1PH, 3-wire system. In addition, there is a 50 KW/62.5 KVA diesel fuel standby generator with an automatic transfer switch to provide power in case of emergency. Most of the electrical equipment, including the standby generator (see EE2), and automatic transfer switch (see EE3), has been in use for more than thirty years. The coastal climate, severe weather conditions, and some flooding have caused rusting of the enclosed outdoor service entrance equipment (see EE1). Some of the equipment covers are missing or broken. The existing storage room panel board is very old and rusted (see EE1). The amperage in the exercise room is not adequate to run the exercise equipment. There is no security camera or intrusion detection system in this facility.

The following lighting installations have been observed in the field:

1. There are smoke detectors missing from the bedrooms.
2. Due to years of operation, the translucent acrylic prismatic fluorescent fixture diffusers have become discolored at the center/edge of the luminaire (see EE5).
3. Most of the fluorescent fixtures are equipped with 40-watt lamps, which are considered obsolete. The current standard for fluorescent lamps with electronic ballast is a rating of 32 watts.
4. Building door lights and fixtures at the Living Quarters are equipped with 60-watt incandescent lamps. One wall mounted light in the Living Quarters is broken (see EE6). Incandescent lamps consume more energy and provide less illumination than compact fluorescent lamps.
5. There are five high-wattage security HID flood lights on the building roof that consume a great deal of electricity when in use.
6. There are three 25-inch diameter HID fixtures, plus eight 2 lamp, 1'x4' industrial-type fluorescent fixtures in the Apparatus Building. All fixtures are ceiling-mounted. There is a time delay due to lamp warm up when the HID lights are turned on. This hampers operation and maintenance of the vehicles.

Miscellaneous Findings:

1. Most of the receptacles inside all three buildings are worn, having been in use for many years. Some are discolored. They need to be replaced.
2. Ceiling-mounted, battery-powered smoke detectors have been found in some rooms. Some rooms lack these smoke detectors, particularly in Living Quarters.
3. Sump pump power and control equipment is located outdoors in a wooden cabinet adjacent to the Headquarters building. The enclosures show rust.

B. Mechanical Systems Existing Conditions

There is no gas or sewer piping to these buildings. There is an underground septic tank for black water. The septic tank floods periodically, requiring station personnel to rent and use portable toilet facilities when the septic system is being repaired and cleaned.

A propane tank provides gas to these buildings. The kitchen oven runs on propane. There is an old propane domestic water heater serving showers and lavatories in the Living Quarters (see ME1). There is rust on the 500 gallon propane tank and the dual fuel tank (1000 gallon diesel and 500 gallon unleaded gasoline), probably due to flooding. The fuel tank appears leak (see ME3 and ME5).

An old, forced-air propane furnace serves the Living Quarters, (see ME2). The ductwork lacks insulation. There are no heating ducts to some of the rooms in the Living Quarters. There is no indication of mechanical ventilation in either the Living Quarters or in the Apparatus Building. There are no fire sprinkler and no fire alarm systems. A large proportion of the equipment is rusted, possibly due to salt water.

The available utilities are Pescadero Community Water System, which provides potable water, and Pacific Gas & Electric providing power. A well on the hill above the site has a holding tank that feeds the stand pipe. It provides non-potable water.

There is a 240-volt air compressor for shop air requirements/Apparatus Building, which is aged. There are three overhead exhaust systems with control boxes on the wall in the Apparatus Building. This building has no fire alarm or fire sprinkler. There is an antiquated bathroom and sink and in the Apparatus Building.

Heat for the Apparatus Building is provided by an old, propane-fired, Reynar unit heater, (see ME6), which has some rusted piping and no insulation on the exhaust flue. There is no heat in the Apparatus Building office areas. The engine area of the Apparatus Building is too small and too proximate to the roll up door. Existing HVAC control systems are localized via thermostat.

II. Option A- New, Single-Building, Fire Station Site

A. Electrical System

A new site will require a 120/240 VAC, single phase, 3 wire power distribution system. A new service transformer shall be provided and installed by the utility company (PG&E) to meet new load requirements. The new utility transformer shall be either the pole mounted or the pad mounted type. Building lighting will be served by a 120 or 208 VAC single phase system. Receptacles shall be served with 120 VAC system. A standby diesel generator and automatic transfer switch shall be provided for emergency power outages.

List of desirable electrical items in an ideal site:

1. New utility company service transformer,
2. Service entrance panel board with utility meter socket,
3. Two power distribution panel boards, one located in Level 1 and the other located in Level 2,
4. New standby diesel generator and associated automatic transfer switch,
5. Addressable fire alarm system for the building
6. CCTV/security systems for the building
7. Telephone system for the building
8. LED type security floodlights for the new building and surrounding areas.
9. An energy management system to control HVAC systems.

B. Mechanical Systems

The building shall be provided with HVAC systems consistent with the design conditions in order to maintain occupants' comfort and functional requirements. Heating and ventilating units and exhaust fans for different zones shall be provided to supply heating and ventilation to the apparatus room , electrical room, dorms, lounge, kitchen, dining, corridors, toilets, shower room, and janitor storage. One split-system heat pump unit per zone will be provided to serve the office area that includes areas for secretary, reception, corridor, and storage. A ductless, split heat pump unit shall be provided to serve the physical training area. Make-up air unit and exhaust fans shall be provided for the engine exhaust in the apparatus room.

The HVAC systems will be equipped with local digital thermostats. Kitchen shall be provided with state-of-the-art exhaust hood and a stove, refrigerator, dish washer, dual-sink, and a garbage disposal.

A. Plumbing Systems

The building plumbing fixtures will include low-flow water closets, urinals, and lavatories; showers, sinks, floor drains, trap primers, hose bibs, roof drains, overflow drains, washing machine hook-up or drains, trench drains, area drains, and filtered water system. One high-efficiency, central, gas-fired, water heater shall be provided to supply domestic hot water for the showers, lavatories, and sinks. A circulating pump will be installed to maintain hot water at the point of use. A compressed-air system with a refrigerated dryer shall be provided to supply compressed air to the apparatus room. A double wall fuel storage tank for diesel and unleaded gasoline fuels will be provided. The fuel storage tanks shall be

equipped with leak detection sensors and monitoring units. All utilities, gas, water, sewer, storm, and fire water to be piped from city/county systems.

III. Option B- Keep Existing Site , New Living Quarters over Offices, Modify Apparatus Building

A. Electrical System

Power distribution system shall be a 120/240VAC, single phase, 3 wire system. It is recommended that a new service transformer shall be provided and installed by PG&E to replace the existing one. Building lighting will be served by a 120 or 208VAC single phase system .Receptacles will be served by a 120VAC system. A standby diesel generator and automatic transfer shall be provided to replace the existing ones.

List of electrical items to be demolished

1. Existing pole-mounted utility transformer,
2. Existing service entrance panel board with utility meter,
3. Existing panel board “ILEC”,
4. Existing diesel standby generator and associated automatic transfer switch,
5. All fluorescent fixtures inside the existing buildings,
6. All building door/outside wall-mounted incandescent light fixtures,
7. All lighting fixtures inside Apparatus Building,
8. All roof-mounted HID floodlights,
9. All conduit, wires, junction boxes associated with demolition items.

B. Mechanical Systems

The buildings shall be provided with HVAC systems consistent with the design conditions in order to maintain occupants’ comfort and functional requirements. Heating and ventilating units and exhaust fans for different zones shall be provided to supply heating and ventilation to the apparatus room , electrical room, dorms, lounge, kitchen, dining, corridors, toilets, shower room, and janitor storage. One split-system heat pump unit per zone will be provided to serve the office area that includes areas for secretary, reception, corridor, and storage. A ductless, split heat pump unit shall be provided to serve the physical training area. Make-up air unit and exhaust fans shall be provided for the engine exhaust in the Apparatus Building.

The HVAC systems will be equipped with local digital thermostats. Kitchen shall be provided with state-of-the-art exhaust hood and a stove, refrigerator, dish washer, dual-sink, and a garbage disposal.

C. Plumbing Systems

The buildings’ plumbing fixtures will include low-flow water closets, urinals, and lavatories; showers, sinks, floor drains, trap primers, hose bibs, roof drains, overflow drains, washing machine hook-up or drains, trench drains, area drains, and filtered water system. One high-efficiency, central, gas-fired, water heater shall be provided to supply domestic hot water for the showers, lavatories, and sinks. A circulating pump will be installed to maintain hot water at the point of use. A compressed-air system with a refrigerated dryer shall be provided to supply compressed air to the Apparatus Building. A double wall

fuel storage tank for diesel and unleaded gasoline fuels will be provided. The fuel storage tanks shall be equipped with leak detection sensors and monitoring units.

List of mechanical and plumbing items to be demolished

1. All the HVAC equipment: furnace, toilet exhaust fans, kitchen hood exhaust fan, and distribution systems (ductwork, diffusers, exhaust grills, etc.) and controls (thermostat) for the Living Quarters shall be demolished and discarded;
2. The existing unit heater and associated piping and exhaust flue in the Apparatus Building shall be demolished and discarded;
3. All existing lavatories and water closets and kitchen sink in the Living Quarters and lavatory and water closet area shall be demolished and discarded;
4. Demolish and discard existing dual fuel tank,
5. Remove and discard existing propane tank,
6. Remove and discard existing air compressor.

ME1 – Water heater and furnace

ME2 – Gas furnace

ME3 – Liquid fuel tank

ME4 – Non-potable water connection

ME5 – Propane fuel tank

ME6 – Gas unit heater

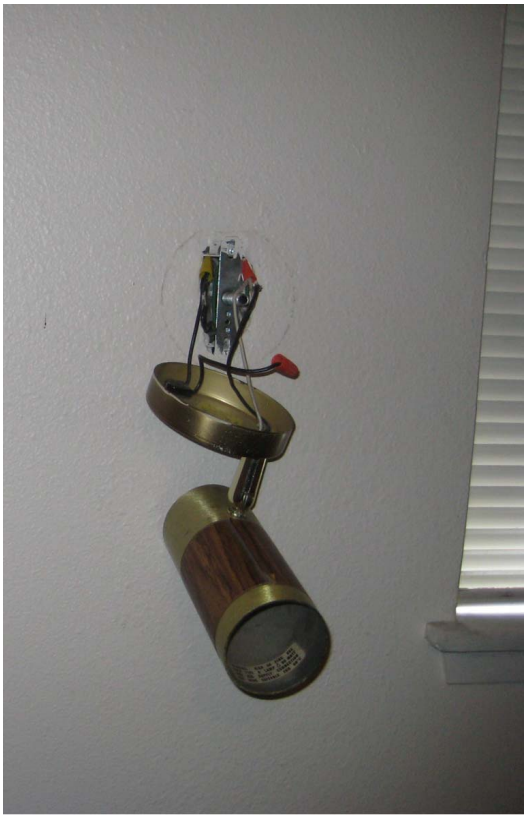
EE1 – Fire Station entrance equipment cabinet

EE2 – Single phase diesel fuel standby generator

EE3 – Automatic transfer switch

EE4 – Storage Room panel

EE5 – Living quarters corridor lights



EE6 – Damaged light, Living Quarters

8.4 Civil engineering report

DRAFT

CIVIL ASSESSMENT

FOR

PESCADERO FIRE STATION

Pescadero, California

Prepared For:
Ratcliff
5856 Doyle Street
Emeryville, CA 94608

Prepared By:
CSW/Stuber-Stroeh Engineering Group, Inc.
45 Leveroni Court
Novato, California 94949
(415)-883-9850

Prepared:
January 3, 2014

CSW|ST2 File No.:
4.1174.00

CSW | ST2

Introduction

The San Mateo County Fire Station located at 1200 Pescadero Creek Road in Pescadero, CA (Pescadero Fire Sta.) consists of four buildings on a 1.3 acre site. According to the contract drawings and as-builts, the station was originally constructed in 1957 with various improvements made since that time. The site is located within the flood plain which creates a number of issues which will be discussed below. The site and buildings are outdated and in need of improvement, either at the existing site, or at a new site, in order to meet current standards and to adequately serve its community.

Existing Conditions

As mentioned above, the Pescadero Fire Sta. is located in the flood plain of the Butano Creek (see "Pescadero Floodway Map" attached. The site is has experienced an increase in the occurrence of flooding since the mid 1980's due to the accumulation of silt and debris in Butano Creek and Pescadero Marsh as a result of halted dredging operations. It is reported that the site floods at least once a year with as much as three feet of water reported in 1998. Pescadero Creek Road also floods during these events. As such, the Pescadero Fire Sta. staff relocates to alternative sites during heavy rains so that they can maintain their ability to respond to emergency events.

Civil utilities on-site consist of domestic water served by the local water service municipality. Additionally, there is an on-site well used for non-potable water needs (i.e. to supply the existing wharf hydrant), and a septic system for the disposal of site generated sewage waste. The septic system is reported to back-up during flood events, which is to be expected considering the ground would be saturated during these events and would have no additional hydraulic capacity. The system was constructed along with the rest of the site in 1957. Considering the age of the system, it is unlikely that it meets current code. Additionally, septic systems have an average lifespan of 25 years. As such, it is likely that the system at the Pescadero Fire Sta. has reached the end of its useful life, though it would have to be tested to confirm this.

Option A. New Fire Station / Idealized Site

The selected site should be one that is located at an elevation that is above the flood plain with additional vertical elevation to allow for sea level rise. Additionally, the road(s) leading to and from the fire station should be similarly above flood elevations to maximize, as much as possible, access to the community during flood events. There shall also be adequate space on-site to provide for State and local storm water treatment requirements.

Domestic water shall be provided by the local water service municipality if available at the selected location. If municipal water is unavailable at the selected location, there must be adequate potable well water available to serve the new fire station's needs.

In absence of any municipal sewer system, the sewage disposal needs will need to be met with an on-site septic system that meets current code. As such, there must be adequate space and soil conditions to accommodate this.

Option B. Keep Pescadero Creek Rd Site: New Living Quarters over Offices, Renovate Apparatus Bldg.

In this scenario, the existing residence building will be demolished and relocated to a new two story addition adjacent to the existing apparatus building. The new addition must be constructed such that the finished floor elevation of the first level is above the flood elevation with additional vertical elevation clearance to allow for sea level rise. The existing apparatus building, however, may be at an elevation that is below future flood elevations as sea level rise continues. As such, this building may experience flooding in the future. A new driveway access will be constructed to Bean Hollow Road at the south-east side of the site which is at a higher elevation than the existing access from Pescadero Creek Road. This will improve access during flood events, though access to Pescadero Creek Road will still be limited due to flooding. Space will also have to be dedicated on-site to meet State and local storm water treatment requirements. The location of the existing residence would be a likely alternative for this.

The new addition is likely to be situated such that a portion of the existing hillside will have to be excavated to accommodate the structure. As such, a new retaining wall will need to be constructed along with adequate drainage facilities to capture hillside runoff.

Domestic water will continue to be served by the local water service municipality.

A new septic system will likely be required. The location of the existing system would be the ideal location if it has adequate space and soil conditions to accommodate a system that meets current code. Due to the likelihood of high groundwater at the location of the existing system, a shallow pressure dosing system would likely be required. However, because this location becomes inundated with water during flood events (see Photo 1), it is unlikely that this location will meet code. As such, alternative locations on site should be considered such as the western side of the site or on the hillside along the southern end of the site. It is unlikely, however, that the southern end will be feasible due to the steep slope and the confined area.

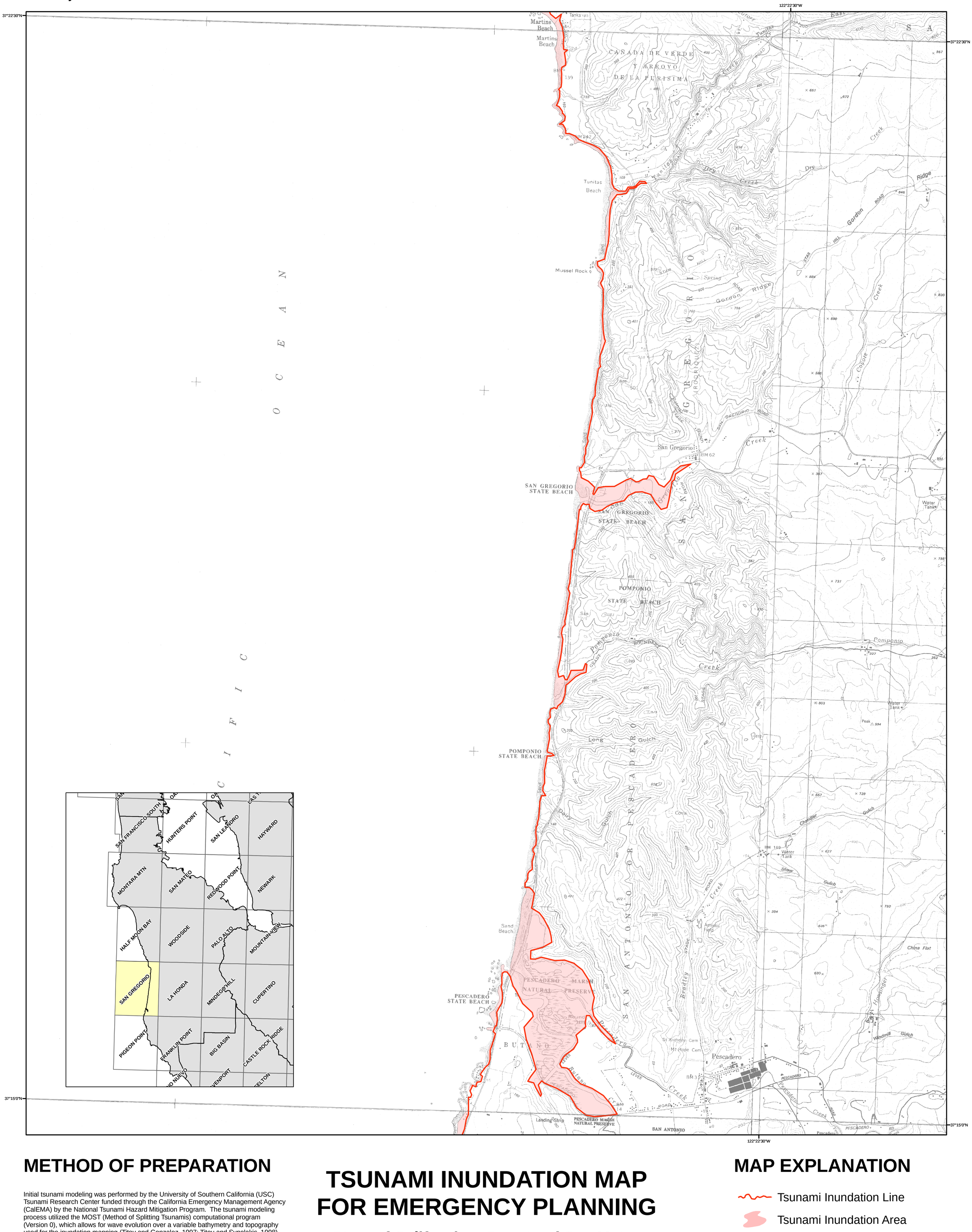
Septic field with flood elevation marker (white post with red marks) shown in the background

8.5 Reference documents

California Emergency Management Agency
California Geological Survey
University of Southern California

Tsunami Inundation Map for Emergency Planning
San Gregorio Quadrangle

State of California
County of San Mateo


122°22'30"W
37°22'30"N
37°15'0"N
Martins Beach
Tunitas Beach
Mussel Rock
San Gregorio
SAN GREGORIO STATE BEACH
POMPONIO STATE BEACH
PESCADERO STATE BEACH
PESCADERO MARSH NATURAL PRESERVE
CAÑADA DE VERDE Y ARROYO DE LA PURISIMA
SAN GREGORIO RIDGE (ROLLING HILLS)
SAN ANTONIO RIDGE
BUTANO
Tunitas Creek
Dry Creek
Gordon Ridge
San Gregorio Creek
Pomponio Creek
Long Gulch
Dairy Gulch
Pescadero Creek
Butano Creek
Sand Hill
Star Hill
Spring
Coral
Sand Beach
Landing Strip
Athletic Field
Water Tank
Peak
St Anthony Cem
Mt Hope Cem
Windmill Gulch
Chandler Gulch
Shaw Gulch
China Flat
Hopkinger
Coyote Creek
Gordon Hill Road
San Gregorio Road
Pescadero Road
Tunitas Creek Road
Pomponio Road
Bradley
Levee
Ridge
Creek
Gulch
Road
Hill
Peak
Pescadero
Pomponio
Water Tank
Landing Strip
Athletic Field
Sand Beach
Coral
Round Hill
Dairy
Long
Chandler
Shaw
Windmill
Hopkinger
Coyote
Bradley
Levee
Butano
Pescadero
Pomponio
San Gregorio
Tunitas
Dry
Gordon
Ridge
Creek
Road
Hill
Peak

RATCLIFF
5856 Doyle Street
Emeryville CA 94608
Tel 510 899 6400
www.ratcliffarch.com

Meeting Minutes

Meeting Date: November 20, 2013
Meeting time: 9:30 am

Meeting No.: 2

Project: Pescadero Fire Station (PFS) Assessment Study
Pescadero, CA
Ratcliff Project No: 32053.00

Place: Pescadero Fire Station

Attendees:

Name

Bill Blessing, Ratcliff
Nina Pakanant, Ratcliff
Scott Ernest, PFS
Robert Pierson, PFS
Andy Cope, PFS
Guido Misculin, San Mateo County
Theresa Yee, San Mateo County

Meeting Minutes:

Item		Agenda topic	Action	Due Date

1		**Existing Drawings**
		- Ratcliff received existing drawings of the Apparatus Building.
		- Current fire station service coverage:
		  ○ North boundary – Tunitas Creek Rd.
		  ○ East boundary – Hwy 84
		  ○ South boundary – Cloverdale Rd.
		- Ratcliff needs a Service Area map.		

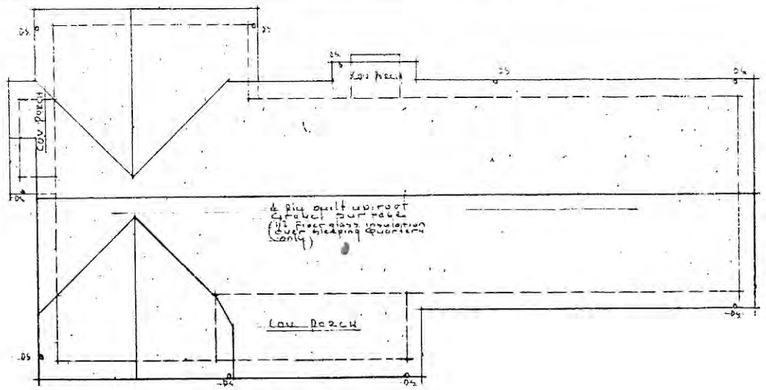
2		**Ratcliff Presentation** - Presented example of stations from Chico Airport Fire Station, Yuba City Fire Station, and Emeryville Fire Station. - Proposed new site in Town of Pescadero is also in the flood zone. - San Mateo OES can provide Tsunami plan.		
3		**Issues with current fire station location** - During seasonal flood, an engine from Station 17 is sent to a site nearby high school. A temporary modular trailer is set up at the fire station. - Chemical run off contaminates rain water. - Response plan includes Engine 40 from Half Moon Bay and Station 55 (volunteer).	.	
4		**Staffing** - Under normal budget, the station has 4 staff (2 rescuers, 2 engine staff). Under the budget cut, the station has 3 engine staff and 1 supplemental rescuer. - Maximum staff is 9. This occurs approximately 8 times per		

		year. - Fire season is between: May 15 – Nov. 1. When maximum staffing typically occurs. - During off-season: 3-4 staff - Typical shift: 3 work days. 4 off days.		
5		**Site** - Currently the overall storage space is insufficient. The shed and shipping container houses landscaping tools and emergency supplies. - Current above grade dual fuel tank is rusting and has some leaks. - Original underground tank had been dug out. (soil contamination ?) - Well water is used for the Apparatus and hydrants. The Living Quarters uses potable city water. - Current emergency power generator is pre 1983. - PFS is ok with 72 hr generator. Ratcliff to confirm size needed. - Need a wharf hydrant. - Hose rack is antiquated. Prefer modern hose dryer.		
6		**Apparatus Bay** - Current engines: (1) Type 1 engine, (1) rescue 59, (1) seasonal Type 3, (1) utility pick-up truck, (1) water tender - Prefer solution for adjacency among decontamination, turn-out room, and extractor equipment spaces. - Currently turnout gear is on sides and rear of Apparatus bays, and is circulation around vehicles is reduced. - Need sizable medical storage due to the variety of incident types required: coastal waters, coastal cliffs, highway, forest, town. - Ratcliff needs make and model of the engines for planning. - Staff performs minor station repairs on site, others by County mechanics. - Need washing apparatus pad. Prefer indoor. Underside spray needed due to salt vapor within coastal areas. - Currently no oil disposal set up. - Need to accommodate 11'-3" high truck at this time. - Rear addition (date:?) includes area for physical training. - Area is insufficient and not efficiently laid out. At present – no daylight and area is mixed with vehicle bay air systems.		
7		**Public/ Office** - PFS prefers having a lobby/office area to receive visitors. - Office space requirements: (2) workstations, (1) EMS workstation, (1) captain's office - Guido requested Ratcliff to present an option of having Emergency Operation Center function. - Prefers having spaces to accommodate public meetings and training (e.g. PMAC Meeting and voting) - Current EMS training takes place at Station 40. - Outdoor training takes place at PFS. - Deliveries: occasional big deliveries. - Need public restroom.		

8		**Living Quarters** - Existing beds: 7. - During training, living facility is insufficient. Would prefer to provide separate gender bathrooms and bedrooms. - Prefer Day Room to have separation from Dining and Kitchen - Kitchen size is currently sufficient. Would like to have commercial-grade dish washer. - Current pantry storage space insufficient. - Dining table some time is used for meetings. During having maximum staffing, some people dine in the Day Room. - Outdoor patio needs wind and insect screen protection in the coastal area. - Prefer commercial-grade washer and dryer.		
9		**Programming Report** - Ratcliff to explore possibly 4 options: o Option A: Renovating existing fire station – occupied site (need phased planning) o Option B: Renovation existing fire station – unoccupied site (need temp site) o Option C: : Renovation existing fire station – with a remote mini station concept. (need remote site) o Option D: New fire station at a new location (need new site TBD). - Ratcliff to incorporate sustainable features.		
10		**Aesthetic** - Not deeply discussed, but some preference for association with local rural structures was mentioned.		

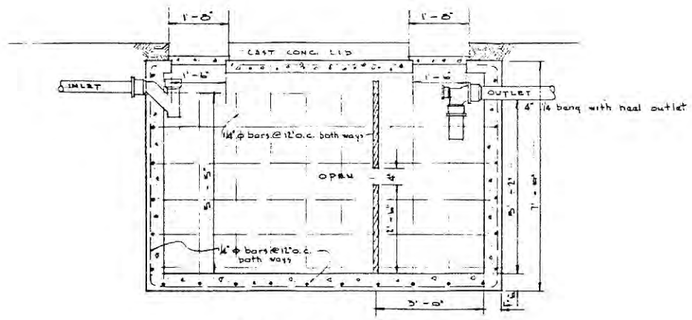
These minutes summarize the conclusions of the subject meeting. If there are substantial errors or omissions, please contact Ratcliff within three working days of receipt of this memorandum

Nina Pakanant
Ratcliff

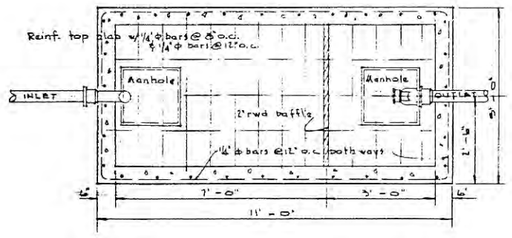


ROOF PLAN

Scale: 1/8" = 1'-0"

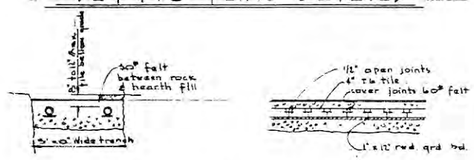


SECTION

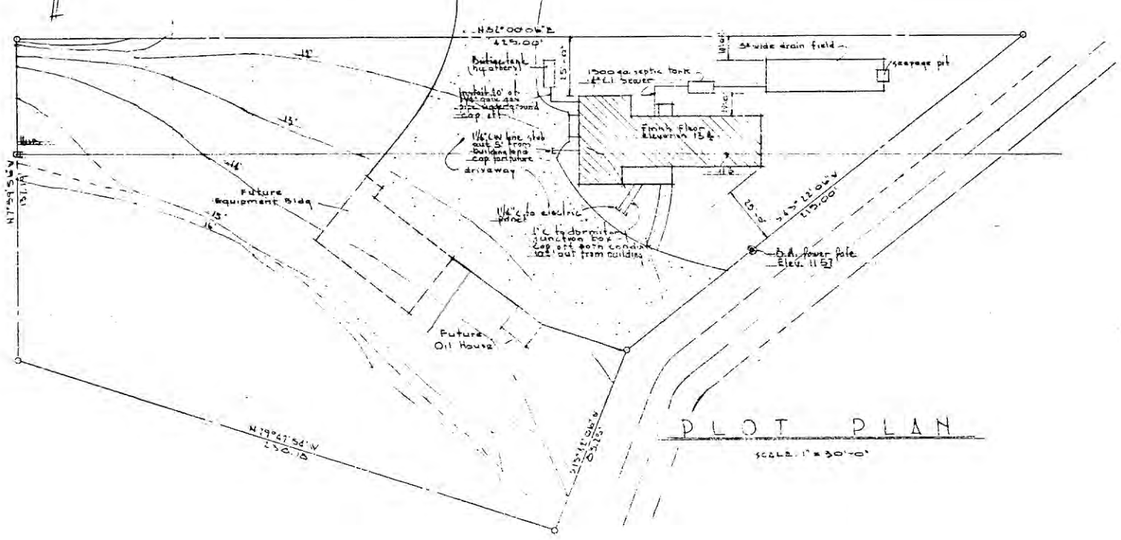


PLAN

SEPTIC TANK DETAILS

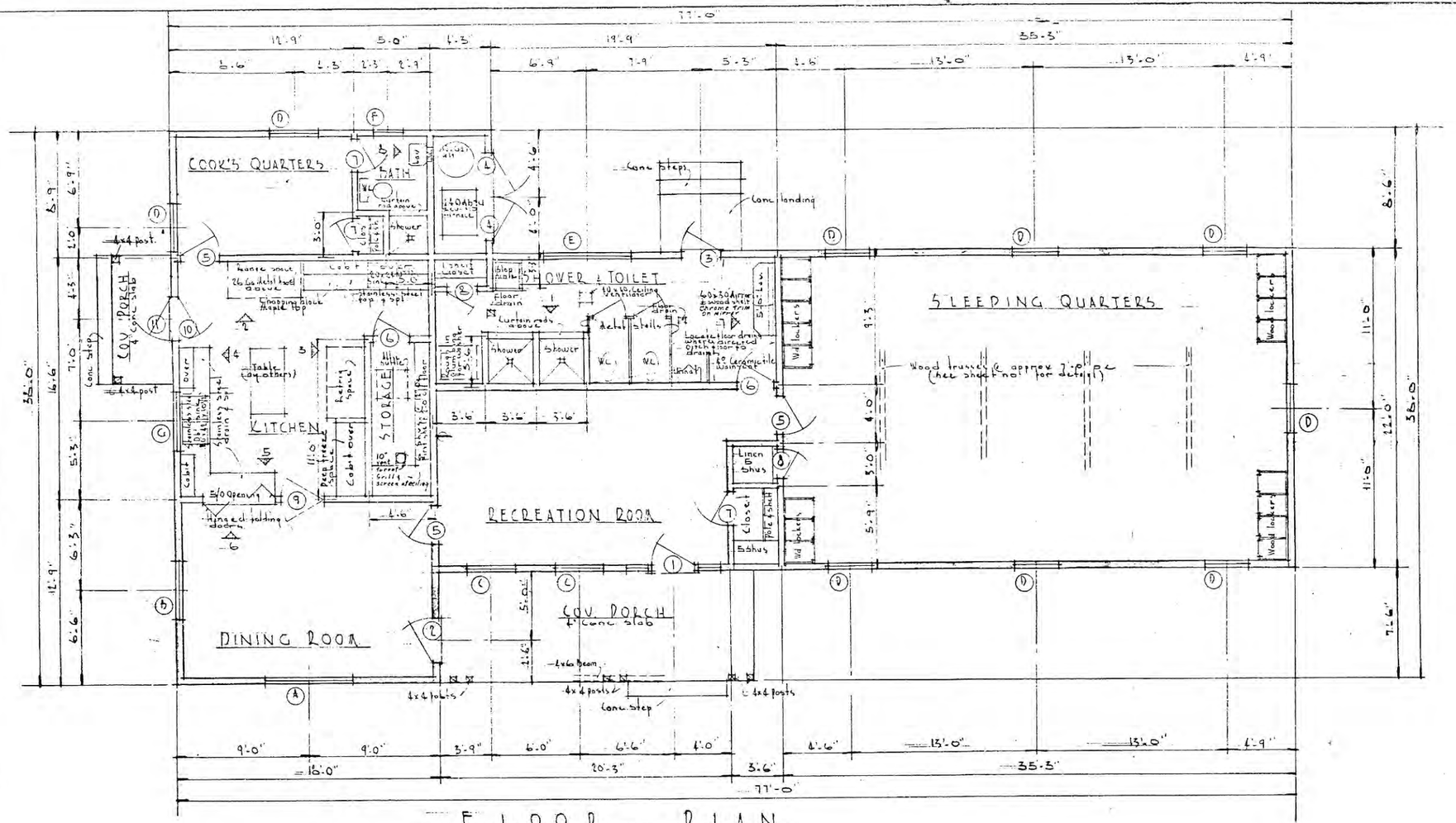


TYPICAL TRENCH DETAILS



APPROVED BY	LIVING QUARTERS FOR PESCADERO FIRE STATION	DATE 1-57
FISH WALDRON		SCALE AS NOTED
CHAIRMAN OF SUPERVISORS		DRAWN BY A.F.J.
COUNTY ASSESSOR	SAN MATEO COUNTY DEPARTMENT OF CONSTRUCTION & MAINTENANCE	CHECKED
COUNTY CLERK-RECORDER		APPROVED
		FILE NO.

P-2-1



FLOOR PLAN

Scale: 1/4"=1'-0"

see sheet no. 3 for truss detail

SCHEDULE OF ROOM FINISHES

ROOM	FLOOR	BASE	WALLS	TRIM	CEILING	PAINTING SPECIFICATIONS
SLEEPING QUARTERS	Asphalt tile	Rubber base	Sheetrock painted	Wood	painted w/ ceiling Exposed trusses painted	Spec *1 & 2
DINING	(Ceramic proof)	" "	" "	"	Sheetrock painted	" *1 & 2
COOKS QUARTERS	" "	" "	" "	"	" "	" *1 & 2
KITCHEN	(Ceramic proof)	" "	" "	"	" "	" *2 & 3
BATH	" "	" "	" "	"	" "	" *2 & 3
SHOWERS TOILET	Ceramic tile by owners	Ceramic tile Ceramic tile	Ceramic tile Sheetrock painted	"	" "	" *2 & 3
STORAGE	Asphalt tile	Rubber base	Sheetrock painted	"	" "	" *1 & 2
CLOSET	" "	" "	" "	"	" "	" *1 & 2
RECREATION	" "	" "	" "	"	" "	" *1 & 2
FURNACE	4" conc. slab	None	5/8 sheetrock no paint	"	5/8 sheetrock no paint	" *2

PAINTING NOTES:
1. Interior woodwork shall be specification *2 except ceiling at Sleeping Room which shall be *1
2. Interior walls & ceilings shall be specification *1 except in Kitchen, Bath & Toilets which shall be *3
3. Exterior woodwork shall be specification *4
4. Exterior metal shall be specification *4

WINDOW SCHEDULE

NO	SIZE	TYPE	NOTES
A	6'-0" x 4'-2 5/8"	Alum Casement	All glass shall be "B" Quality type Double Strength
B	4'-0" x 4'-2 5/8"	" "	
C	3'-0" x 4'-2 5/8"	" "	
D	3'-0" x 3'-2 5/8"	" "	
E	6'-0" x 3'-2 5/8"	" "	1 Horiz. mullion 10 Obscure glass in bottom sash
F	2'-0 1/2" x 2'-2"	" "	Obscure glass
G	4'-0" x 3'-2 5/8"	" "	

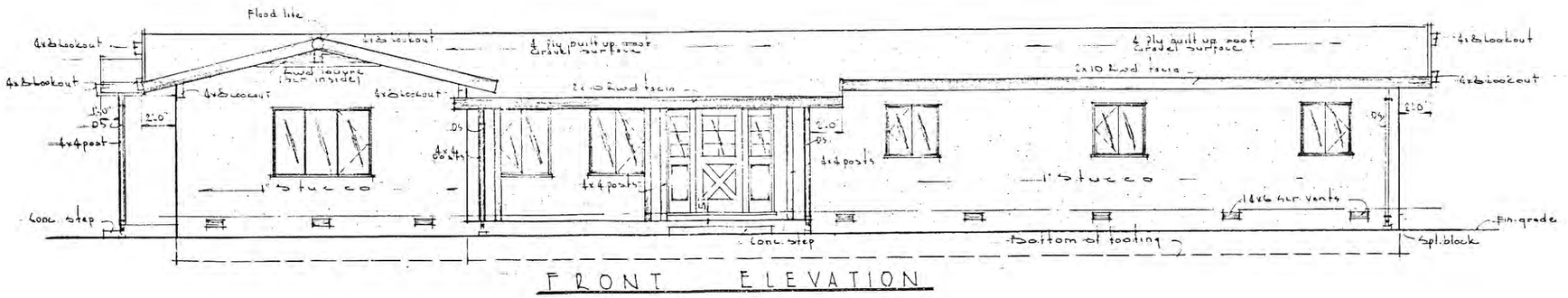
Furnish one screen for each vented window

DOOR SCHEDULE

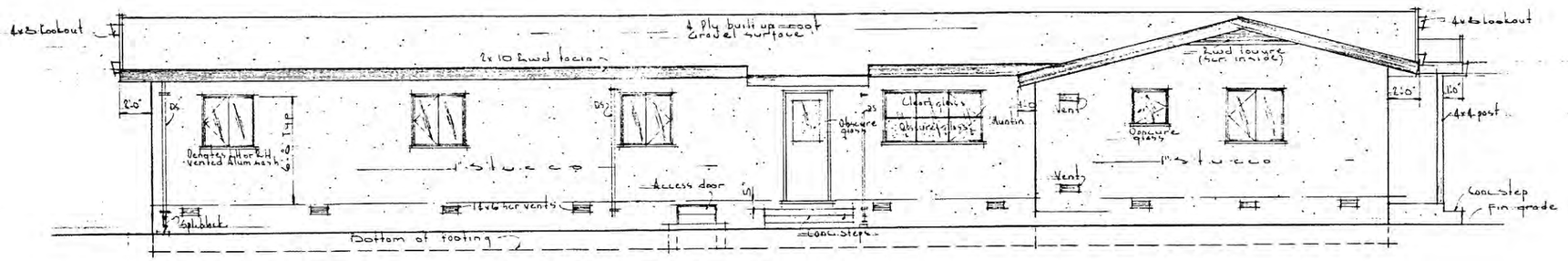
NO	SIZE	TYPE	NOTES
1	3'-0" x 6'-8" 1 3/4"	D.F. 9 Lites	Size lites 11 6" x 6 3/4"
2	3'-0" x 6'-8" 1 3/4"	D.F.	Panel - Solid core
3	2'-8" x 6'-8" 1 3/4"	D.F. Hollywood	Obscure glass
4	3'-0" x 6'-8" 1 3/4"	D.F.	Panel - solid core
5	2'-8" x 6'-8" 1 3/8"	D.F.	" Hollow core
6	2'-6" x 6'-8" 1 3/8"	D.F.	" " "
7	2'-4" x 6'-8" 1 3/8"	D.F.	" " "
8	2'-0" x 6'-8" 1 3/8"	D.F.	" " "
9	3'-0" x 6'-8" 1 3/8"	D.F. Double acting	1/3 - Panel solid core 2/3 - Obscure glass
10	3'-0" x 6'-8" 1 3/4"	D.F. Lite	1/3 - Panel solid core
11	3'-0" x 6'-8" 1 3/8"	D.F. Louver	

Approved by:	LIVING QUARTERS FOR RE-LANDED FILE SECTION	Date: 1-17-67
FILE VERSION		Date Noted
GENERAL CONTRACTOR		Checked by
COUNTY ENGINEER	SAN MATEO COUNTY DEPARTMENT OF	Contract
DISTRICT ENGINEER	CONSTRUCT OR MAINTENANCE	FILE NO

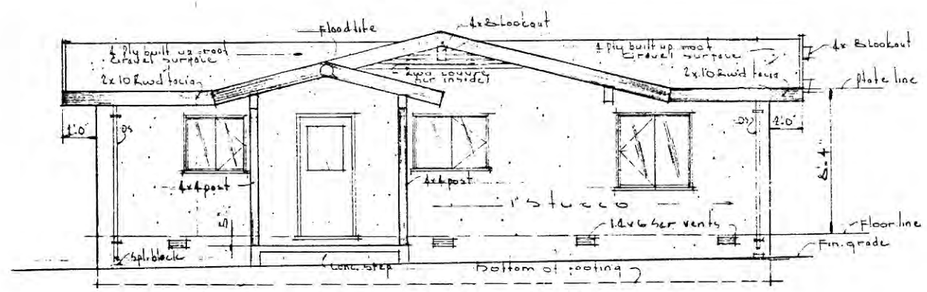
P-2-6



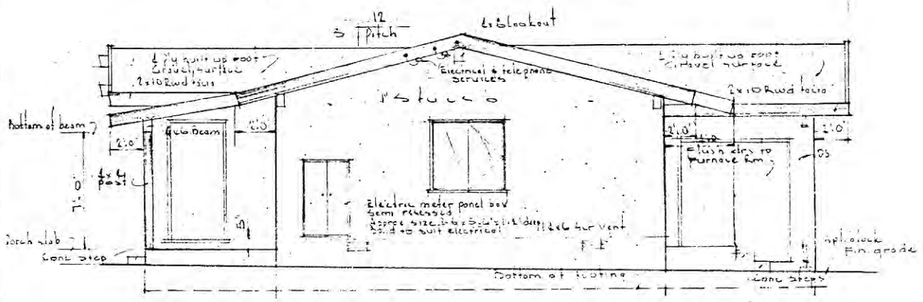
FRONT ELEVATION



REAR ELEVATION



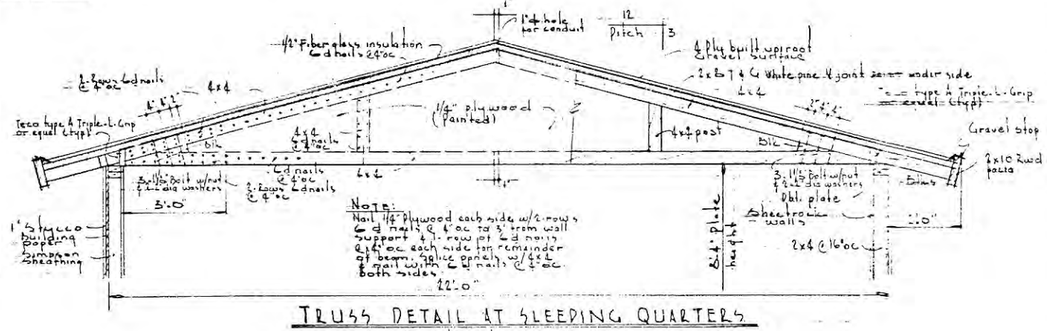
LEFT ELEVATION



RIGHT ELEVATION

EXTERIOR ELEVATIONS

Scale: 1/4" = 1'-0"



TRUSS DETAIL AT SLEEPING QUARTERS

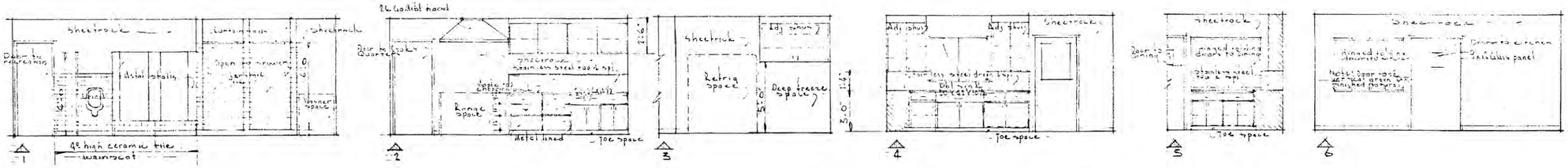
Scale: 1/2" = 1'-0"

Truss detail only by FRED L HASTING - CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER FRED L. HASTING No. 8939 CIVIL ENGINEER STATE OF CALIFORNIA

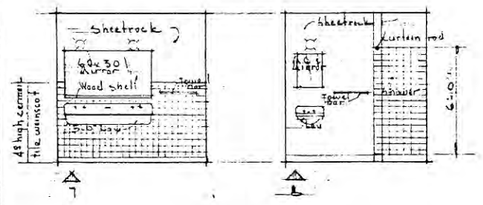
Approved by: FIRE WARDEN; MANAGER-SECRETARY; COUNTY ARCHITECT; LOS ALTOS CONSTR.	LIVING QUARTERS FOR DES LLERO FIRE STATION	DATE 6-7-57; SCALE Noted; DRAWN BY A.G.A.; SHEET 2; NUMBER OF SHEETS; FILE NO
	DEPARTMENT OF CONSTRUCTION	

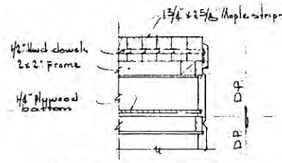
F-2-4



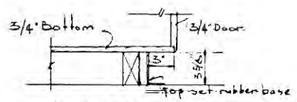
INTERIOR ELEVATIONS

Scale: 1/4" = 1'-0"



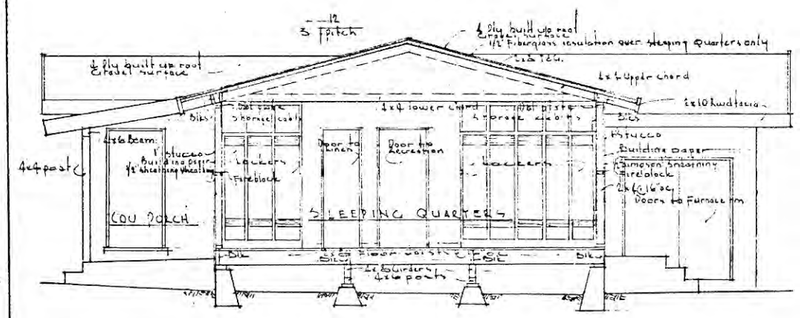


DETAIL AT CUTTING BLOCK



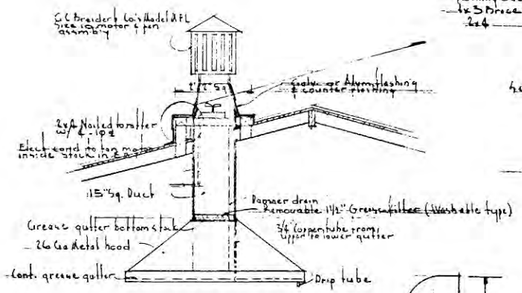
TYP TOE SPACE

Scale: 1 1/2" = 1'-0"



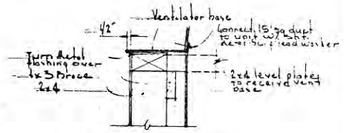
SECTION X

Scale: 1/4" = 1'-0"

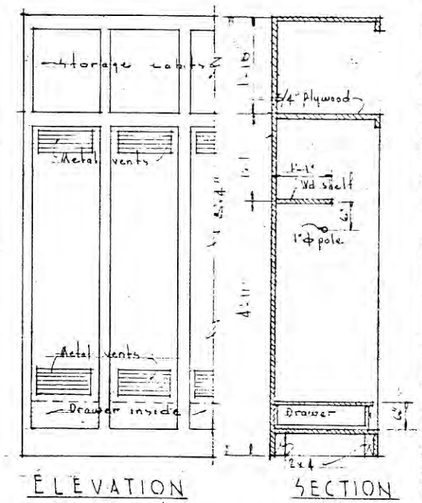


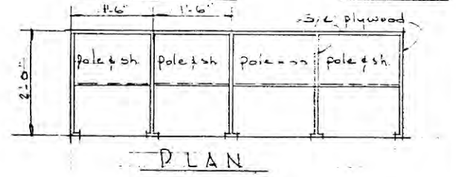
HOOD & EXHAUST FAN DETAIL

Scale: 1/2" = 1'-0"



Scale 1 1/2" = 1'-0"

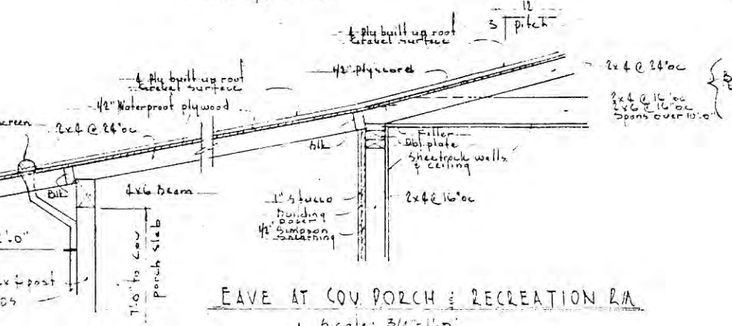




PLAN

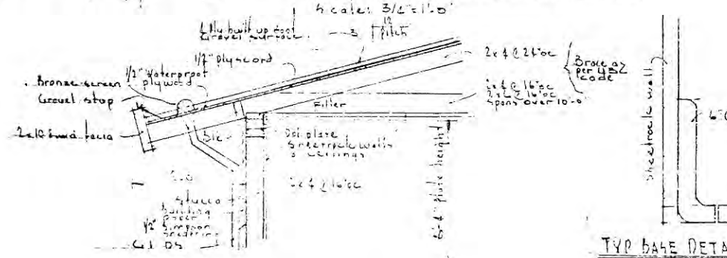
LOCKERS' DETAILS

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

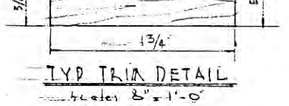


EAVE AT COV PORCH & RECREATION RM

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

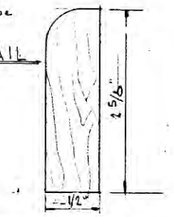


INT EAVE DETAIL



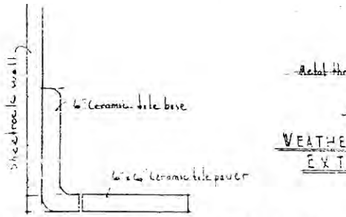
TYP TRIM DETAIL

Scale: 8" = 1'-0"



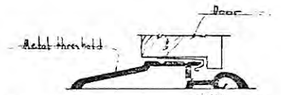
TYP BASE DETAIL

Scale: 12" = 1'-0"



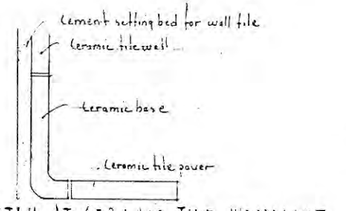
TYP BASE DETAIL AT CERAMIC TILE FLOOR

Scale: 3" = 1'-0"



WEATHERSTRIP DETAIL AT EXTERIOR DOORS

Scale: 6" = 1'-0"

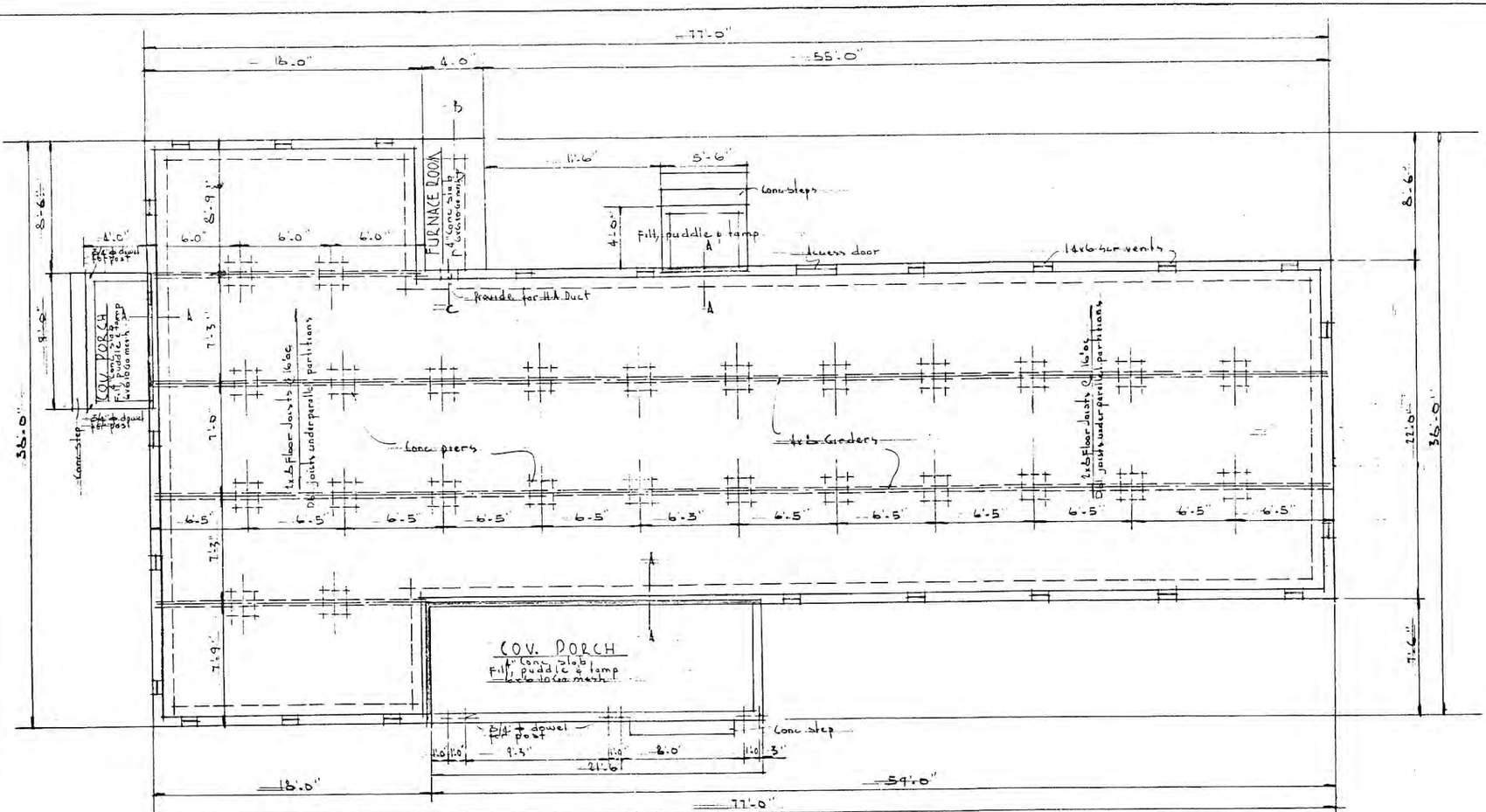


DETAIL AT CERAMIC TILE WAINSCOT

Scale: 3" = 1'-0"

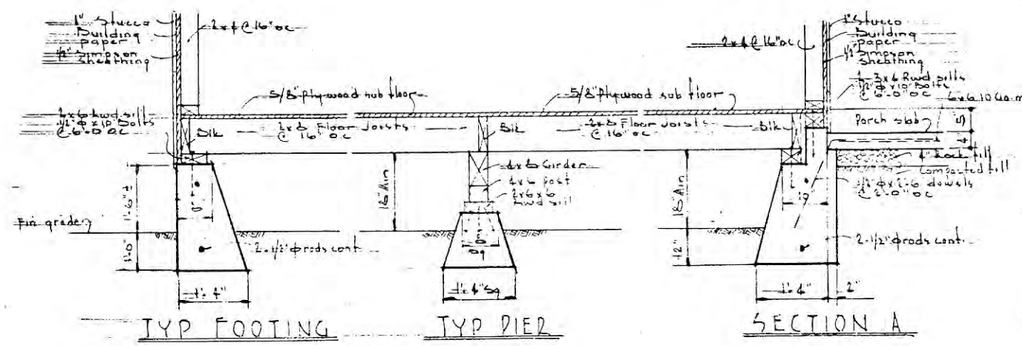
APPROVED BY: FIRE WARDEN; CHAIRMAN OF BOARD OF SUPERVISORS; COUNTY MANAGER; FIRE CHIEF, CDF&FPD, COUNTY	LIVING QUARTERS FOR DE LA CADERO FIRE STATION	DATE: 1-17-57; REVISED: NOTED; DRAWN BY: A.A.A.; SHEET: 1 OF 1 SHEETS; JOB NO.
	STATE OF CALIFORNIA — DEPARTMENT OF CONSTRUCTION — DIVISION OF ARCHITECTURE	

C-2-3

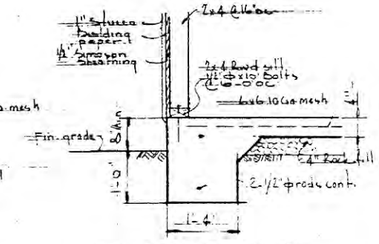


FOUNDATION PLAN

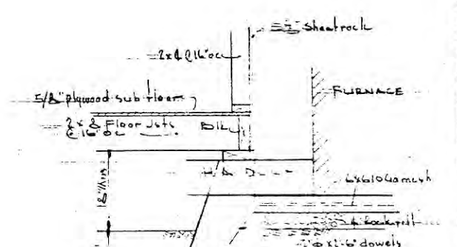
Scale: 1/4"=1'-0"



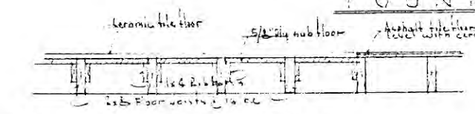
TYP FOOTING TYP PIER SECTION A



SECTION B



SECTION C

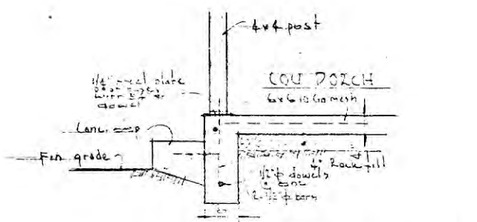


FLOOR DETAIL FOR TILE FLOOR

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

FOUNDATION DETAILS

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



POST DETAIL AT COV PORCH

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

Approved by: Fire Warden; Board of Supervisors; County Architect: Henry H. Harnett, Chief Deputy	LIVING QUARTERS FOR DESCANSO FIRE STATION	Date: 2-1-57; Scale: None; Design by; Drawn by; Traced by; Checked by
	San Diego County Department of Construction and Maintenance	Sheet No; File No

P-2-5

ELECTRICAL FIXTURE SCHEDULE

A	THOMAS INDUSTRIES INC., STARLIGHT	*T1-229-4.60 WATT LAMPS	
B	GRAYBAR HOMES AREA LITES	24"x24"sq. PLASTIC-2 SLIMLINE LAMPS	
C	LIGHTOLIER, OPALITE 4317	2-75 WATT LAMPS	
D	THOMAS INDUSTRIES INC., STARLIGHT	*T1-135	2-40 " "
E	" " " "	*SL-143	2-60 " "
F	" " " "	*T1-151	1-40 " "
G	STEBER UTILITE FLOODLIGHT S300		1-260 LAMP
H	LIGHTOLIER, OPALITE 4318		3-60 WATT LAMP
I	- 5 1/4" PORCELAIN SOCKET, KEY-LESS OR PULL AS REQUIRED-1-75 W LAMP		
J	- 3-STEBER LITES and FITTINGS S300		3-R40 LAMPS

NOTE

Telephone: Electrical contractor shall furnish and install all conduits, boxes and conduits necessary for the telephone system.

SYMBOLS

- Outlet wall or ceiling
- Duplex convenience outlet
- WP Weatherproof convenience outlet
- C Clock outlet (110 volts)
- P T&T Telephone
- Intercom & radio
- Push buttons
- Buzzer or bell as selected
- e Switches on emergency light circuit (see specs).

2"C. Empty stub out from transfer SW & cap 5'-0" from building

PLUMBING NOTES:

Hot & cold water supply to water heater shall be 1"
Hot & cold feeder lines shall be of size shown on plans.
Taps for fixtures & hose bibbs shall be sized in accordance with SAN MATEO COUNTY PLUMBING CODE.
Pressure on system shall be 30 lbs.
Rough in only for washing machine
Gas line shall be as shown on plans
Waste and venting shall be in accordance with SAN MATEO COUNTY COUNTY CODE and shall be complete with septic tank and drain field as shown on plans.
See plot plan for extensions of

MAIN SERVICE EQUIPMENT

2" Service conduit - 3-#4 90 RH.
200 Amp. - 3 pole S-N switch type "C"
2" Meter base
150 Amp. Automatic load transfer switch (See specs)
conduit for overhead
Telephone service as called for by Telephone Company

ELECTRICAL & PLUMBING PLAN

Scale: 1/4"=1'-0

HEATING NOTES:

1. Floor supply diffusers shall be TUTTLE & BAILEY T-60 with adjustable dampers
2. Return air registers shall be TUTTLE & BAILEY AERONAVE MODEL T 78" or equal with opposed blade dampers
3. Return air ducts shall be in space, supply ducts under floor

LEGEND

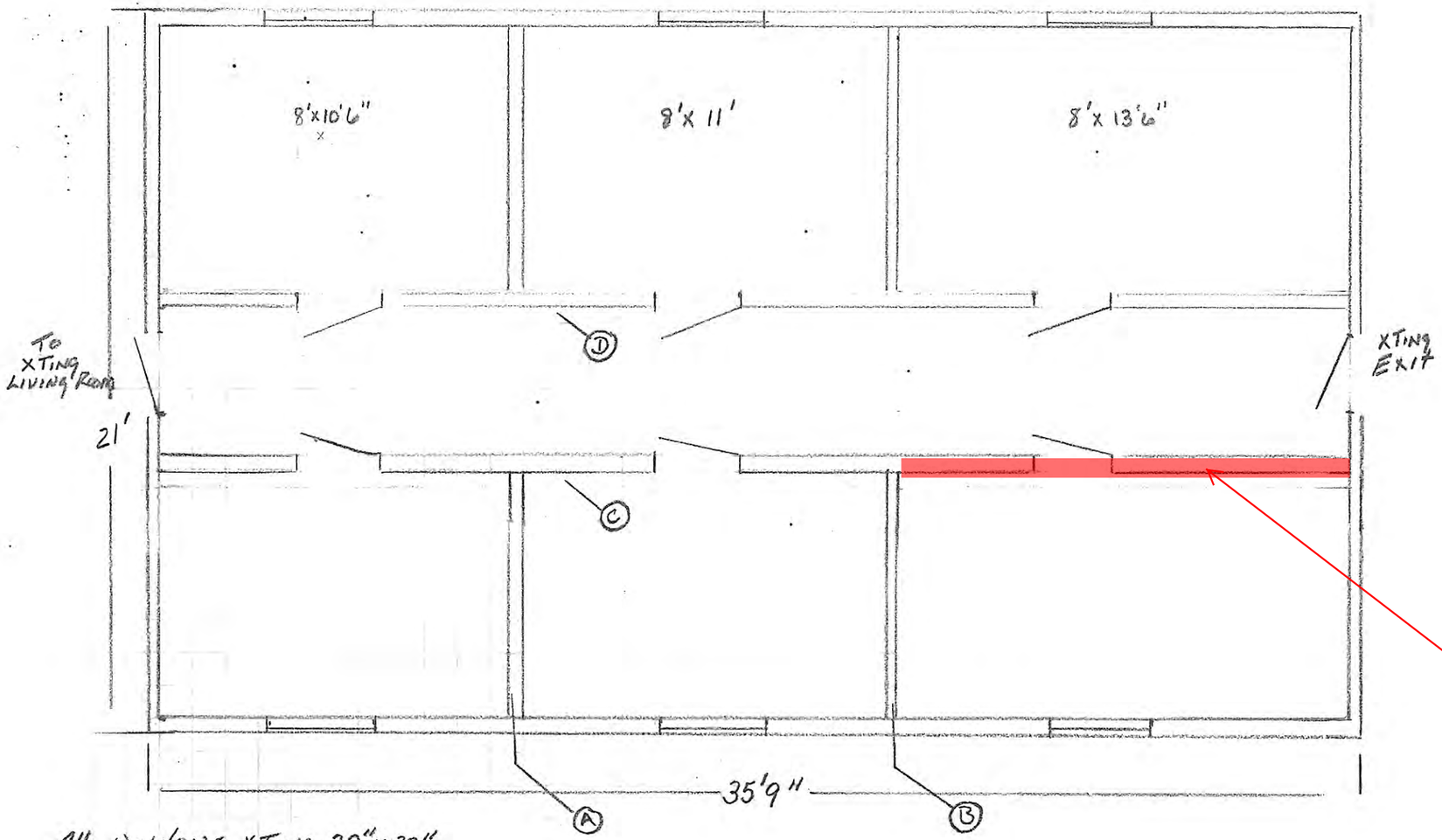
- Supply Air
- Return Air
- Volume damper
- T Room Thermostat

HEATING PLAN

Scale: 1/4"=1'-0

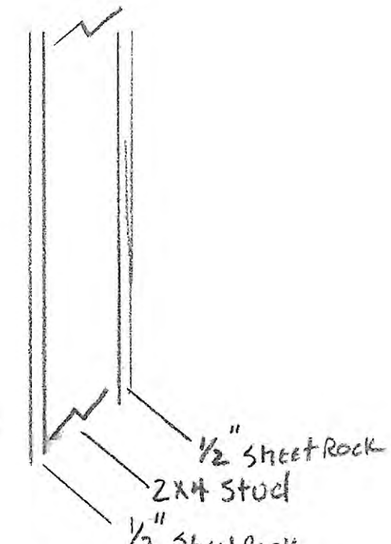
APPROVED BY: FIRE WARDEN; CHAIRMAN OF SUPERVISORS; COUNTY MANAGER; FIRE CONTROL ENGINEER	LIVING QUARTERS FOR DES-ODERO FIRE STATION	DATE 2-7-67; SCALE NOTED; DRAWN BY ARCH; CHECKED; FILE NO
	REVISED PLAN TO CONFORM TO REQUIREMENTS OF CONSTRUCTION & MAINTENANCE	

E-2-2



All windows XTing 38"x38"
All doors 3° Hollow core
All walls insolated for sound Resistance

Walls A, C, D New Partitians
Wall B XTing Partitian



Typical wall detail

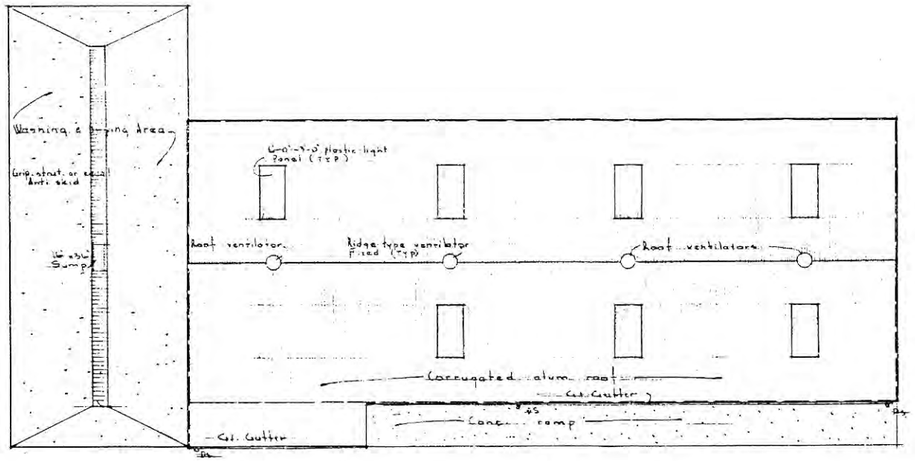
This wall was not built.
Confirmed on 11/20/13.
Note:
"xting" means "Existing Condition"

Date of Drawing:
Unknown

1/4" Scale

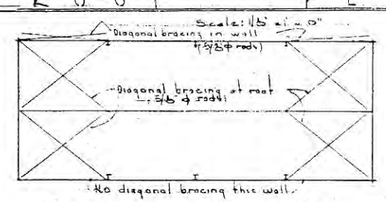
D. Risney

Pescadero Fire Station
Barracks



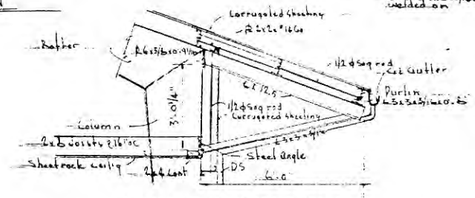
ROOF PLAN

Scale: 1/8" = 1'-0"



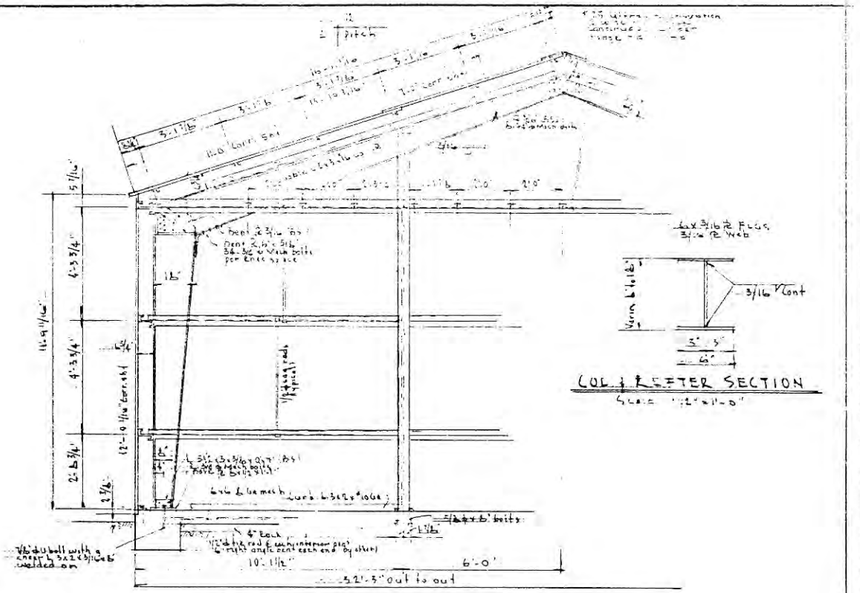
DIAGONAL BRACING DETAIL

Scale: 1/16" = 1'-0"



CANOPY AT OFFICE BAY

Scale: 3/8" = 1'-0"

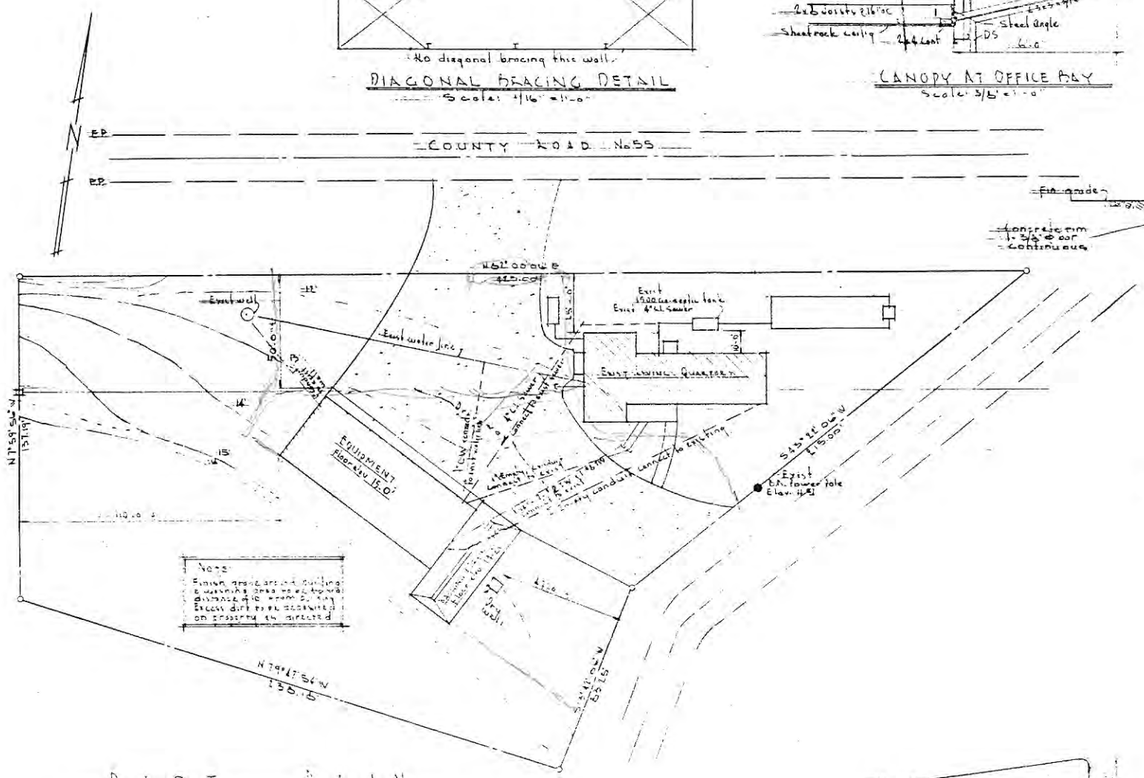


TYPICAL BENT & END WALL FRAMING

Scale: 3/8" = 1'-0"

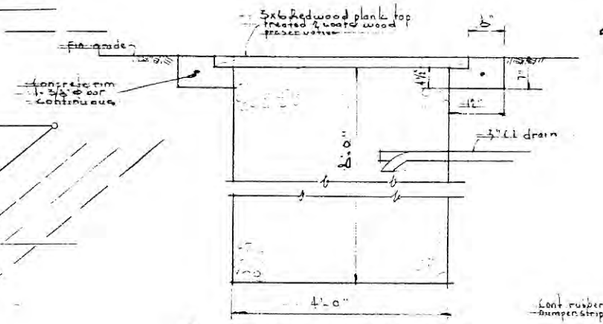
COL. & RAFTER SECTION

Scale: 1 1/2" = 1'-0"



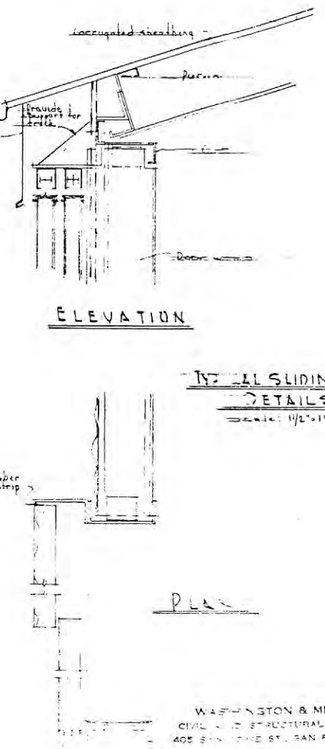
PLOT PLAN

Scale: 1" = 30'-0"



DRAINAGE SUMP DETAIL

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

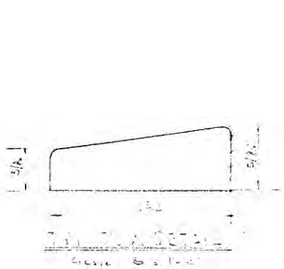


ELEVATION

INTERIOR SLIDING DOOR DETAILS

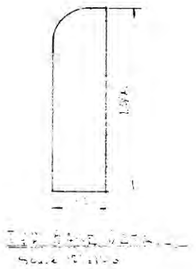
Scale: 1 1/2" = 1'-0"

PLAN



Typical Base Detail

Scale: 6" = 1'-0"



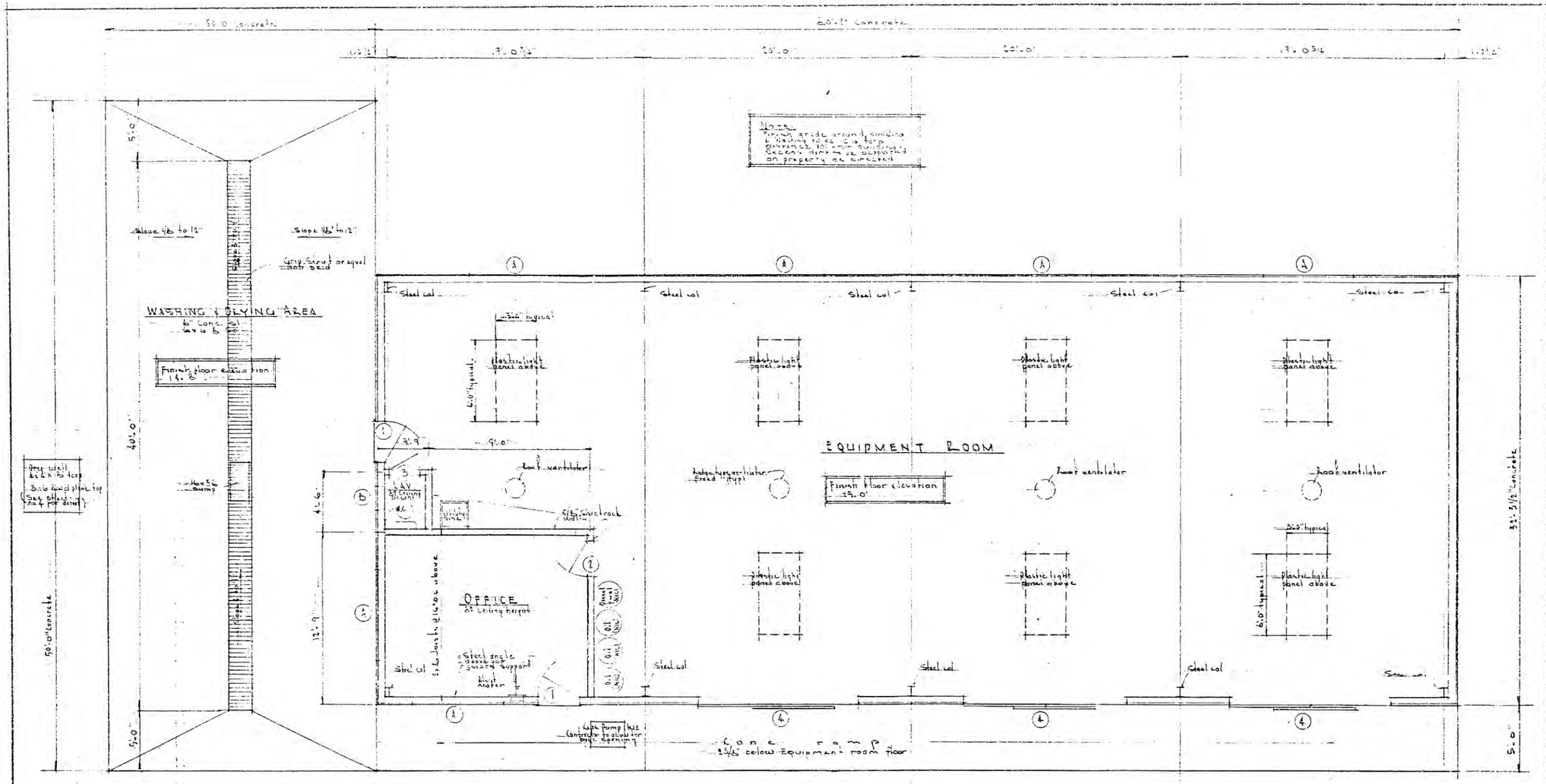
Typical Post Detail

Scale: 1" = 1'-0"

WASHINGTON & MITCHELL
CIVIL & STRUCTURAL ENGINEERS
405 14TH STREET, SAN FRANCISCO 11

Approved for:	DESCANSO FIRE STATION EQUIPMENT STORAGE	Date: Nov. '62
Fire Warden		Scale: As Noted
County Engineer	SAN MATEO COUNTY DEPARTMENT OF PUBLIC WORKS	Sheet No. 4 of 5 Sheets
Prepared by: L. F. Earl, Chief	Construction of Fire Station	File No.

A-2-9



FLOOR PLAN

Scale: 1/4" = 1'-0"

SCHEDULE OF ROOM FINISHES

ROOM	FLOOR	BASE	WALLS	TRIM	CEILING	PAINTING SPECIFICATIONS
EQUIPMENT	[illegible]	[illegible]	[illegible]	Steel	[illegible]	[illegible]
OFFICE	[illegible]	[illegible]	[illegible]	Wood	[illegible]	Spec #5
LAV.	[illegible]	[illegible]	[illegible]	Wood	Sheetrock	Spec #6

PAINTING NOTES:

Exterior & interior stucco sheathing - no paint
Structural Steel shop coat only on domino supplier
Exterior sides of doors & metal sash Spec #5
Interior sides of doors & metal sash see schedule of room finishes above

WINDOW SCHEDULE

NO	SIZE	TYPE	NOTES
1	[illegible]	[illegible]	[illegible]
2	[illegible]	Steel projected out	Operating gear

FROM SOULE STEELITE WINDOW CATALOG

DOOR SCHEDULE

NO	SIZE	TYPE	NOTE
1	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]
4	[illegible]	Sliding	Corrugated Iron

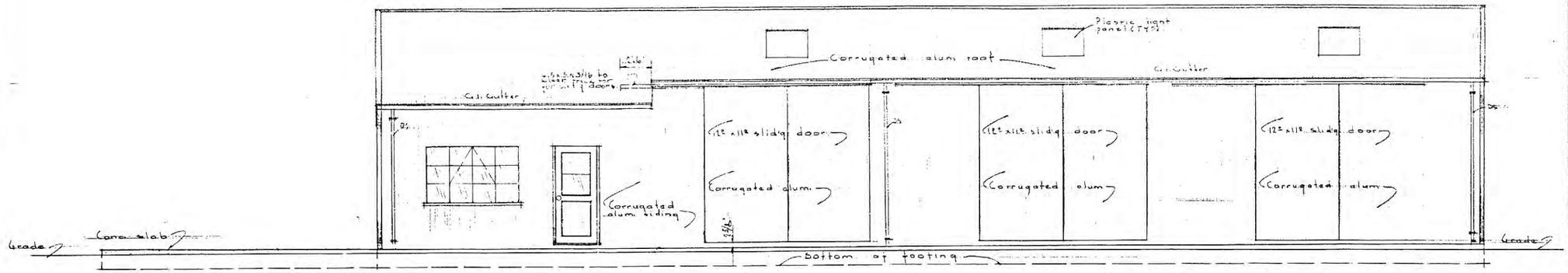
WASHINGTON & MITCHELL
CIVIL AND STRUCTURAL ENGINEERS
[illegible] SANSOME ST., SAN FRANCISCO 11

[illegible] COUNTY ROAD DEPT.
SIZE WARDEN
[illegible]
[illegible]
Secy Pomeroy

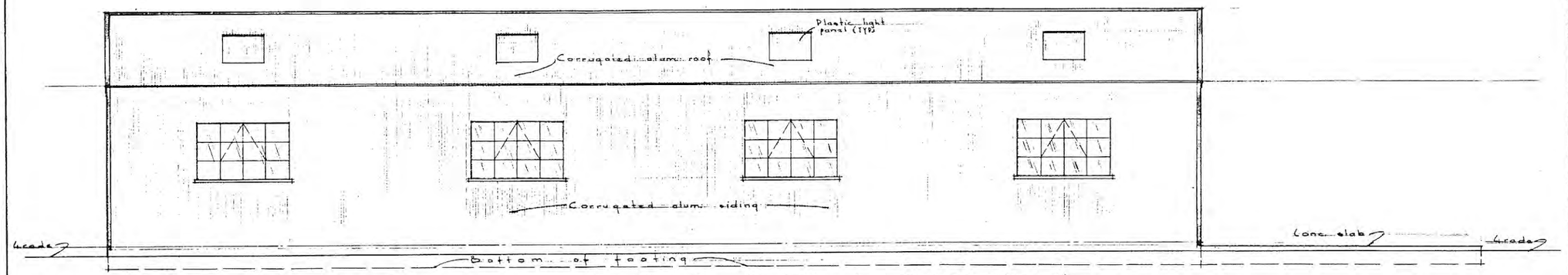
PESCADERO FIRE STATION
EQUIPMENT STORAGE
Building
SAN MATEO COUNTY
PESCADERO CALIFORNIA

SCALE: 1/4" = 1'-0"
DATE: [illegible]
DRAWN: [illegible]
CHECKED: [illegible]
SHEET 1 OF 2 SHEETS
JOB NO. [illegible]

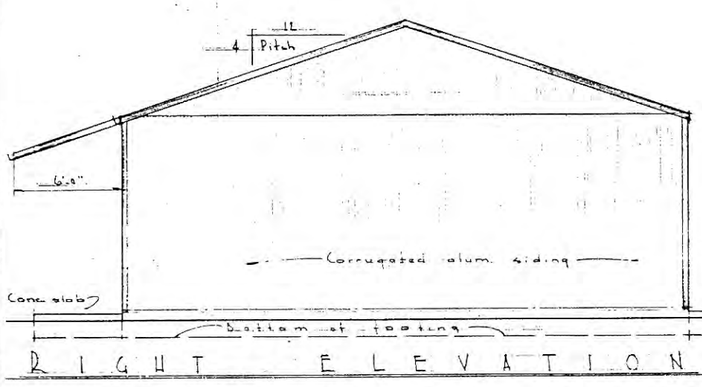
F-2-12



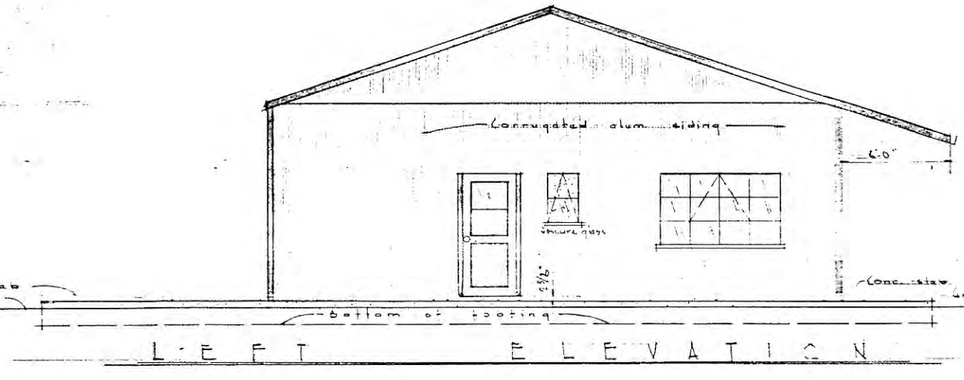
FRONT ELEVATION



REAR ELEVATION



RIGHT ELEVATION



LEFT ELEVATION

EXTERIOR ELEVATIONS

Scale: 1/4" = 1'-0"

WASHINGTON & MITCHELL
CIVIL AND STRUCTURAL ENGINEERS
405 SANSOME ST. SAN FRANCISCO 11

APPROVED BY	DATE
FIRE WARDEN	SCALE 1/4"=1'
COMM. OF SUPERVISORS	DESIGNED BY
COUNTY MANAGER	DRAWN BY
Dir. of Bldg. Constr.	SHEET 5 OF 5 SHEETS
	JOB NO.

PESCADERO FIRE STATION
EQUIPMENT STORAGE
BUILDING

SAN MATEO COUNTY
DEPARTMENT OF
CONSTRUCTION & MAINTENANCE

P-2-10

NOTE:
Building authorities to approve on owners engineers calculations & justifying design of building to meet 1946 Uniform Building Code. Maximum soil pressure not over determined @ 2000 #/sq ft.

SECTION 1-1

SECTION H-H

TYPE (A) BAY

TYPE (A) BAY

TYPE (B) BAY

TYPE (B) BAY

WASHING & DRYING AREA
6" conc. slab
6x16 bar mesh
(Washing & drying area 23/8 below equipment room floor line)

EQUIPMENT ROOM
6" conc. slab
6x6 & Gamesh

TYPE 32-A END WALL

EXPANSION JOINT DETAIL
1 ON EACH COLUMN LINE
(TWO FOR WASHING & DRYING AREA)

SECTION A-A

SECTION B-B

TYPE (D) BAY

TYPE (D) BAY

TYPE (D) BAY

TYPE (C) BAY

concrete ramp
(Concrete ramp 23/8" below equipment room floor line)

FOUNDATION PLAN
Scale: 1/4" = 1'-0"

TYPE "A" BAY

TYPE "B" BAY

TYPE 32-A END WALL

TYPE "C" BAY

BAY DETAILS
Scale: 3/8" = 1'-0"

TYPE "D" BAY

SECTION E-E As Noted

SECTION F-F As Noted

SECTION G-G

SECTION C-C

FOUNDATION DETAILS
Scale: 3/8" = 1'-0"

WASHINGTON & MITCHELL
CIVIL AND STRUCTURAL ENGINEERS
433 SANSOME ST., SAN FRANCISCO 11

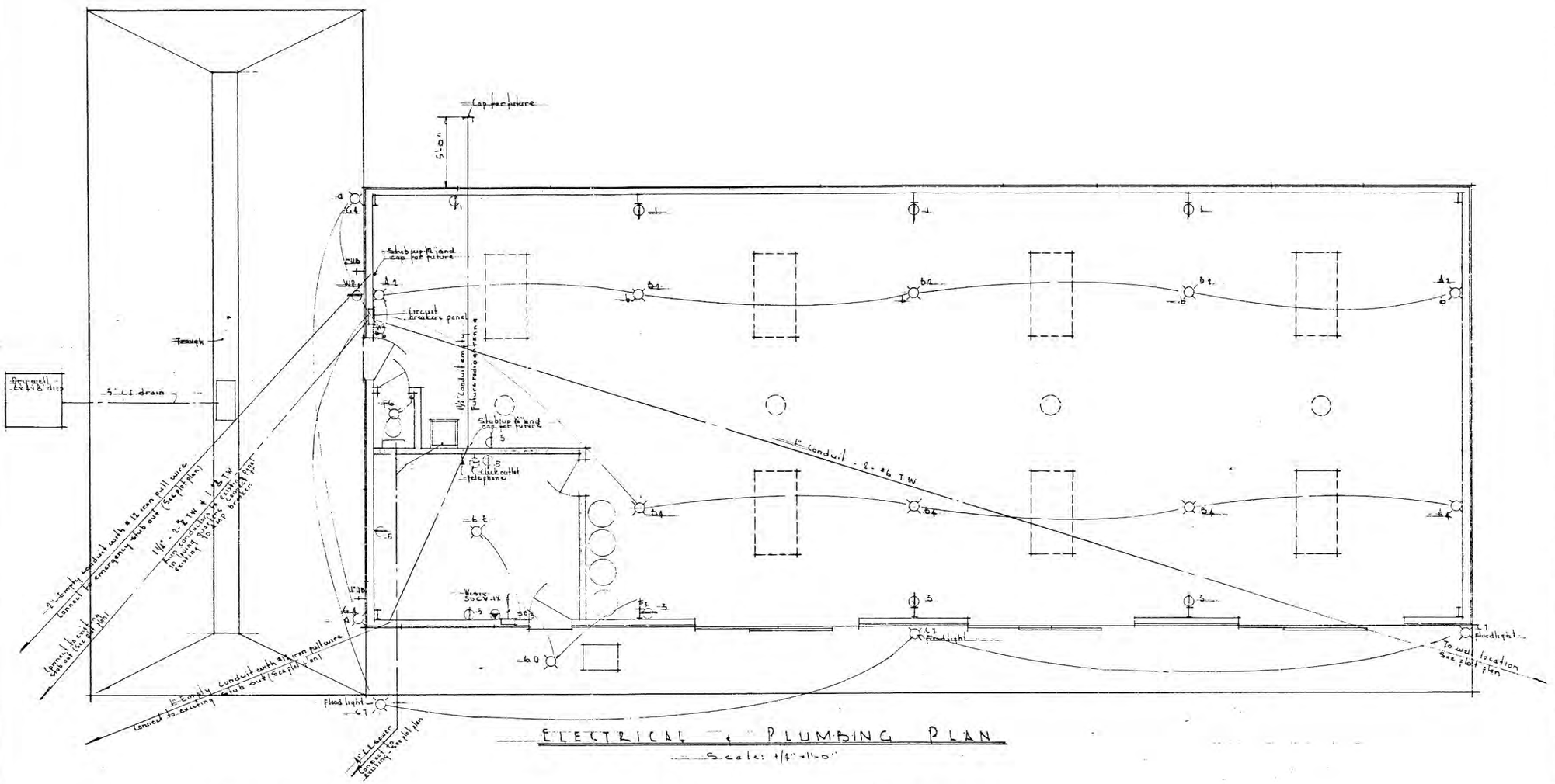
APPROVED BY
FRED WARDEN
JOHN A. BUTTERWORTH
COUNTY MANAGER

DESCANSO BEACH STATION
EQUIPMENT STORAGE
BUILDING

SAN MATEO COUNTY
DEPARTMENT OF
PUBLIC WORKS

DATE 7-11-52
DRAWN
TRACED
CHECKED
SCALE AS NOTED
SHEET NO. 2 OF 5 SHEETS

P-2-11



ELECTRICAL & PLUMBING PLAN

Scale: 1/4" = 1'-0"

ELECTRIC FIXTURE SCHEDULE

A Benjamin #5526 with 200 watt lamp
B Benjamin #5826 with #N-3585 Aligner and 200 watt lamp
C 3. Steberlites & fittings each fixture S-300 with 3-R 40 Lamps
D R & S. #6362 Shallow dome vaportight with 100 watt lamp
E All-Brite #86296 with 2-96-T 12-430 MA lamps
F 5/8" Pare Keyless Socket
G 1. Steberlite & fittings each fixture S-300 with 2-R 40 Lamps

PANEL SCHEDULE

Cir.			
"	1	South wall receptacles	20 A
"	2	Overhead lights	15 A
"	3	North wall receptacles	20 A
"	4	Overhead lights & Exit lights	15 A
"	5	Office receptacles	20 A
"	6	Office & Isu lights	15 A
"	7	North floods	15 A
"	8	Spare	20 A
"	9	4. Pole - 230 volt well pumps	35 A
"	10	2. Pole - 230 volt Air comp.	15 A
"	11	220 Volt 3 KW Elect heater	20 A

SYMBOLS

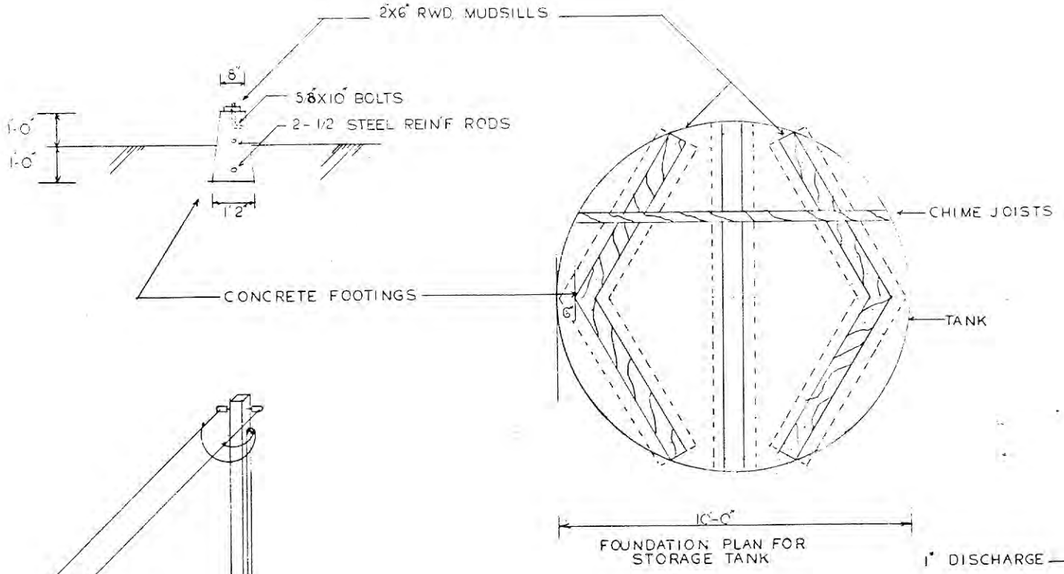
- Outlet wall or ceiling
- Duplex convenience outlet
- 220 V
- Clock outlet to point
- Telephone
- Under slab

APPROVED BY: FIRE WARDEN	PESCADERO F. P. STATION EQUIPMENT STORAGE	DATE: SCALE: AS NOTED
COUNTY MANAGER	SAN MATEO COUNTY PESCADERO F. P. DIST. ELECTRICAL & PLUMBING PLAN	SHEET 5 OF 5 SHEETS FILE NO.

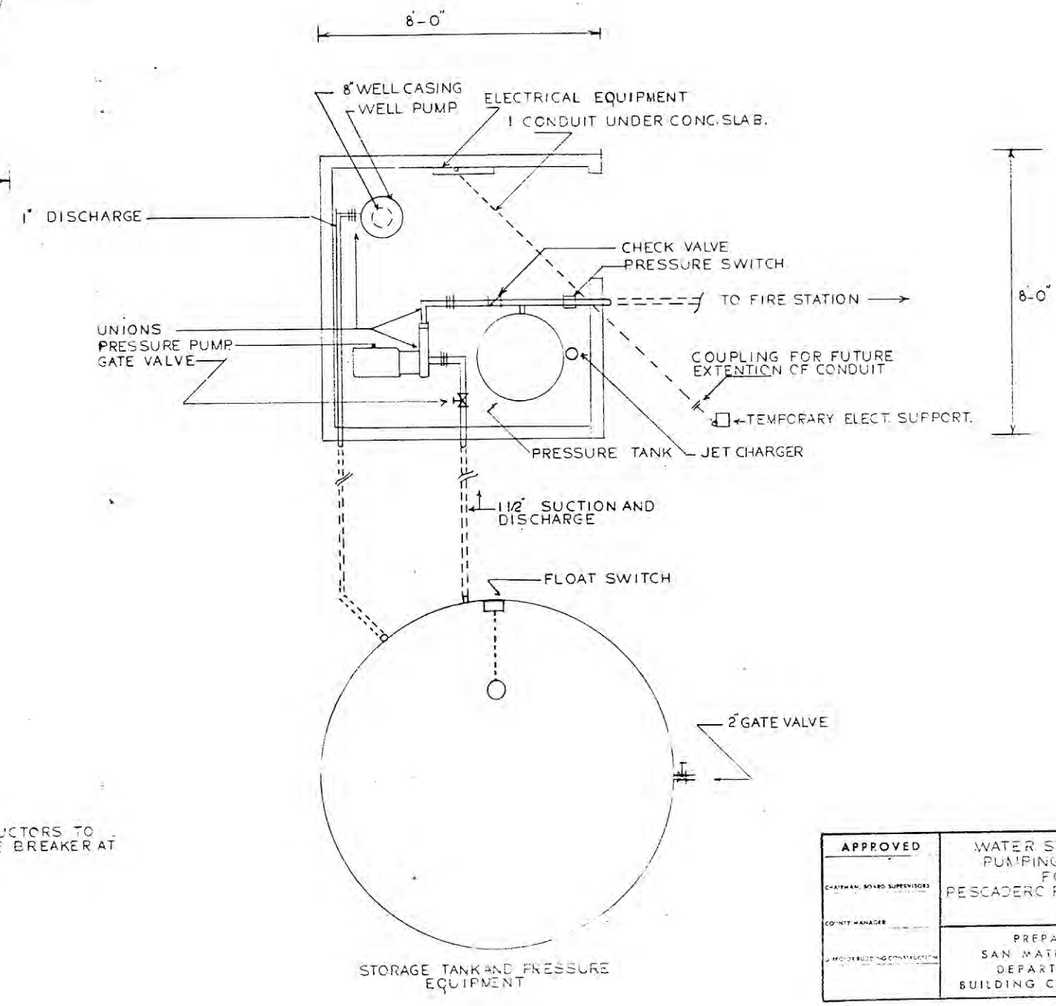
P-2-8

PIPING ABOVE GRADE
PIPING BELOW GRADE
CONDUIT BELOW GRADE
EXISTING CONDUIT

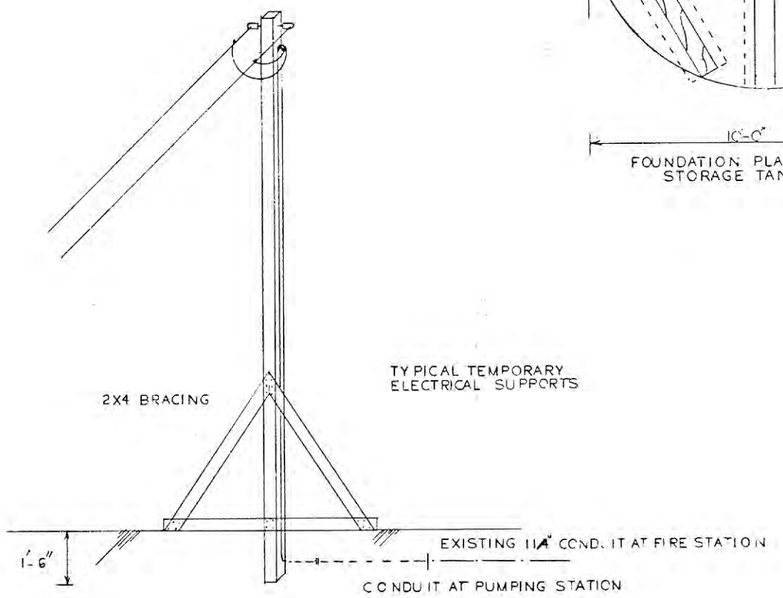
1-CONCRETE FOUNDATION FOR STORAGE TANK BY OTHERS
2-PUMPING STRUCTURE AND CONCRETE FLOOR BY OTHERS
3-ALL PIPING BELOW GRADE SHALL BE INSTALLED AT A DEPTH OF 1'-0" MIN.



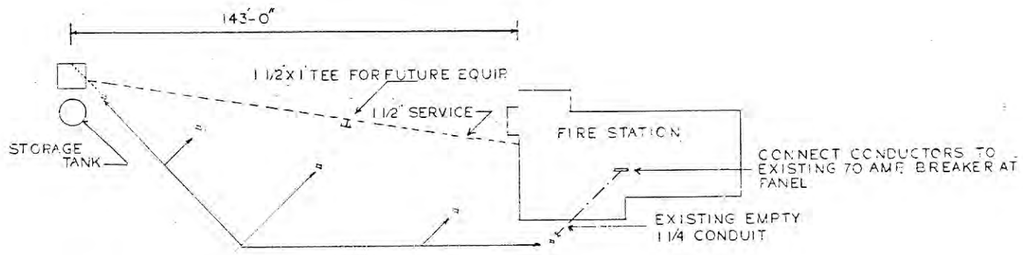
FOUNDATION PLAN FOR STORAGE TANK



STORAGE TANK AND PRESSURE EQUIPMENT



TYPICAL TEMPORARY ELECTRICAL SUPPORTS



TEMPORARY ELECTRICAL SUPPORTS

PLOT PLAN
NO SCALE

APPROVED CHAIRMAN, BOARD SUPERVISORS COUNTY MANAGER DIRECTOR OF PUBLIC WORKS	WATER STORAGE AND PUMPING SYSTEM FOR PESCADERO FIRE STATION PREPARED BY SAN MATEO COUNTY DEPARTMENT OF BUILDING CONSTRUCTION	DATE 6-28-57 SCALE 1/2"=1'-0" DRAWN BY J.C.P. CHK'D FILE NO.

P-2-7

105.6
loft

6.0
Mech

(18) 25"x40"
[9 x 2 high]

380.0

40"x60"

6.0
tool
shed

138.0

60"x72"

60"x72"
[5 tubs above]

40"x86"

18.2

60"x86"

12.1

12.4

EQUIPMENT ROOM

555.0

555.0

555.0

176
HazMat
Stor

OFFICE
295.0

(12) 25"x40"
[6 x 2 high]

FLOOR PLAN
Scale: 1/4"=1'-0"

3023 Main level
105 Loft
3128 GSF

160
storage container

80
storage shed

SCHEDULE OF ROOM FINISHES

ROOM	FLOOR	BASE	WALLS	TRIM	CEILING	REMARKS
EQUIPMENT						
OFFICE						
LAN —						

PAINTING NOTES:

WINDOW SCHEDULE

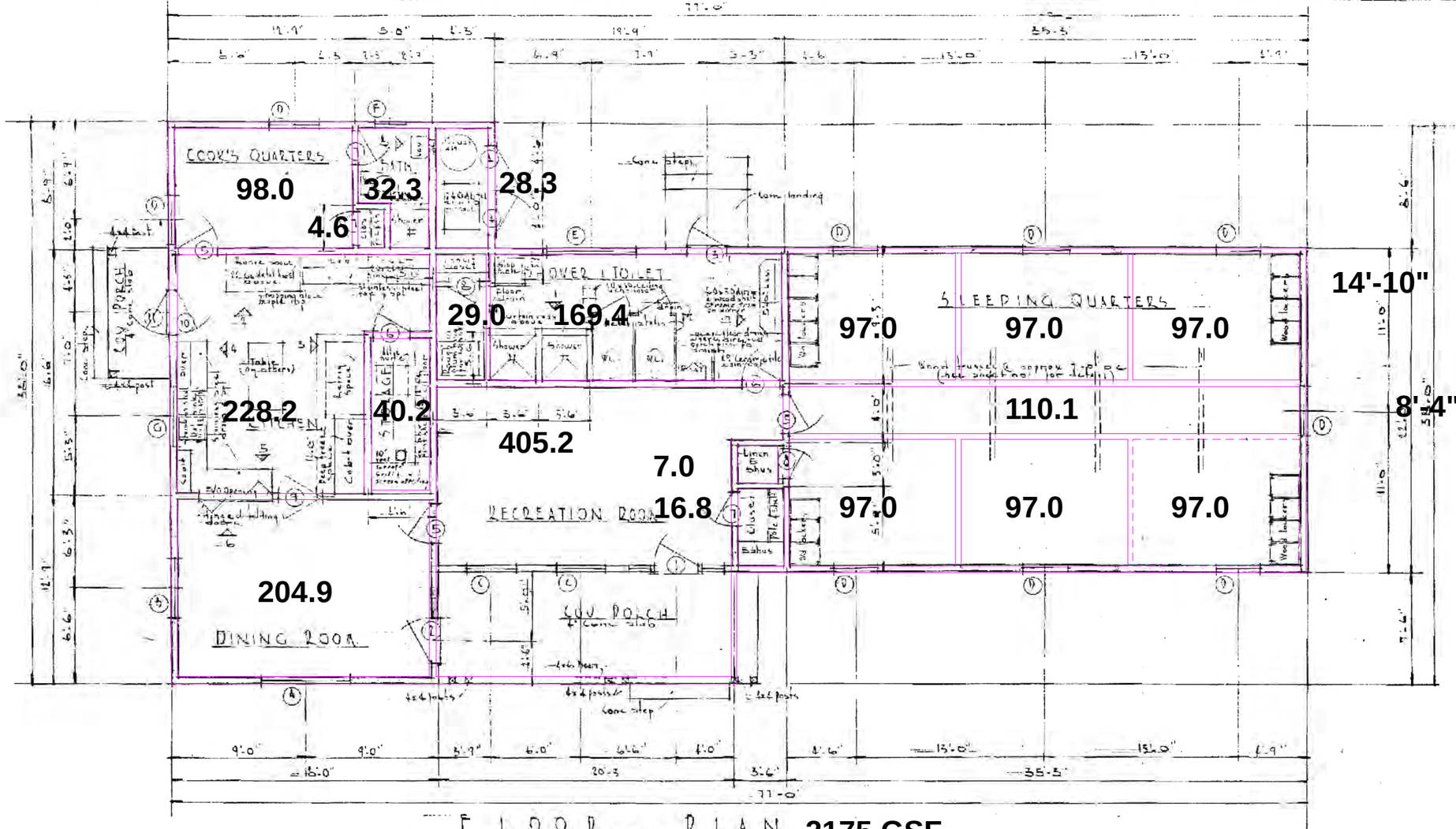
NO	SIZE	TYPE	NOTES
A			
B			

FROM GOULD STEELINE WINDOW CATALOG

DOOR SCHEDULE

NO	SIZE	TYPE	NOTE
1			
2			
3			
4			

PESCADERO FIRE STATION
EQUIPMENT STORAGE



FLOOR PLAN 2175 GSF

scale 1/4"=1'-0"
See sheet no 3 for truss detail

SCHEDULE OF ROOM FINISHES

ROOM	FLOOR	BASE	WALLS	TRIM	CEILING	PAINTING SPECIFICATIONS
SLEEPING QUARTERS	Asphalt tile	Rubber base	Sheetrock painted	Wood	Sheetrock painted (painted V3 ceiling. Exposed beams painted)	Spec #1 & 2
DINING	(Carbone proof)	" "	" "	"	Sheetrock painted	" #1 & 2
COOK'S QUARTERS	" "	" "	" "	"	" "	" #1 & 2
KITCHEN	(Ceramic proof)	" "	" "	"	—	" #2 & 3
BATH	"	" "	" "	"	—	" #2 & 3
SHOWERS TOILET	Ceramic tile w/ Jacuzzi	Ceramic tile Ceramic tile	Ceramic tile Sheetrock painted	"	" "	" #2 & 3
STORAGE	Asphalt tile	Rubber base	Sheetrock painted	"	" "	" #1 & 2
CLOSET	" "	" "	" "	"	" "	" #1 & 2
RECREATION	" "	" "	" "	"	" "	" #1 & 2
FURNACE	Concrete slab	None	5/8 sheetrock w/o paint	"	5/8 sheetrock w/o paint	" #2

PAINTING NOTES: Interior woodwork shall be specification #2 except ceiling at Sleeping Room which shall be #1
Interior walls & ceilings shall be specification #1 except in Kitchen, Bath & toilets which shall be #3
Exterior woodwork shall be specification #4
Exterior metal shall be specification #4

WINDOW SCHEDULE

NO	SIZE	TYPE	NOTES
A	6'-0" x 4'-2 5/8"	Alum Casement	All glass shall be 'B' Quality type Double Strength
B	4'-0" x 4'-2 5/8"	" "	
C	3'-2" x 4'-2 5/8"	" "	
D	3'-2" x 2'-5 5/8"	" "	
E	6'-0" x 5'-2 5/8"	" "	
F	12'-0" x 2'-2"	" "	Obscure glass
G	4'-0" x 3'-2 3/8"	" "	
Furnish one screen for each vented window			

DOOR SCHEDULE

NO	SIZE	TYPE	NOTES
1	3'-0" x 6'-6" 1 3/4"	DF 4 lites	
2	3'-0" x 6'-6" 1 3/4"	DF	Furnish shelf
3	2'-8" x 6'-6" 1 3/4"	DF Half louvered	
4	3'-0" x 6'-6" 1 3/4"	DF	Furnish screen
5	2'-6" x 6'-6" 1 3/4"	DF	Mortise
6	2'-6" x 6'-6" 1 3/4"	DF	
7	2'-4" x 6'-6" 1 3/4"	DF	
8	2'-0" x 6'-6" 1 3/4"	DF	
9	3'-0" x 6'-6" 1 3/4"	DF Louvre ceiling	
10	3'-0" x 6'-6" 1 3/4"	DF Solid	
11	3'-0" x 6'-6" 1 3/4"	DF Louvre	

The 2010 Forest and Range Assessment: Final Document

http://frap.fire.ca.gov/data/assessment2010/pdfs/california_forest_assessment_nov22.pdf

This assessment highlights key issues, resource status and trends and priority landscapes for the subsequent strategy document, which will provide a framework for state and federal programs to support good forest and rangeland stewardship in California.

Chapter 3.7 Climate Change: Threats and Opportunities. A variable pattern of annual precipitation is expected; increasing through 2069, then followed by a large decrease by 2099.

California Coastal Commission Draft Sea-Level Rise Policy Guidance. Public Review Draft.

http://www.coastal.ca.gov/climate/slr/guidance/CCC_Draft_SLR_Guidance_PR_10142013.pdf

Page 5 of the document, showing projected sea level rise, is included below.

Table 1. NRC Sea-Level Rise Projections for California (NRC, 2012)

TIME PERIOD	NORTH OF CAPE MENDOCINO	SOUTH OF CAPE MENDOCINO
2000 – 2030	-4 – +23 cm (-1.56 – 9 inches)	4 – 30 cm (1.56 – 11.76 inches)
2000 – 2050	-3 – + 48 cm (-1.2 – 18.84 inches)	12 – 61 cm (4.68 – 24 inches)
2000 – 2100	10 – 143 cm (3.6 – 56.28 inches)	42 – 167 cm (16.56 – 65.76 inches)

Could be 24" rise within 50-year lifespan of New Fire Station

In addition to these sea-level rise projections, the 2012 NRC report provides information on the impacts of sea-level rise in California. According to the report, sea-level rise will cause flooding and inundation, an increase in coastal erosion, changes in sediment supply and movement, and saltwater intrusion to varying degrees along the California coast. These effects in turn could have a significant impact on the coastal economy and could put important coastal resources and coastal development at risk, including ports, marine terminals, commercial fishing infrastructure, public access, recreation, wetlands and other coastal habitats, water quality, biological productivity in coastal waters, coastal agriculture, and archeological and paleontological resources.

PRINCIPLES FOR ADDRESSING SEA-LEVEL RISE IN THE COASTAL ZONE

This guidance is rooted in certain fundamental guiding principles, many of which derive directly from the requirements of the Coastal Act. In this respect, the principles are not new, but rather generally reflect the policies and practices of the Commission since its inception in addressing coastal hazards and the other resource and development policies of the Act. Each of the four groups of principles below embodies important concepts that are specifically and increasingly raised by the challenges of rising sea levels. This guidance builds on the cumulative knowledge and experience of the agency to help identify practical guidance for addressing sea-level rise in the California coastal zone, consistent with these principles and the statewide policies of the California Coastal Act.

A. Use Science to Guide Decisions [Coastal Act Sections 30006.5; 30335.5]

1. Acknowledge and address sea-level rise as necessary in planning and permitting decisions.
2. Use the best available science to determine locally relevant (context-specific) sea-level rise projections for all stages of planning, project design, and permitting reviews.
3. Recognize scientific uncertainty by using scenario planning and adaptive management techniques.

B. Minimize Coastal Hazards through Planning and Development Standards [Coastal Act Sections 30253, 30235; 30001, 30001.5]

4. Avoid significant coastal hazard risks where feasible.
5. Minimize hazard risks to new development over the life of authorized structures.

DRAFT

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT F

BAY AREA OFFICE
1720 Solano Avenue
Berkeley, CA 94707
Phone: 510/559-9603
Fax: 510/559-9605
www.vollmarconsulting.com

Delineation of Potential Jurisdictional Waters

CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects
Pescadero, San Mateo County, California

Prepared for:

Northgate Environment, Inc.
428 13th Street, 4th Floor
Oakland, CA 94612
Contact: Nancy Hendrickson
(510) 839-0688

Prepared by:

Vollmar Natural Lands Consulting
1720 Solano Avenue
Berkeley, CA 94707
Contact: Jake Schweitzer & Ivy Poisson
(510) 559-9603

May 2021

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1.0 INTRODUCTION **1**
2.0 PROJECT BACKGROUND INFORMATION **1**
2.1 Extent and Location of Study Area **1**
2.2 General Setting of Study Area **4**
3.0 REGULATORY BACKGROUND **5**
3.1 Federal Regulatory Framework **5**
3.2 California State and Regional Regulatory Framework **5**
4.0 METHODS **9**
4.1 Preliminary Review and Field Preparation **9**
4.2 Field Survey and Personnel **9**
4.2.1 Soils 9
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FIGURE 2. USGS Topographic Map **3**
FIGURE 3a-d. Topography and Soil Units **11**
FIGURE 4a-d. Map of Potential Jurisdictional Waters **16**

TABLE 1. WETS Analysis Table for the May 2021 Survey **4**
TABLE 2. Acreage of Mapped Potential Jurisdictional Waters **15**

APPENDIX A. Representative Photographs of the Study Area
APPENDIX B. Wetland Delineation Data Forms

1.0 INTRODUCTION

This document presents the methods and results of the delineation of potential jurisdictional Waters of the United States and/or State of California within the CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects (project). The Study Area for the project is located within the Town of Pescadero, in San Mateo County (County), California (**Figure 1**). The project involves construction of a new County fire station, installation of 1.5 miles of new water supply pipeline to serve Pescadero High School and the new County fire station, and decommission of a portion of the existing County fire station. The new water supply pipeline will extend from the existing CSA-11 water line east of the intersection of Pescadero Creek Road and Stage Road to Pescadero High School, and the pipeline will run along the unpaved roadway shoulders, or within paved road. The new fire station will be constructed within an undeveloped portion of Pescadero High School, which is owned by La Honda-Pescadero Unified School District. The existing fire station, located at 1200 Pescadero Creek Road, will be partially decommissioned, while retaining a portion of the existing structures. The purpose of the delineation is to identify and map any potentially jurisdictional Waters within the Study Area, which is approximately 36.306 acres. The delineation was conducted by staff from Vollmar Natural Lands Consulting (VNLC).

All Waters delineated within the Study Area may be subject to federal jurisdiction by the U.S. Army Corps of Engineers (ACOE) through Section 404 of the Clean Water Act/Section 10 of the Rivers and Harbors Act and may also be subject to State jurisdiction by the California Department of Fish and Wildlife (CDFW), the Regional Water Quality Control Board (RWQCB) and/or the California Coastal Commission (CCC) through state regulations. The results of this delineation are preliminary and must be reviewed and verified in writing by the ACOE to be considered an official delineation.

The delineation identified a total of 2.123 acres of potential jurisdictional wetlands, which include 0.204 acre of emergent channel and 1.919 acres of riparian habitat.

2.0 PROJECT BACKGROUND INFORMATION

2.1 Extent and Location of Study Area

The Study Area consists of the San Mateo County Fire Station – Station 59 (APN 086-160-050), the proposed water pipe alignment along Pescadero Creek Road/Cloverdale Road, and Pescadero High School (APN 087-053-010). Project actions like ingress/egress, staging, and construction are anticipated to occur within the Study Area.

The Study Area is broken up into the western and eastern portions; the western portion consists of the existing Fire Station 59, while the eastern portion consists of the proposed water pipe alignment and Pescadero High School (where the new fire station is proposed to be built in the southwest corner). The Study Area is mapped within the Franklin Point, La Honda, Pigeon Point, and San Gregorio U.S. Geological Survey (USGS) 7½ minute topographic quadrangles and the Butano Landgrant, San Antonio or Pescadero Landgrant, and Sections 10 and 11 of Township 08 South, Range 05 West (**Figure 2**). The Study Area may be accessed via the Pacific Coast Highway by exiting at Pescadero Creek Road and continuing east for 1.25 miles until Fire Station 59 is reached, at 1200 Pescadero Creek Road. To reach Pescadero High School, continue west along Pescadero Creek Road for another 1.25 miles, turn right (southeast) on Cloverdale Road, and then turn left (east) on Butano Cutoff. Pescadero High School is located to the left (north) after 0.2 mile, at 360 Butano Cutoff, Pescadero.

The western Study Area (Fire Station 59) is primarily surrounded by open space, with Butano Creek and agricultural land use to the east. The eastern Study Area is surrounded by agricultural land use, civic buildings, and open space. The Study Area is described in greater detail below.

Legend

- Study Area (39.306 ac)
- Highway
- Midpen Preserve
- Other Public or Preserved Land
- Water Body
- Urbanized Area

Data Sources: Midpen, 2019, 2020 | CPAD, 2016
USGS, Various | GAP, 1998 | VNLC, 2019
GAP Analysis Project, 1998 | TIGER, 2012
GIS/Cartography by: Ivy Poisson, Dec. 2020
Map File: 484_Vicinity_484_A-P_2020-1230.mxd

FIGURE 1
Regional Vicinity Map

CSA-11 Water Service Extension and
Pescadero Fire Station (Station 59) Projects
San Mateo County, California

N
W E
S

1:200,000

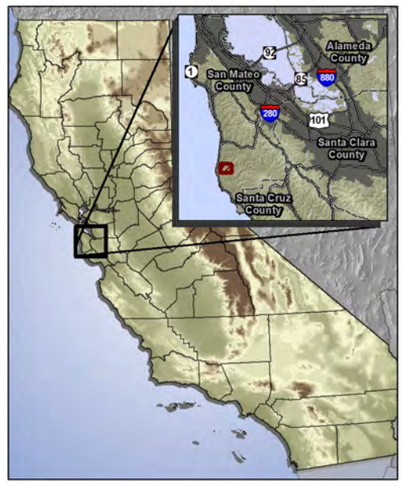
0 2 4 Km

0 1 2 4 Miles

FIGURE 2
USGS Topographic Map

CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects
San Mateo County, California

Project and Study Area (39.306 ac)



N
W E
S

1:12,000
(1 in. = approx. 1,000 feet at tabloid layout)

0 150 300 600 Meters

0 300 600 1,200 Feet

Data Sources: LSA, 2017 | TIGER, 2012 | DWR, 2001
GGNRA, 2020 | ESRI/DigitalGlobe, 2019
GIS/Cartography by: Ivy Poisson, Jan. 2021
Map File: 484_USGS_B-P_2021-0517b.mxd

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2.2 General Setting of Study Area

The Study Area is located within the Pescadero Watershed, the largest watershed in San Mateo County. Land use within the surrounding area is predominantly rural, which is a blend of open space, agriculture (farmland and ancillary structures), and civic buildings (school and fire station). The elevation within the Study Area ranges from 26-92 feet (8-28 meters) above sea level (USGS 1997). There are two creeks that are within or adjacent to the Study Area: Butano Creek is located 150 feet east of the western Study Area (**Figure 3a**), while Pescadero Creek is located within the northeastern corner of the eastern Study Area (**Figure 3b – 3d**). Since there is no riparian or wetland habitat associated with Butano Creek within the western Study Area, both the western Study Area and Butano Creek will not be discussed further in this report.

The Study Area is located within the Coastal Zone, as defined by the CCC. Therefore, only one parameter is required for a feature to be considered a wetland (CCC 2011; County of San Mateo 2021). The Study Area and greater San Mateo County coast is within the "Western Mountains, Valleys, and Coast" climate zone, as defined by the ACOE.

The region's coastal climate is similar to California's Mediterranean climate, which is characterized by cool, wet winters and hot, dry summers, though the coastal climate features warmer winters, cooler summers, and greater moisture throughout the year. Mean annual precipitation and temperature at the study area are 29.7 inches and 55.9 degrees Fahrenheit, respectively (PRISM 2021). More than 98 percent of annual precipitation occurs during the "wet season," which extends from October to May. The 2020-2021 wet season (up to the end of April 2021) experienced much lower than average precipitation and slightly lower than average temperatures compared to historical wet seasons (October to April, due to the date of this report). Specifically, precipitation was 42.0 percent of normal (11.8 inches versus 28.0 inches), and mean temperatures were 96.2 percent of normal (51.6 degrees F versus 53.6 degrees F) (ibid). Each month of the 2020-2021 wet season received significantly lower than average rainfall. See **Table 1**.

TABLE 1. WETS Analysis Table for the May 2021 Survey

Precipitation Data from the Last 30 Years (1990-2020)[1]			Recent Field Conditions Compared to Precipitation Data from the Last 30 Years, and Analysis[1]					
Date	**30th Percentile (inches)**	**70th Percentile (inches)**	**Date**	**Recorded Rainfall (inches)**	**Rainfall Condition Compared to Previous 30 Years[2]**	**Numeric Condition Value[3]**	**Weighting Factor[4]**	**Product of Condition Value and Weighting Factor[5]**
Apr	1.69	3.78	Apr 2021	0.22	Dry	1	3	3
Mar	2.61	6.52	Mar 2021	2.33	Dry	1	2	2
Feb	2.9	9.77	Feb 2021	3.03	Normal	2	1	2
[1] All precipitation data is obtained from the Skyline Ridge Preserve, CA Weather Station (USDA-NRCS 2021). [2] Below 30th percentile = dry; between 30th and 70th percentile = normal; above 70th percentile = wet. [3] Relative rainfall conditions are then translated to a numeric condition value, as follows: dry = 1, normal = 2, wet = 3. [4] Greater weight is given to the most recent month as this would most likely influence what hydrologic or vegetative characteristics are observed. [5] The numeric condition value is then multiplied by the weighting factor, then the subtotals are added to get the total value. Total value equivalents: 6-9 = dry; 10-14 = normal; 15-18 = wet						**TOTAL[5]**	7 or DRY

3.0 REGULATORY BACKGROUND

3.1 Federal Regulatory Framework

The federal government, through Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (RHA), has jurisdiction over all Waters of the United States. Waters of the United States are divided into four subsets – territorial seas and traditional navigable waters (TNWs); tributaries to TNWs; lakes, ponds, and impoundments of TNWs; and wetlands adjacent to territorial seas and TNWs. Section 404 of the CWA regulates the discharge of dredged or fill material into Waters of the United States. The CWA grants dual regulatory authority of Section 404 to the U.S. Environmental Protection Agency (EPA) and ACOE. The ACOE is responsible for issuing and enforcing permits for activities in jurisdictional Waters in conjunction with prior permitting authorities in navigable Waters under the RHA of 1899. The EPA is responsible for providing oversight of the permit program. In this capacity, the EPA has developed guidelines for permit review (Section 404 [b][1] Guidelines) and has the authority to veto permits by designating certain sites as non-fill areas (Section 404[c] of the CWA). The EPA also has enforcement authority under Section 404. The ACOE generally extends its jurisdiction to all areas meeting the criteria for Waters of the United States.

As defined in the 2020 Navigable Waters Protection Rule (published in the Federal Register, effective June 22, 2020), waters of the U.S. exclude features that lack hydrological surface connection to territorial seas and TNWs. Examples of water features excluded from federal jurisdiction include: groundwater, ephemeral features in a typical water year, diffuse stormwater runoff/sheet flow over upland areas, farm/roadside ditches[1], cropland[2], artificially irrigated areas[3], artificially created water conveyance structures located in uplands, groundwater systems in upland or in non-jurisdictional waters, and waste treatment systems.

Projects which propose activities that fall under the jurisdiction of Section 404 of the CWA and/or Section 10 of the RHA must obtain approval from the ACOE through the individual or nationwide permit (NWP) process. Individual permits entail a full public interest review that includes consultation with other federal and state agencies.

3.2 California State and Regional Regulatory Framework

California Department of Fish and Wildlife

The CDFW regulates river, stream, and lake habitats through Fish and Game Code section 1600 *et seq*. Fish and Game Code section 1602 requires an entity to notify the CDFW prior to commencing any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit debris, waste, or other materials that could pass into any river, stream, or lake.

A “river, stream, or lake" includes those that are episodic (i.e., they are dry for periods of time) as well as those that are perennial. The definition includes ephemeral streams, desert washes, and watercourses with a subsurface flow (CDFW 2016) and may also apply to work undertaken within the flood plain of a body of water, the boundary of which may be identified as a topographic feature or as riparian vegetation. In

[1] This exclusion would not apply if the farm/roadside ditch satisfies flow conditions of a perennial/intermittent tributary; i.e., the feature flows more than in direct response to precipitation events.
[2] This exclusion would not apply if the site was abandoned and reverts to wetland within 5 years.
[3] This exclusion would only apply if the artificially irrigated area would revert to upland conditions if irrigation ceased.

addition, the CDFW does not distinguish between a "pond" and a "lake," such that relatively small bodies of water, including both natural and artificial features, may be regulated under section 1600.

The CDFW requires a Lake and Streambed Alteration (LSA) Agreement when it determines that the activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources (ibid). A LSA Agreement includes measures necessary to protect existing fish and wildlife resources. The CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing a LSA Agreement, CDFW must comply with the California Environmental Quality Act (CEQA).

Regional Water Quality Control Board

The Study Area is located within the San Francisco Bay (Region 2) Regional Water Board which has authority to regulate projects that could potentially impact wetlands and/or other Waters. According to the California State Water Resources Control Board (State Water Board, 2006), the authority derives from the following:

- Porter-Cologne Water Quality Control Act through Waste Discharge Requirements to protect Waters of the state;
- The CWA under Section 4013;
- The San Francisco Bay Basin Water Quality Control Plan (Basin Plan [2005]) (Sections 4.23 & 4.23.4) which is available at http://www.waterboards.ca.gov/sanfranciscobay/basinplan incorporates several State directives to protect wetlands including:

  - Governor's Executive Order W-59-93 (i.e., the "California Wetland's Policy" which requires "No Net Loss of Wetlands");
  - Senate Concurrent Resolution No. 28; and
  - California Water Code Section 13142.5 (applies to coastal marine wetlands).

In addition to the state directives to protect wetlands, for individual permits (but not NWPs), the Basin Plan also directs the State Water Board staff to use the EPA's CWA 404(b)(1) guidelines to determine circumstances under which the filling of wetlands may be permitted and requires that attempts be made to avoid, minimize, and only lastly to mitigate for adverse impacts (ibid).

California's jurisdiction to regulate its water resources is much broader than that of the federal government. The State Water Board's Executive Director issued a memorandum directing the Regional Water Boards to regulate such waters under the authority of the Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne extends to "Waters of the State," which is broadly defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." This definition includes isolated wetlands and any action that may impact isolated wetlands is subject to the Water Board's jurisdiction, which may include the issuance of Statewide General Waste Discharge Requirements (WDRs). For projects that will impact less than 0.2 acre of "isolated" wetlands, the State Water Board issued Order No. 2004-004-DWQ, WDRs for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction (General WDRs). These General WDRs streamline the permitting process for low impact projects in isolated wetlands (ibid).

Activities or discharges from a project that could affect California's surface, coastal, or ground waters, require a permit from the local RWQCB. Discharging pollutants (or proposing to) into surface water requires the applicant to file a complete National Pollutant Discharge Elimination System permit application form with the RWQCB. Other types of discharges, such as those affecting groundwater or from

diffused sources (e.g., erosion from soil disturbance or waste discharges to land) are handled by filing a Report of Waste Discharge with the RWQCB in order to obtain WDRs. For specified situations, some permits may be waived and some discharge activities can be handled through enrollment in an existing general permit (ibid). The State has adopted updated Dredge and Fill procedures, which became effective May 28, 2020. These changes modify the current State definition and jurisdictional determination of State wetlands.

California Coastal Commission and San Mateo County

The Study Area is located within the Coastal Zone, which grants the California Coastal Commission (CCC) authority over many activities affecting wetlands (San Mateo 2011 and CCC 2021). Their authority is derived from the California Coastal Act of 1976.

In addition, wetlands in the Coastal Zone are subject to the one-parameter definition, as stated in the California Code of Regulations Title 14, Section 13577:

> "Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats."

Development activities in the Coastal Zone are subject to a Coastal Development Permit from either the CCC or the local government authority with a certified Local Coastal Plan. For this Study Area, San Mateo County would preside over permitting processes, under the guidance of County of San Mateo Local Coastal Program (LCP) Policies (San Mateo County 2013).

Development activities that are subject to the Coastal Development Permit include, but is not limited to:

> "… the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land […]; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan […]. As used in this section, "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line."

The San Mateo County LCP provides their own definition of wetlands and specific guidance regarding permitted uses within wetlands, buffer zone requirements for wetlands, and development activities within the buffer zone. The relevant definitions and policies relating to wetlands are reproduced below.

Policy 7.14: Definition of Wetland

Define wetland as an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground. Such wetlands can include mudflats (barren of vegetation), marshes, and swamps.

Such wetlands can be either fresh or saltwater, along streams (riparian), in tidally influenced areas (near the ocean and usually below extreme high water of spring tides), marginal to lakes, ponds, and man-made impoundments. Wetlands do not include areas which in normal rainfall years are permanently submerged (streams, lakes, ponds and impoundments), nor marine or estuarine areas below extreme low water of spring tides, nor vernally wet areas where the soils are not hydric. In San Mateo County, wetlands typically contain the following plants: cordgrass, pickleweed, jaumea, frankenia, marsh mint, tule, bullrush, narrow-leaf cattail, broadleaf cattail, pacific silverweed, salt rush, and bog rush. To qualify, a wetland must contain at least a 50% cover of some combination of these plants, unless it is a mudflat.

Policy 7.16: Permitted Use in Wetlands
Within wetlands, permit only the following uses: (1) nature education and research, (2) hunting, (3) fishing, (4) fish and wildlife management, (5) mosquito abatement through water management and biological controls; however, when determined to be ineffective, allow chemical controls which will not have a significant impact, (6) diking, dredging, and filling only as it serves to maintain existing dikes and an open channel at Pescadero Marsh, where such activity is necessary for the protection of pre-existing dwellings from flooding, or where such activity will enhance or restore the biological productivity of the marsh, (7) diking, dredging, and filling in any other wetland only if such activity serves to restore or enhance the biological productivity of the wetland, (8) dredging man-made reservoirs for agricultural water supply where wetlands may have formed, providing spoil disposal is planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation, and (9) incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

Policy 7.18: Establishment of Buffer Zones
Buffer zones shall extend a minimum of 100 feet landward from the outermost line of wetland vegetation. This setback may be reduced to no less than 50 feet only where: (1) no alternative development site or design is possible; and (2) adequacy of the alternative setback to protect wetland resources is conclusively demonstrated by a professional biologist to the satisfaction of the County and the State Department of Fish and Game. A larger setback shall be required as necessary to maintain the functional capacity of the wetland ecosystem

Policy 7.19: Permitted Uses in Buffer Zones.
Within the buffer zones, permit the following uses only: (1) uses allowed within wetlands policy (7.16) and (2) public trails, scenic overlooks, and agricultural uses that produce no impact on the adjacent wetlands.

4.0 METHODS

4.1 Preliminary Review and Field Preparation

Prior to conducting the field delineation, the project ecologist reviewed site aerial photography, topographic data, existing preliminary wetland and watershed mapping, and geology and soil survey maps of the Study Area and surrounding areas. This information was used to help characterize the Study Area, identify any potential Waters of the United States on a preliminary basis, and guide the field surveys. Background imagery and a project boundary map were loaded on to a professional GPS unit (Trimble GeoXH 6000) for use in navigation and mapping in the field.

4.2 Field Survey and Personnel

The delineation field survey was conducted on May 7, 2021, by Ivy Poisson (Ecologist, VNLC). During the survey, the ecologist traversed the entire Study Area, using detailed topographic and soils data as guides. The ecologist established delineation data points, recorded additional notes on plant community and site characteristics, and took representative photographs of habitats and features of interest. **Section 5** below presents summaries of the notes recorded during the field survey. A total of 5 delineation data points were established throughout the Study Area. At each data point, data were collected on soils, hydrology, and plant cover following the Routine Wetland Determination Method developed by the ACOE and described in the 1987 ACOE Wetlands Delineation Manual (Environmental Laboratory 1987) and the regional supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (ACOE 2010). The boundaries of all potential jurisdictional Waters identified in the Study Area were mapped using sub-meter precise GPS units.

The specific methods for collecting data on soils, hydrology, and plant cover at delineation data points are described below.

4.2.1 Soils

Soil profiles were taken at each data point using a tile spade shovel and/or a mattock (for difficult digging situations). Soils were examined for positive hydric soil indicators such as low matrix chromas, redox features, gleys, and iron and manganese concretions. The color and texture of the soil layers encountered were recorded on the delineation forms. A standardized soil texture chart used by the California Native Plant Society (CNPS) for assessing soils (adapted from Brewer and McCann 1982) was used to determine texture (e.g., clay versus clay loam, etc.). Soil color was identified using a Munsell soil color chart (Kollmorgen 2009). All soil samples were moistened before determining the color. Soil map units were cross-referenced with the California hydric soils list (SCS 1993) and the national hydric soils list (SCS 1991). Determination of whether or not the hydric soil criterion was met was based upon the criteria specified by the National Technical Committee for Hydric Soils (ibid) and the Western Mountains, Valleys, and Coast Supplement (ACOE 2010). In most cases, soils with a matrix chroma of 1, and mottled soils with a matrix chroma of 2 or less are considered to meet the hydric soil criteria. Soils that do not have low matrix chromas but are inundated or saturated within 12 inches of the surface are considered to be hydric when those conditions persist for at least 5 percent of the growing season (14 consecutive days). Topography and soil unit boundaries can be found on **Figures 3a-d**.

4.2.2 Hydrology

Indicators of wetland hydrology were noted, such as the presence of surface soil cracks, sediment deposits, sub-surface soil characteristics, and water-stained vegetation/thatch. To the extent possible, hydrological connectivity was investigated throughout the Study Area and surrounding habitats. This delineation was conducted in May, which experienced below average precipitation, and followed a winter and early spring that overall experienced below average precipitation (see **Section 2.2** and **Table 1** above). Based on plant

phenology, climate conditions appeared to be suitable for assessing wetland habitats, as perennial and annual seasonal wetland plant cover was conspicuous throughout the Study Area.

4.2.3 Vegetation

At each delineation data point, all herbaceous plant species within a five-foot radius were identified and a visual estimate of percent coverage for each species was recorded. The nearest trees and shrubs were accounted for at distances of 25 and 15 feet, respectively, as appropriate for the site. Plant species and strata cover estimations were calibrated using CNPS percent cover templates—see the following website: http://www.cnps.org/cnps/vegetation/pdf/percent_cover_diag-cnps.pdf.

The indicator status of each species was then checked using the most recent ACOE National Wetland Plant List—Version 3.4 (Army Corps, 2018). Indicator status categories are as follows:

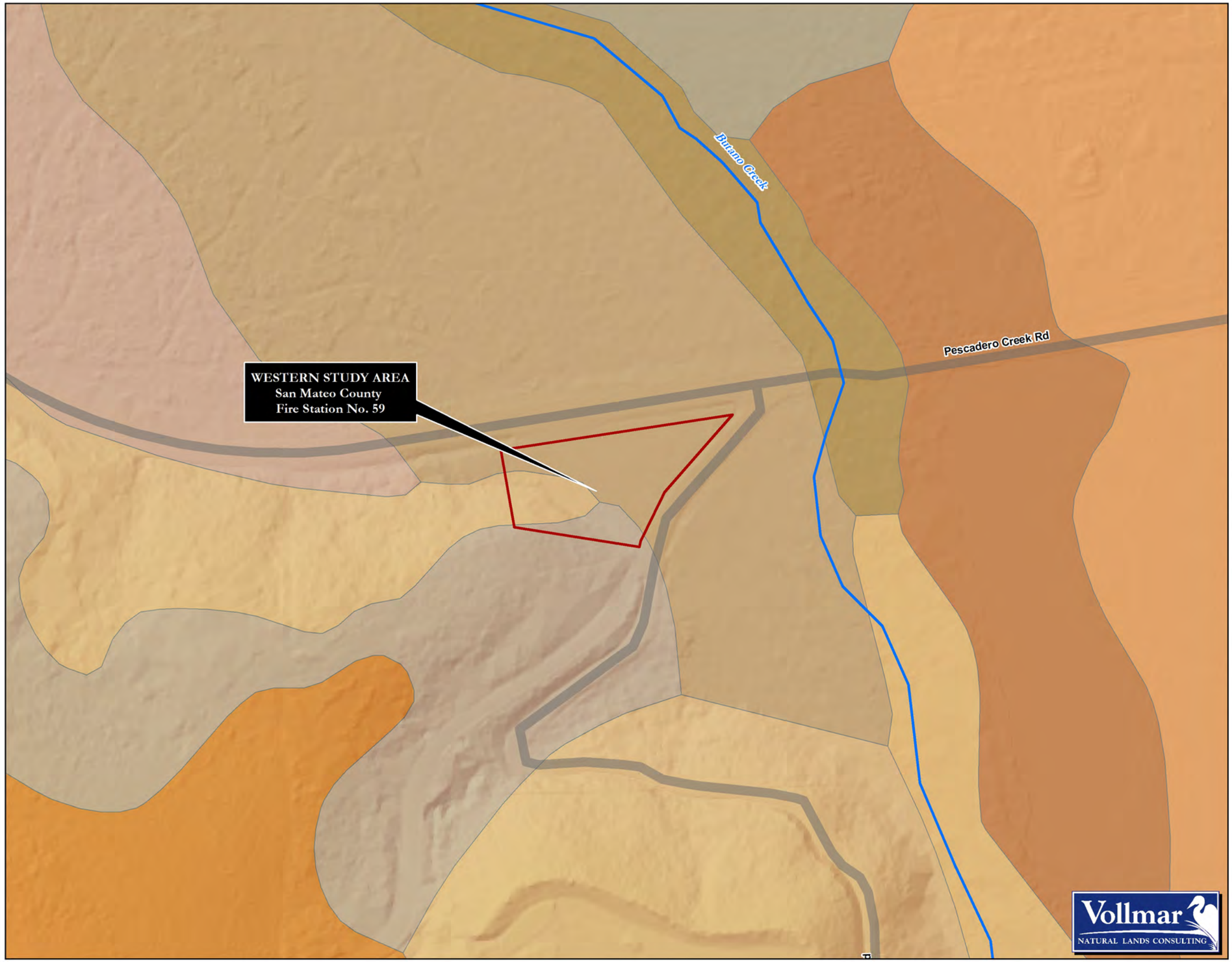
OBL = obligate wetland; >99% probability of occurring in a wetland
FACW = facultative wetland; 67%-99% probability of occurring in a wetland
FAC = facultative; 33%-67% probability of occurring in a wetland
FACU = facultative upland; 1%-33% probability of occurring in a wetland
UPL = obligate upland; <1% probability of occurring in a wetland
NL = not listed (plants not listed in Lichvar et al. [2018], including some known to occur occasionally or primarily in wetlands). Note: unlisted taxa are included as UPL on the delineation data forms included in **Appendix B**.

The wetland plant cover criterion is met when the vegetation passes the dominance test: greater than 50 percent of the dominant plants are designated as OBL, FACW, or FAC wetland indicators. The ACOE defines dominant plant species as those that, when included in descending order of their percent cover, together sum up to 50 percent of the relative cover in their stratum (tree, sapling/shrub/subshrub, herb, or woody vine). In addition, all species with at least 20 percent relative coverage of the total canopy within a stratum are always counted as dominants. All scientific and common plant names correspond to Baldwin et al. (2012) and/or the Calflora database (2021).

If the dominance test is not passed, vegetation can be considered hydrophytic if it meets the requirements of the prevalence index, morphological adaptations, or problematic wetland situations (ACOE 2008).

FIGURE 3a
Topography and Soil Units

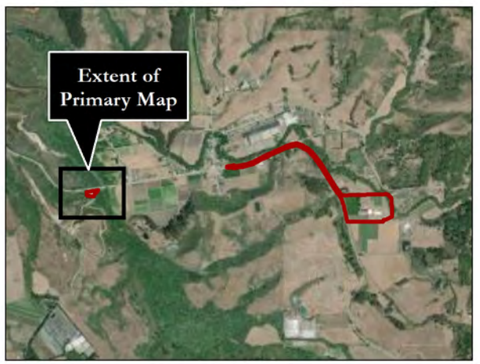
CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects
San Mateo County, California



Project and Study Area (39.306 ac)

Road

Stream



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(1 in. = approx. 166 feet at tabloid layout)

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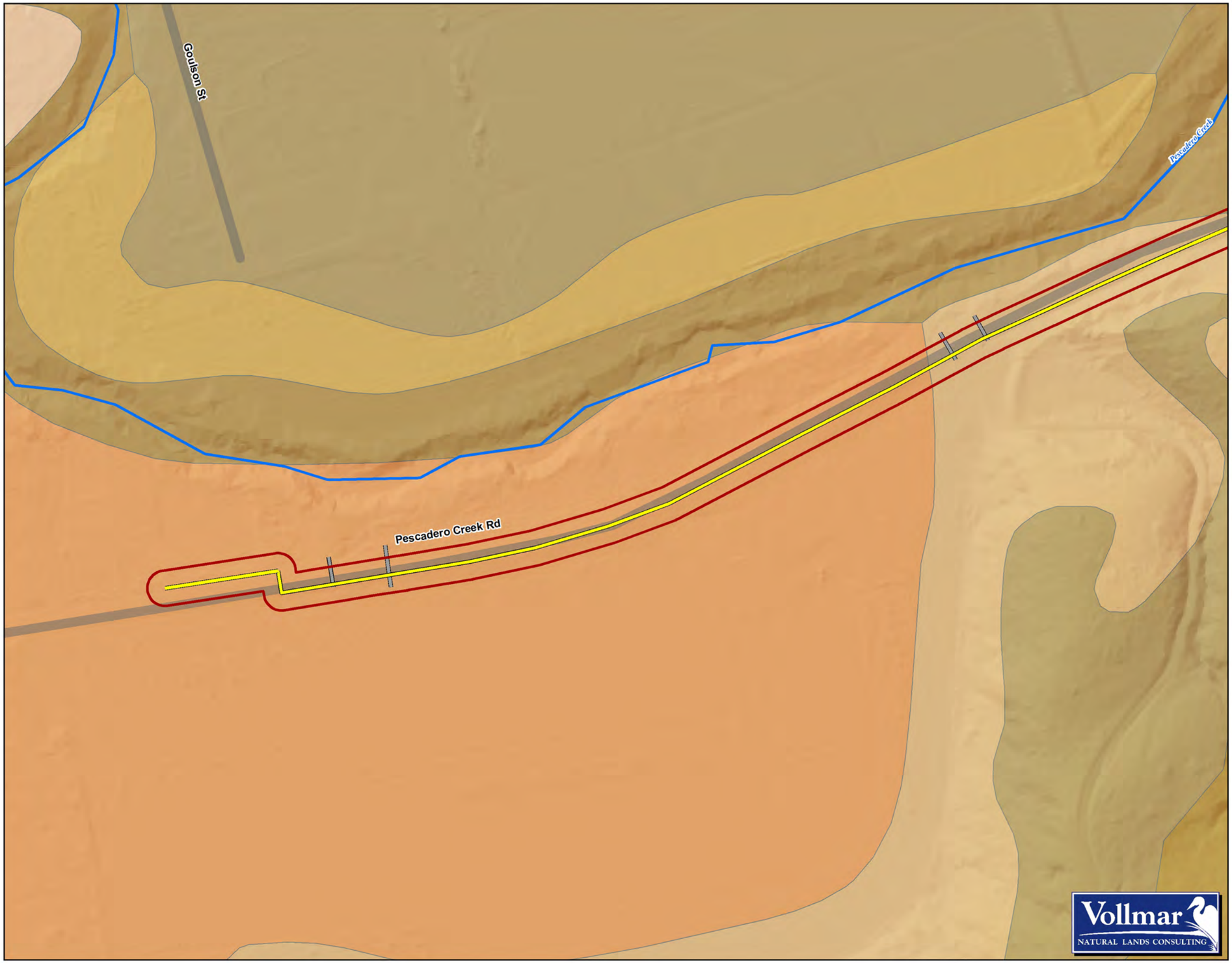
0 75 150 300 Feet

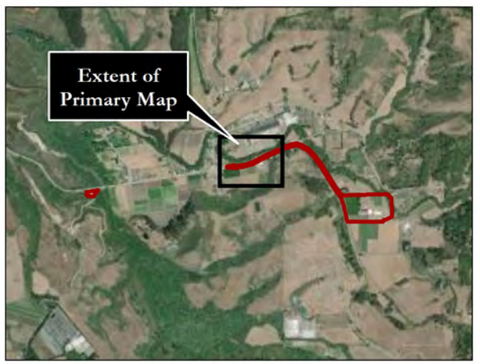
Data Sources: LSA, 2017 | TIGER, 2012 | DWR, 2001
GGNRA, 2020 | ESRI/DigitalGlobe, 2019
GIS/Cartography by: Ivy Poisson, Jan. 2021
Map File: 484_Soils_B-P_2021-0517.mxd

FIGURE 3b
Topography and Soil Units

CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects
San Mateo County, California



- Project and Study Area (39.306 ac)
- Road
- Proposed Pipe Alignment
- Existing Water Conveyence Structures
- Stream



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(1 in. = approx. 166 feet at tabloid layout)

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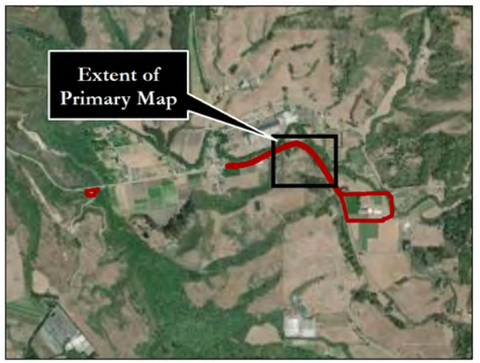
0 75 150 300 Feet

Data Sources: LSA, 2017 | TIGER, 2012 | DWR, 2001
GGNRA, 2020 | ESRI/DigitalGlobe, 2019
GIS/Cartography by: Ivy Poisson, Jan. 2021
Map File: 484_Soils_B-P_2021-0517.mxd

FIGURE 3c
Topography and Soil Units

CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects San Mateo County, California

- Project and Study Area (39.306 ac)
- Road
- Proposed Pipe Alignment
- Existing Water Conveyence Structures
- Stream
- Roadside Drainage Ditch



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(1 in. = approx. 166 feet at tabloid layout)

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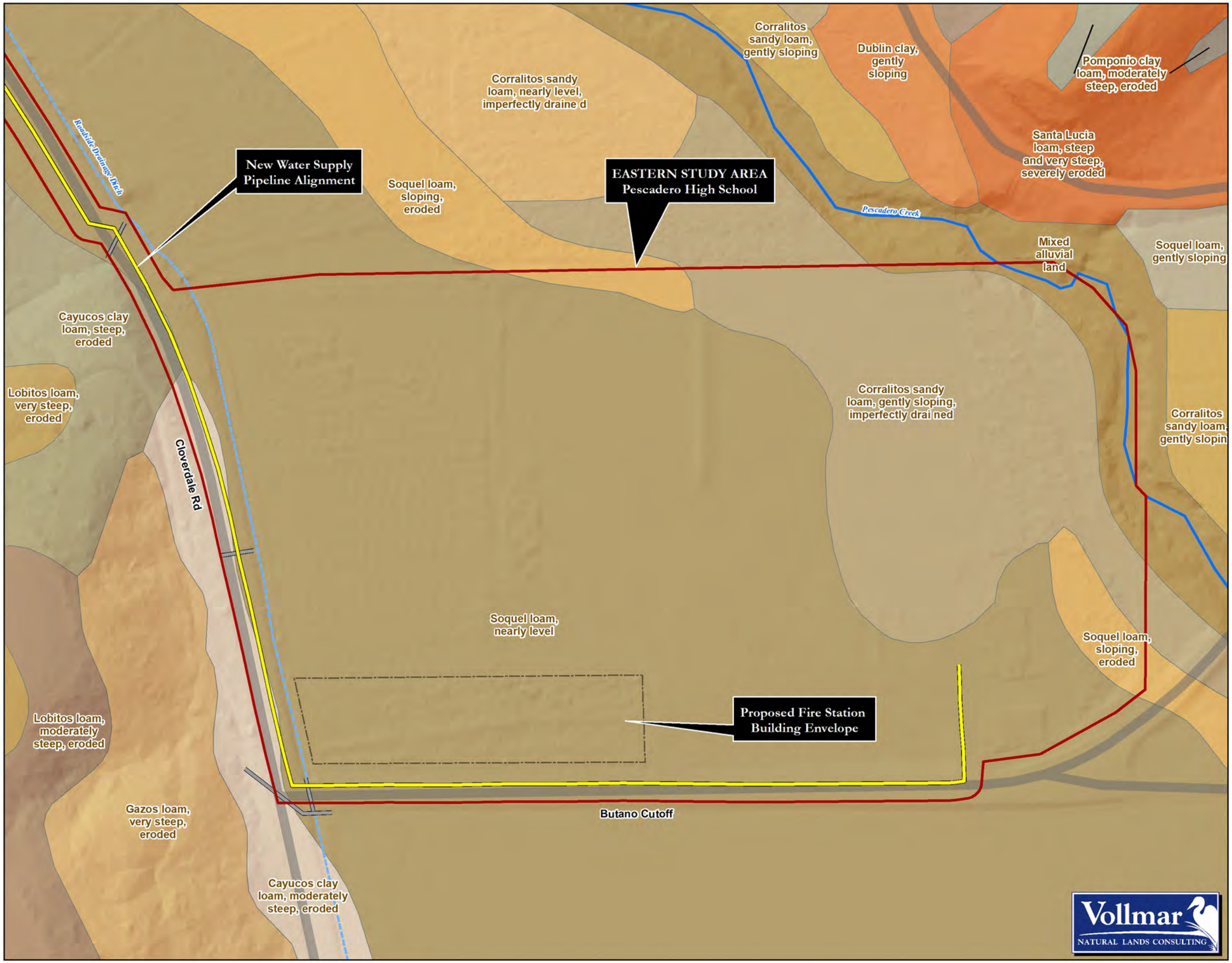
0 75 150 300 Feet

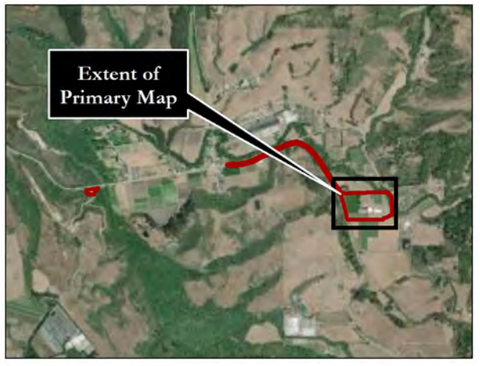
Data Sources: LSA, 2017 | TIGER, 2012 | DWR, 2001
GGNRA, 2020 | ESRI/DigitalGlobe, 2019
GIS/Cartography by: Ivy Poisson, Jan. 2021
Map File: 484_Soils_B-P_2021-0517.mxd

FIGURE 3d
Topography and Soil Units

CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects
San Mateo County, California



- Project and Study Area (39.306 ac)
- Road
- Proposed Pipe Alignment
- Existing Water Conveyence Structures
- Stream
- Roadside Drainage Ditch



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(1 in. = approx. 166 feet at tabloid layout)

0 25 50 100 Meters

0 75 150 300 Feet

Data Sources: LSA, 2017 | TIGER, 2012 | DWR, 2001
GGNRA, 2020 | ESRI/DigitalGlobe, 2019
GIS/Cartography by: Ivy Poisson, Jan. 2021
Map File: 484_Soils_B-P_2021-0517.mxd

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5.0 RESULTS

5.1 Overview

Within the 39.306-acre Study Area, the delineation identified a total of 2.123 acres of potentially jurisdictional wetlands. This includes 0.204 acre of emergent channel and 1.919 acre of riparian habitat. These features were determined to be outside of the building envelope for the fire station, and outside of the proposed pipeline alignment.

Table 2 below lists each of these habitat types, and all features are mapped on **Figure 4d**, which also provide acreage values for the individual features. General conditions, as well as vegetation, soil, and hydrology indicators of each wetland feature type are described below. **Appendix A** provides representative photographs of the habitats, and **Appendix B** presents the delineation data forms, of which there are 5, that were recorded throughout the Study Area.

TABLE 2. Acreage of Mapped Potential Jurisdictional Waters

Habitat Type	Cowardin Code	Agency Jurisdiction				Acreage
		Army Corps	CDFW	RWQCB	CCC	
Wetlands						
Riparian Habitat	R5	X	X	X	X	1.919
Emergent Channel	PEM1Ed	X		X	X	0.204
					TOTAL	**2.123**

5.2 Potential Jurisdictional Waters

5.2.1 Riparian Habitat

Feature RP01. This feature is 1.191 acre, and is habitat associated with Pescadero Creek located in the northeastern corner of the Pescadero High School property (see **Figure 4d**). Pescadero Creek is a perennial stream with a canopy of mature riparian vegetation and steep banks, approximately 10-20 feet from top of bank to the water level. The riparian habitat supported by Pescadero Creek features bed and bank topography and a semi-closed canopy with dense understory, consisting of a mix of both native and non-native plant species. Pescadero Creek flows in a northwesterly direction for 3.5 miles, then empties into the Pacific Ocean (a territorial sea). Delineation data points 01 and 02 are representative points for the riparian area, with point 01 representing upland conditions outside of the riparian habitat, and point 02 representing riparian habitat (**Figure 4d**).

The riparian corridor of Pescadero Creek is characterized by Arroyo willow (*Salix lasiolepis*, FACW) as a codominant species with Fremont's cottonwood (*Populus fremontii*). Species observed in the riparian understory include: cape ivy (*Delareia odorata*, FAC), poison hemlock (*Conium maculatum*, FAC), and giant horsetail (*Equisetum telmateia*, FACW). Some weedy upland species were intermixed, and include wild radish (*Raphanus sativus*, UPL), ripgut brome (*Bromus diandrus*, UPL), and black mustard (*Brassica nigra*, UPL). California blackberry (*Rubus ursinus*, FACU) is also commonly seen in the understory.

The paired delineation points were taken within the Corralitos soil series (**Figure 3d**). Both sample points had the same soil characteristics: a color of 10Y 3/2, no redoximorphic features, no restrictive layers, clay loam texture, and uniform soil profile. No hydric soil indicators were observed for either delineation point.

No indicators of wetland hydrology were observed at either delineation point. However, since the Study Area is located in a Coastal Zone (as mentioned previously), only one parameter is needed to be considered a wetland; the presence of hydrophytic vegetation at point 02 satisfies this condition.

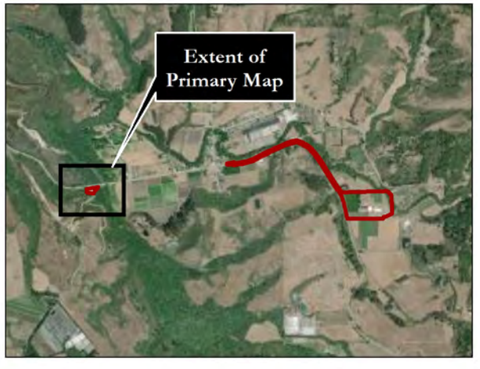
FIGURE 4a
Map of Potential Jurisdictional Waters

CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects
San Mateo County, California

Project and Study Area (39.306 ac)

Road

Stream



N

W E

S

1:2,000

(1 in. = approx. 166 feet at tabloid layout)

0 25 50 100 Meters

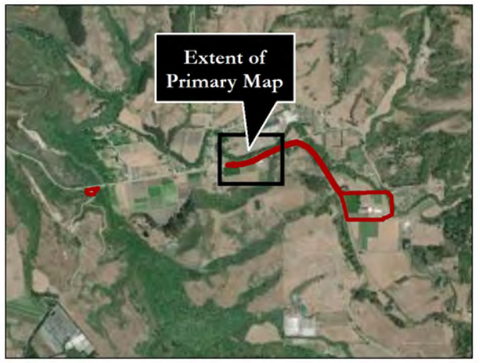
0 75 150 300 Feet

Data Sources: LSA, 2017 | TIGER, 2012 | DWR, 2001
GGNRA, 2020 | ESRI/DigitalGlobe, 2019
GIS/Cartography by: Ivy Poisson, Jan. 2021
Map File: 484_WD_B-P_2021-0526.mxd

FIGURE 4b
Map of Potential Jurisdictional Waters

CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects
San Mateo County, California

- Project and Study Area (39.306 ac)
- Road
- Proposed Pipe Alignment
- Existing Water Conveyence Structures
- Stream



N
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1:2,000
(1 in. = approx. 166 feet at tabloid layout)

0 25 50 100 Meters

0 75 150 300 Feet

Data Sources: LSA, 2017 | TIGER, 2012 | DWR, 2001
GGNRA, 2020 | ESRI/DigitalGlobe, 2019
GIS/Cartography by: Ivy Poisson, Jan. 2021
Map File: 484_WD_B-P_2021-0526.mxd

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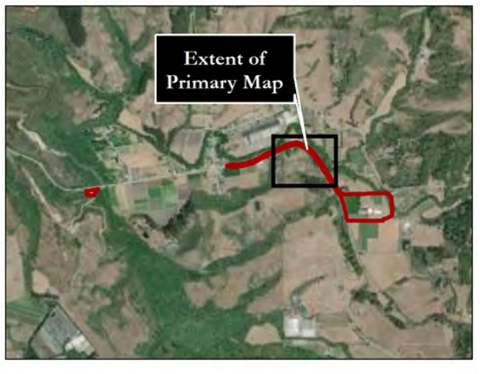
FIGURE 4c
Map of Potential Jurisdictional Waters

CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects
San Mateo County, California

- Project and Study Area (39.306 ac)
- Road
- Proposed Pipe Alignment
- Existing Water Conveyence Structures
- Stream
- Roadside Drainage Ditch



N
W E
S

1:2,000
(1 in. = approx. 166 feet at tabloid layout)

0 25 50 100 Meters

0 75 150 300 Feet

Data Sources: LSA, 2017 | TIGER, 2012 | DWR, 2001
GGNRA, 2020 | ESRI/DigitalGlobe, 2019
GIS/Cartography by: Ivy Poisson, Jan. 2021
Map File: 484_WD_B-P_2021-0526.mxd

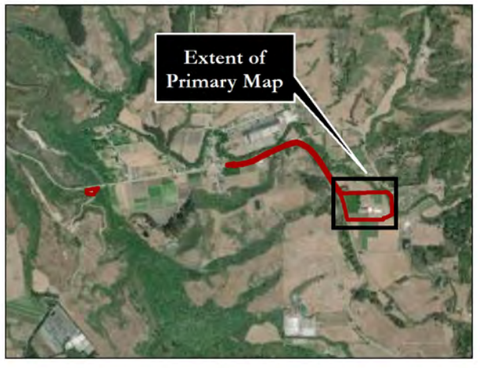
FIGURE 4d
Map of Potential Jurisdictional Waters

CSA-11 Water Service Extension and Pescadero Fire Station (Station 59) Projects
San Mateo County, California

- Project and Study Area (39.306 ac)
- Road
- Proposed Pipe Alignment
- Existing Water Conveyence Structures
- Stream
- Roadside Drainage Ditch
- Riparian Canopy Dripline
- Sample Points

Potentially Jurisdictional Features

- Emergent Channel (0.204 ac / 860 linear ft)
- Riparian (1.919 ac)



N
W E
S

1:2,000
(1 in. = approx. 166 feet at tabloid layout)

0 25 50 100 Meters

0 75 150 300 Feet

Data Sources: LSA, 2017 | TIGER, 2012 | DWR, 2001
GGNRA, 2020 | ESRI/DigitalGlobe, 2019
GIS/Cartography by: Ivy Poisson, Jan. 2021
Map File: 484_WD_B-P_2021-0526.mxd

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Tributaries are categorically listed as waters of the United States according to the 2020 Navigable Waters Protection Rule. Feature RP01 is likely to fall under Army Corps jurisdiction since Pescadero Creek contributes surface water to the Pacific Ocean, a territorial sea. Pescadero Creek would be classified as a perennial/intermittent stream, or tributary. Feature RP01 is also potentially considered a Water of the State by CDFW, RWQCB, and CCC.

5.2.2 Emergent Channel

Feature EC01. This feature is part of the roadside drainage ditch that connects to Pescadero Creek approximately ¼ mile north of the high school (see **Figure 4c** and **4d**). Delineation data point 05 represents the emergent channel habitat and point 04 is the paired upland point.

This feature supports emergent wetland species, with cattails (*Typha latifolia*, OBL) being dominant throughout the channel. Common rush (*Juncus effusus*, FACW) and giant horsetail was also observed to be growing in the channel, higher up along the edge of the feature.

Points 04 and 05 were taken within the Soquel soil series (**Figure 3d**). Point 05, located within the emergent channel, featured yellower soils, colored at 2.5YR 3/1. In contrast, the soil at point 04 was 10YR 2/1. The soil sample collected at the wetland point (Point 05) also contained higher organic materials; the soil was textured as mucky clay loam. This is also the only sample point within the Study Area that had hydric soil indicators: histosol (A1), black histic (A3), and hydrogen sulfide (A4). Both soil samples featured no redoximorphic features, no restrictive layers, and had a uniform soil profile.

Wetland hydrology indicators observed at point 05 include High Water Table (A2), Saturation (A3), Hydrogen Sulfide Odor (C1) as primary indicators, with Geomorphic Position (D2) as secondary indicator.

Three out of three hydric indicators (vegetation, soils, and hydrology) were present for this feature, which satisfies the one-parameter wetland definition for features in Coastal Zones.

This feature is potentially a Water of the U.S. under Army Corps jurisdiction, since this conveys surface water to Pescadero Creek, which is also potentially a water of the U.S. as described above. While ditches are typically categorically excluded as waters of the U.S., the exception is if there the ditch has water flowing more than in direct response to a single precipitation event in a typical year, which is the case for feature EC01. Since there was saturation and high water table observed within this channel (during a drier than normal year), it is reasonable that there would be intermittent surface water flow in a typical year. This feature is also potentially a Water of the State under RWQCB and CCC jurisdiction.

5.2.3 Upland Agricultural Features

Upland agricultural features are located on a field that gently slopes down towards the west, in the direction of the roadside drainage ditch. At the time of the site visit, these features were located on a recently tilled/fallow field, on a rosemary field, and on a field that was planted with fava beans (*Vicia faba*). A review of historical aerial imagery shows that this area is routinely disturbed as part of the ongoing agricultural operations. Delineation data point 03 is a representative point for this feature type (particularly: soils and hydrology), and this point was taken within the building envelope for the fire station.

The vegetation at point 03 is representative of cultivated/disturbed conditions, located approximately halfway across the proposed building envelope for the fire station. Species observed include fava bean (UPL), growing with other species characteristic of disturbed habitats like scarlet pimpernel (*Lysimachia arvensis*, FAC) and mustard (*Brassica nigra*, UPL). This point does not support wetland vegetation.

Point 03 was taken within the Soquel soil series (**Figure 3d**). The soil was textured to be silty clay loam, had a color of 10Y 2/1, had no redoximorphic features, had no restrictive layers, and had a uniform soil profile. No hydric soil indicators were observed.

At the time of the site visit (both on December 7, 2020 and May 7, 2021), there were no indications of direct-surface water connection from the agricultural features to the emergent channel feature to the west; these features are separated by an at-grade, unpaved roadway. Overall, there were no hydric indicators (vegetation, soils, and hydrology) present for these agricultural features.

This is an upland feature that would likely not be subject to federal, state, or county jurisdiction.

5.3 Summary

All 2.123 acres of wetlands identified within the 36.306-acre Study Area are potentially jurisdictional Waters of the U.S.; this consists of 1.919 acre of riparian habitat and 0.204 acre of emergent channel (see **Section 5.1**, **Table 2**). Waters of the U.S. delineated within the Study Area would be regulated by the ACOE under Section 404 of the Clean Water Act. The riparian habitat would also be regulated under Section 10 of the Rivers and Harbors Act.

These features are also potentially under state jurisdiction, with the riparian habitat potentially regulated by CDFW, RWQCB, and CCC. The emergent channel is potentially regulated by RWQCB and CCC.

The results of this delineation are preliminary and must be reviewed and verified in writing by the ACOE to be considered an official delineation.

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APPENDIX A:

REPRESENTATIVE PHOTOGRAPHS OF THE STUDY AREA

(Recorded May 7, 2021)

Representative Photographs of the Study Area

Point 01, facing south-southeast. Point 02 is located to the left of shovel, within riparian canopy.

Point 03, facing southwest, located within fava bean field.

Representative Photographs of the Study Area

Point 04, facing west. Cloverdale Road is shown in the background, with emergent channel in the middle of the photo, and upland edge of channel in the foreground (comprised of California blackberry).

Point 05, facing west. Pure stand of cattails growing in emergent channel.

Representative Photographs of the Study Area

Giant horsetail growing among upland plant species, in an upland area outside of the Pescadero Creek riparian corridor. This photo was taken in an area that was not subject to recent soil/veg disturbance, and may represent mesic, but not wetland, conditions. Equisetum species are known to colonize disturbed areas and may be weedy, indicating that it may not be the best indicator for wetland, particularly if it's the only wetland species occurring.

APPENDIX B:

WETLAND DELINEATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Pescadero Pipeline & Fire Station City/County: Pescadero, San Mateo Co Sampling Date: May 7, 2021
Applicant/Owner: Pescadero Unified School District, City of Pescadero State: CA Sampling Point: 01
Investigator(s): Ivy Poisson, VNLC Section, Township, Range: S11, T08S, R05W
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%
Subregion (LRR): A Lat: 4122572 Long: 556472 Datum: NAD 83
Soil Map Unit Name: Corralitos sandy loam, gently sloping, imperfectly drained NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No X	**Is the Sampled Area within a Wetland?**	**Yes ___ No X**
Hydric Soil Present?	Yes ___	No X		
Wetland Hydrology Present?	Yes ___	No X		

Remarks: Second consecutive year of drier than normal conditions. Point located outside of riparian area/top of bank; paired upland point for sampling point 02. Undisturbed area compared to adjacent fallow fields that have been mowed recently.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Conium maculatum*	40	Y	FAC
2. *Brassica nigra*	20	Y	UPL
3. *Silybum marianum*	10	N	UPL
4. *Raphanus sativus*	5	N	UPL
5. *Equisetum telmateia*	5	N	FACW
6. *Festuca perennis (Lolium perenne)*	5	N	FAC
7. *Bromus diandrus*	4	N	UPL
8. *Melilotus indicus*	1	N	FACU
9.			
10.			
11.			
	90	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	45	x 3 =	135
FACU species	1	x 4 =	4
UPL species	39	x 5 =	195
Column Totals:	90 (A)		344 (B)

Prevalence Index = B/A = 3.82

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks:
Ruderal vegetation characteristic of disturbed areas. Vegetation appears to be the least disturbed near this survey plot, which is why this was selected as representative point.

SOIL

Sampling Point: 01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18”	10YR 3/2	100					clay loam	friable soils

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: none

Depth (inches): N/A

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks:
Uniform soil horizon throughout 18” soil profile. Expected of disturbed/developed site with potential imported fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches):	N/A
Water Table Present?	Yes	___	No	X	Depth (inches):	N/A
Saturation Present? (includes capillary fringe)	Yes	___	No	X	Depth (inches):	N/A

Wetland Hydrology Present? **Yes** ___ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
No wetland hydrology indicators observed

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Pescadero Pipeline & Fire Station City/County: Pescadero, San Mateo Co Sampling Date: May 7, 2021
Applicant/Owner: Pescadero Unified School District, City of Pescadero State: CA Sampling Point: 02
Investigator(s): Ivy Poisson, VNLC Section, Township, Range: S11, T08S, R05W
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 1-3%
Subregion (LRR): A Lat: 4122574 Long: 556477 Datum: NAD 83
Soil Map Unit Name: Corralitos sandy loam, gently sloping, imperfectly drained NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is the Sampled Area within a Wetland? **Yes X No ___**

Remarks: Point located just within the edge of the riparian canopy drip line. Hydric soil and wetland hydrology indicators not observed; however, this satisfies the one-parameter wetland for coastal zones because of the presence of wetland vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	80	Y	FACW
2.			
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Delairea odorata*	30	Y	FAC
2. *Conium maculatum*	20	Y	FAC
3. *Bromus diandrus*	10	N	UPL
4. *Equisetum telmateia*	5	N	FACW
5. *Raphanus sativus*	5	N	UPL
6. *Rubus ursinus*	4	N	FACU
7. *Brassica nigra*	1	N	UPL
8.			
9.			
10.			
11.			
	75	= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	50	x 3 =	150
FACU species	4	x 4 =	16
UPL species	16	x 5 =	80
Column Totals:	75 (A)		256 (B)

Prevalence Index = B/A = 3.41

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X No ___**

Remarks:
Survey plot is more representative of dry, outer edge of riparian habitat.

SOIL

Sampling Point: 02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18”	10YR 3/2	100					clay loam	friable soils

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: none

Depth (inches): N/A

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks:
Same soil type found at point 01. Uniform soil horizon throughout 18” soil profile. Expected of disturbed/developed site with potential imported fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): N/A

Water Table Present? Yes ___ No X Depth (inches): N/A

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): N/A

Wetland Hydrology Present? **Yes** ___ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Pescadero Pipeline & Fire Station City/County: Pescadero, San Mateo Co Sampling Date: May 7, 2021
Applicant/Owner: Pescadero Unified School District, City of Pescadero State: CA Sampling Point: 03
Investigator(s): Ivy Poisson, VNLC Section, Township, Range: S11, T08S, R05W
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): none Slope (%): 1-3%
Subregion (LRR): A Lat: 4122502 Long: 556111 Datum: NAD 83
Soil Map Unit Name: Soquel loam, nearly level NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
Are Vegetation X , Soil X , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No X	**Is the Sampled Area within a Wetland?**	**Yes ___ No X**
Hydric Soil Present?	Yes ___	No X		
Wetland Hydrology Present?	Yes ___	No X		

Remarks: Second consecutive year of drier than normal conditions. Located in cultivated field consisting of fava beans (*Vicia faba).* Elevation is slightly higher on the eastern end of the cultivated field; the field slopes down towards the roadside drainage ditch.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Vicia faba*	16	Y	UPL
2. *Lysimachia arvensis*	2	N	FAC
3. *Brassica nigra*	2	N	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	18	x 5 =	90
Column Totals:	20 (A)		96 (B)

Prevalence Index = B/A = 4.8

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks:
Located in cultivated field consisting of fava beans (*Vicia faba),* but with upland plant species growing among fava beans. Beans may be planted as cover crop/nitrogen fixer. Rosemary fields are located to the north. Vegetation is regularly disturbed for ag.

SOIL

Sampling Point: 03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18”	10YR 2/1	100					silty clay loam	slightly blocky

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: none

Depth (inches): N/A

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks:
Uniform soil horizon throughout 18” soil profile. Expected of disturbed/developed site that is regularly tilled for crops. Soil was moist (not saturated) below 2-4”. Dark soils may make detection of redox difficult; soil ped was left out for over 30 minutes and still no redox features were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches):	N/A
Water Table Present?	Yes	___	No	X	Depth (inches):	N/A
Saturation Present? (includes capillary fringe)	Yes	___	No	X	Depth (inches):	N/A

Wetland Hydrology Present? **Yes** ___ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
No wetland hydrology indicators observed. Sample point located at slightly higher elevation compared to paired wetland point.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Pescadero Pipeline & Fire Station City/County: Pescadero, San Mateo Co Sampling Date: May 7, 2021
Applicant/Owner: Pescadero Unified School District, City of Pescadero State: CA Sampling Point: 04
Investigator(s): Ivy Poisson, VNLC Section, Township, Range: S11, T08S, R05W
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): convex Slope (%): 5-7%
Subregion (LRR): A Lat: 4122498 Long: 556060 Datum: NAD 83
Soil Map Unit Name: Soquel loam, nearly level NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No X	**Is the Sampled Area within a Wetland?**	**Yes ___ No X**
Hydric Soil Present?	Yes ___	No X		
Wetland Hydrology Present?	Yes ___	No X		

Remarks: Second consecutive year of drier than normal conditions. Point taken at the edge of emergent channel feature.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Rubus ursinus*	50	Y	FACU
2. *Equisetum telmateia*	10	N	FACW
3. *Typha latifolia*	5	N	OBL
4. *Erodium cicutarium*	5	N	UPL
5. *Juncus effusus*	2	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	72	= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 28

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	12	x 2 =	24
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	5	x 5 =	25
Column Totals:	72 (A)		254 (B)

Prevalence Index = B/A = 3.52

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No X

Remarks:
Although this survey plot indicates mesic conditions (presence of FACW and OBL plants), the dominance of Rubus ursinus at the edge of the emergent ditch feature and indicates transition to upland.

SOIL

Sampling Point: 04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18”	10YR 2/1	100					silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: none

Depth (inches): N/A

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks:
Less recently disturbed soils along the top of drain slope share same characteristics as soils found at points 03 and 04.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): N/A

Water Table Present? Yes ___ No X Depth (inches): N/A

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): N/A

Wetland Hydrology Present? **Yes** ___ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Pescadero Pipeline & Fire Station City/County: Pescadero, San Mateo Co Sampling Date: May 7, 2021
Applicant/Owner: Pescadero Unified School District, City of Pescadero State: CA Sampling Point: 05
Investigator(s): Ivy Poisson, VNLC Section, Township, Range: S11, T08S, R05W
Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): concave Slope (%): 1-3%
Subregion (LRR): A Lat: 4122498 Long: 556058 Datum: NAD 83
Soil Map Unit Name: Soquel loam, nearly level NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	
Hydric Soil Present?	Yes	X	No	
Wetland Hydrology Present?	Yes	X	No	

Is the Sampled Area within a Wetland? Yes X No ___

Remarks: Second consecutive year of drier than normal conditions. Point taken within emergent channel in roadside ditch. Roadside ditch drains to Pescadero Creek, a TNW. Width of emergent channel is approx. 6-8 feet across.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Typha latifolia*	90	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:		(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ___

Remarks:
Pure stand of cattails in emergent channel

SOIL

Sampling Point: 05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18”	2.5YR 3/1	100					mucky clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- X Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: none

Depth (inches): N/A

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches):	N/A
Water Table Present?	Yes	X	No	___	Depth (inches):	18”
Saturation Present? (includes capillary fringe)	Yes	X	No	___	Depth (inches):	18”

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None

Remarks:

Soil pit started backfilling with water. Steep/abrupt change in topography from upland point (05) to wetland point (06).

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: August 8, 2022

TO: Agricultural Advisory Committee

FROM: Sophie Mintier, Interim Assistant Community Development Director

SUBJECT: CSA-11 Extension and Pescadero Fire Station 59 Project

County File Number: PLN 2021-00056

BACKGROUND

At the Agricultural Advisory Committee (AAC) meeting on June 13, 2022, the AAC received a presentation on the CSA-11 Extension and Pescadero Fire Station 59 project by Melissa Ross-Perkins. The Agricultural Advisory Committee members posed a number of questions and information requests requiring follow-up. Responses to these questions and information requests are provided below and in the attachments.

DISCUSSION

1. *Provide the Pescadero Fire Station Replacement Steering Committee letter for AAC review.*

Please see Attachment A, Steering Committee Recommendation, December 8, 2016.

2. *Review the septic field for the replacement fire station for conflicts with the agricultural field to the north.*

The replacement fire station conceptual designs were reviewed by Greg Smith from San Mateo County Environmental Health Services. His response is provided below.

"While there are no setbacks specified from onsite wastewater treatment systems (OWTS), in our county or in other counties that I am aware of, it is generally considered that 10 to 20 feet separation for edible root crops is adequate. In this case, the outer bounds of the proposed effluent distribution trenches are approximately 20 feet from the existing agricultural area to the north (where they have been growing rosemary for as long I can remember).

For this project, I see no conflicts between the proposed OWTS location and the adjacent agricultural fields." (Source, email from Gregory J. Smith, July 14, 2022)

3. *Is it possible to separate the fire station and connection of CSA-11 in case either project does not go through?*

If the annexation of the school district's parcel and extension of CSA-11's water service to the school were not to be completed for any reason, the replacement Pescadero Fire Station would fail for lack of access to potable water and sufficient fire flows.

If the replacement Pescadero Fire Station were not completed, no current or proposed policies in the Local Coastal Program or other regulations would technically prevent the CSA-11 waterline extension to Pescadero Middle/High School to proceed from a regulatory standpoint.

However, while the engineering and construction of the CSA-11 extension is being funded by the State Water Boards, several of the processes and approvals required for the waterline extension rely on the involvement and participation of the County of San Mateo, including amendment of the Local Coastal Program, annexation of the school site to the CSA-11 district, Coastal Development Permits and building permits, and project management and coordination with numerous County departments and external stakeholders. At present, the project design and scope both assume the existence of the school and the fire station as users of the water line. Proceeding solely with the annexation of the school parcel into CSA-11 and designing a water line that serves solely the school may involve substantial changes in the project, including the identity of the applicant and project proponents, which could delay the project and potentially cause it to fail. Moreover, if the replacement fire station were not to move forward at the school site, the County would need to identify and acquire another site and redesign the fire station, including provision of water supply, which could also impact the project design for the CSA-11 annexation and construction and potentially impact the whole CSA-11 water system in unanticipated ways. Thus, changing the location of and plans for the fire station would divert County resources, including funding and staff time and could delay, prolong or even alter the CSA-11 extension project to the school.

4. *Provide the current status of the CSA-11 wells.*

The Department of Public Works provides monthly updates to the Pescadero Municipal Advisory Council on the surface water level elevation for CSA-11 Well No.1 and Well No.3 (which is the primary well). Well No.2 has always served as a standby well for use in case Well No.1 is out of service, and so is not included in the monthly updates. The latest update for July 12, 2022 is included as Attachment B.

The aquifer that serves CSA-11 has been in overdraft since 1992, meaning the rate of drawdown exceeds the rate of replenishment. This condition of overdraft is expected to continue, with or without the addition of the replacement fire station and school to the CSA-11 system.

According to the Pescadero (CSA-11) Water Supply Yield and Sustainability Study (Todd Groundwater, 2021, https://www.smcgov.org/media/127971/download?inline=),

the near-term impact of adding the fire station and school to CSA-11 would be minimal. Total new potable water demand from the school is estimated to be a 4.3% increase over existing use and for the replacement fire station to be an overall 0.04% increase (since current usage at the existing fire station will be replaced with the new fire station, and the existing fire station will only be used in emergencies).

In summary, the Todd Groundwater report found the CSA-11 system has sufficient capacity to supply existing demand and additional demand from addition of the fire station and school for the next 30 to 40 years, a similar time horizon to many public water systems in California. The report also recommended beginning to identify and evaluate options for additional water supplies beyond the next 30 to 40 years.

5. *What are the major and minor incidents that Pescadero Fire Station 59 responds to?*

Please see the summary report for Station 59 calls by incident type for the period July 1, 2021 to June 30, 2022 included as Attachment C.

6. *How much prime agricultural land is in the Pescadero community?*

As defined by the Local Coastal Program, Prime Agricultural Lands are Grade 1, Classes 1-3. There is a total of 3,894 acres of Prime Agricultural Land within Pescadero. This includes 246 acres of Class 1, 2,030 acres of Class 2, and 1,618 acres of Class 3 soil. Attachment D shows the location of these soils in Pescadero.

ATTACHMENTS

A. Fire Station Steering Committee Recommendation, December 8, 2016
B. DPW Project Update for PMAC, July 12, 2022
C. Pescadero Fire Station 59–Major and Minor Incidents, July 1, 2021-June 30, 2022
D. Map: Prime Agricultural Land Within Pescadero

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT A

Date: December 8, 2016

To: The Honorable Don Horsley

From: Steering Committee, Pescadero Fire Station Replacement Project

Subject: Site Selection Recommendation

Recommendation: Site D [High School] appears to be the most favorable location for the replacement fire station. Site B [Corp Yard] should remain in consideration as an alternative.

Background:

In August, 2013, the Board of Supervisors accepted the recommendation of the County Manager to authorize $6 million in Measure A funding to construct a new 7,880 square foot facility on a new site to replace the existing barracks and apparatus building for County Fire Station #59. Built in the mid-1960s, the current facility has a number of structural issues and is constrained by the small parcel size and location in a floodzone.

In July 2014, residents of the greater Pescadero area served by this station requested that the County include more community members directly in the site selection and facility design process to ensure that the new facility would adequately serve the area's needs for many years to come. After a number of public meetings, the Fire Station Steering Committee was formed in August, 2015 to help County Staff gather input and assess information necessary to the project's success.

The primary mission of the Steering Committee is to facilitate clear, complete transfers of information between the community and County staff, to advocate for the community's desires, and to participate in decisions which have the potential to change the landscape and vibrancy of Pescadero for generations to come. The Committee has taken great care to review County provided documents, to ask detailed questions, and to consider the opinions and preferences of residents in each phase of this project, prior to issuing this recommendation. The committee has also identified several areas for continued discussion, which are attached to this recommendation.

Discussion:

The majority of Steering Committee members agree with the following recommendation:

> For the project described in the Measure A recommendation adopted by the Board of Supervisors on August 6, 2013, the most favorable location is the site identified as the portion of parcel D-High School, as shown on the maps distributed on November 17, 2016. However, the steering committee also recommends that site B-Corp Yard remain

in consideration as an alternative, in the event that regulatory obstacles or other challenges arise which prevent development of the project on the High School site.

The committee discussed many concerns specific to the High School site. Among these are:

- **Water:** No figures available on the quantity of water needed to support fire station operations; quantity and quality of water available to Site D is currently unknown; extending CSA-11 water lines to the site is considered fiscally unfeasible.

- **Prime soils designation:** While the current site map plan places the fire station on already converted soils (i.e., main parking lot), it is unknown if additional prime agricultural soils may be disturbed or lost due to the development of the fire station or replacement parking areas. Impacts on current and future agriculture need to be further studied and quantified.

- **Parking:** The current site map plan appears to indicate a loss of approximately 70-80 parking spaces. Impact to high school functions (sports activities, community events, emergency shelter, etc.) needs to be studied. No information available on whether sufficient parking can be located on areas already paved, or how weekend/event traffic may impact CalFire's ability to navigate Butano Cut-off in response to calls.

In addition, the committee wishes to note these questions regarding all of the final four sites in consideration.

1) **Please confirm or correct this statement:** *As a condition of receiving a Coastal Development Permit for a replacement station at a new location, the existing location [Site A] will be restored to its natural state, potentially allowing the natural floodplain between the Butano Creek and the Pescadero Marsh to reconnect.*

2) If the statement above is correct, does that eliminate the possibility of future development on the existing site (e.g., visitor's center, public bathrooms, parking, alternate corp yard)? Will all existing buildings be removed?

3) The committee recommends removing Site C-Bean Hollow from further consideration as a fire station site.

The members of the Steering Committee wish to thank the Supervisor, his staff, and all of the County employees who have collaborated on this effort to supply information, interpret regulations, and offer alternative solutions to the community. We understand that the process is complex and that much more investigation, planning and discussion is required. We look forward to continuing to actively meet with County staff to ensure that the community is fully informed of project plans, timelines, adjustments to scope, and other activities related to development of the new fire station.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

Pescadero Area – Updates from the Department of Public Works (Department)
July 12, 2022 PMAC Meetings

<table>
<tr><th>Project/Item</th><th>Project Type and Location(s)</th><th>Update</th></tr>
<tr><td>CSA 11
Information</td><td></td><td>
CSA 11 Well #1 and #3 Water Surface Measurements – PMAC has requested that water surface elevation information be provided for the Wells #1 and #3.

Calculated Water Surface Elevation Above Mean Sea Level (feet)
<table>
<tr><th>Month/Year</th><th>Well #1
(Former Production Well)</th><th>Well #3
(Current Production Well)</th></tr>
<tr><td>Jul. 2022</td><td>Not available yet
(Typically 10th of subsequent month)</td><td>Not available yet
(Typically 10th of subsequent month)</td></tr>
<tr><td>Jun. 2022</td><td>77.00</td><td>74.10</td></tr>
<tr><td>May 2022</td><td>77.20</td><td>74.40</td></tr>
<tr><td>Apr. 2022</td><td>77.20</td><td>74.30</td></tr>
<tr><td>Mar. 2022</td><td>77.60</td><td>75.00</td></tr>
<tr><td>Feb. 2022</td><td>77.30</td><td>74.90</td></tr>
<tr><td>Jan. 2022</td><td>77.50</td><td>75.40</td></tr>
<tr><td>Jan. 2021</td><td>77.40</td><td>75.60 **</td></tr>
<tr><td>Jan. 2020</td><td>77.70</td><td>-</td></tr>
<tr><td>Jan. 2019</td><td>77.00</td><td>-</td></tr>
<tr><td>Jan. 2018</td><td>77.30</td><td>82.00 ***</td></tr>
<tr><td>Jan. 2017</td><td>77.90</td><td></td></tr>
<tr><td>Jan. 2016</td><td>78.20</td><td></td></tr>
<tr><td>Jan. 2015</td><td>78.60</td><td></td></tr>
<tr><td>Jan. 2014</td><td>77.00</td><td></td></tr>
<tr><td>Feb. 2013</td><td>80.92</td><td></td></tr>
<tr><td>Apr. 2012</td><td>78.67</td><td></td></tr>
<tr><td>Jan. 2011</td><td>79.42</td><td></td></tr>
<tr><td>Jan. 2010</td><td>80.00</td><td></td></tr>
<tr><td>Jan. 2009</td><td>81.38</td><td></td></tr>
</table>
* No recording made.
** Well operational on Oct. 7, 2020 with DDW approval. However, level transmitter was not functional until replaced on December 29, 2020.
*** Well completion in Aug. 2018 (as-built condition)
</td></tr>
</table>

Project/Item	Project Type and Location(s)	Update
		The measuring system for Well #3 is based on recording the water surface elevation as an elevation above mean sea level. This measurement system is different from the measurements for Well #1 that have been provided previously (distance) to the water surface from the top of the well. The data provided above for Well #1 has been converted to water surface elevation information to be represented in the same way as Well #3 data. Based on the measurements listed above, the water surface of Well #1 has dropped 4.38 feet from January 2009 to June 2022. Water surface of Well 3 has dropped 7.90 feet from January 2018 to June 2022. A supply of fire hydrant hangers (50) was ordered on April 28, 2022 for delivery and to be installed by PMAC (Rob Skinner) as a deterrent to unauthorized drawing of CSA 11's water from its hydrants. These were to be delivered in mid-May.
Speeding Issues	Speeding along SR-1	Please contact the Sheriff's Office & CHP for speeding issues in Pescadero and along SR-1. Please contact Caltrans for roadway-related issues along SR-1.
Roadway related issues	Roadway related issues (incl. graffiti) in Pescadero	Please submit roadway related service requests via: https://sanmateo.maintstar.co/portal/#/default-1/1/myRequests Register for an account and submit the request via MaintStar in order for the Department to track and respond to service requests appropriately.
Mowing	Countywide mowing	Coastside mowing activities are on-going and are anticipated to be completed by Mid-August.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C

Pescadero Fire Station 59 - Number of Incident Calls by Type
July 1, 2021-June 30, 2022

Call Type	Number of Calls
TREE DOWN	94
LOCK OUT - VEHICLE	78
FIRE ALARM - SMOKE DETECTOR	72
CLIFF RESCUE	59
PUBLIC ASSIST	58
SMOKE INVESTIGATION	56
FULL ASSIGNMENT RESPONSE	54
GRASS FIRE	50
WIRES DOWN (NOT SPARKING)	36
WATER RESCUE INVESTIGATION	31
FIRE ALARM - MANUAL	26
SPARKING/ARCING WIRES DOWN	26
TRASH FIRE	23
AUTO AID REQUEST	20
OBV DEATH UNQUESTIONABLE - FIRE RESPONSE	18
CARBON MONOXIDE ALARM	15
FIRE ALARM	15
FIRE ALARM - WATER FLOW	13
POLE FIRE	10
PUBLIC ASSIST, WATER PROBLEM	10
ODOR INVESTIGATION	8
TRAFFIC ACCIDENT - STRUCTURE	8
VEHICLE FIRE	7
LANDSCAPE FIRE	5
GAS MAIN BREAK	4
STRUCTURE FIRE	4
FIRE INFORMATION ADVISEMENT	3
Total:	803

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT D

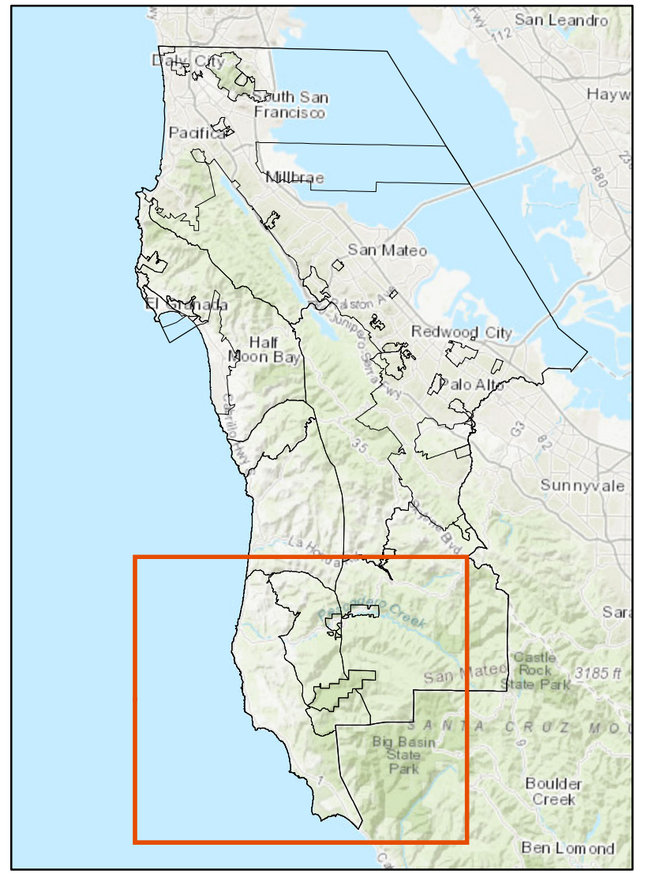
Prime Agricultural Land in Unincorporated Pescadero

Prime Agricultural Land

Land Capability Classification

- LCC: 1 - Area: 245.88
- LCC: 2 - Area: 2029.76
- LCC: 3, Lands Capable of Growing Artichokes or Brussels Sprouts - Area: 1618.45 Acres

SAN GREGORIO
LA HONDA
PESCADERO EAST
LOMA MAR
LOMA MAR
SOUTH SKYLINE
DEARBORN PARK
PESCADERO WEST
BUTANO FALLS TRACT
SAN MATEO
SANTA CRUZ
0 1.5 3 Miles



The Flooding of Pescadero Road

&

The Restoration of Butano Creek

Its Lower Channel and Floodplains

November 2002 Edition

By

William H. Cook

P.O. Box 282, Pescadero, CA 94060

bill@williamhcook.com

(650) 255-0055;[

William H. Cook P.O. Box 400, Pescadero, CA 94060 Office: (650) 879-0824 Email: Bill@TeamCook.net

Dear Friend of Pescadero and the Pescadero Marsh,

Here is a copy for you of the November 2002 Special Edition of The Restoration of Butano Creek and the Flooding of Pescadero Road. I hope you enjoy it.

Of special interest as this winter begins is the excellent progress we have made as a result of the removal of the beaver dams in February of 2001. If they had not been removed, the road would have been completely flooded last winter for 47 days. Instead, the water rose high enough to flood the road for only 15 days. With the addition of the sandbags we installed at the side of the road, which held back an additional 8 inches of water and forced that water back into the creek, the road actually flooded for a total of only 5 days!

Today, instead of a non-existent channel filled with sediment backed up behind several dams, the Butano Creek channel below the bridge is open. It is growing larger for the first time in over forty years. As a result of the removal of the dams, the natural increase in the flow of water in the channel has cut over 3000 feet of the length of the channel 1 to 4 feet deeper and 5 to 15 feet wider. We are hoping for strong sustained flows this winter to continue the re-establishment of the channel. The restoration of the creek is helping not only the flooding situation, but the fishery, endangered species habitat, and the health of the entire marsh. I'm really excited about our progress and I hope you are too.

That being said, the channel is still clogged with sediment and freshwater vegetation, the primary flood plain is still isolated from the creek, and the risk of flooding is still unnaturally high. The channel today averages approximately 15 feet wide by 3 feet deep, compared to 64 feet wide and 10 feet deep in 1961, and 100 feet wide and 12 feet deep in 1854. We have a long way to go to restore the natural channel and reconnect Butano Creek to its primary floodplain through the removal of sediment, breaching of levees, raising the low spot in the road and moving it immediately next to the bridge, adding a similar low spot immediately to the west of the bridge, moving the fire station, etc.

There is a lot of work to do. It will be very rewarding and should be a lot of fun. I' m really looking forward to continuing to do what I can, and I very much appreciate all the help that you and so many people have given and continue to give. We may not always agree on what should be done or how to do it, but we re listening, learning, moving forward, and making progress. We're doing great! Thank you so much.

Have fun!

Bill

P.S. If I can be of service please feel free to contact me. 650-255-0055 - bill@williamhcook.com

Dedicated to
The People of Pescadero

Congress of the United States
House of Representatives
Washington, D. C. 20515

Anna G. Eshoo
Fourteenth District
California

May 7, 2001

Mr. Bill Cook
PMAC Flood Committee
P.O. Box 913
Pescadero, California 94060

Dear Mr. Cook,

Thank you for your time, your dedication and your insights which you've documented in *The Story of the Flooding of Pescadero Road.* This is an important document which will help all of us, together, to find solutions to the problems that have plagued Pescadero for too long. I'm very proud of your work and the contribution it represents.

Whenever I may be of assistance, do let me know.

Gratefully,

Anna G. Eshoo
Member of Congress

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INTRODUCTION

This paper describes how the chronic flooding that currently impacts Pescadero Road at Butano Creek developed over time, and recommends a solution that adresses the flooding and improves and restores natural habitat values. The recommended solution was endorsed unanimously by the Pescadero Municipal Advisory Council, the thirteen-member elected body representing the people of Pescadero. The information contained in this paper is compiled from numerous scientific studies and historic documents; from countless interviews with individuals who have specific knowledge, expertise, personal experience and memories of the area; and from my own observations, data collection and analysis. The conceptual approach of this report's recommended solution, to restore and re-establish the natural self-maintaining hydrology of the area, in other words, re-establish the historic channel and, to the extent practical, remove and modify the unnatural barriers that obstruct, divert or restrict the flow of water and sediment through the system. (in contrast to solutions that would impose artificial structures that work against the natural functions of the system) is supported by the numerous scientific studies of the Pescadero watershed and marsh, as well as every modern stream corridor and habitat restoration manual I have found. If you or your organization have any questions or information that would help make this paper more accurate or complete, please send your comments to the address on the cover page, to my email address or give me a call. Your help is very much appreciated.

ACKNOWLEDGEMENTS

I would like to thank the following people and organizations for sharing their knowledge, experience and memories with me. I am sure there are many whose names I have forgotten to include, and to you I apologize. Your assistance is invaluable. Without your kind help it is impossible to put together an accurate picture…

Mark Allaback, red legged frog biologist with Biosearch Consulting; the American Fisheries Society; Patricia Anderson, Fisheries Biologist for the California Department of Fish and Game; Michael Bias, Biological Projects Director for Ducks Unlimited; Earl Brabb, United States Geological Survey; Anthony Brazil, resident and former San Mateo County Road Superintendent; B.J. Burns, resident farmer and former President of the San Mateo County Farm Bureau; California Department of Forestry Pescadero Fire Crew; Rich Casale, Erosion Control Specialist for the Natural Resource Conservation Service; Pete Congdon, resident fisherman; Pat Coulston, Supervisor of Fisheries Biologists for the California Department of Fish and Game; Joe Countryman, former Head Hydrological Engineer for the entire water system of the State of California and currently a consultant with Murray, Burns and Kremlin, Miles Croom, Central California Coast Salmon and Steelhead Recovery Coordinator for the National Marine Fisheries Service; Bob Curry, Watershed Institute of California State University at Monterey; Neil Curry, resident farmer and neighbor to the Pescadero Marsh; the Davenport Geological Society; Jim and Cindy Davis, linguists; David Dawdy, Hydrologist; Meg Delano, Pescadero Municipal Advisory Council Flood Committee; Noel Dias, resident farmer and long time land owner on Butano Creek; Reno Dinelli, resident farmer and former farmer of the marsh; John Dixon, resident kayaker; Ron Duarte, resident fisherman; Jean Ferreira, former Resource Ecologist with primary responsibility for management of the Pescadero Marsh for the California Department of Parks and Recreation; Chris Fischer, former Resource Conservationist for the San Mateo County Resource Conservation District; Joanne Florsheim, Fluvial Geomorphologist at UC Davis; Tim Frahm, fisherman, former San Mateo County Resource Conservation District Board Member and current Director of the San Mateo County Farm Bureau Water Quality Protection Program for the Monterey Bay National

Marine Sanctuary; Johnny Gomes, resident and San Mateo County Public Works employee; Tony Gomes, resident; Herb Hamor, resident and Pescadero Municipal Advisory Council Chair; Barry Hecht, Balanced Hydrologies; Dave Herman, Head Forester for Red Tree Properties; Janet Kear, former head of the Waterfowl and Wetlands Trust; Joanne Kerbavas, Resource Ecologist for the California Department of Parks and Recreation Gary Kittleson, Hydrologist; Matt Kondolf, Associate Professor of Environmental Planning and Geography at UC Berkeley; Kurt McAsland, U.S. Fish and Wildlife Service; Bud McCrary, Big Creek Lumber; Scott McBain and Bill Trush, McBain & Trush consultants in fluvial geomorphology; Joe Muzzi, resident farmer and former farmer of the Pescadero Marsh; Mike Napolitano, Regional Water Quality Control Board; Jennifer Nelson, Fisheries Biologist for the California Department of Fish and Game; Ed Nunez, resident and retired San Mateo County Public Works Road Supervisor; Tom Oku, Oku Nursery; Tony Oliveira, former resident and neighbor to the Pescadero Marsh; Jack Olsen, San Mateo County Farm Bureau and long time resident; Gaston Periat, resident, Ken Perri, resident; Lou Perri, former San Mateo County Road Superintendent; Pescadero/Butano CRMP; Pescadero Municipal Advisory Council; Phillip Williams and Associates, Ltd. Consultants in Hydrology; Tom Phipps, resident farmer with a great deal of experience working in the marsh; Tony Prigan, resident fisherman; Jim and Meredith Reynolds, Level Lea Farm and long time land owner on Butano Creek and neighbor to Pescadero Marsh (Meredith is a present member and former Chair of the Pescadero Municipal Advisory Council; the Salmonid Restoration Federation; Kevin Schmidt, U.S. Geological Survey; Kristin Schroeder, former Resource Conservationist for the San Mateo County Resource Conservation District; the late “Big” Jim Schweikert, resident and Pescadero Municipal Advisory Council Public Works Committee Chair; Aldo Silvestri, resident and past Chair of the Pescadero Municipal Advisory Council; Caesar Silvestri, resident and past board member of the Pescadero Municipal Advisory Council; Dante Silvestri, resident; Steve Simms, resident fisherman; Roberta Smith, Geologist; Bill Souza, resident; Tom Spitler, U.S. Bureau of Mines and Geology; Mitch Swanson, Swanson Hydrology and Geomorphology; Tom Taylor, Entrix; John Wade, Pescadero Conservation Alliance; John Williams, Hydrologist.

I would like to make special thanks to Jerry Smith, from the biology department of San Jose State University, an expert in the field of steelhead, salmon and red legged frog biology in our local coastal streams and estuaries, for taking the time to read and provide written comments on this paper, to Mitch Swanson for generously contributing his vast knowledge and his continued efforts to help the marsh and our community, to John Donovan, Pescadero Municipal Advisory Council Flood Committee Chair, for prodding me unmercifully to hurry up and complete this paper, to Resource Ecologists Jean Ferreira and Joanne Kerbavas of the California Department of Parks and Recreation and the San Mateo County Sheriff’s Fire Crew under the direction of Deputy Bob Gerbi for working with me to successfully remove the beaver dams, to the Pescadero Municipal Advisory Council, San Mateo County Supervisor Rich Gordon, and United States Congresswoman Anna Eshoo for their support and continued attention to our situation, and especially to my wonderful wife Andrea for her hard work and support in all aspects of this project and for her countless hours of editing and computer time spent organizing this information and creating clear diagrams, charts and photographs. She has made the completion of this report possible. I can’t thank her enough for all she has done.

SUMMARY

Over the last century we have altered the natural hydrology of the lower reaches of Butano Creek and its associated flood plains. We have created dams, levees, and other structures that impede the natural flow of water and sediment through the creek and floodplains, thereby clogging the system. As a direct result flow is blocked, the natural system is filling with sediment, and the frequency and severity of flooding to the Pescadero Marsh, Pescadero Road and the surrounding homes and farms has increased to the point where it has become a chronic and dangerous problem. This unnatural increase in flooding and sediment deposition is depositing sediment in the wetland areas of the marsh at a highly accelerated rate, causing their unnatural conversion into upland habitat. This negatively impacts numerous species, from steelhead to migratory waterfowl. We have lost over 95% of our wetlands statewide over the last 100 years. They are a precious resource. The marsh, the people of Pescadero and the visitors to the community deserve to have this unnatural situation corrected.

One of the first dams we built that impeded the natural flows of Butano Creek and its floodplains was completed in October 1941, just before U.S. entry into World War II. We were working to construct Highway 1 in order to help protect our nation's shores from possible invasion. During that project, to facilitate the construction of the original Highway 1 Bridge, we built a coffer dam/haul road across the mouth of Pescadero/Butano Creek. Ron Duarte remembers that as a boy he and his friends used to jump off the haul road bridge into the channel, (which at that time was about 8-10 feet deep at that location) and dive to the bottom to pick up pebbles. When the bridge was completed, the large rock rip-rap used to construct the haul road was not removed but was "just spread around with a drag line" into the channel creating a dam at the mouth of the creek. (Ron Duarte, Tom Phipps, personal comments)

At about the same time (1937), we introduced beavers, a non-native species, into the area. Pescadero resident Noel Dias witnessed their release (approximately six animals) into Butano Creek at a location off of Cloverdale Road. Over the years, these industrious animals that we innocently introduced successfully re-produced, colonized, and built several dams in the lower reaches of Butano Creek and at other locations in the Pescadero watershed.

Our mountains, due to their natural geologic makeup, are among the most highly erodable in the world and have always created a huge sediment load in the system. In addition, between 1945 and the early 1970's, we heavily logged the upper watershed using timber harvest practices that are now outdated, such as clear cutting, slash burning, and inappropriate crossing and haul road design, location and construction. That post World War II logging boom created an increase in erosion and sediment input into the creeks and added to the already massive natural erosion and sediment load of the system. (Timber harvest practices have changed dramatically in our watershed and no longer contribute the increased sediment input of the past).

The Highway 1 haul road/coffer dam and the beaver dams blocked the natural movement of sediment through the system, and the sediment backed up behind the beaver and haul road dams filling the lagoon and lower reaches of Butano Creek with sand and silt. As of January 2001, the lagoon, which had been over twenty feet deep, could be waded across. The Butano Creek channel at the Pescadero Road Bridge, which had been 100 feet wide and over ten feet deep, had been reduced to about ten feet wide and one foot deep. The channel had only about 1% of its former capacity and could no longer contain even low flows. Water flooded out of the banks all year round. Approximately 1000 feet downstream of the bridge the channel was completely gone and where it did still exist it was in several places fully blocked.

Also blocked were the out-of-bank flows through both the eastery and westerly flood plains. They were blocked by old agricultural levees (located in the Pescadero Marsh Natural Preserve and no longer of any farm related use), along with raised road fill and the raised fill upon which the CDF Fire Station is built. The primary flood plain, the natural path of small to moderate flood flows, is west of the channel and almost completely within the boundaries of the State Preserve. The blockage caused by these artificial structures further reduces the overall flood and sediment carrying capacity of the system and forces the out-of-bank flows to the east of the channel onto the secondary eastern flood plain, which is, on the average, three to four feet higher in elevation than the primary flood plain to the west.

Today this secondary flood plain is the most functional component of the system, but it too has been modified. The present road alignment directs flow away from the channel, away from the natural entrance to the flood plain, well to the east and over Pescadero Road through private property and residences, even in relatively low flow events.

The unnatural clogging of the system and the resulting sedimentation and flooding of the marsh, road and adjacent homes and farmland is the chronic problem that is addressed by this report. The solution is both simple and natural… ***To the degree practical, restore the natural hydrology of the system by re-establishing the historic channel, re-connecting the channel to its primary and secondary flood plains, and thereby restore their natural function and flow capacity.***

To repeat, the basic concept is to restore the natural hydrology of the area. In other words, re-establish the historic channel and, to the extent practical, remove and modify the unnatural barriers that obstruct, divert or restrict the flow of water and sediment through the system. The restoration of the natural hydrology will restore the historic capacity of the Butano Creek channel and floodplains, and will restore the sediment transport function of the system. As a result, the chronic flooding of Pescadero Road will be non-existent, and the increased sedimentation that is currently plaguing the marsh will return to natural levels.

The restoration will also provide improved habitat values, especially rearing and passage for steelhead and other fish species, and will help restore Pescadero Marsh to the pristine condition it deserves. The following actions will most efficiently restore the natural functions of the system. (A conceptual diagram can be seen on page 23)

1. **Re-establish the Butano Creek channel by removing sediment, dams, beavers, and vegetation from the channel bed.**
2. **Reconnect Butano Creek to its primary flood plain by moving the fire station, by relocating the low point in Pescadero Road to the immediate area of the bridge (both to the east and west of the bridge) and by creating openings in the old levees (after the channel has cut below the elevation of the adjacent flood plains).**
3. **Raise Pescadero Road to provide safer access.**
4. **Remove sediment from the Butano Creek channel from atop the Pescadero Road Bridge and repeat the procedure when and if sediment accumulates.**
5. **Secure, implement and provide support for a long-term vegetation management, beaver dam management, and beaver removal program in cooperation with the California Department of Parks and Recreation.**

Much of the actual restoration work in the marsh can be done by hand at minimal cost. The major costs are permitting, road modifications, sediment removal and the relocation of CDF Fire Station facilities.

In March of 2000 the thirteen elected representatives of the Pescadero Municipal Advisory Council voted unanimously to send a letter to our County Supervisor, Rich Gordon, stating that we have an emergency, asking for his help, and specifically listing the actions that the PMAC believes need to taken to improve the situation. *Over 800 people signed the letter*, demonstrating the high level of agreement in this small community. The actions put forth in that request to our elected representatives are identical to, and based upon, the recommendations of this report.

We have made progress! The upper watershed no longer contributes the increased erosion and sediment of the post World War II logging boom era. We are now using selective cutting, rotational section harvesting and other timber harvest techniques that are at the cutting edge of environmentally sensitive forest management. Forests on our local timber harvesters lands have regenerated, are very well managed, and are some of the healthiest forests and fisheries on the central coast.

The haul road/coffer dam was removed in 1988, and we successfully removed the beaver dams downstream of the Pescadero Road Bridge in February 2001. We have also successfully simulated raising the road (eight inches) using sandbags. The lower channel is beginning to re-establish itself through natural hydraulic action, and for the first time in over half a century it is increasing in size. Approximately 3000 feet of the channel, both upstream and downstream of the bridge, has cut 1 to 4 feet deeper and 5 to 15 feet wider. Last winter, if these improvements had not been made, Pescadero Road would have been completely underwater for 47 days. Instead it was completely under water for only five days. This is very encouraging, but we have a long way to go. Last year was a relatively mild winter and the channel, relative to its size in 1854, is still over 95% filled with sand and silt.

Money, though important, is not our main need. What we need most is a positive attitude, cooperation, determination and perseverance. We need to work with each other, the residents and friends of our community, the private property owners along the stream, the California Department of Parks and Recreation (the owner of the marsh), the County of San Mateo (the owner of the roads and fire station), the scientific community, and the permitting and regulatory agencies to accomplish our goal before more unnecessary damage is done to our natural system, our community, our fishery, and the lives of our friends and neighbors, before any more serious tragedies occur as a result of this correctable situation. If we take determined, positive, thoughtful, consistent steps toward our goal, keep moving forward (and have fun while we're doing it), we will most assuredly succeed.

In the words of Winston Churchill, ***"Never, never, never, never, never give up!"***

GEOMORPHIC HISTORY

15,000 years ago, during the last ice age, sea level was more than 300 feet lower than it is now. The present site of the town of Pescadero, the surrounding agricultural fields, the creeks, and the Pescadero marsh, was a canyon, perhaps 100 feet deep or more. Pescadero Creek met the Pacific Ocean about fifteen miles west of its present location, somewhere near the Farallone Islands. (Viollis, 1979).

About 11,000 years ago the glaciers began to melt, and as a result sea level began to rise. The mountains surrounding Pescadero, formed from relatively soft unconsolidated material, were and still are, among the most highly erodable in the world. These unstable soils, highly susceptible to landslides and debris flows, delivered sediment to the creeks in huge quantities. (United States Geological Survey) To illustrate this point, the local mountains, given their degree of geologic uplift over time, would now be over 50,000 feet high if they were not made of such highly erosive material. (Tom Spitler, U.S. Bureau of Mines and Geology) In short, our local mountains have been 'melting' with every significant rainfall event for thousands of years and they continue to do so. Consequently, Butano Creek transports more sediment to the ocean than almost any small creek in California. It is a natural process.

As the glaciers melted and sea level rose, the large volume of sediment carried down by Pescadero and Butano Creeks filled in the ancient canyon, because as stream flows meet the ocean, they slow and drop their sediment loads. As sea level approached its current level about 5,000 years ago and the ancient canyon filled, the site of the town, the agricultural fields, the marsh and the lagoon began to assume its current form. The location of the beach, lagoon, marsh and lower creeks has probably been in approximately the same configuration for a few thousand years. (Phillip Williams & Associates, 1990) Sea level continues to rise and the flood plains upon which we live and farm continue to increase in elevation as flood events deposit sediment in our valley. This has been occurring for millennia.

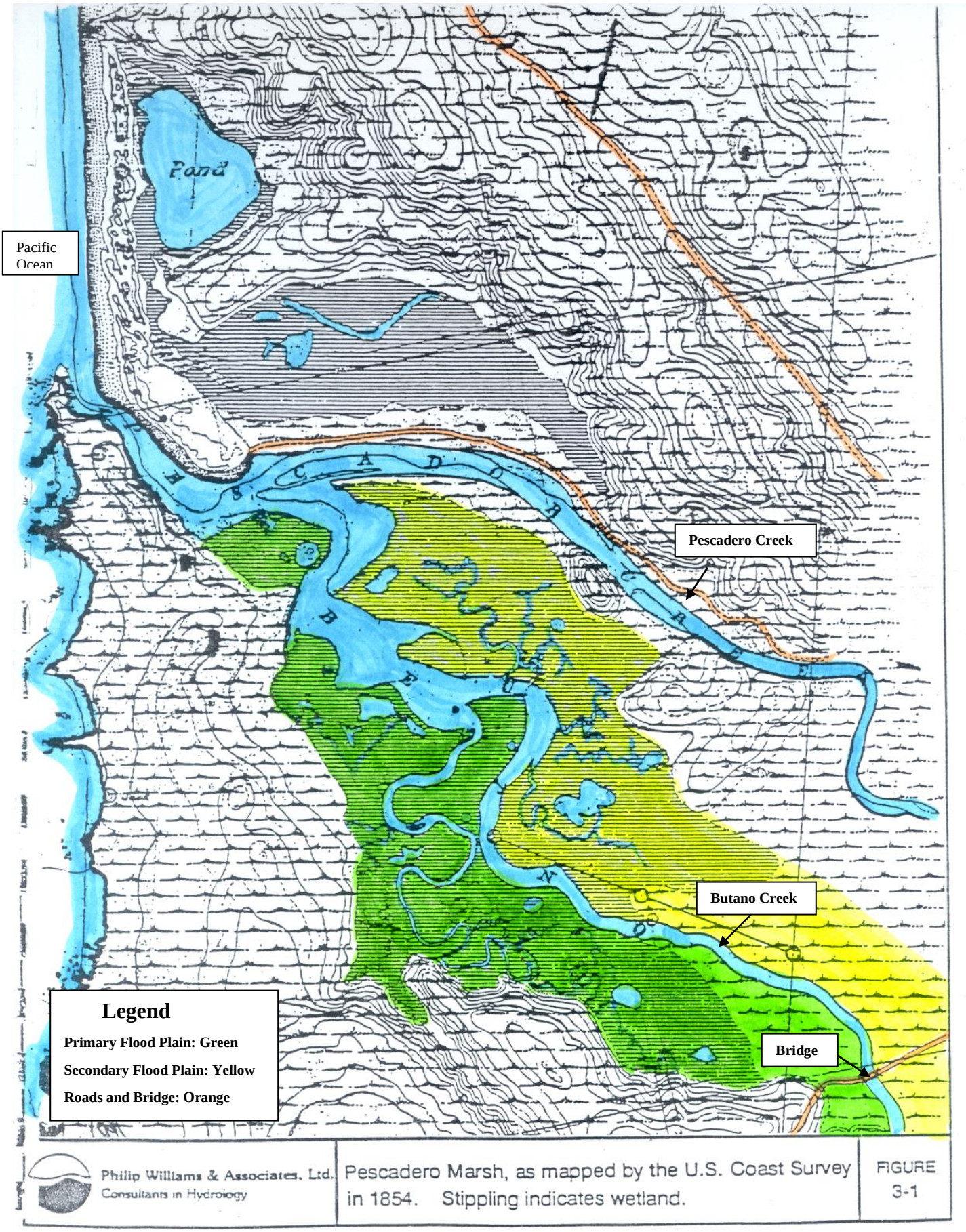
NATIVE AMERICAN AND EARLY EUROPEAN INFLUENCE

Since the last ice age, Native Americans heavily managed the area through the use of fire. The burning removed brush and trees, and maintained large areas of grassland, which made land more usable and increased access to game. (Burning can also increase biodiversity and wetland habitat values.) Modifications of the marsh during the Spanish period were minor, and occurred mainly as a consequence of grazing and the introduction of exotic plants. Logging in the watershed began in the mid 19th Century, along with farming on the alluvial soils adjacent to the marsh, but had little effect on the marsh. Major changes in the marsh did not occur until later. (Viollis, 1979; Osterling, 1987)

THE MARSH IN 1854

In 1854 (shortly after California attained statehood) the U.S. Coast Survey created the first accurate map of the Pescadero Marsh. It was based upon a geodetic network and done by careful surveyors. This map is very useful to our management and restoration efforts because it accurately describes the marsh, in detail, when it was functioning hydraulically as a natural system, before it was significantly modified by European settlers. (Phillip Williams & Associates, 1990)

The lower channel of Butano Creek (then spelled Beutno, and still pronounced that way) was very wide, and both creek channels were much deeper than at present. There was already a bridge over Butano Creek (highlighted in orange and labeled on the 1854 map), close to the location of the present Pescadero Road Bridge. The low water line on the map extends up Butano Creek only a short distance,



Pescadero Marsh Map of 1854

indicating nearly vertical banks in the channel upstream of the lagoon. The map clearly documents that both creeks were approximately 100 feet wide and over 10 feet deep at the upstream limit of mapping, with bed elevations below sea level. At the bridge, the Butano Creek channel was approximately 100 feet wide with vertical banks over ten feet high. (Phillip Williams & Associates, 1990) In comparison, Butano Creek at that location in January of 2001 was approximately 10 feet wide and one foot deep, with bed elevations around ten feet above sea level; less that 2%, *one-fiftieth*, of its former size. (Swanson, 1999) Downstream the channel was completely gone and fully blocked at several locations.

The tide rose and fell far upstream in both channels, sending a lower strata of saline or brackish water upstream well past the bridge on Butano Creek and at least as far as "downtown" in Pescadero Creek (labeled Pescador Creek on the map). This brackish water helped keep the channel open by preventing willows, cattails and other fresh water vegetation from growing in the channel bed. The volume of water going in and out of the estuary and creek channels with the tides was much larger than it is now and added to the natural sediment flushing action of the system. An 1874 account describes fishing for steelhead in the lagoon on a rising tide, after which the party "hoisted sail and went swiftly gliding back up the stream to the hotel [at Pescadero]." (Phillip Williams & Associates, 1990)

The primary flood plain of Butano Creek (highlighted in green on the 1854 map and other diagrams included in this report) sloped away from the channel to the southwest. This flood plain was, and still is, approximately three to four feet lower in elevation than the secondary flood plain to the east (highlighted in yellow). An area of upland that includes the area of the current chronic road flooding, extended into the marsh from the east, and was only utilized by flood flows in large events. The large unobstructed stream channels and flood plains accommodated large flood events, and along with the tidal volume, moved the massive sediment load through the system and out of the lagoon, marsh, and lower creek beds into the ocean. (Osterling, 1987; Phillip Williams and Associates, 1990; Swanson Hydrology and Geomorphology and Joe Countryman, Murry, Burns and Kienlin, 1999)

PESCADERO MARSH: 1928 to 1950

A 1928 aerial photograph is the earliest known vertical aerial photograph, and is a valuable document for studying the evolution of the marsh. Construction of levees and drains to convert marshland to agricultural use had begun by the 1920s, but was not extensive until the 1930s. Compared to the 1854 map, the 1928 photo shows that the stream channels at the upstream margins of the marsh had narrowed significantly, but near the lagoon the channels were still wide. (Phillip Williams & Associates, 1990)

Between 1937 and 1938 six beavers (not native to the area) were released near the location of the USGS gauging station on Butano Creek approximately one mile upstream from the Pescadero Road bridge. (Noel Dias, witness, personal comment) By the 1940s they had colonized the section of Butano Creek known as “the willow patch” and had moved into the marsh and the lower reaches of Pescadero Creek. (Noel Dias and Reno Dinelli, personal comments) They added a new factor to the hydrology of the system, especially in these low gradient reaches near the marsh. Beaver dams slowed the flow of water and blocked the movement of sediment through the system. The system began to deposit its sediment loads in the vicinity of the dams instead of transporting the sediment to the ocean as it had for thousands of years. By the end of the 1940s, the impact of the beavers below the bridge on Butano Creek was not yet significant, as documented by a local account that

"rowboats were kept at the present location of the Butano Creek Bridge and you could row to the lagoon without touching the bank with an oar, and the water in the channel was so deep you could hardly touch the bottom by pushing your oar down as far as you could reach…as a matter of fact, in many places you couldn't reach the bottom at all." (Ron Duarte)

The channels near the lagoon in aerial photographs from 1941 appear similarly wide as in the 1928 aerial photograph. Levees were beginning to be constructed, mostly in the north marsh.

In the early 1940s the first Highway 1 bridge was built across the mouth of the lagoon. The coffer dam/haul road built to facilitate the construction of the bridge disrupted the sediment transport function of the system, causing sediment to begin depositing in the lagoon and the lower stream channels. This was the beginning of our present day flooding problem and the degradation of the Butano Creek channel. Prior to the existence of the coffer dam and beaver dams "Even with higher level of sediments, (from clearcutting and logging road construction) the channels remained clear and the marsh was not apparently subject to the sedimentation that currently exists". (Ralph Osterling Consultants, Inc., 1987, Tom Phipps, personal comment) Before the construction of the bridge, the lagoon was about 20 feet deep. Today you can walk across it. (Ron Duarte, Tom Phipps, Pete Congdon, Steve Simms and others, personal comments)

PESCADERO MARSH: 1950 to 2000

By 1950, the beavers had moved into the lower creek channels and were actively building their dams. (Reno Dinelli, personal comment) A 1953 photograph at the UCSC map library shows the narrowing of lower Butano Creek well underway and many sandbars were visible along the channel. The storm and flood of 1955 brought large amounts of sediment into the system and in a 1956 photograph the narrowing of the channel continued. In a 1960 photograph, much of the channel had largely disappeared under riparian vegetation. Agricultural use of the marsh had peaked in the 1950s, and cultivation of land in the marsh was on the decline when the State of California began to acquire property here in the 1960s. (Phillip Williams & Associates, 1990)

With the return of our soldiers from World War II, the need for new housing, and the coming of age of the motorized tractor, there was a post World War II logging boom that lasted well into the 1960's. Timber harvest and forest management practices were in their infancy, with little or no erosion control measures or regulation. Significant portions of the watershed were clear-cut. Slash was burned and large areas left bare. The creek channels themselves were used and haul roads. With the winter rains this produced a large increase of sediment input into the creek system over and above the already high natural levels. (Curry, 1985; Osterling, 1987; Phillip Williams and Associates, 1990) In the early 1950s, this increased sedimentation was particularly evident in the Butano Falls and cascades area as the pools filled with sediment and did not clear out for at least two years. (Gaston Periat, personal comment)

It is not known how the increase from this period in logging history compares quantitatively with natural erosion events over geologic time, as this watershed produces huge amounts of sediment under natural conditions due to its geological makeup. Nevertheless, the massive volume of sediment produced naturally by the watershed, the erosion created by the intensive logging activities, and the reduction of the creek system's sediment transport capability as a result of the beaver and haul road dams all combined to begin rapidly filling the lower reaches of Butano Creek. As the bed elevations of the channel rose above the influence of the salt water carried upstream by the tides, fresh water vegetation began to grow in the channel beds and clog the system even more. (Phillip Williams and Associates, 1990) A vicious cycle of reduced flow, increased sediment deposition and uncontrolled vegetation growth in the channel had been established.

In all fairness it should be noted that logging practices here have evolved considerably since the post World War II era. Our local timber harvesters, Big Creek Lumber and Red Tree Properties, are widely recognized to be leaders at the cutting edge of environmentally sensitive forest management. Timber sections are harvested on a rotating basis through selective cutting, and only during the dry season. There is no clear-cutting. Trees are often removed by helicopter to avoid impacts to sensitive areas. Haul roads are well maintained and are not used in the wet season. Big Creek and Red Tree have removed several bridges and Humboldt crossings, and have seeded, rocked, mulched, re-contoured and de-commissioned miles of old logging roads in the upper watershed. They have also implemented numerous erosion control projects. Red Tree has recently restored several hundred feet of creek in Waterman Gap in the Pescadero watershed. Big Creek Lumber also provides hatchery facilities for the Monterey Bay Salmon and Trout Project, which help restore native fish populations. Big Creek recently received a commendation from the California Department of Fish and Game "for outstanding wildlife conservation achievement." Throughout the watershed there probably are some relic haul roads, stream crossings and other structures that would be beneficial to remove or re-contour, and some significant areas of forest that should be thinned (particularly in some of our parks and public lands), but the forests of our watershed have regenerated, stabilized, and are generally in good health, especially on lands managed by our local timber harvesters. Today there are more trees and more acres of forest than in the period preceding European settlement. (Bonnicksen, 1997) Consequently the increased erosion and sediment input of the post World War II era has largely ceased, although a portion of that sediment is still in transit through the system. (Ralph Osterling Consultants, Inc., 1987; Phillip Williams and Associates, 1990) It is an unfortunate injustice that these responsible managers and caretakers of our forests and streams are frequently vilified and blamed for problems they did not create.

In approximately 1960 the current Pescadero Road Bridge over Butano Creek was built, Pescadero Road was extended to the coast highway on a raised bed of fill, and the CDF fire station was built at the southwest intersection of Pescadero Road and Bean Hollow Road on ten feet of fill. The new road and the fill for the fire station essentially acted as a dam and blocked the upstream entrance of the primary flood plain and restricted the upstream entrance of the secondary flood plain. The design configuration of the low spot in Pescadero Road directed flood waters away from the channel and primary floodplain, and forced the flood flows into the secondary flood plain through upland private property and homes well to the east of the channel. (See the Pescadero Marsh Diagram 2001)

Also around 1960, local farmers used a dragline (the predecessor to the modern day excavator) to remove the accumulation of sediment from the Butano Creek channel, below the bridge several thousand feet downstream. The sediment that was removed was used to build a levee approximately 6,000 feet long completely along the west bank of the creek. (Joe Muzzi, personal comment) This levee provided access to the farm fields in the primary flood plain but unfortunately the levee also isolated that 6,000-foot section of Butano Creek from its primary floodplain. About this same time, levees were also constructed perpendicular to Butano Creek across the primary flood plain in two other locations and across the secondary floodplain as well to provide access and to keep salt water out of the agricultural fields. These levees further restricted the use of the primary and secondary flood plains for flood flows. (The levees in the primary flood plain and the roads and fill are highlighted in orange on the Pescadero Marsh Diagram January 2001) Following that sediment removal work the channel remained open enough and provided sufficient capacity that Pescadero Road and neighboring homes did not flood for approximately fifteen years, despite the isolation of the primary flood plain from Butano Creek, the restriction of the secondary flood plain by a levee extending from Round Hill, constant beaver activity, and the existence of the old coffer dam and haul road at the mouth. (Lou Perri, Anthony Brazil & Ed Nunez, residents and former San Mateo

County Public Works Road Superintendents and employee, personal comments). After the dragline work in the early 1960s, there has been no more sediment removal work in Butano Creek.

Eyewitness accounts verify that from the early 1960s (shortly following the dragline work) through the early 1970s, there were several beaver dams in the section of Butano Creek beginning 100 feet downstream from the Pescadero Road Bridge and extending three-quarters of a mile downstream of that point. High winter flows often washed out or burried the dams, which were rebuilt, sometimes in different locations, but always in the same three-quarter mile section of the creek. (Tony Prigan, personal comment) In the mid 1970s beavers were still active in the area "…as their dams back up water into cultivated artichoke fields. Also, their inclination to wander into these same fields in search of artichoke fruits and stalks, for food and dam-building material does not endear them to the local farmers who lack appreciation of the beaver's gourmet inclinations." (Elliot, 1975)

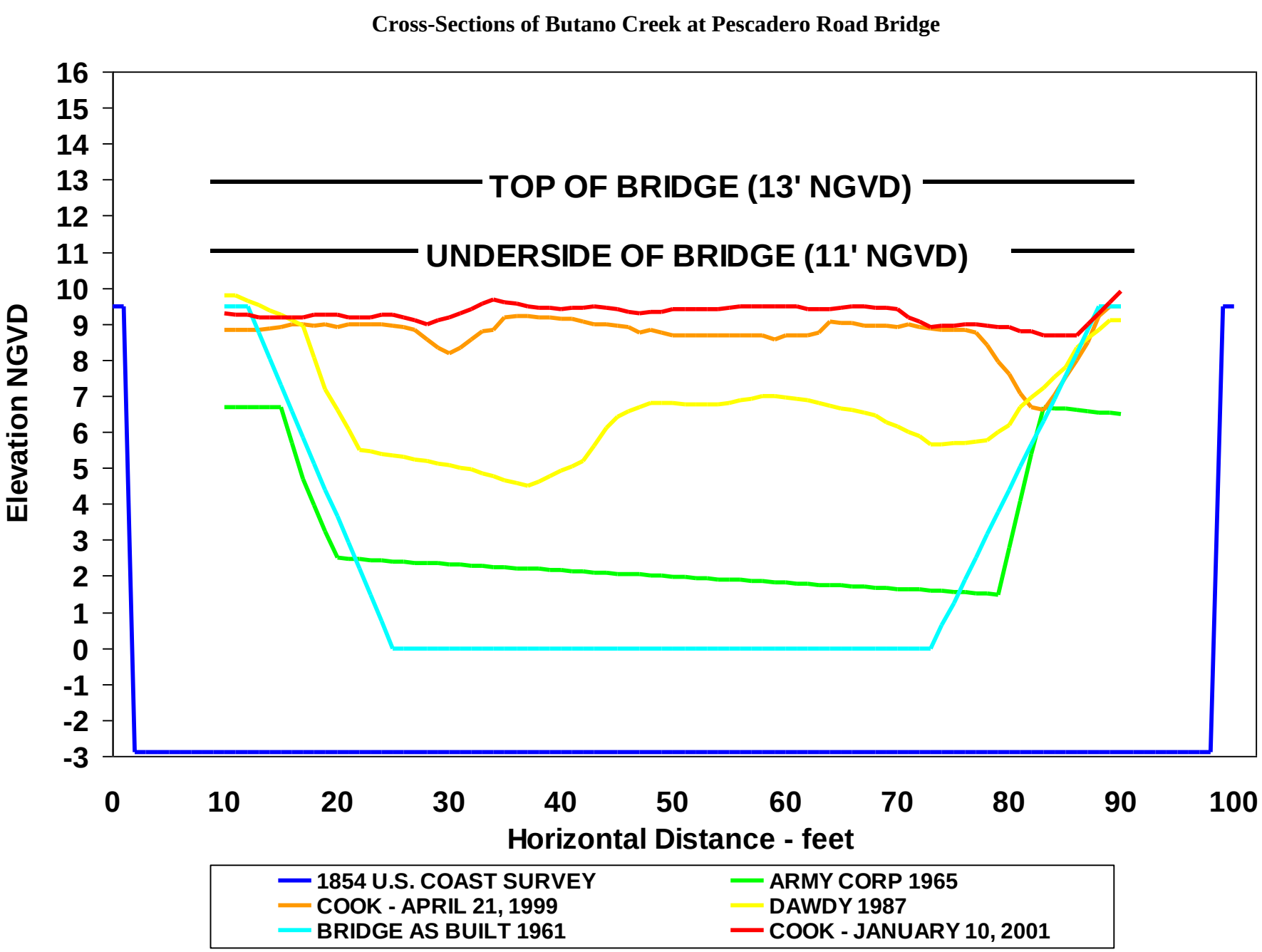
As a result of the beaver dams and the old coffer dam at the mouth of the lagoon, Butano Creek again began to drop its massive sediment load behind these dams in the channel, the lagoon and in the floodplains, instead of transporting that sediment to the ocean. As the creeks once again filled above the elevation of tidal influence, freshwater vegetation became permanently established and grew unchecked in the streams, further clogging the channels and re-establishing the vicious cycle of reduced flow and increased sedimentation.

During the 1970s a drought period stimulated the growth of willows and other freshwater vegetation in the channel bed, and made construction of dams easier for the beavers. The increase in regulation of stream corridors by governmental agencies was another factor that affected the situation during the 1970s and intensified through the following decades. It became increasingly complicated and difficult to obtain permission to work in the creeks. Local residents, who in the past managed the vegetation and kept their sections open and free from clogs, increasingly discontinued their maintenance activities due to fear of regulatory action. The cycle of sedimentation was continuing to accelerate.

The storm and flood event of 1982 once again brought large amounts of sediment into the system, contributed a great deal of sediment to the lower Butano Creek channel, and washed out or buried the beaver dams.

Studies from 1984 found that strong tidal influence still extended up Butano Creek to below the location of the beaver dams, to the area known as triple junction where three levees come together on the south bank of Butano Creek, approximately one-half the way from the bridge to the lagoon. The channel narrowed immediately upstream from triple junction, with dense growth cattails and bulrush. No beaver dams were observed during those studies, nor during a photographic documentation of the channel shortly after the 1982 flood. (Jerry Smith, personal comment, Lou Perri, personal comment) Based on these accounts, it took at least two years after the storm and flood event of 1982 for the beaver dams to be re-established, or perhaps they were burried or unrecognizable due to the storm event.

By the early 1980s, the flooding of Pescadero Road and the neighboring homes and agricultural lands had become a chronic problem. The system was seriously crippled by the damming and partial filling of the channel; the isolation of the channel from its primary flood plain by levees, road fill, and the fill at the fire station; and the restriction of the secondary flood plain by levee and road fill. Butano Creek had lost over 50% of its 1960 flow capacity and over 80% of its 1854 flow capacity. (The attached cross sections of Butano Creek at the Pescadero Road Bridge show the reduction in size of the channel over the years). Since the construction of the first Highway 1 Bridge, the lagoon had decreased in depth from near twenty feet to less than ten. (Elliot, 1975; Osterling, 1987; Philip Williams and Associates, 1990 Ron Duarte, personal comment)


Cross-Sections of Butano Creek at Pescadero Road Bridge
TOP OF BRIDGE (13' NGVD)
UNDERSIDE OF BRIDGE (11' NGVD)
Elevation NGVD
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
0
10
20
30
40
50
60
70
80
90
100
Horizontal Distance - feet
1854 U.S. COAST SURVEY
ARMY CORP 1965
COOK - APRIL 21, 1999
DAWDY 1987
BRIDGE AS BUILT 1961
COOK - JANUARY 10, 2001

In approximately 1988 the Highway 1 Bridge at the mouth of the lagoon was replaced, and the remnants of the old haul road and coffer dam were at least partially removed. More work may need to be done at this site to completely remove the old dam. It was believed by scientists who completed an analysis of the Pescadero Marsh watershed in 1987 that "…relieving of the channel by removing the old Coffer Dam may well create an open, self-flushing channel similar to that of historic times. If this does in fact happen (the removal of the coffer dam), the (Butano Creek) channel will erode itself back to conditions similar to the historic; the marsh will no longer be receiving the sediment deposits and will survive with the deep water channels to the ocean". (Ralph Osterling Consultants, Inc., 1987) These scientists were unfortunately not aware of the proliferation of beaver dams immediately upstream in Butano Creek. A dry period in the mid 1980s, with lower than normal rainfall and no major storm events, once again afforded the beavers the opportunity to reinforce their dams, and stimulated the growth of freshwater vegetation in the channel. (Jeanne Ferreira, personal comment)

In the mid-1980s, a 25-foot wide breach (highlighted in gray on the Pescadero Marsh Diagram January 2001) was cut in the levee on the west bank of Butano Creek approximately 50 feet downstream of the Pescadero Road Bridge in an attempt to partially reconnect to the primary flood plain. (Tom Taylor, Entrix; Tony Oliveira; personal comments) The Department of Parks and Recreation also created three breaches approximately 50 to 100 feet wide in the levees across the primary floodplain of Butano Creek (highlighted in gray on the Pescadero Marsh Diagram January 2001). These breaches are relatively small, and the roads, fire station and levee on the west bank of the creek still isolated the channel from that flood plain, so unfortunately the breaches had little effect on their own. Further breaching of levees and facilitation of flood flow through the area of the Fire Station into the primary flood plain would be necessary to make this effort to restore the function of the primary flood plain effective. (Curry, 1985, Mitch Swanson, Swanson Hydrology & Geomorphology, Joe Countryman, former Chief Hydrological Engineer for the State of California now Consulting with Murray, Burns and Kienlin, personal commennts)

On February 13, 1986 a License Agreement between the Peninsula Open Space District (POST) and the Department of Parks and Recreation was notarized and recorded with the San Mateo County Recorder's Office "with the objective of stream clearance within the Pescadero Marsh Natural Preserve." and "The Owner (California Department of Parks and Recreation) and POST agree to develop, and Owner agrees to implement, a long-term maintenance program which maintains the project…" Similar agreements were made with many creek-side property owners, and projects, funded by POST under the direction of John Wade, conducted vegetation management projects in the lower reaches of both Pescadero and Butano Creeks for several years. These projects provided significant flood protection for the community. Unfortunately they were not continued or maintained.

In 1989 beaver dams were fully entrenched in several locations below the bridge on Butano Creek (Neil Curry, personal comment), freshwater vegetation grew unchecked in the channel, and the channel continued to fill with sediment. There was little or no maintenance of the channel. Bean Hollow Road, Pescadero Road, and the fill at the site of the CDF Fire Station still blocked the upstream entrance for floodwaters into Butano Creek's primary and secondary flood plains. The levees that had been constructed earlier along both Butano Creek and across the marsh (most notably across the primary and secondary flood plains of Butano Creek and along the west bank of Butano Creek) still isolated Butano Creek from its primary flood plain and blocked overland flows through the flood plains. By the mid 1990s the primary floodplain, which was sparsely vegetated in 1986, had experienced rapid growth of cattails. (Jerry Smith, personal comment) This solid growth further reduced flow capacity and decreased habitat values, especially for migratory waterfowl, which heavily used this area in the past. (Michael Bias, Ducks Unlimited; Johnny Gomes. Joe Muzzi, Caesar Silvestri, Dante Silvestri, and others, personal comments)

In 1990 Phillip Williams and Associates completed the *Hydrological Enhancement Plan for the Pescadero Marsh Natural Preserve* for the California Department of Parks and Recreation. One of the primary focuses of the plan was relieving the flooding of Pescadero Road. Some of the proposed alternatives of the plan were implemented by the California Department of Parks and Recreation, most notably the removal of 2500 feet of the levee across the secondary floodplain of Butano Creek, from Round Hill to the east bank of Butano Creek and upstream from that point. The removal of this section of levee in the late 1990s increased the capacity for and facilitated flood flows through the secondary flood plain.

Recommendations of the Hydrological Enhancement Plan to re-establish the Butano Creek Channel were not implemented.

Between 1993 and 1997, beaver dams were partially removed from the channel on three occasions, but they were never completely removed and were quickly repaired by the beavers. No thorough removal program was set up or implemented. The California Department of Parks and Recreation's primary goal at that time for Butano Creek in the marsh was "velocity and scour" but the department was unable to achieve that goal due to staff and budget limitations. (Jeanne Ferreira, Resource Ecologist for the Pescadero Marsh, personal comment) Staff and budget limitations are still a big problem for the State today.

In February of 1998, Pescadero experienced its largest flood event in over eighty years. This storm brought landslides, debris flows, and huge volumes of sediment into Butano Creek and contributed considerably to the filling of the lower Butano channel (over two feet at the bridge). Water flows at the USGS gauging station on Pescadero Creek were approximately 10,500 cfs compared to approximately 9,500 cfs in 1955 and 1982. The damage to private property by the 1998 flood was amplified by the beaver dams and poor condition of the Butano Creek channel, the levees, road fill and the fill at the fire station, all of which forced water further to the east onto private property and increased the depth and velocity of flows through these private lands.

In 1999 San Mateo County funded a study by Swanson Hydrology and Geomorphology to determine the effects of raising Pescadero Road in the area of the flooding. This study updates information from previous studies and provides us with an extremely valuable model of the hydrology of the area. This study also provides some initial options for new configurations of Pescadero Road that would improve access in and out of town during floods.

The local property owners opposed implementing any of the options to raise the elevation of the road, until an agreement is reached with the State Park to insure that the creek downstream of the bridge will be kept free of beaver dams and clogs in the future and that the primary flood plain will be reconnected to the channel. Their concern is that if the road is raised and the access problem is improved, the unnatural flooding of homes, private property and crops could be more easily ignored, and the restoration of the natural hydrology of the area and the damage being done to wildlife habitat will never be addressed.

In early 2000 the San Mateo County Farm Bureau began implementation of the Rural Lands Water Quality Protection Plan for the Monterey Bay National Marine Sanctuary. This program actively involves rural landowners in erosion and pollution control activities in the entire county and has included thousands of acres of the Butano watershed in the program. This program is helping reduce sediment input into both Pescadero and Butano Creek.

THE FLOODING SITUATION: JANUARY 2001

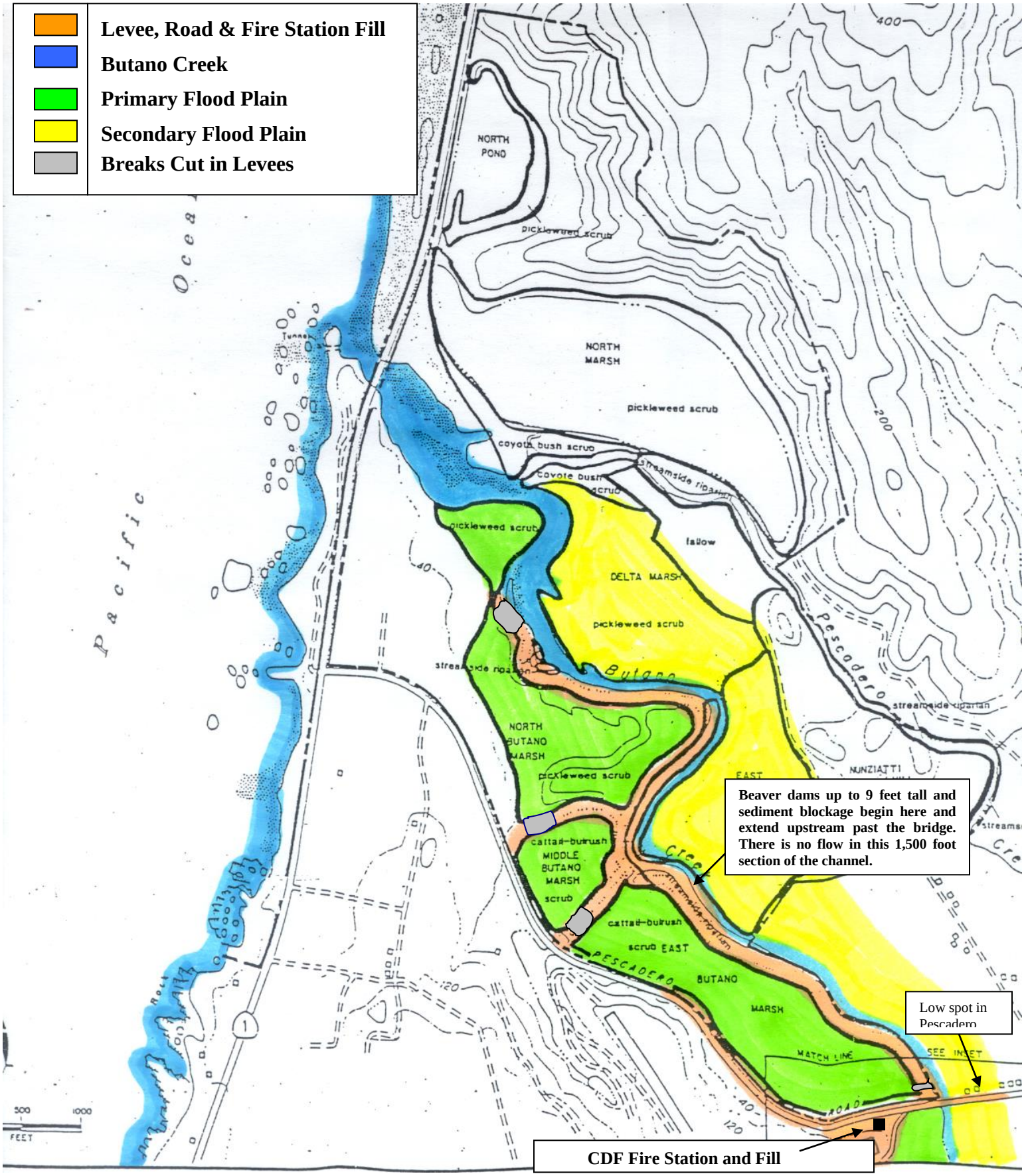
Feral pigs have become established in the watershed. (Half Moon Bay Review, April 25, 2001 and numerous residents' personal comments) Their rooting behavior is possibly causing more unnatural erosion than any other factor. The system of beaver dams has increased in and along Butano Creek below the bridge to the point where the channel is completely plugged and all flow is diverted out of the stream channel. Five dams block the channel, ranging from one foot to nine feet in height. The dams continue to contribute significantly to the unnatural siltation and aggradation of the creek and flood plains. Since 1960 approximately 3,000 feet of the Butano Creek channel downstream of the bridge has filled with ten feet of sediment. The bed elevation of the channel is near, equal to, and even actually above the elevation of the adjacent floodplains in this entire 3,000 foot reach. (Swanson Hydrology and Geomorphology) The channel is blocked by fresh water vegetation at several locations. For almost 2,000 feet there is no movement of water in the channel. All flow is forced out of the channel onto adjacent lands. For hundreds of feet the channel is gone.

Bean Hollow Road, Pescadero Road and the fill placed in the vicinity of the fire station still block the upper entrance to the primary flood plain and restrict the secondary flood plain. The low spot in the road still directs floodwater onto private property and homes well to the east of the channel with increasing frequency. Levees still isolate the primary flood plain from Butano Creek.

The agricultural fields to the east of Butano Creek, that prior to 1980 were subject to natural flooding in large events once every fifteen years or so, are now severely damaged every year. Pescadero Road and the homes to the east of Butano Creek that were subject to natural flooding only once every fifteen years or so, are subject to more and more frequent flood events. In the winter of 2000 (rainfall that year was normal), Pescadero Road was closed or barricaded due to flooding for twenty-eight days and the private property to the east of the creek was affected for a much longer period of time. (see cover photos)

The damage caused by the flooding of Pescadero Road is far reaching. Many services have been unavailable, including care for our elderly and others in need. People miss work. Our local businesses are being hurt. Crops are ruined. Customers can't get here safely. Property that was usable is now saturated and unusable. Historic home sites have been ruined. Homes that did not flood for the entire history of Pescadero now do, even in normal rainfall years. Teachers and children miss school and older students can't get to college. Vehicles and equipment are damaged, especially wheel bearings and brakes. Crops and other products of our area cannot be delivered. Shipments of needed goods and supplies are not received. Property values are lowered. Our town is separated from emergency facilities. (Pescadero Municipal Advisory Council letter to San Mateo County Supervisor, Rich Gordon, March 10, 2000) There are three alternate routes into and out of town, but these roads are narrow, winding and highly susceptible to landslides and washouts. They can be extremely dangerous during periods of flooding and heavy rainfall.

The chronic flooding during average rainfall years has also become increasingly dangerous. Stalled vehicles and stranded motorists are commonplace. One morning in February of 2000, an elderly man was stranded in his car as it filled to the dashboard with 50-degree water. He was disoriented. His car was being push by the flow into deeper and deeper water. He futilely bailed water out his window with a coffee cup. The fire department finally rescued the man after a 911 call was made by a local resident who observed the situation. Had this incident occurred when no one was around the man could have easily died. One dark night in the winter of 2001 a woman crashed into the car in front of her when it came to an abrupt halt as it hit the flood waters crossing the road and her vehicle could not stop. The vehicle in front of her had temporarily parted the water when it plowed into the flooding, leaving a thin sheet of water behind it, making it impossible for her vehicle to get traction.



Pescadero Marsh Diagram - January 2001

RECENT PROGRESS

On February 22, 2001 with the cooperation of the California Department of Parks and Recreation represented by Resource Ecologist Joanne Kerbavas, the Sheriff's Fire Crew under the direction of Deputy Bob Gerbi and myself, all five of the beaver dams downstream of the bridge were removed from Butano Creek. The project received approval from the U.S. Fish and Wildlife Service, the California Department of Fish and Game and the National Marine Fisheries Service. It took about three months of my time (not counting research) to acquire the necessary authorizations. The actual work was accomplished in less than one day with a crew of five men using non-motorized hand tools. The out of pocket cost was about $600, mostly in wetsuits to keep the crew warm, coffe and donuts.

The goal of the project was to help re-establish the channel of Butano Creek by removing obstructions to flow, thereby increasing hydraulic velocity and scour of the channel. It should be noted that before the removal of the dams the there was no flow in the channel in the vicinity of the dams, although 3000 feet upstream from the dams the flow was approximately 40 cubic feet per second and the road was flooding. All of the flow was being forced out of the channel by the dams. Practically speaking, the channel had ceased to exhist.

After the removal of the dams, flows increased in the channel and the historic channel began to re-establish itself. After 24 hours, in sections where the channel had completely disappeared, the increased velocity and scour had re-established a channel over ten feet wide and two feet deep. Over the course of the rest of the winter of 2001, the historic channel continued to cut deeper and wider. During the winter of 2002, both upstream and downstream of the bridge, over 3000 feet of the channel cut 1 to 4 feet deeper and 5 to 15 feet wider. However, it still contained a huge amount of sediment that needs to be removed to restore the channel to any approximation of its former size.

Prior to the removal of the beaver dams in February 2001, flows of 36.4 cubic feet per second completely flooded Pescadero road. After the removal of the dams, as of January 2002, it required 61 cubic feet per second to flood the road to the exact same level. This change represents a 67.5% improvement.

To look at the improvement from another perspective, in the winter of 2001, flood waters reached the elevation necessary to flood the road for a total of 15 days. If we had not removed the beaver dams the road would have been flooded for 47 days. In addition, the placement of sandbags along the south side of the road returned additional flow to the channel, increased the velocity and scouring action in the channel, and reduced the total number of days the road was flooded to only five. *That's from 47 to five*. The removal of the dams is making a difference. We are making progress!

San Mateo County Supervisor Rich Gordon and Congresswoman Anna Eshoo have recently written letters declaring their strong support for raising Pescadero Road and refocusing overflow closer to the bridge. Rich Gordon ageed that for this to be successful, it is necessary to have the commitment of the California Department of Parks and Recreation to implement a long-term removal program of beaver dams and obstructions in Butano Creek downstream of the Pescadero Road Bridge. If this is not done, it is probable that private homes and prime agricultural lands will be unfairly damaged by the change to the road. Designing the overflow swales will require deciding upon a balance between the degree to which the road floods and the degree to which water is backed up on to the agricultural fields. This will require the participation and support of the property owners that will be directly affected. Supervisor Gordon has also agreed to work to design the new configuration of the overflow swales so that flows are directed over the road to the west of the bridge as well as the east so that both flood plains are utilized to their capacity, not just the flood plain to the east as is the case now.

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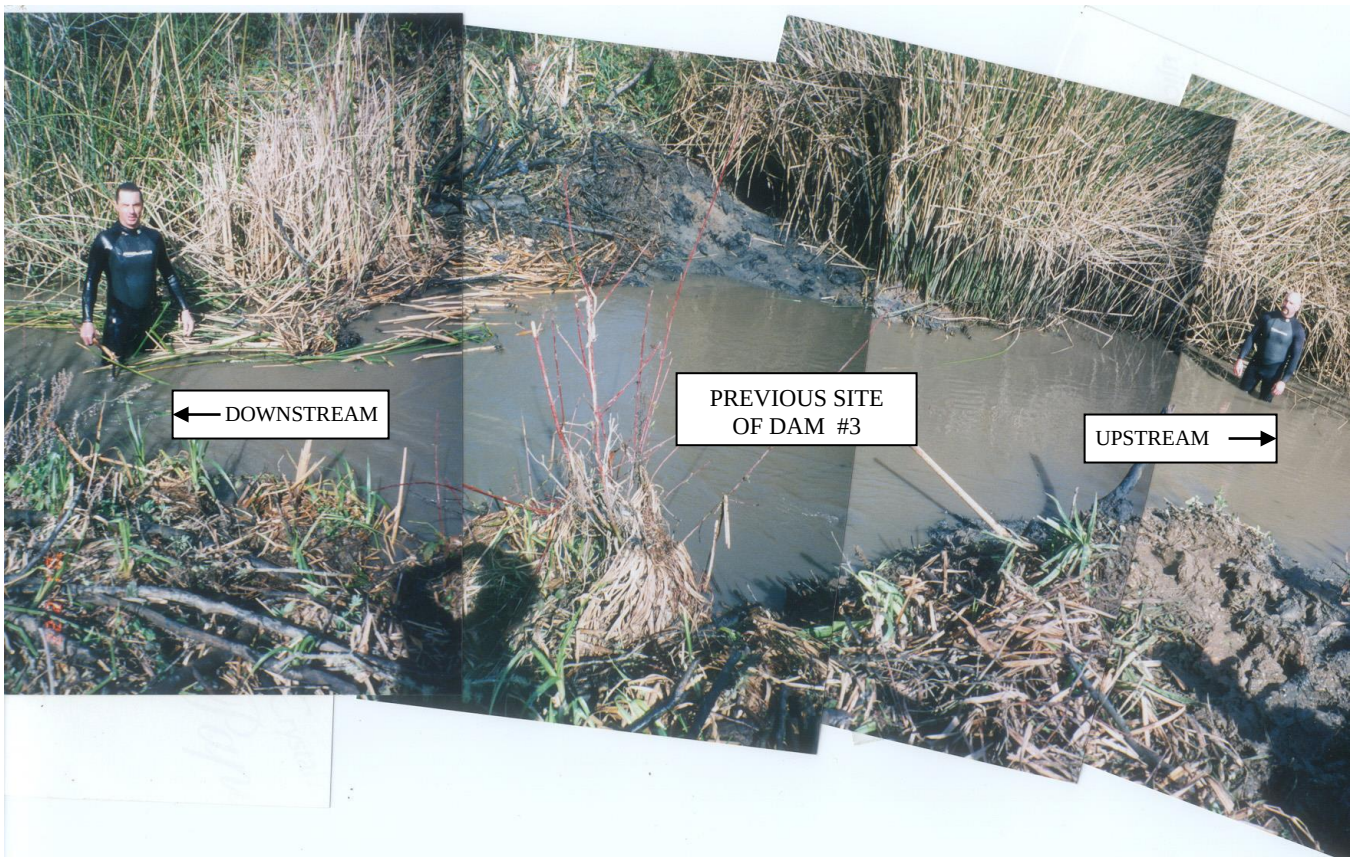
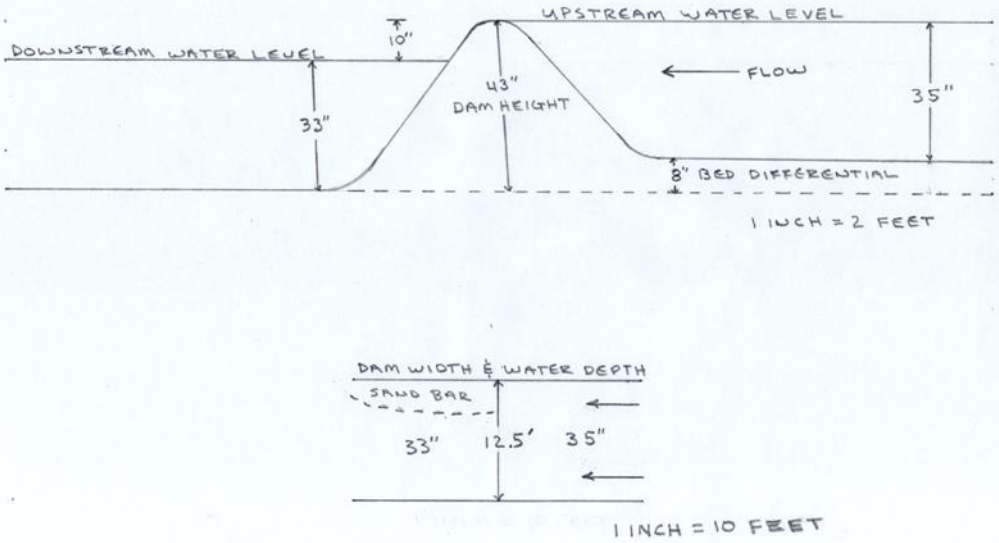
Butano Creek and Beaver Dam #3 Prior to Removal



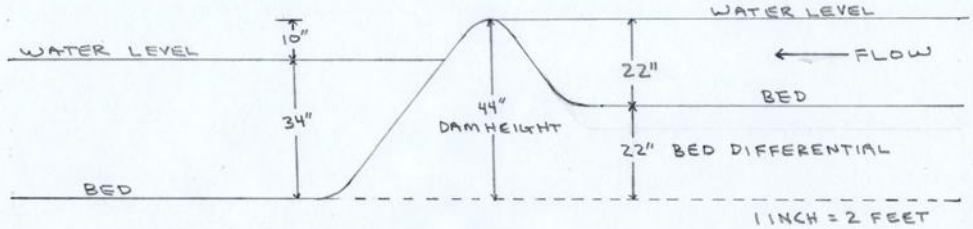
Butano Creek Channel Re-Established after Removal of Beaver Dam #3

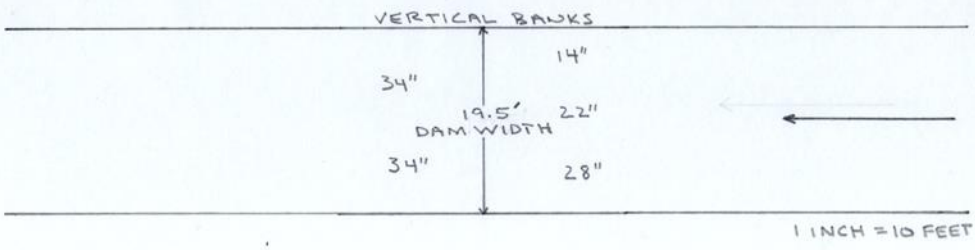
DAM #1

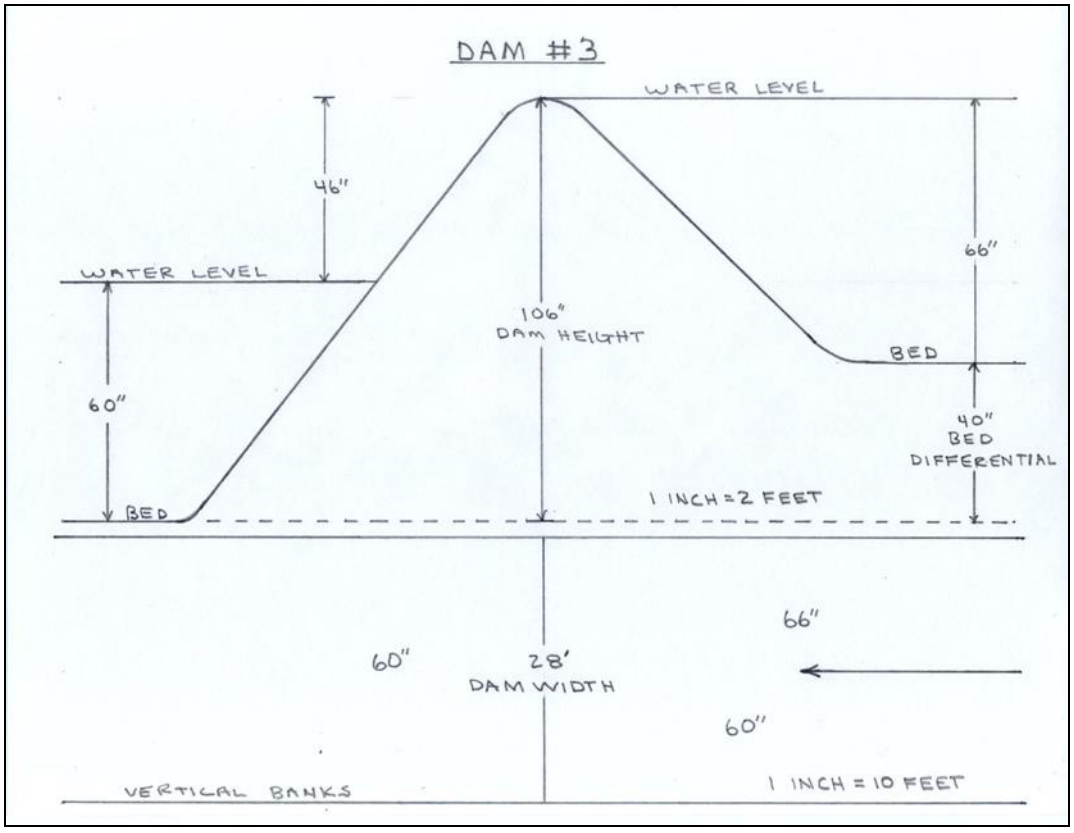

UPSTREAM WATER LEVEL
DOWNSTREAM WATER LEVEL
10"
FLOW
43"
DAM HEIGHT
33"
35"
8" BED DIFFERENTIAL
1 INCH = 2 FEET

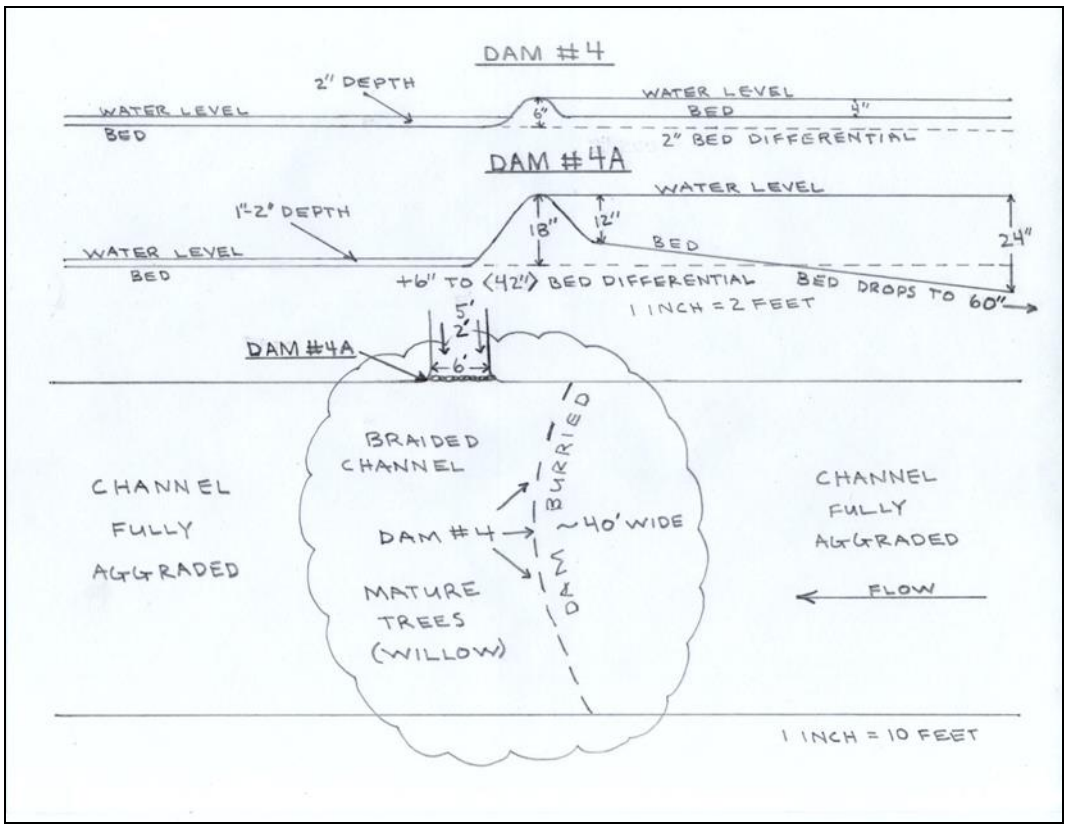
DAM WIDTH & WATER DEPTH
SAND BAR
33"
12.5'
35"
1 INCH = 10 FEET

DAM #2


WATER LEVEL
10"
WATER LEVEL
FLOW
22"
BED
34"
44"
DAM HEIGHT
22" BED DIFFERENTIAL
BED
1 INCH = 2 FEET


VERTICAL BANKS
14"
34"
19.5'
22"
DAM WIDTH
34"
28"
1 INCH = 10 FEET


DAM #3
WATER LEVEL
46"
WATER LEVEL
66"
106"
DAM HEIGHT
BED
60"
40"
BED
DIFFERENTIAL
1 INCH = 2 FEET
BED
66"
60"
28'
DAM WIDTH
60"
VERTICAL BANKS
1 INCH = 10 FEET


DAM #4
2" DEPTH
WATER LEVEL
BED
6"
WATER LEVEL
BED
4"
2" BED DIFFERENTIAL
DAM #4A
WATER LEVEL
1"-2" DEPTH
18"
12"
24"
WATER LEVEL
BED
BED
+6" TO <42"> BED DIFFERENTIAL
BED DROPS TO 60"
1 INCH = 2 FEET
5'
2'
DAM #4A
6'
BRAIDED
CHANNEL
BURIED
CHANNEL
FULLY
AGGRADED
DAM #4
~40' WIDE
MATURE
TREES
(WILLOW)
CHANNEL
FULLY
AGGRADED
FLOW
1 INCH = 10 FEET

Pescadero Road Bridge Prior to Beaver Dam Removal (January 1999)

Pescadero Road Bridge after Beaver Dam Removal (Winter 2002)

RECOMMENDED ACTIONS

To the degree practical, take the following actions to restore the natural hydrology of the system by re-establishing the historic channel, re-connecting the channel to its primary and secondary flood plains, and thereby restore their natural function and flow capacity.

1. **Re-establish the Butano Creek channel by removing sediment, beaver dams, beavers, and vegetation from the channel bed, as well as any remnants of the Highway 1 haul road/coffer dam.** This will increase the flow capacity of the channel and begin to restore the channel's sediment transport capability. The beaver dams and vegetation can easily be removed by hand. This action must be at least partially completed before reconnecting to the primary flood plain (Recommendation #2) or Butano Creek, because its bed has filled with sediment above the elevation of the primary flood plain, will relocate and the historic channel will be lost due to unnatural causes. The channel has been stable in its present location for well over 150 years and it makes sense to allow it to remain in this location. If subsequent to the removal of the dams and blockages the sediment is not washed to the ocean through natural hydraulic action and the channel and lagoon width and depth are not restored, the most sensitive and effective way to assist the natural hydrological processes in the removal of the accumulated sediment is by hand work and suction pumping as was done in the Walker River. Sediment is pumped through 4" lines to remote locations without disturbing the riparian corridor and without the use of heavy equipment in the creek or adjacent wetlands. *Removal of the beaver dams and beavers is the critical first step.* (Jeanne Ferreira, Jerry Smith, Mitch Swanson, personal comments) Once the dams and beavers are removed and the channel's cross sectional size is restored, the channel will maintain itself through the natural action of the water.

2. **Reconnect Butano Creek to its primary flood plain by moving the fire station, by relocating the over-flow swale in Pescadero Road to the immediate area of the bridge (both to the east and west of the bridge) and by creating openings in the old levees (after the channel has cut below the elevation of the adjacent flood plains).** This will greatly increase the flood conveyance capacity of the system, possibly even more than the re-establishment of the Butano Creek channel. (Mitchell Swanson, Swanson Hydrology & Geomorphology: Joe Countryman, former Hydrological Engineer for the State of California water system and currently with Murray, Burns and Kremlin) We can reconnect the flood plains in a variety of ways and to varying degrees by removing sections of levees, modifying the roads, removing fill, and relocating or realigning the fire station. If the fire station is relocated or even re-positioned on its existing site, the upstream entrance to the primary flood plain can be reconnected, thereby facilitating the flow of water through that area.

   The fire station was damaged by the 1998 flood and has not been fully repaired. It is still vulnerable to flooding, especially at those times when emergency services are needed most by our community. It is probable that money will be spent at some point to complete the repairs. At this time, before money is spent raising the firemen's living quarters above the 100 year flood elevation, it would be worthwhile to reposition the buildings as far to the edge of the flood plain as possible on their present parcel (there is a building pad available at that location), or even relocate the station to the county-owned property on the top of the hill, near the old air strip, above the station's current location. That new location would provide safety from flooding, multiple routes of access, and establish a secure location for emergency helicopter operations. Money would be better spent assisting in the relocation or re-positioning of the station than repairing it and leaving it in its present vulnerable location. Many people in the community are willing to help with this effort and our firefighters and paramedics deserve a more secure base of operations.

3. **Raise Pescadero Road and re-design the over-flow swales.** Using data from the recent Pescadero Road study by Swanson Hydrology and Geomorphology, modify the road profile to move the low spot

in the road to the immediate vicinity of the bridge, and to focus flows into the channel. It is of particular importance to facilitate flows to the west of the bridge into the primary flood plain. This would be far less expensive than spanning the entire area with a new bridge or causeway and would be in harmony with the area's natural hydrology. The raised road and re-designed overflow swales would provide the flow capacity across the road, needed in large events, and would make access to our community by emergency vehicles much easier and safer than at present. Focusing flows into the channel and the flood plains on both sides of the bridge, immediately adjacent the channel, would help re-establish and maintain the historic channel, and help restore the natural sediment transport functions of the system. (Sand bags can be used temporarily to simulate the effect of various levels of modification of the road profile and provide some immediate protection.)

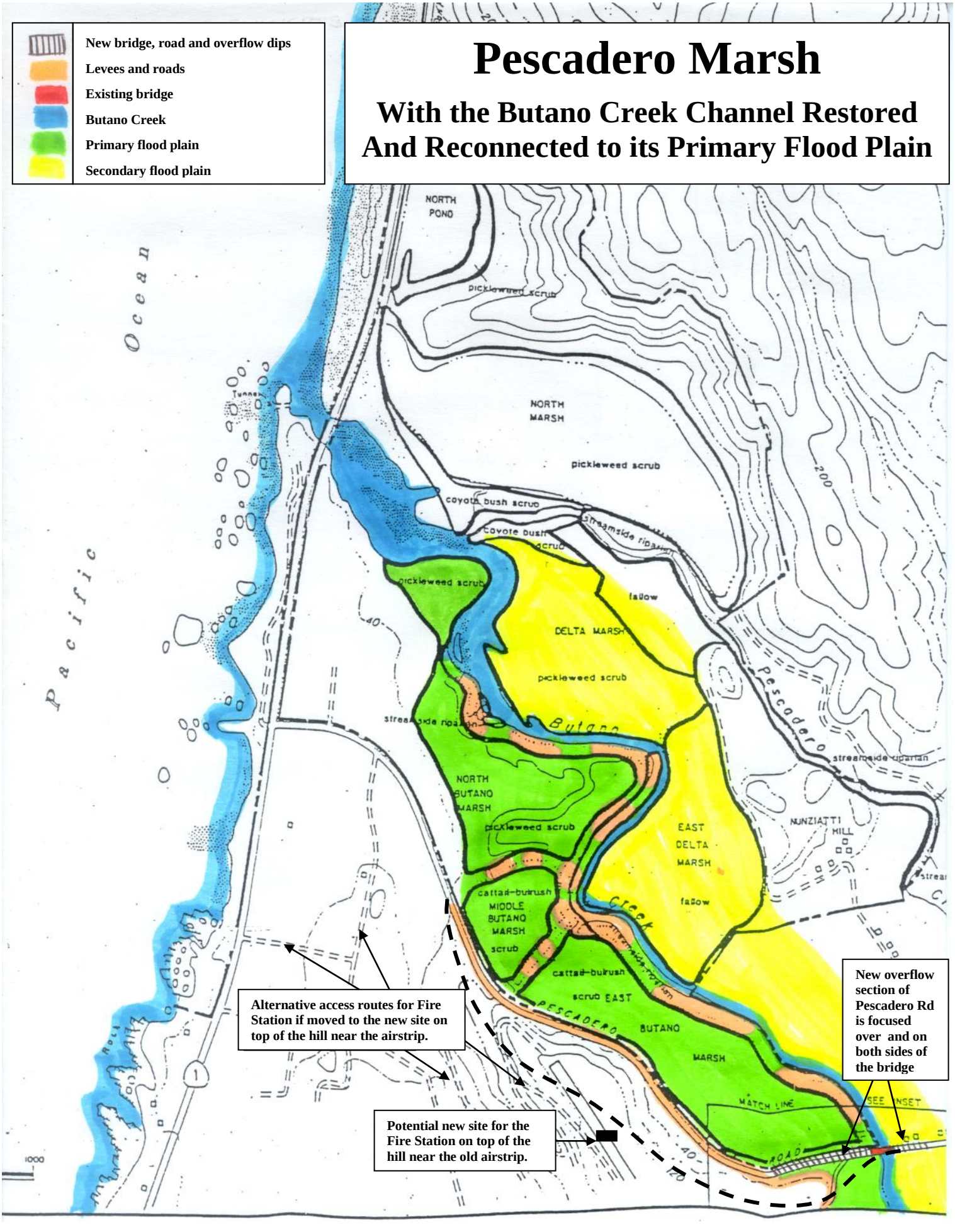
During the flood of February 1998, CDF crewmen almost lost their lives at this location when their heaviest and most stable vehicle was swept sideways. If the road were raised, emergency vehicles, in an event similar to the flood of February 1998, would only have to cross through less than two feet of water, instead of facing powerful flows over four feet deep. The chronic flooding of the road in smaller storm events would be far less frequent. This re-configuring of the road could potentially increase flooding of Level Lea Farm if the channel is not kept open downstream of the bridge and if the primary flood plain is not effectively reconnected. For this reason it is important that the State Department of Parks and Recreation agree to allow the channel downstream of the bridge to be kept free from beaver dams and other major obstructions so as not to put an unfair burden on Level Lea Farm and the community of Pescadero.

4. **Remove sediment from the Butano Creek channel from atop the Pescadero Road Bridge and repeat the procedure as sediment re-accumulates.** This could be easily accomplished by using an excavator or grade-all from atop the bridge (as it was in the past), without entering the creek. Removing sediment at this location will increase the flow capacity under the bridge, will help re-establish and maintain the creek channel, and will reduce sediment input into the marsh. This area was used in the past by bullfrogs (an invasive non-native species) and it would be beneficial to control their population. The sediment basin will also create an area of deep-water habitat that will be of value as rearing habitat and refuge from predators for steelhead and red legged frogs. The creation of this sediment basin would also re-establish the historic emergency water-filling site for the CDF fire trucks. This can be done immediately.

5. **Secure, implement and provide support for a long-term vegetation management, beaver dam management, and beaver removal program in cooperation with the California Department of Parks and Recreation.** This will keep the channel from becoming blocked and starting the cycle of reduced flow, increased sedimentation and uncontrolled vegetation growth all over again. Staff and budget limitations are the biggest obstacles. We need to find ways to help.

The implementation of these actions to restore the natural hydrology of lower Butano Creek and its floodplains will provide the following benefits:

- **Increased flood protection and safety for the residents and visitors of our community**
- **Restoration of the Butano Creek channel before it completely disappears or relocates**
- **Re-establishment of the sediment transport function of the system**
- **Stopping the unnatural deposition of sediment in the Pescadero Marsh and the resulting undesirable and unnatural conversion of wetland habitat into upland habitat**
- **Improvement of the rearing habitat, fish passage and protective cover from predators for our native steelhead and other fish species**
- **Improved deep water habitat for red-legged frogs and improved protective cover from predators**


New bridge, road and overflow dips
Levees and roads
Existing bridge
Butano Creek
Primary flood plain
Secondary flood plain
Pescadero Marsh
With the Butano Creek Channel Restored
And Reconnected to its Primary Flood Plain
NORTH POND
pickleweed scrub
Ocean
Pacific
NORTH MARSH
pickleweed scrub
coyote bush scrub
streamside riparian
fallow
DELTA MARSH
pickleweed scrub
Butano
Pescadero
streamside riparian
NORTH BUTANO MARSH
pickleweed scrub
EAST DELTA MARSH
fallow
NUNZIATTI HILL
cattail-bulrush
MIDDLE BUTANO MARSH
scrub
Creek
streamside riparian
cattail-bulrush
scrub EAST
PESCADERO
BUTANO
MARSH
MATCH LINE
SEE INSET
ROAD
Alternative access routes for Fire Station if moved to the new site on top of the hill near the airstrip.
Potential new site for the Fire Station on top of the hill near the old airstrip.
New overflow section of Pescadero Rd is focused over and on both sides of the bridge

OTHER POINTS OF VIEW

It is believed by some that there is a lack of information available on the overall condition of our watershed, and we should wait until we have completed more scientific study and analysis before we take some, if not all, of the actions recommended in this report. This perspective views the flooding as possibly a result of increased erosion of the upper watershed caused by past and present human land use, and as a result there is currently "an abnormally high load of sediment being transported downstream and deposited in the flood-plain. Consequently, the creeks overflow, particularly where Pescadero Road crosses Butano Creek." (Half Moon Bay Review, April 11, 2001) One newspaper article "blamed flooding on silt running down from logging areas in the upper watershed" originating from erosion caused by old abandoned logging roads and stream crossings. (San Francisco Chronicle, February 15, 2000) From this perspective we should first find out specific causes and sites of additional erosion caused by human activities, and control those additional sediment sources before we take action in the lower watershed. It is further suggested that if we do not follow this procedure, "…any 'fixes' in the lower Pescadero/Butano will be at best temporary," (Half Moon Bay Review, April 11, 2001) and that any restoration work we do in the lower watershed might be overwhelmed by massive sediment events exacerbated by human activities. By taking action now, without the benefit of more information, we could be wasting our time, money and effort.

CONCLUSION

We should fully support all practical, objective efforts to study, learn and cooperatively improve the health and safety of our entire watershed. It is important to do what ever we can to obtain the best information possible to actively manage the upper watershed for the benefit of the entire natural system, including the people.

We should also support the restoration of the natural hydrology of the lower Butano watershed, its channels and floodplains. There is more than sufficient information (partially documented in the references of this report) available to make wise, science based decisions regarding immediate actions that can be taken to restore the area's natural hydrology. Some of those actions are already making good progress. The resulting improvement in the sediment transport function of the system will increase the effectiveness of our current and future erosion and sediment control efforts in the upper watershed, will provide immediate flood relief to the community of Pescadero, and will stop the accelerated deposition of sediment that is unnaturally filling the Pescadero Marsh. It will improve the health of the system as a whole, particularly our fishery and wetlands. Projects that improve the health and natural functions of the upper watershed, and projects that restore the natural functions of the lower channels and floodplains work hand-in-hand to the benefit of the entire natural system and the welfare of the community.

Virtually all stream and habitat management and restoration manuals promote restoration of natural historic channels and the reconnection of channels to their historic flood plains. Three recent studies focusing on our particular watershed, *Pescadero Marsh Management, A Plan for Persistence and Productivity* (Curry, 1985); the *Pescadero Marsh Watershed Analysis* (Osterling, 1987); and the *Hydrological Enhancement Plan for the Pescadero Marsh Natural Preserve* (Phillip Williams & Associates, 1990) all promote restoration of the natural hydrology of the marsh. The restoration of the natural hydrology of this area will provide immediate benefits to the entire system.

Let's be wise with our expenditures and utilize the great deal we know about our watershed. We have completed many studies, there will be many more studies in the future, and we should not be afraid to take immediate, responsible, thoughtful action to protect lives, property and to improve the health of our watershed, our fishery and our wetlands.

PESCADERO ROAD & BUTANO CREEK FLOOD SPECIFICATIONS & DATA

- 1 Year Estimated Flood Event: **~200 cubic feet per second (cfs)**
- 2 Year Estimated Flood Event: **~1000 cfs**
- 10 Year Estimated Flood Event: **~2000-2600 cfs**
- 100 Year Estimated Flood Event: **~3500-5700 cfs**
- 500 Year Estimated Flood Event: **~4200-6800 cfs**
- 1998 flood (Butano Creek alone): **~3600 cfs**
- Total 1998 flood at Pescadero Road (Butano Creek flow of ~3600 cfs with added flow from Pescadero Creek across Level Lea Farm of ~1500 cfs): **~5000 cfs**
- 100 Year Estimated Flood Elevation: **15 feet**
- Elevation of 1998 flood at bridge: **14.6 feet**
- Elevation of road surface of the Pescadero Road Bridge over Butano Creek: **13 feet**
- Elevation of current low spot in Pescadero Road east of the bridge: **~10.5 feet**
- Road elevation immediately west of bridge above primary flood plain: **~ 4 feet**
  Freeboard available for potential water passage under road surface: **~3.5 feet**
  Slightly less freeboard available immediately east of the bridge.
- Capacity of 1854 channel **~4800cfs**
  (100 feet x 12 feet x 4 feet per second = flow capacity)
- Capacity of channel at the bridge in 1961: **~2560cfs**
  (64 feet wide x 10 feet deep x 4 feet per second = flow capacity)
- Flow required to flood road completely in January 2001: **~36cfs**
- Flow required to flood road completely in January 2002 after beaver dam removal in February of 2001: **~60cfs**
- Number of days the road would have flooded during the winter of 2001-2002 if the dams had not been removed: **47**
- Number of days flood water rose high enough to flood the road during the winter of 2001-2002 with the beaver dams removed: **15**
- Actual number of days that the road flooded with the added effect of sandbags holding back an additional 8 inches of water: **5**

HOW WE CAN HELP

Money, though important, is not our main need. What we need most is a positive attitude, cooperation, determination and perseverance. We need to work with each other, the residents and friends of our community, the private property owners along the stream, the California Department of Parks and Recreation (the owner of the marsh), the County of San Mateo (the owner of the roads and fire station), the scientific community, and the permitting and regulatory agencies to accomplish our goal and to minimize the unnecessary damage being done to our natural system, our community, our fishery, and the lives and property of our friends and neighbors, hopefully before any more serious tragedies occur as a result of this correctable situation. If we take determined, positive, thoughtful, consistent steps toward our goal, keep moving forward (and have fun while we're doing it!), we will most assuredly succeed.

In the words of Winston Churchill, ***"Never, never, never, never, never give up!"***

- Give copies of this report to people interested in the restoration of the Pescadero Marsh and the improvement of the flooding situation, especially those who might like to help. Call me if you need additional copies. They are free to everyone.
- Let me and others know your ideas as to how we can best make progress.
- Contact me for information on the status of current and potential projects, what is needed, and how you can help to help move them forward. My phone number and contact information are on the cover of this booklet.
- Contact the Pescadero Municipal Advisory Council and ask how you can help. Their phone numbers are (650) 879-0964 and (650)879-0218
- Contact the California Department of Parks and Recreation and ask how you can help them achieve their goals for the Pescadero Marsh. Their phone number is (415) 330-6300
- Contact the Pescadero Conservation Alliance and talk to them about programs they may have to educate people about the marsh, and programs they may currently have to help restore and improve habitat and natural functions in the Pescadero Marsh. Their phone number is (650) 879-1441
- Contact your elected officials, ask for their help and support, and ask how we can help and support them in this effort.

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COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ITEM 13

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: September 12, 2022

TO: Agricultural Advisory Committee

FROM: Kanoa Kelley, Planning Staff, kkelley@smcgov.org

SUBJECT: Consideration of a Coastal Development Permit (CDP), Planned Agricultural District (PAD) Permit, Architectural Review Permit, and Grading Permit for a new 3,658 sq. ft. single-family residence, attached 1,358 sq. ft. garage/workshop/unconditioned storage, and a 718 sq. ft. greenhouse on a 38-acre parcel located at 12720 Cabrillo Highway in the unincorporated Pescadero area of San Mateo County. The project includes the conversion of an agricultural well for domestic use, a new septic system, new water tanks, and 1,800 cubic yards of grading (1,200 c.y. of cut and 600 c.y. of fill) for the residence, 4 fire engine turnouts and a new driveway. No tree removal is proposed. The project parcel is located in the Cabrillo Highway State Scenic Corridor. The project is appealable to the California Coastal Commission.

County File Number: PLN 2021-00022 (Lee)

PROPOSAL

The project parcel is located adjacent and east of Cabrillo Highway (State Route 1), within the Cabrillo Highway State Scenic Corridor. The site is undeveloped and has historically been used as farmland.

The applicant is seeking a Coastal Development Permit (CDP), Planned Agricultural District (PAD) Permit, Architectural Review Permit, and Grading Permit for a new 3,658 sq. ft. single-family residence, attached 1,358 sq. ft. garage/workshop/unconditioned storage, and a 718 sq. ft. greenhouse. The project includes the conversion of an agricultural well for domestic use with the addition of a water lateral connecting the well to the new home, a new septic system, new water tanks, and 1,800 cubic yards of grading (1,200 c.y. of cut and 600 c.y. of fill) for the residence, 4 fire engine turnouts and a new driveway. The new driveway includes a 15-foot culvert to span over an existing man-made drainage ditch. The proposal includes continuation of agricultural activities on site including small animal grazing. The applicant is pursuing organic certification for beans, peas, and other specialty vegetables and fruits. An agricultural management plans has been submitted and is included as an attachment to this report. The legality of the 38-acre parcel was established by a determination for a Certificate of

Compliance, Type A (COC 92-0001). No tree removal is proposed and the parcel is not under a Williamson Act contract.

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: Kanoa Kelley, Project Planner, kkelley@smcgov.org

Applicant/Owner: Bean Hollow Farm LLC

Location: Bean Hollow Road, east of Cabrillo Highway in the community of Pescadero

APN: 086-191-100

Parcel Size: 38.2-acres

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

General Plan Designation: Agriculture

Local Coastal Plan Designation: Agriculture

Williamson Act: Not contracted

Existing Land Use: Agricultural

Water Supply: There is no municipal water service available in this area. Water will be provided by an existing well on site that currently provides supplemental water for agricultural activities. The well will be converted for use solely by the proposed single-family home. Water for agriculture will be sourced from nearby Lake Lucerne as the owner has appropriate water rights. The water will be stored in an existing pond on site.

Sewage Disposal: There is no municipal septic service available in this area. A new septic system to support the proposed development is proposed.

Flood Zone: Flood Zone X (area of minimal flood hazard), FEMA Panel No. 06081C0431F, effective August 2, 2017.

Environmental Evaluation: An Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared pursuant to the California Environmental Quality Act (CEQA) Guidelines.

Setting: The legal 38-acre project parcel borders Cabrillo Highway on the parcel's west side and is accessed via Bean Hollow Road from Cabrillo Highway (Hwy 1). The parcel is located in a rural area within the Cabrillo Highway State Scenic Corridor and is surrounded by single-family residential and dedicated farmland developed parcels ranging in size between 5 to 45 acres. The parcel is currently used as an agricultural operation. The site is mostly cleared farmland with a few mature trees and ponds. Topography in the area consists of relatively gentle sloped terrains.

Chronology:

Date	Action
October 11, 2005	- Coastal Development Exemption approved to drill an agricultural well (PLN 2005-00468).
January 21, 2022	- Subject application submitted.
May 22, 2022	- Subject application deemed complete.
July 13 to August 2, 2022	- Circulation of Initial Study and Mitigated Negative Declaration.
September 12, 2022	- Agricultural Advisory Committee meeting.
TBD	- Planning Commission hearing.

Will the project be visible from a public road?

No. The parcel is located east of Cabrillo Highway and the new single-family residence will be located approximately 1,300 feet east of Cabrillo Highway. Due to the vertical slope from Cabrillo Highway and existing vegetation, no proposed structures will be seen from Cabrillo Highway. Photo simulations have been included in the submitted plans showing views from 35 different angles along Cabrillo Highway and Bean Hollow Road. The photo simulations demonstrate that the home will not be visible from Cabrillo Highway and will minimally impact views from the Bean Hollow access road.

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

No. The project will be located in an undeveloped area of the parcel where no prime soils exist. The area contains shrubs and non-riparian vegetation. No trees are

proposed for removal. A 100-foot buffer from all wetlands on site and a 50-foot buffer from riparian habitat has been established where no development can occur. Therefore, no habitat or riparian vegetation will be disturbed.

Is there prime soil on the project site?

Yes. The site contains both Class II and Class III prime soils. However, all proposed structures will be placed on non-prime soils located in the center of the parcel, therefore, avoiding any conversion of prime soils to residential uses.

DISCUSSION

A. KEY ISSUES

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

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

a. Conformance with the PAD Development Standards

As shown in the table below, the proposed residential unit complies with Section 6358 and 6359 of the San Mateo County Zoning Regulations, which regulates the height and required setbacks of structures in the PAD.

	PAD Development Standards (Residential)	Proposed
Minimum Lot Size	N/A	38.2 acres (existing)
Minimum Front Setback	50 feet	1,300 feet
Minimum Side Setbacks	20 feet	180 feet (right) 426 feet (left)
Minimum Rear Setbacks	20 feet	614 feet
Minimum Building Height	36 feet	33 feet, 11 inches

b. Conformance with the Criteria for the Issuance of a PAD Permit

In order to approve and issue a PAD permit, the project must comply with the substantive criteria for the issuance of a PAD permit, as outlined in Section 6355 of the Zoning Regulations. As proposed, the project complies with the following applicable policies.

(1) General Criteria

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

Based on a 1961 Natural Resource Conservation Service (NRCS) soils report and Productive Soil Resources with Agricultural Capability General Plan Map, a majority of the parcel contains Class II and III soils. Pursuant to the County's General Plan and Planned Agricultural District, prime soils are defined as all land which qualifies for rating as Class I or Class II in the U.S. Department of Agriculture Soil Conservation Service Land Use Compatibility Classification, as well as all Class III lands capable of growing artichokes or Brussels sprouts.

The site contains both Class II and Class III prime soils. All proposed structures will be placed on non-prime soils located in the center of the parcel, therefore, avoiding any conversion of prime soils to residential uses. No subdivision has been proposed as part of this project

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

The location of the proposed single-family dwelling and associated structures have been clustered in the non-prime soil area located in the central portion of the parcel. The flatter prime soil areas will be dedicated to agricultural activities.

(c) *Every project shall conform to the Development Review Criteria contained in Chapter 20A.2 of the San Mateo County Ordinance Code.*

The project has been reviewed under and found to comply with the Development Review Criteria in Chapter 20A.2 of the County Zoning Regulations. Specifically, the project complies with the Site Design, Scenic, Utilities, and Water Resources Criteria by not introducing noxious odors, chemical agents, or long-term noise levels, retaining the rural nature of the parcel, and undergrounding utilities. Furthermore, the project does not involve the removal of large areas of vegetation and will utilize existing road infrastructure, thereby reducing grading necessary to access the site and accommodate the project.

(2) Water Supply Criteria

(a) *The existing availability of an adequate and potable well water source shall be demonstrated for all non-agricultural*

uses. Each existing parcel developed with non-agricultural uses shall demonstrate a safe and adequate well water source located on that parcel.

The subject parcel contains an existing agricultural water well on site. The project includes the conversion of the agricultural well for domestic use and a new water lateral from the well to the new residence.

This proposal has been reviewed and conditionally approved by Environmental Health Services (EHS). As a part of their conditional approval, EHS will require the review of the quality and quantity of the water provided by the domestic well on site to ensure that it meets the minimum domestic standards for the proposed residential unit prior to building permit issuance.

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

Water for agriculture will be sourced from nearby Lake Lucerne as the owner has appropriate water rights. The water will continue to be stored in an existing pond on site which will maintain the sensitive habitats contained in and around the pond.

(3) Criteria for the Conversion of Lands Suitable for Agriculture and Other Land

The project site is located on Other Lands as defined by the PAD Regulations. All lands suitable for agriculture and other lands within a parcel shall not be converted to uses permitted by a Planned Agricultural District Permit unless all of the following criteria per Section 6355.F of the PAD Regulations are met:

(a) All agriculturally unsuitable lands on the parcel have been developed or determined to be undevelopable.

(b) Continued or renewed agricultural use of the soils is not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors (Section 30108 of the Coastal Act).

(c) Clearly defined buffer areas are developed between agricultural and nonagricultural uses.

(d) The productivity of any adjacent agricultural lands is not diminished, including the ability of the land to sustain dry farming or animal grazing.

(e) Public service and facility expansions and permitted uses do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.

All prime soil locations on the parcel will be utilized for agricultural operations. The only non-prime soil locations on the parcel is where the subject development is proposed. Due to riparian and marshland buffers, no other suitable locations for development exist on the parcel. The owner will continue agricultural operations in the form of grazing small animals and the cultivation of artichokes, beans and other specialty fruits and vegetables. There will be clearly defined agricultural and living areas separated by the natural topography and new access roads.

2. Conformance with the General Plan

Staff has reviewed the project and found it to be in conformance with the applicable General Plan policies as follows:

a. Vegetative, Water, Fish, and Wildlife Resources

Policies 1.28 (*Regulate Development to Protect Sensitive Habitats*) and 1.29 (*Establish Buffer Zones*) seek to regulate development activities within or adjacent to sensitive habitat to protect endangered plants and animals, and establish necessary buffer zones to protect these areas from encroachment by development.

A minimum buffer zone of 50 feet from riparian habitat and 100 feet from wetlands must be maintained for this project. See staff's discussion on LCP Policy 7.11 and 7.18 below.

b. Visual Quality

Policy 4.15 (*Appearance of New Development*) and Policy 4.22 (*Scenic Corridors*) seek to regulate development to promote good design, site relationships, and to protect and enhance the visual quality of development within designated scenic corridors.

General Plan Table 4.6 designates Cabrillo Highway (State Route 1) from the southern limits of the City of Half Moon Bay to the Santa Cruz County line as a State Scenic Corridor. Adjacent to Cabrillo Highway, the project parcel and project site fall within the Highway 1 State Scenic Corridor. The parcel is located east of Cabrillo Highway and the new single-family residence will be located approximately 1,300 feet east of Cabrillo Highway. Due to the vertical slope from Cabrillo Highway and existing vegetation, no proposed structures will be seen from Cabrillo Highway. Photo simulations have been included in the submitted plans showing views from 35 different angles along Cabrillo Highway and Bean Hollow Road. The photo simulations demonstrate that the home will not be visible from Cabrillo Highway and will minimally impact views from the Bean Hollow access road. The project does not propose the removal of any existing vegetation or trees adjacent to Cabrillo Highway or Bean Hollow Road, therefore existing vegetation that provides screening will be maintained.

c. Rural Land Use

Policy 9.23 (*Land Use Compatibility in Rural Lands*) and Policy 9.30 (*Development Standards to Minimize Land Use Conflicts with Agriculture*) encourage compatibility of land uses in order to promote the health, safety, and economy of rural lands, seek to maintain the scenic and harmonious nature of rural lands, and seek to: (1) promote land use compatibility by encouraging the location of new residential development immediately adjacent to existing developed areas, and (2) cluster development so that large parcels can be retained for the protection and use of vegetative, visual, agricultural, and other resources.

The rural residential use of this parcel is compatible with the rural residential structures located on adjacent properties. The project will not be located on the flat prime soil locations which will maintain existing farmland for the purposes of grazing and organic farming. The project proposes to cluster development and will employ natural colors and materials to further blend into the landscape. Finally, the project will utilize existing road infrastructure to minimize grading and disturbance.

d. Wastewater

Policy 11.10 *(Wastewater Management in Rural Areas)* considers individual sewage disposal systems as an appropriate method of wastewater management in rural areas.

The project site is located in a rural area with no public water or sewage system. The applicant has proposed to construct an on-site septic system to meet the project's needs. The proposed septic system's location, size, and design has been reviewed and conditionally approved by the County's Environmental Health Services.

3. Conformance with Local Coastal Program (LCP) Policies

Staff has determined that the proposed development conforms to all applicable Local Coastal Program (LCP) Policies, specifically:

a. Locating and Planning New Development

Policy 1.8 *(Land Uses and Development Densities in Rural Areas)* states that new development in rural areas shall not: (1) have significant adverse impacts, either individually or cumulatively on coastal resources, or (2) diminish the ability to keep all prime agricultural land and other lands suitable for agriculture in agricultural production.

As discussed previously, the proposed project will add a single-family home on areas not designated as prime soils. Staff has concluded through the preparation of an Initial Study that the project, with the required mitigation measures, will not have significant adverse impacts to coastal resources. The agricultural management plan details the intention to preserve a majority of the parcel for agricultural activity which includes grazing for small animals such as sheep and goats, and the planting of artichokes, beans, peas, and other specialty fruits and vegetables; thereby, keeping prime agricultural land in production.

b. Agriculture

Policy 5.1 (*Definition of Prime Agricultural Lands*) defines prime agricultural lands as all lands which contain soils rated Class I, Class II, as well as Class III soils rated capable of growing artichokes or Brussel sprouts as defined by the U.S Department of Agriculture Soil Conservation Service Land Use Compatibility Classification. Policy 5.5 (*Permitted Uses on Prime Agricultural Lands Designated as Agriculture*) permits the cultivation of food and grazing on prime soils.

Per the Productive Soil Resources with Agricultural Capability General Plan Map, most of the project parcel contains Class II and III soils capable of growing artichokes or Brussel sprouts. There is a small centrally located portion of the parcel that is sloped and is not designated as prime soils where the proposed single-family

development will be located. Additionally, the PAD Regulations allows conversion of Other Lands subject to a PAD Permit, which the applicant is seeking. In compliance with LCP Policy 5.5, the applicant will continue to use the prime soil locations on the property for the purposes of organic farming and grazing.

c. Sensitive Habitats Component

Policy 7.1 (*Definition of Sensitive Habitats*) defines sensitive habitats as "habitats containing or supporting rare and endangered species as defined by the State Fish and Game Commission". This habitat includes riparian corridors and wetlands. Policy 7.11 (*Establishment of Buffer Zones*) requires a 50-foot buffer zone from the limit of riparian vegetation. Similarly, Policy 7.18 (*Establishment of Buffer Zones*) establishes a buffer zone of 100 feet landward from the outermost line of wetland vegetation.

There are two ponds on site that, although man-made, are surrounded by wetland and riparian vegetation that create an ideal environment for special-status plant and animal species. In compliance with LCP Policies 7.11 and 7.18, a minimum buffer zone of 50 feet from riparian habitat and 100 feet from wetlands must be maintained. In consultation with a qualified biologist, the project has mapped a 100-foot buffer from all ponds and wetlands and riparian habitat, where no project construction will occur. The project therefore complies with these LCP policies.

Due to the high potential for special-status and endangered plants and animals to occur within the riparian and wetland areas, mitigation measures as recommended by the project biologist will be required to reduce the impacts to biological resources to a less-than-significant level. These mitigations include a pre-construction survey, wildlife exclusion fencing, environmental training for workers, and other avoidance measures during construction.

d. Visual Resources

Policy 8.5 (*Location of Development*) requires that new development on rural lands be located where it is least visible from scenic roads, is least likely to impact views from public viewpoints and is consistent with all other LCP requirements. Policy 8.6 (*Streams, Wetlands and Estuaries*) seeks to retain wetlands intact except for public accessways designed to respect the visual and ecological fragility of the area and adjacent land, in accordance with the Sensitive Habitats Component policies.

The location of development will be approximately 1,300 feet from Cabrillo Highway. Due to the topography and existing vegetation the proposed single-family home will not be visible from the public roadway or nearby Bean Hollow State Beach or other public viewpoints. See Section 2.b for additional details.

All wetlands identified on site will be preserved and a buffer will be established where no development can take place. See Section 3.c of the staff report for details on compliance with LCP policies for biological resources.

4. Conformance with the Grading Ordinance

The project includes 1,800 cubic yards (c.y.) of grading, including 1200 c.y. of cut and 600 c.y. of fill, for the single-family residence and access road, which requires the issuance of a grading permit.

Staff has reviewed the proposal against the required findings for the issuance of a Grading Permit and concluded that the project, as conditioned, conforms to the criteria for review contained in Section 9296 of the Grading Ordinance such as the standards for erosion and sediment control and submittal of a geotechnical report. As discussed in Section A.2 of this staff report, the project is consistent with all applicable policies in the General Plan. The Department of Public Works, Geotechnical Section, and the Drainage Section have all reviewed and conditionally approved the proposed plans.

B. ENVIRONMENTAL REVIEW

An Initial Study and Mitigated Negative Declaration (IS/MND) was prepared for this project and circulated from July 13, 2022 to August 2, 2022. No comments were received during the public comment period. Staff has determined that the project, with the recommended mitigation measures, will not have a significant impact on the environment. All mitigation measures can be viewed in the Initial Study/Mitigated Negative Declaration in Attachment D.

ATTACHMENTS

A. Vicinity Map
B. Project Plans
C. Biological Report
D. CEQA Initial Study/Mitigated Negative Declaration
E. Agricultural Management Plan

County of San Mateo - Planning and Building Department

ATTACHMENT A

San Mateo County

County San Mateo, CA

0.57 0 0.28 0.57 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

© Latitude Geographics Group Ltd.

1: 18,056

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

County of San Mateo - Planning and Building Department

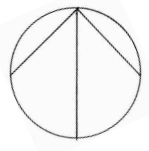
ATTACHMENT B

BH

BEAN HOLLOW FARMHOUSE
CABRILLO HWY APN 086191100
SAN MATEO COUNTY, CA

BRIAN LEE ARCHITECT
brian.lee.faia@gmail.com
1.415.812.3294

2020.12.24 SMC



LOCATION MAP

BEAN HOLLOW FARMHOUSE
CABRILLO HWY APN 086191100
SAN MATEO COUNTY, CA

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1.415.812.3294

2020.12.24 SMC

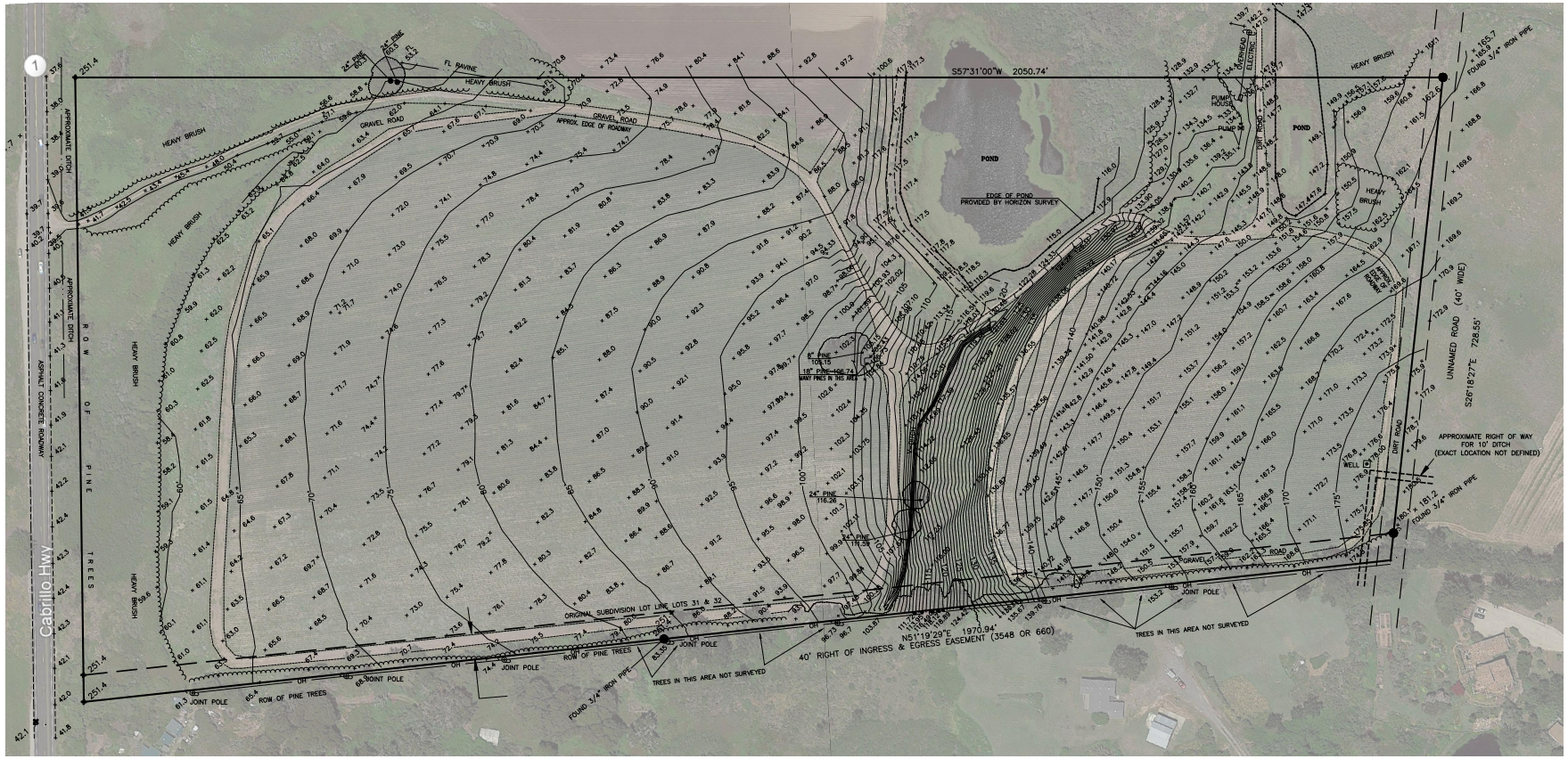
CONTEXT PLAN

BEFORE EXCAVATING CALL U.S.A.

OWNER AND/OR CONTRACTOR ARE RESPONSIBLE FOR LOCATION AND VERIFICATION OF ALL EXISTING UNDERGROUND UTILITIES. UNDERGROUND SERVICE ALERT (USA) SHOULD BE NOTIFIED FOR ASSISTANCE IN THIS MATTER AT (800) 227-2600, 48 HOURS PRIOR TO ANY CONSTRUCTION.
THE (USA) AUTHORIZATION NUMBER SHALL BE KEPT AT THE JOB SITE.
LOCATION AND CHARACTER OF ANY UTILITIES IF SHOWN HEREON ARE APPROXIMATE, AND TAKEN FROM A COMBINATION OF SURFACE STRUCTURE OBSERVATION AND/OR THE RECORDS OF THE CONTROLLING AGENCY. HUMANN COMPANY DOES NOT ASSUME RESPONSIBILITY FOR THE LOCATION OF ANY EXISTING UTILITIES OR OTHER UNDERGROUND FEATURES SUCH AS VAULTS, TANKS, BASEMENTS, BURIED OBJECTS, ...ETC.

0 60 120 180
(IN FEET)
1 inch = 60 ft.

LEGEND
JOINT POLE
EXISTING GRADE



GENERAL NOTES

THE SCOPE AND LIMIT OF THIS SURVEY WAS DEFINED IN JUNE, 2018 BY BRIAN LEE. USE OF THIS SURVEY IS LIMITED TO THE PROPERTY OWNER AS REFERENCED IN THE TITLE BLOCK AND CONSULTANTS FOR THE SPECIFIC PROJECT. OTHERS MAY NOT USE THIS MAP WITHOUT THE PERMISSION OF THE CLIENT AND HUMANN COMPANY. BOUNDARY AND BASIS OF BEARINGS ARE PER THE UNDERLYING RECORD MAP AS REFERENCED IN THE TITLE BLOCK HEREON.

TITLE REPORT FOR THIS SURVEY WAS PREPARED BY OLD REPUBLIC TITLE COMPANY, DATED JULY 1, 2000, ORDER NO.280708.

THE ELECTRONIC FILE IF SUPPLIED, IS BEING DONE SO AS A COURTESY AND CONVENIENCE, AND IS SUBORDINATE TO THE PROVIDED SIGNED HARD COPY MAP WITH RESPECT TO CONTENT, ACCURACY AND QUALITY. HUMANN COMPANY MAKES NO WARRANTEE OR GUARANTEE, EXPRESSED OR IMPLIED FOR ANY COPIES OF THE DRAWINGS OR WORK ASSOCIATED WITH THE ELECTRONIC FILE BY OTHERS.

TREES AND DRIP LINES AS SHOWN ARE LOCATED SUFFICIENTLY FOR GENERAL ARCHITECTURAL SITE PLANNING. ANY CONSTRUCTION ACTIVITY PLANNED IMMEDIATELY ADJACENT TO THE TREES OR DRIP LINES SHOULD BE REVIEWED WITH THE APPROPRIATE CONSULTANT. IF IT IS DETERMINED THAT DETAILED TREE AND/OR BRANCH MEASUREMENTS ARE NEEDED, FURTHER SURVEYING MAY BE NECESSARY AND SHOULD BE ARRANGED BY THE OWNER AND/OR CONSULTANT. SPECIES AS REFERENCED ON THE SURVEY SHOULD BE CONFIRMED BY A LICENSED ARBORIST OR LANDSCAPE ARCHITECT IF THE SPECIFIC TREE(S) IS SUSPECTED OF BEING A PROTECTED OR CRITICAL ONE(S).

PORTIONS OF TOPOGRAPHIC INFORMATION SHOWN HEREON AS PROVIDED BY HORIZON SURVEY, ELECTRONIC MAILING OF POINTS AND PARTIAL TOPOGRAPHIC SURVEY PLAN, DATED AUGUST 2000.

DATUM: TEMPORARY BENCHMARK: "X" SET ON CONCRETE WELL LOCATED NEAR THE SOUTHEASTERLY CORNER OF THE SITE, ELEVATION TAKEN AS 178.0 FEET, SAID TEMPORARY BENCHMARK WAS SHOWN ON TOPOGRAPHY SURVEY BY HORIZON SURVEY, DATED AUGUST, 2000. SAID BENCHMARK WAS BASED UPON USGS BENCHMARK (SAN MATEO COUNTY DATUM) FOUND ALONG BEAN HOLLOW ROAD PER SAID HORIZON SURVEY TOPOGRAPHY, ELEVATION WAS 251.40 FEET.

CONTOUR INTERVAL: 1-5 FEET

LICENSED LAND SURVEYOR
ERIC A. HUMANN
Exp. 9-30-00
No. 5452
STATE OF CALIFORNIA

ERIC (RICK) A. HUMANN PLS 5452

07/30/2018
DATE

REVISIONS

SCALE	1" = 60'
DATE	07/30/18
DRAWN	CS
CHECKED	RH
JOB NO.	18087

TOPOGRAPHIC SURVEY

PORTION OF LOT 11, BOOK 11 PAGE 18-26 (APN: 086-191-100)

LEE FARM - - CABRILLO HIGHWAY, PESCADERO

SAN MATEO COUNTY CALIFORNIA

HUMANN COMPANY INC.
SURVEYING
ENGINEERING
1023 CRANE STREET, MENLO PARK, CA 94549
PH (925)933-8000 FAX (925)933-8979
www.humanninc.com

SHEET 1
OF 2 SHEETS

JOB NO. 18087

BH

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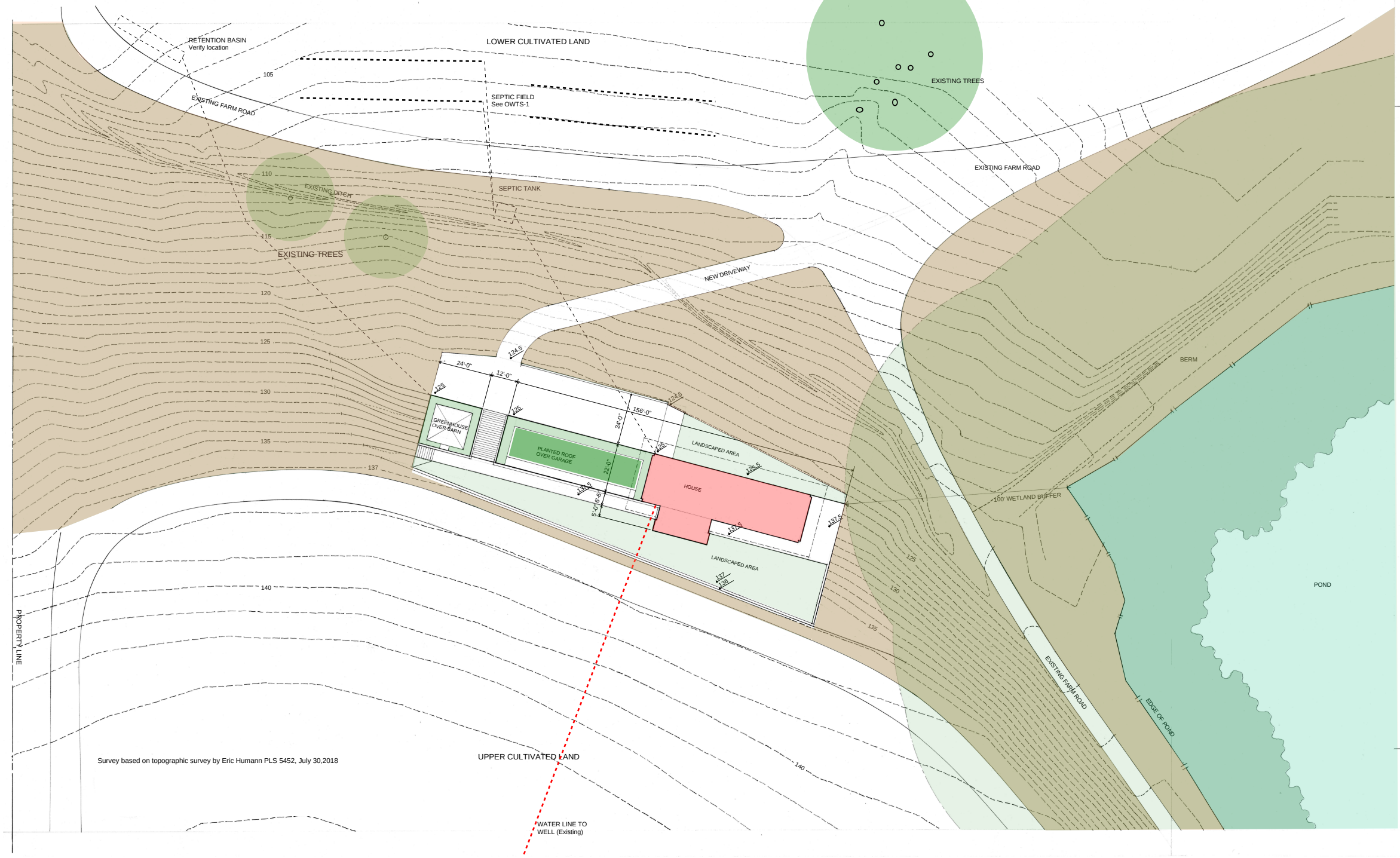

Survey based on topographic survey by Eric Humann PLS 5452, July 30,2018

BH

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250
100
50
40
30
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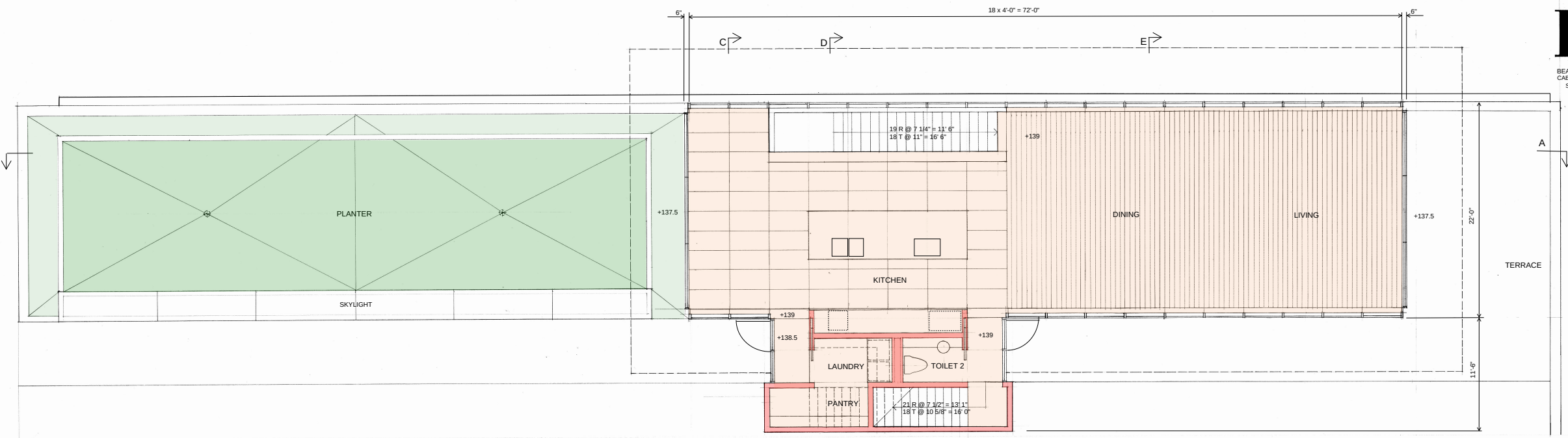
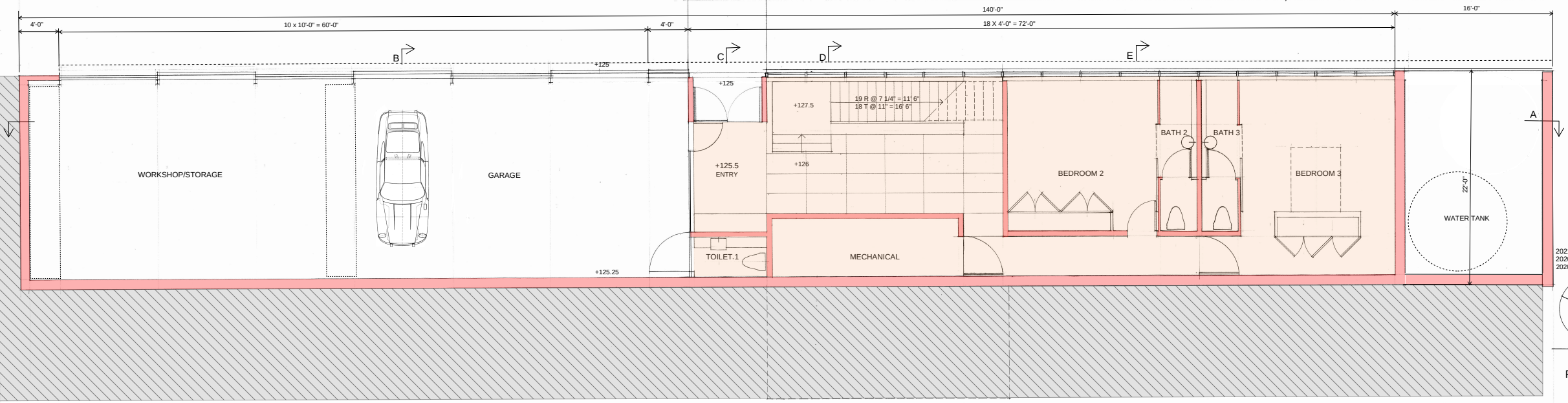
2021.01.10 SMC
2020.12.24
2020.03.04 PLANNING
2020.01.04 CONCEPT

SITE PLAN

A1



LEVEL 2 1,629 sf



LEVEL 1 1,409 sf (1.358 sf Garage/ Workshop/ Storage)

BH

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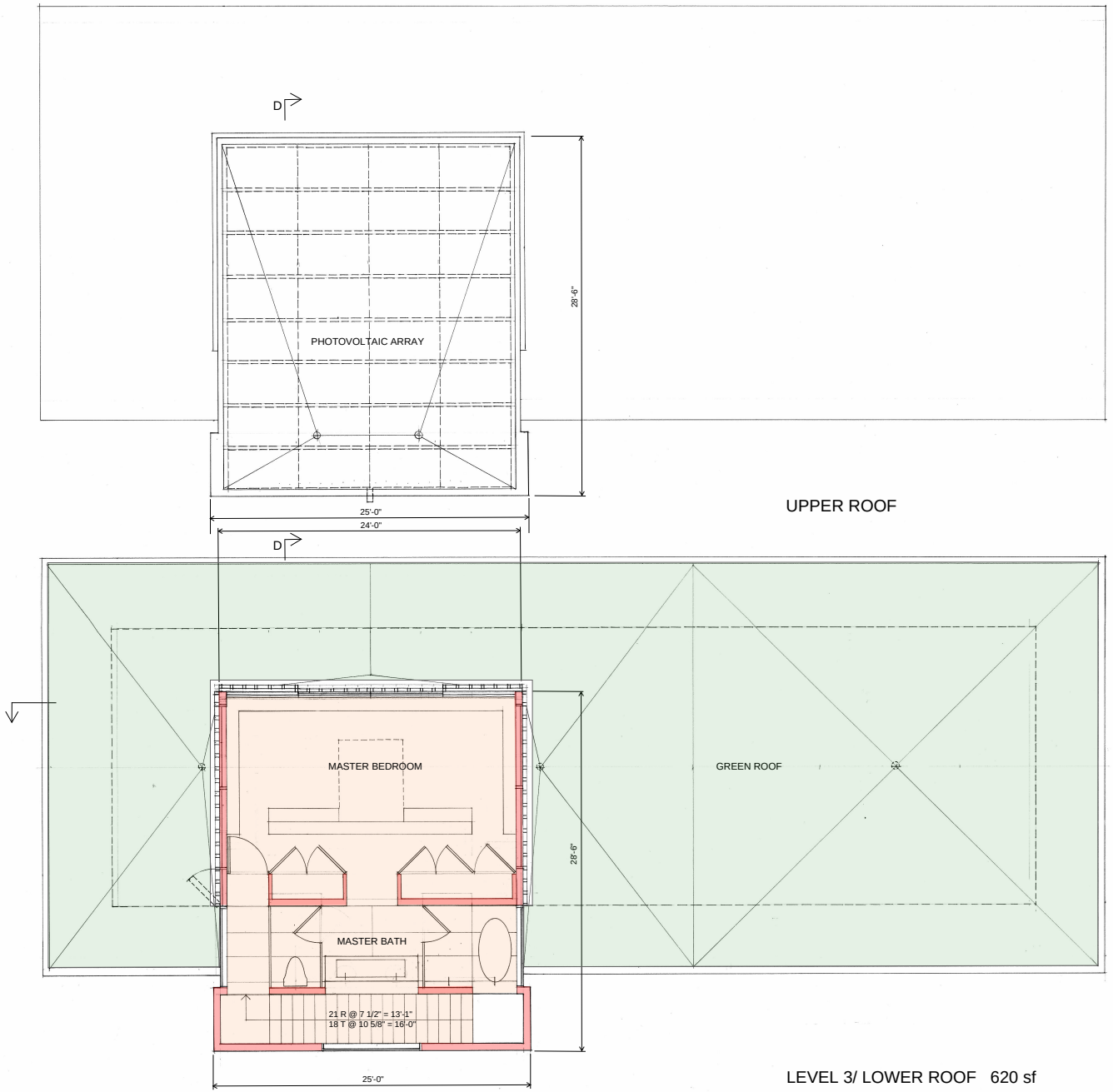
2021.01.10 SMC
2020.12.24
2020.01.06 CONCEPT

FLOOR PLANS

A2



BH

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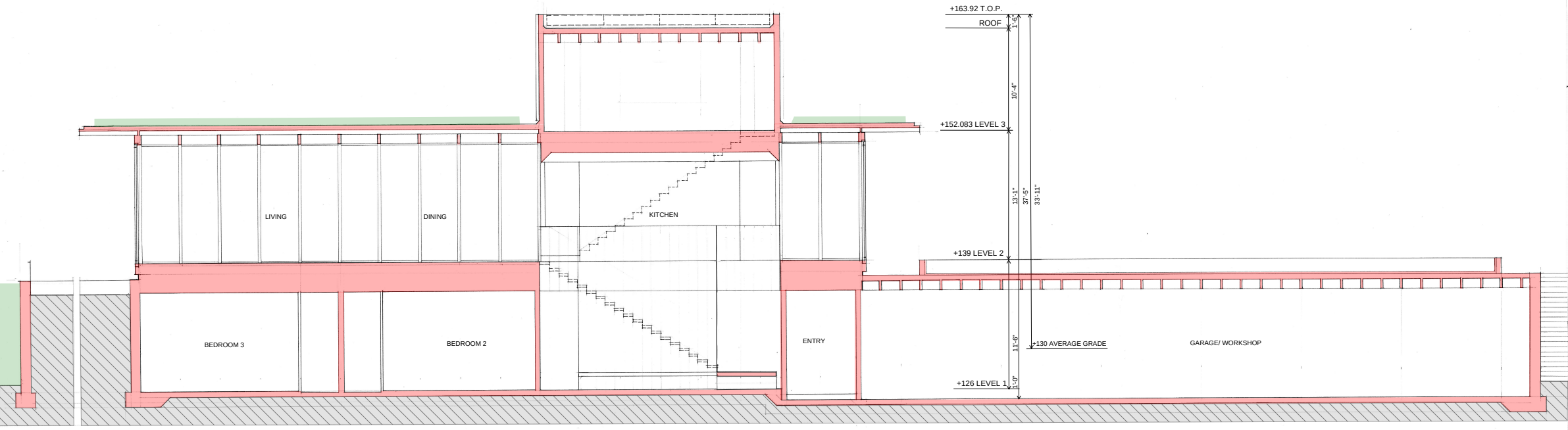
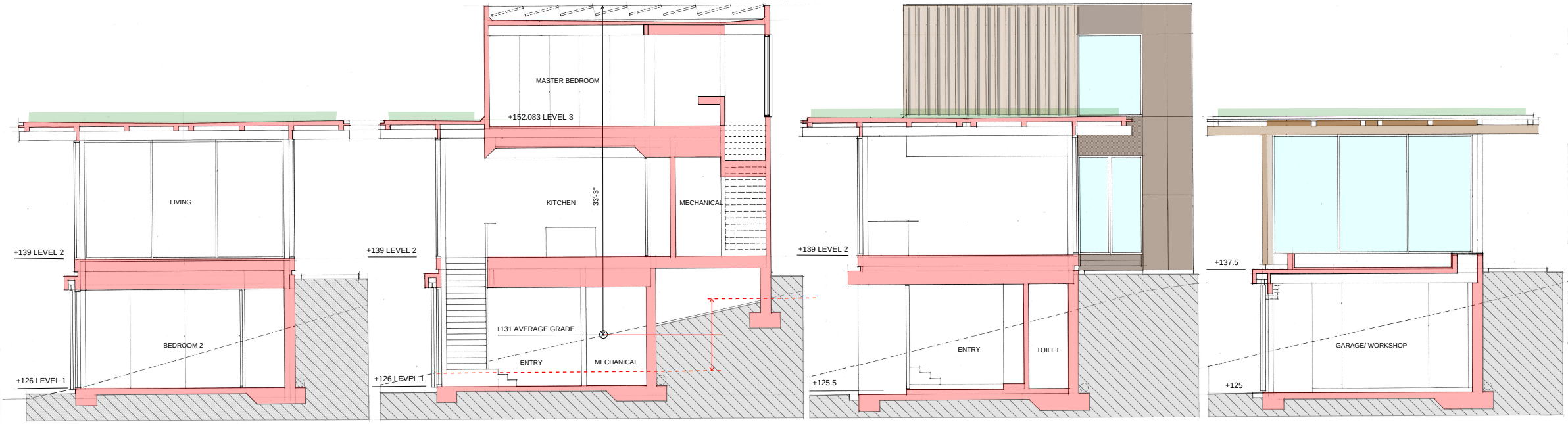
2021.01.10 SMC
2020.12.24
2020.01.06 CONCEPT

FLOOR/ROOF PLANS

A3



SECTION A



SECTION E

SECTION D

SECTION C

SECTION B

BEAN HOLLOW FARMHOUSE
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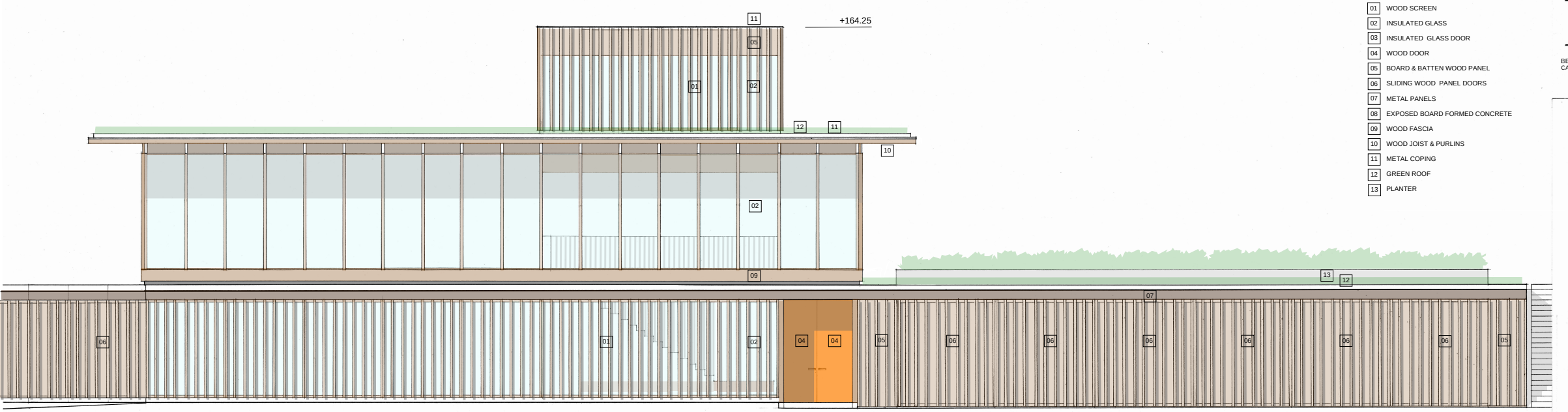
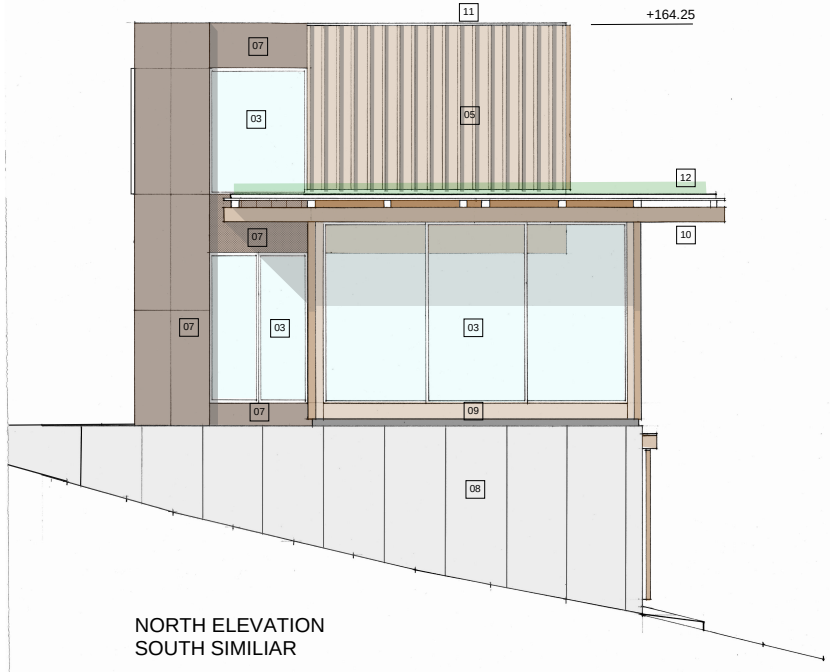
2021.01.10 SMC
2020.12.24
2020.01.06 CONCEPT

SECTIONS

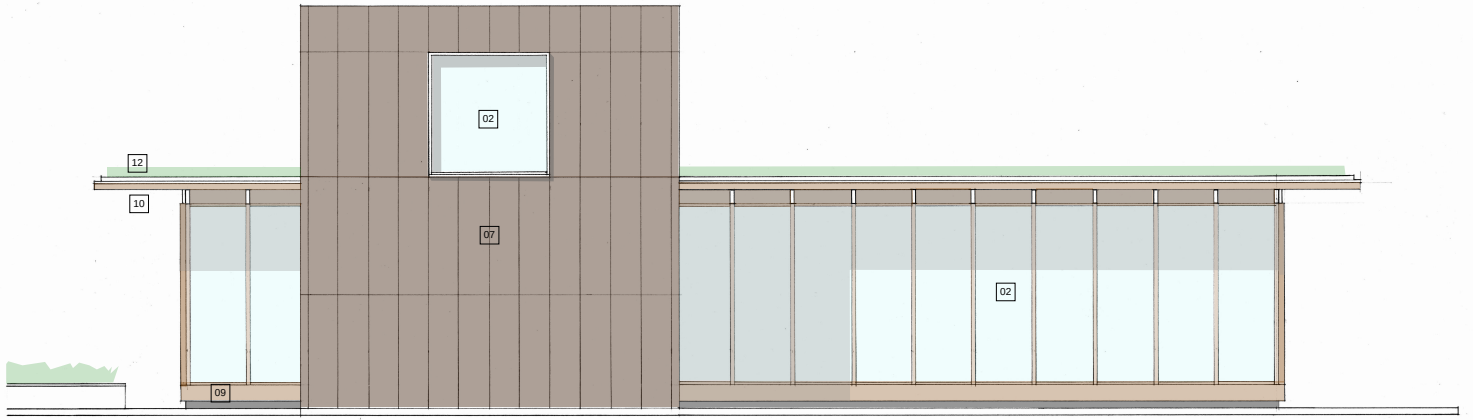
A4



WEST ELEVATION



NORTH ELEVATION
SOUTH SIMILIAR



EAST ELEVATION

01 WOOD SCREEN
02 INSULATED GLASS
03 INSULATED GLASS DOOR
04 WOOD DOOR
05 BOARD & BATTEN WOOD PANEL
06 SLIDING WOOD PANEL DOORS
07 METAL PANELS
08 EXPOSED BOARD FORMED CONCRETE
09 WOOD FASCIA
10 WOOD JOIST & PURLINS
11 METAL COPING
12 GREEN ROOF
13 PLANTER

BH

BEAN HOLLOW FARMHOUSE
CABRILLO HWY APN 086191100
SAN MATEO COUNTY, CA

BRIAN LEE ARCHITECT
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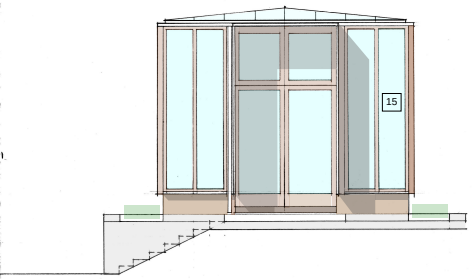
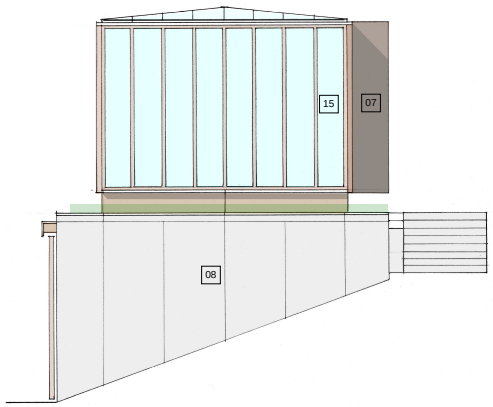
2021.01.10 SMC
2020.12.24
2020.03.04 PLANNING
2020.01.06 CONCEPT

ELEVATIONS

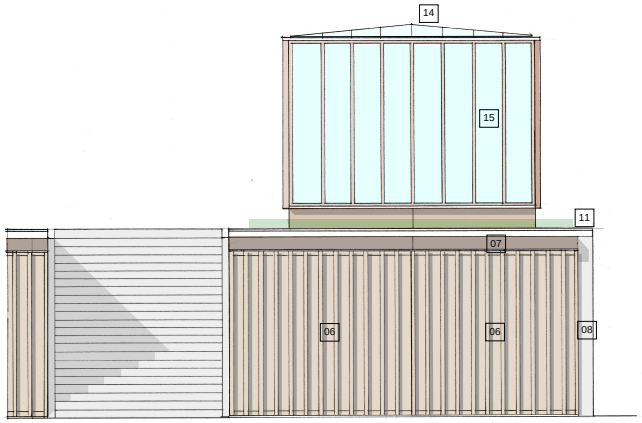
A5



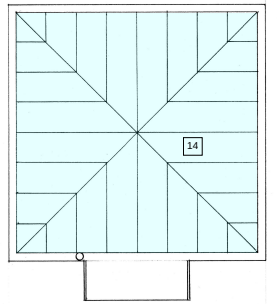
EAST ELEVATION



SOUTH ELEVATION

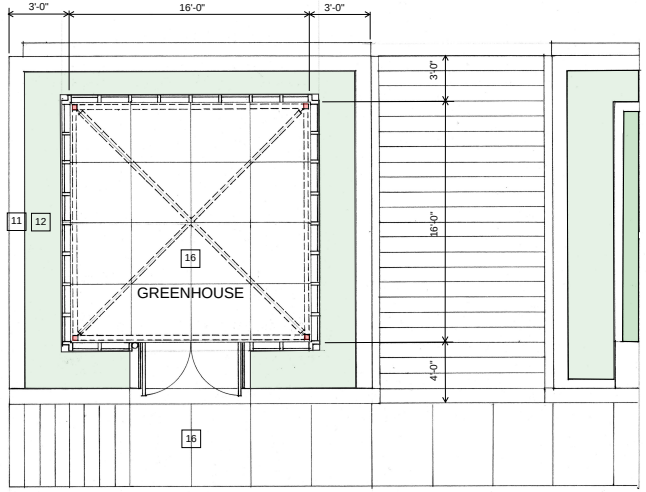


WEST ELEVATION

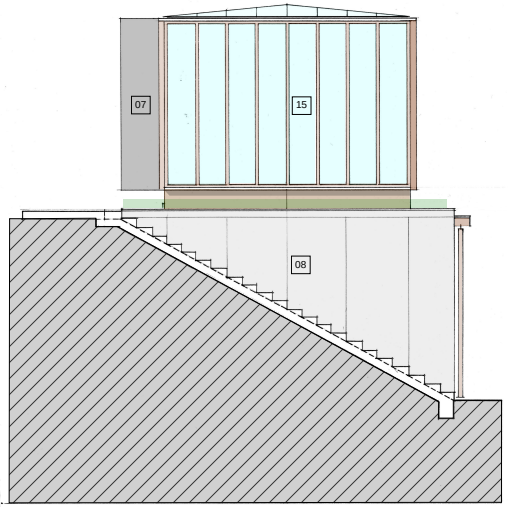


ROOF

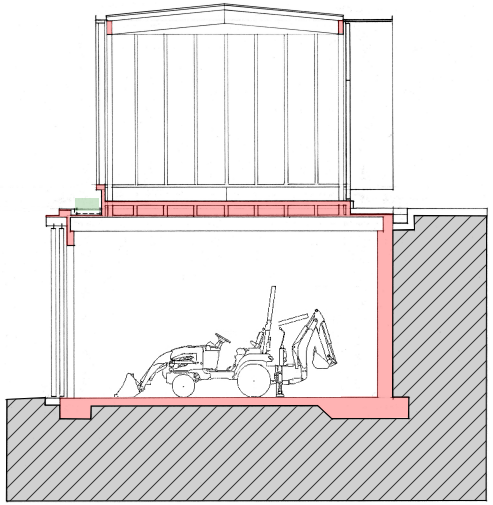
01	WOOD SCREEN
02	INSULATED GLASS
03	INSULATED GLASS DOOR
04	WOOD DOOR
05	BOARD & BATTEN WOOD PANEL
06	SLIDING WOOD PANEL DOORS
07	METAL PANELS
08	EXPOSED BOARD FORMED CONCRETE
09	WOOD FASCIA
10	WOOD JOIST & PURLINS
11	METAL COPING
12	GREEN ROOF
13	PLANTER
14	SKYLIGHT
15	SINGLE GLAZING
16	CONCRETE PAVING



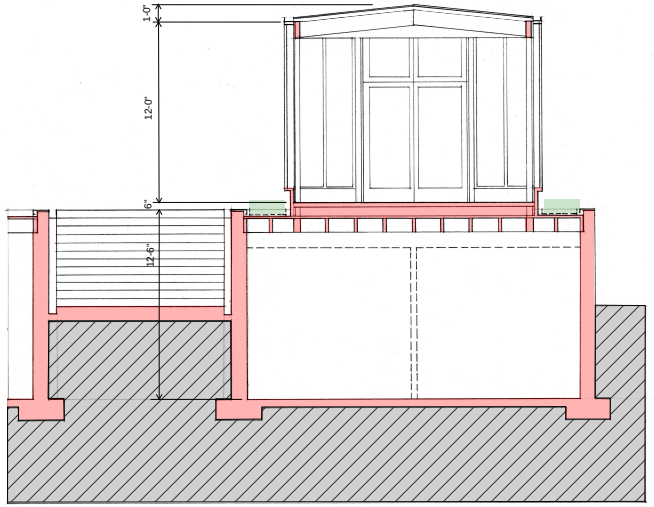
LEVEL 2 256 sf



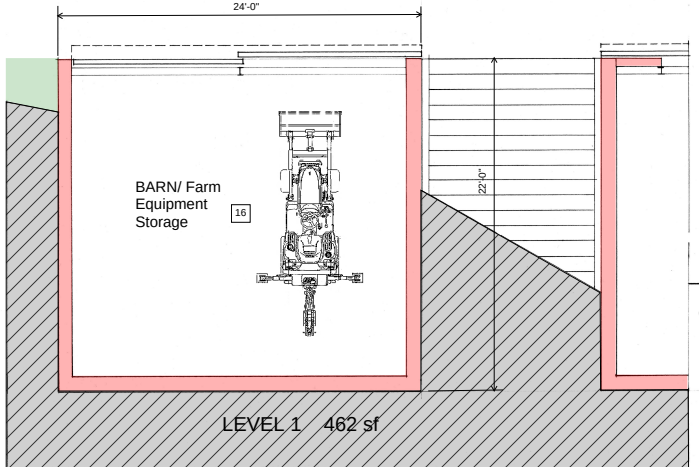
NORTH ELEVATION



SECTION B



SECTION A



LEVEL 1 462 sf

BH

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GREENHOUSE/
BARN

A6

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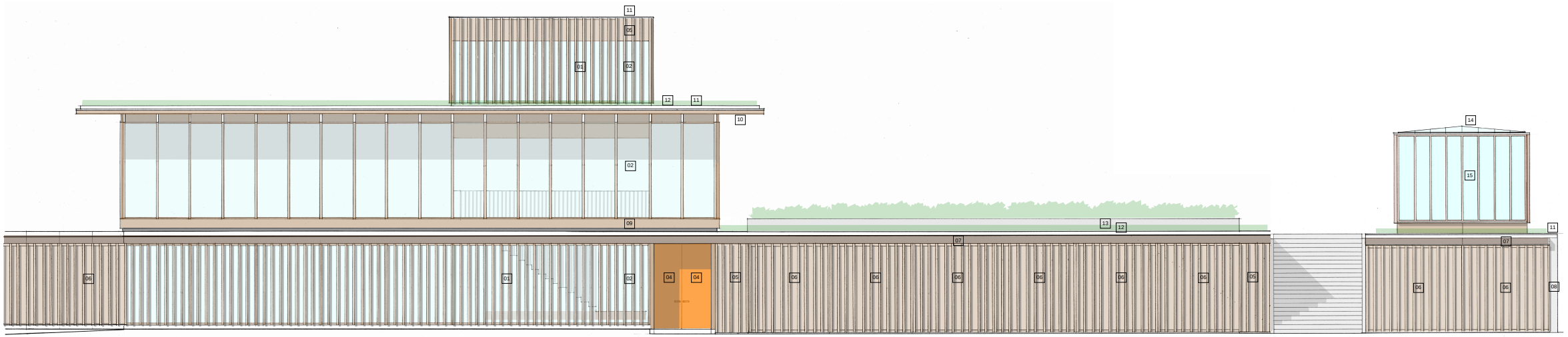
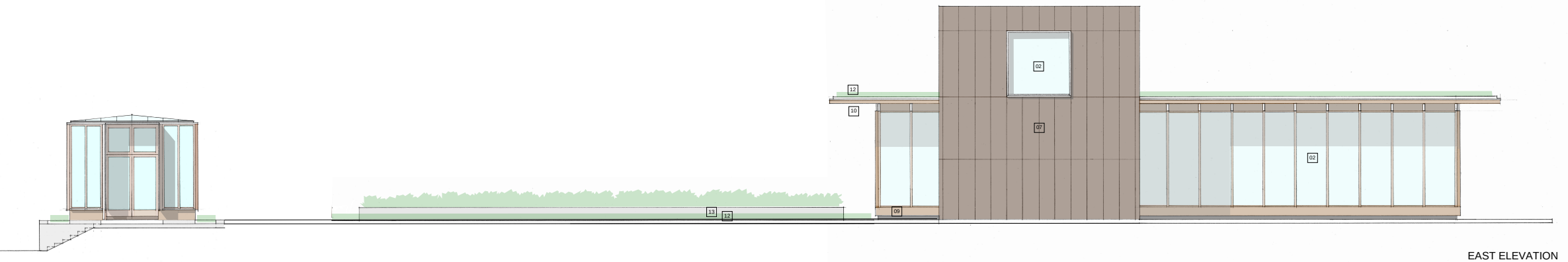


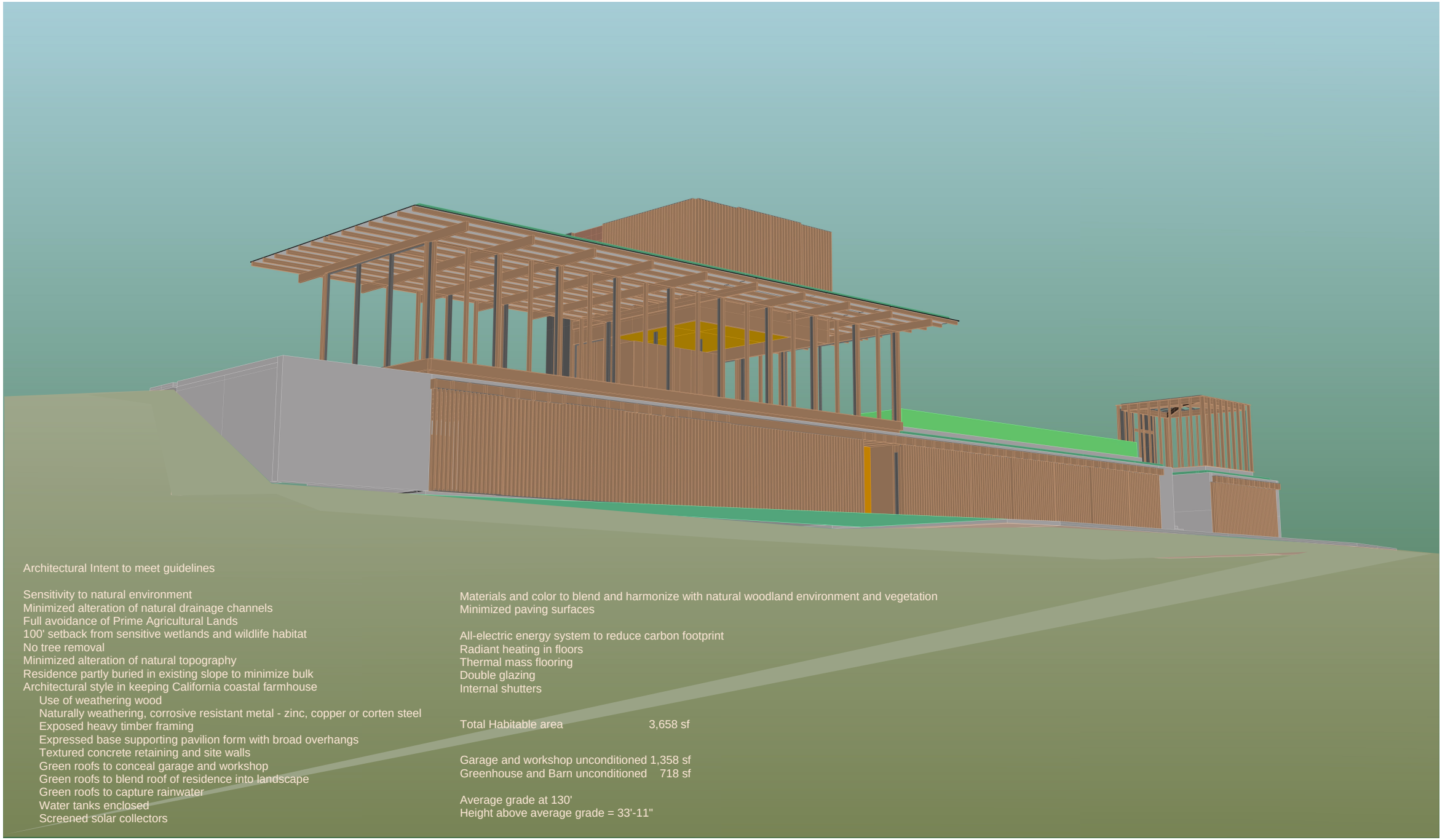
WEST ELEVATION



EAST ELEVATION

COMPOSITE
ELEVATIONS

A7



Architectural Intent to meet guidelines

Sensitivity to natural environment
Minimized alteration of natural drainage channels
Full avoidance of Prime Agricultural Lands
100' setback from sensitive wetlands and wildlife habitat
No tree removal
Minimized alteration of natural topography
Residence partly buried in existing slope to minimize bulk
Architectural style in keeping California coastal farmhouse
- Use of weathering wood
- Naturally weathering, corrosive resistant metal - zinc, copper or corten steel
- Exposed heavy timber framing
- Expressed base supporting pavilion form with broad overhangs
- Textured concrete retaining and site walls
- Green roofs to conceal garage and workshop
- Green roofs to blend roof of residence into landscape
- Green roofs to capture rainwater
- Water tanks enclosed
- Screened solar collectors

Materials and color to blend and harmonize with natural woodland environment and vegetation
Minimized paving surfaces

All-electric energy system to reduce carbon footprint
Radiant heating in floors
Thermal mass flooring
Double glazing
Internal shutters

Total Habitable area 3,658 sf

Garage and workshop unconditioned 1,358 sf
Greenhouse and Barn unconditioned 718 sf

Average grade at 130'
Height above average grade = 33'-11"

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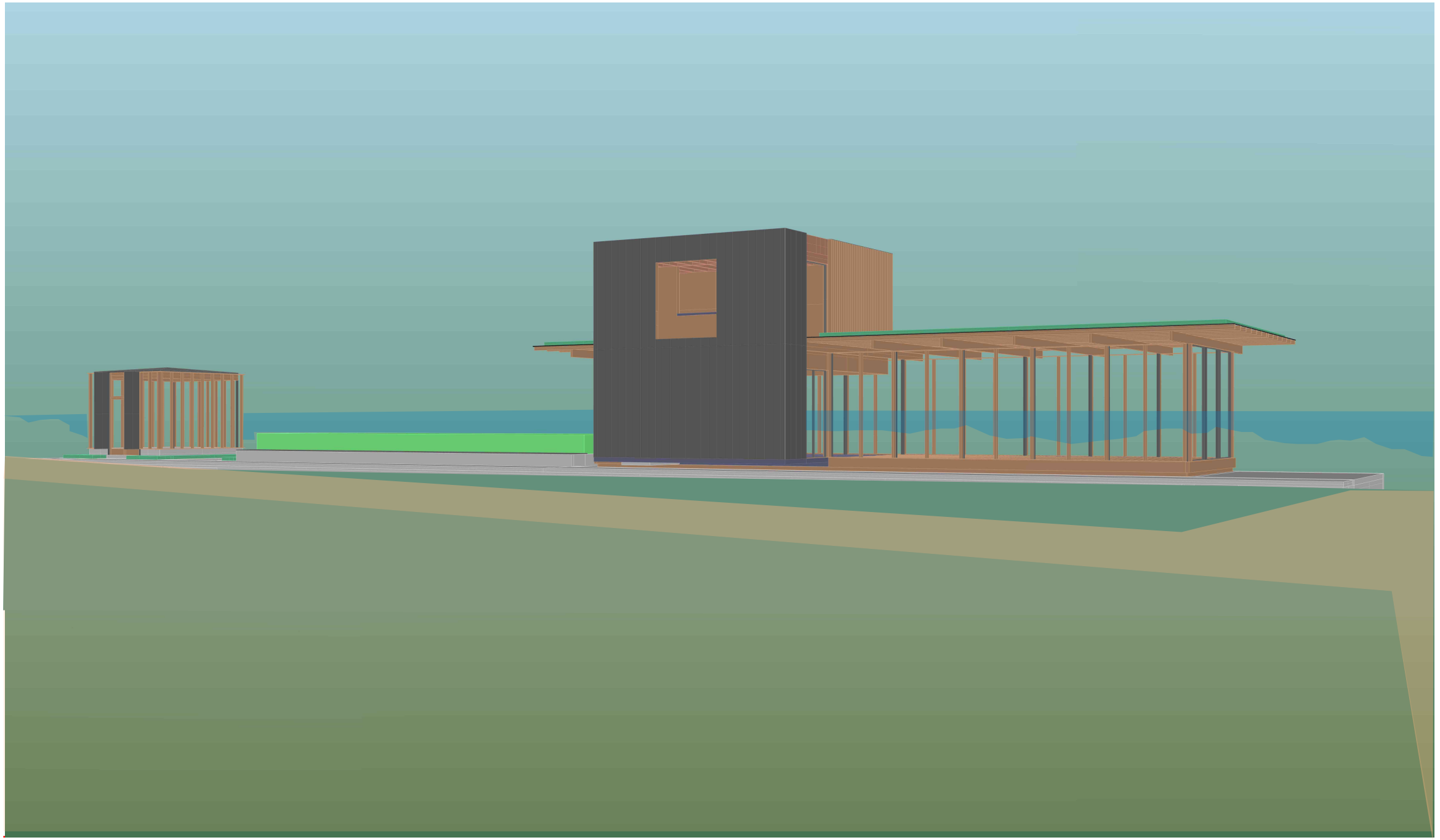
NW VIEW

A8



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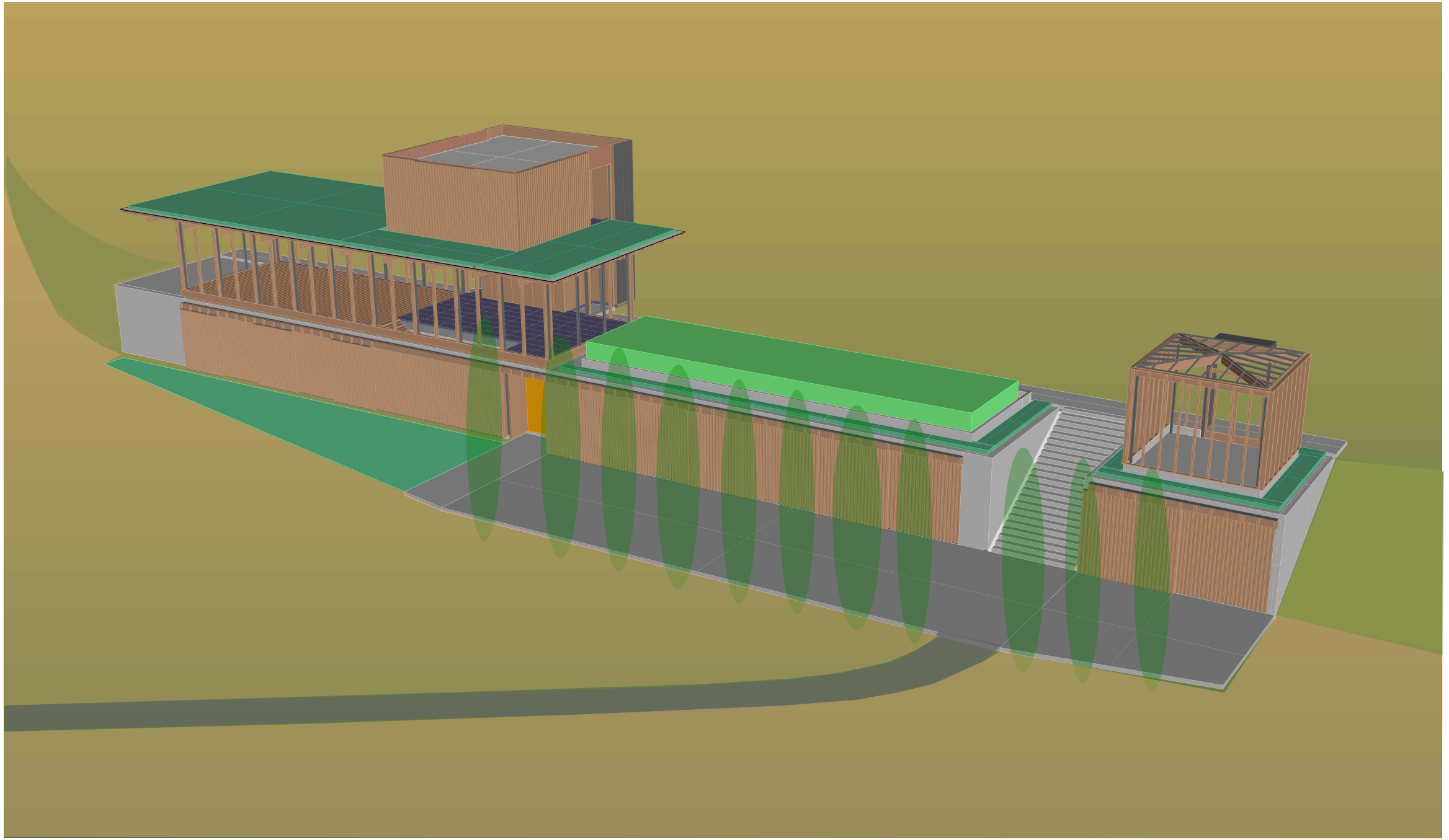
NE VIEW

A9



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SW VIEW

A10

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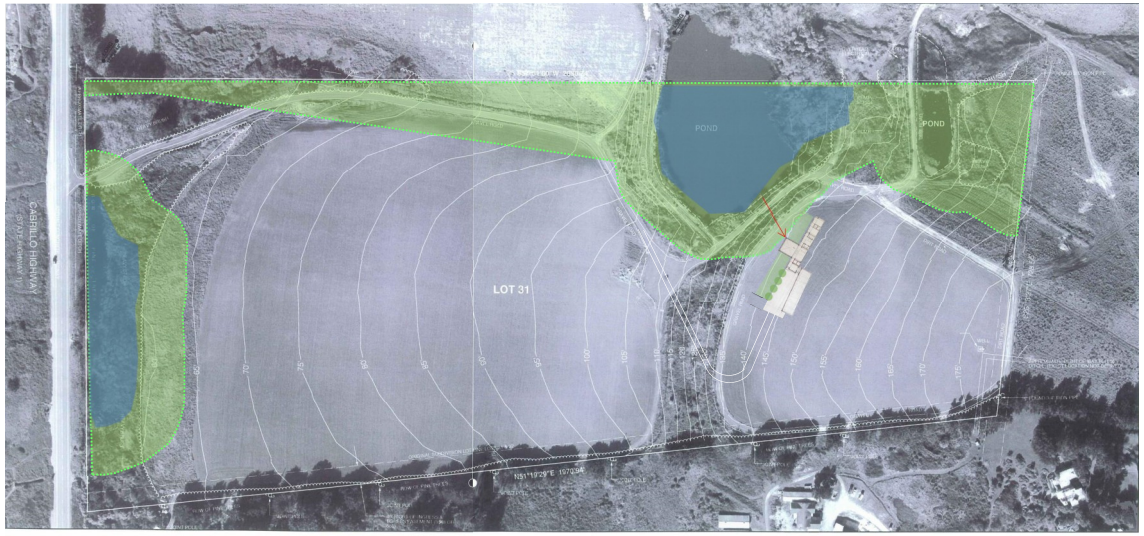
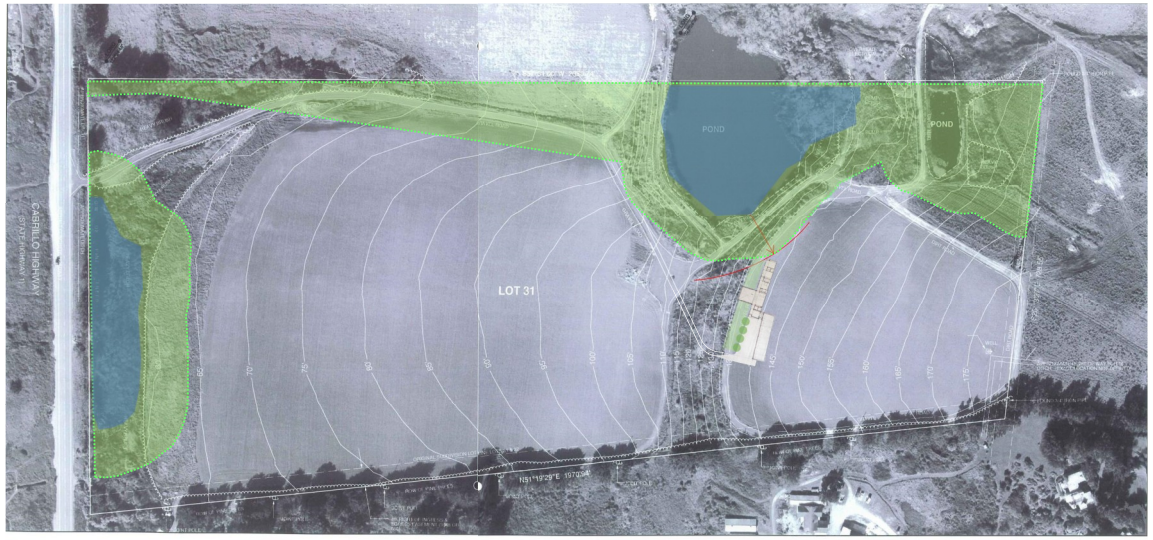
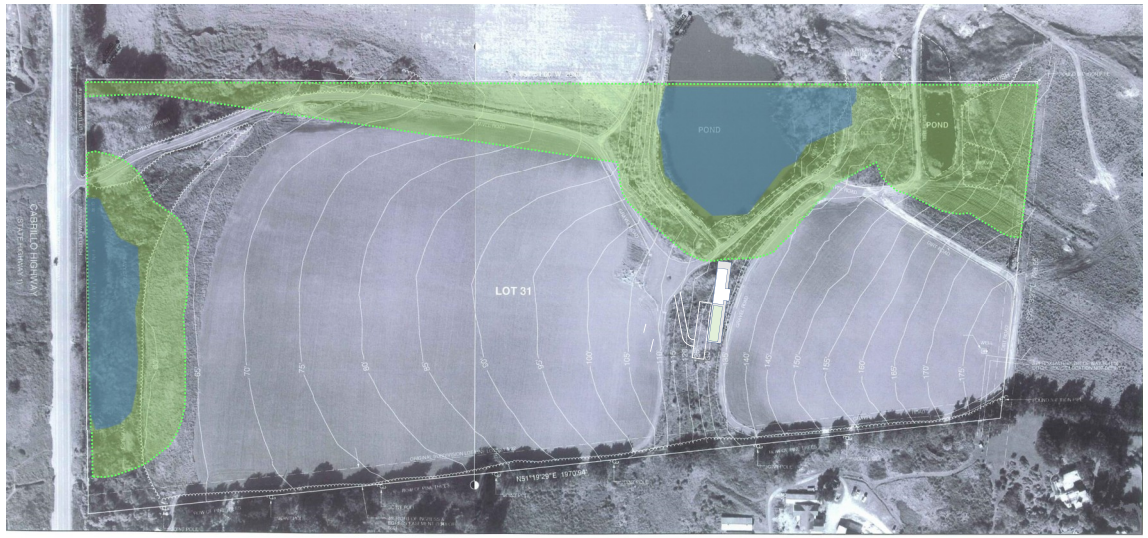


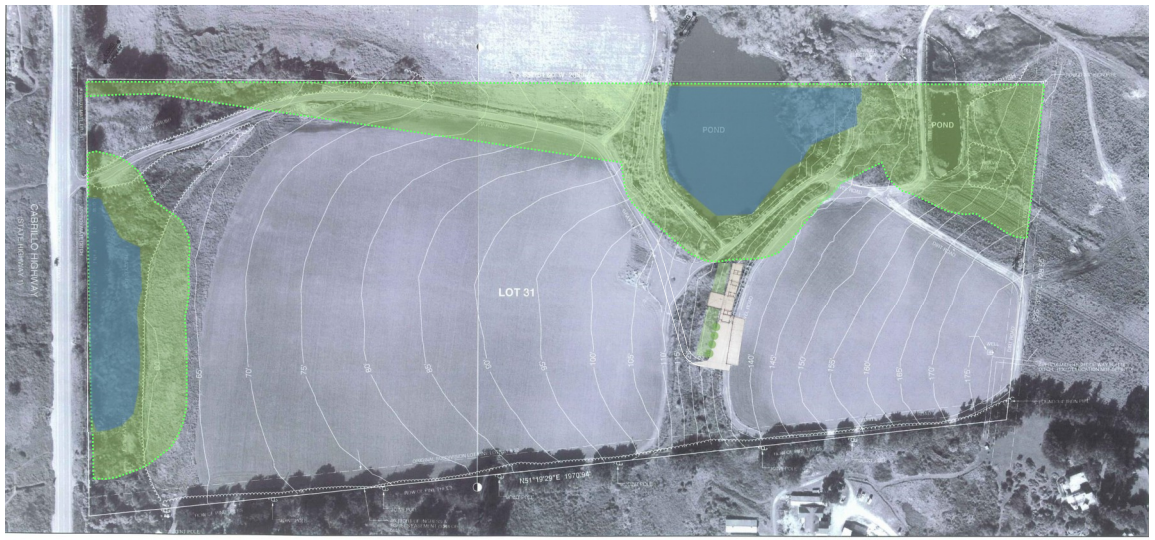
Scheme A Upper cultivated lands - Flat site overlooking pond
Minimal grading, but more visual impact, on prime soils, and longer driveway



Scheme B Upper cultivated lands - Flat site
Minimal grading, but more visual impact, on prime soils



Scheme D
Project Plan
Consolidated plan, siting on bank for house and garage
All on non-prime soils, most compact plan, less driveway, less visibility,



Scheme C Partial siting on bank for house and upper cultivated land for garage
Partial grading with some conversion of prime soils

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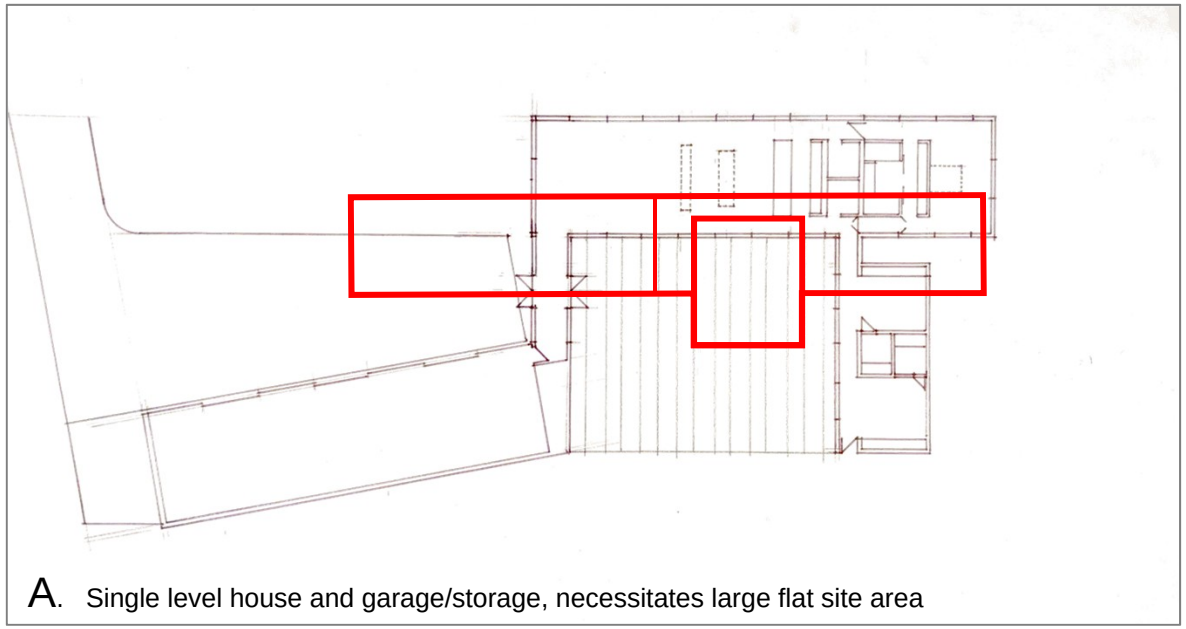
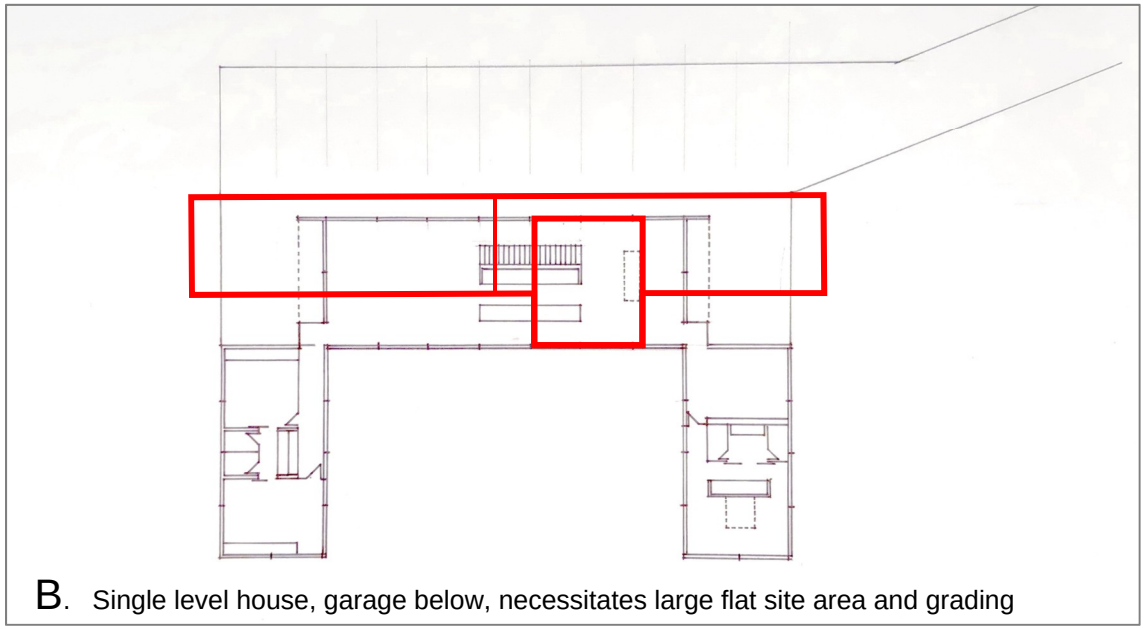
ALTERNATIVE SITING

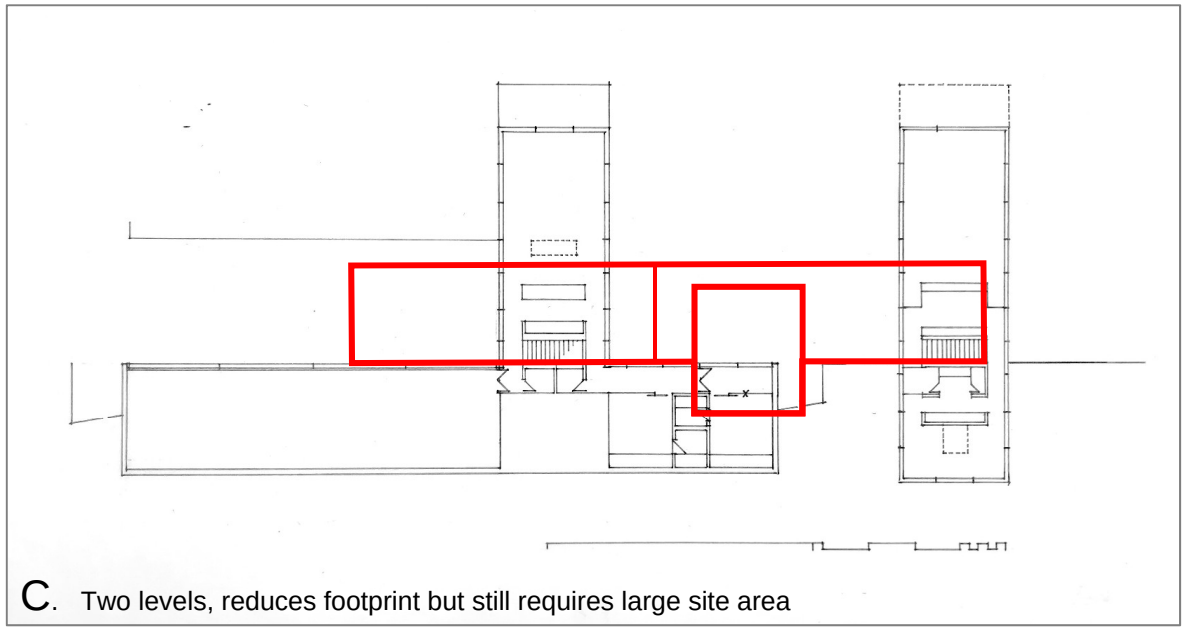
Aa



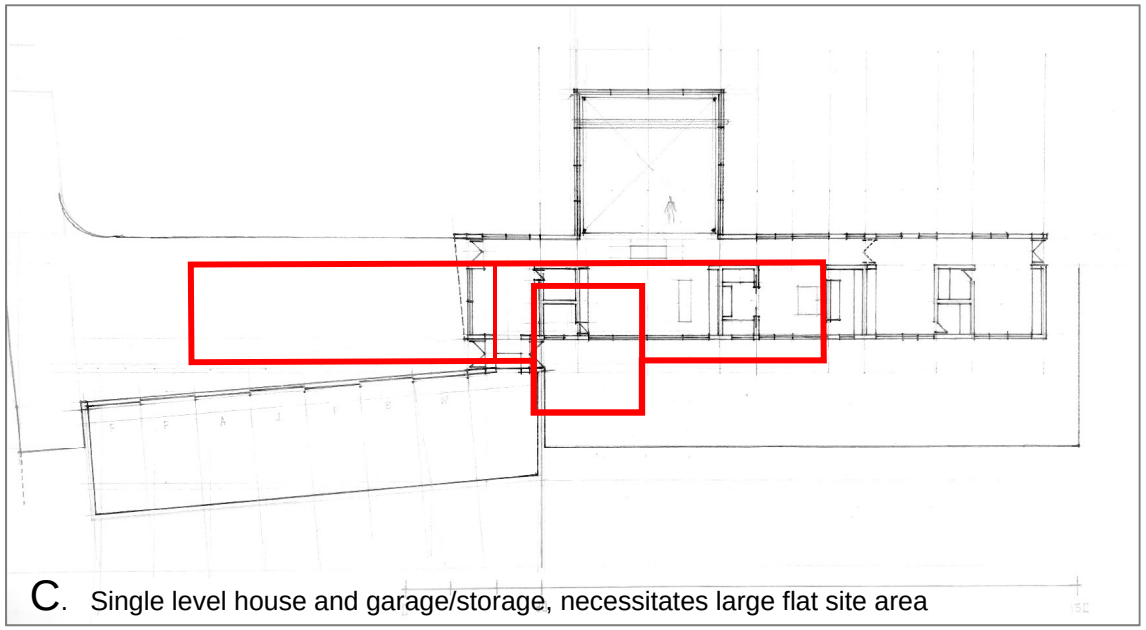
A. Single level house and garage/storage, necessitates large flat site area



B. Single level house, garage below, necessitates large flat site area and grading



C. Two levels, reduces footprint but still requires large site area



C. Single level house and garage/storage, necessitates large flat site area

Linear plan (red outline) results in most compact plan with least disturbance to site

BH

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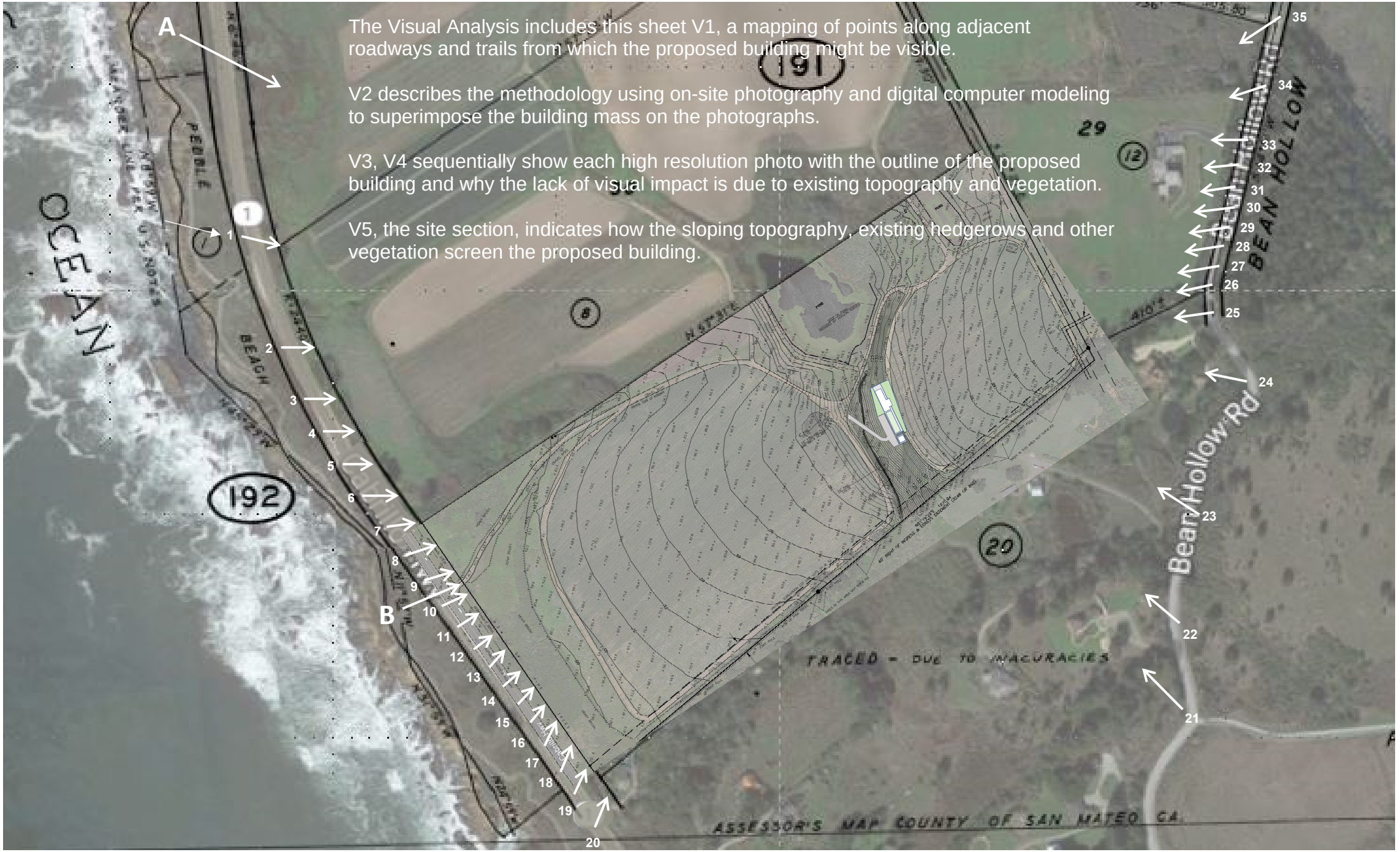
ALTERNATIVE PLANS

Ab



The Visual Analysis includes this sheet V1, a mapping of points along adjacent roadways and trails from which the proposed building might be visible.

V2 describes the methodology using on-site photography and digital computer modeling to superimpose the building mass on the photographs.

V3, V4 sequentially show each high resolution photo with the outline of the proposed building and why the lack of visual impact is due to existing topography and vegetation.

V5, the site section, indicates how the sloping topography, existing hedgerows and other vegetation screen the proposed building.

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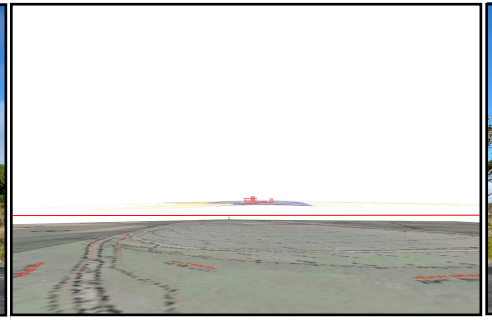
VIEW MAP
VISUAL ANALYSIS

V1

PHOTOGRAPH TOWARD HOUSE SITE

LOCATION NOTED ALONG HIGHWAY 1
OR BEAN HOLLOW ROAD



VIEW TOWARD HOUSE MAPPED FROM SAME LOCATION AND ELEVATION ON 3D DIGITAL MODEL

HORIZON LINE USED AS REFERENCE
DIGITAL VIEW SAME FOCAL LENGTH AS CAMERA

DIGITAL VIEW CAPTURED AND SUPERIMPOSED ON SITE PHOTOGRAPH

HOUSE MASS OUTLINED FOR CLARITY

OUTLINE SHOWS HOUSE NOT VISIBLE DUE TO HEAVY SITE VEGETATION

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DIGITAL MODEL
& METHODOLOGY
VISUAL ANALYSIS

V2

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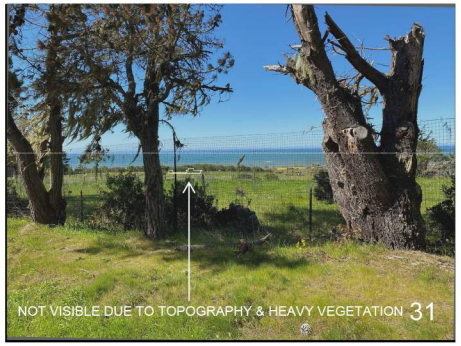
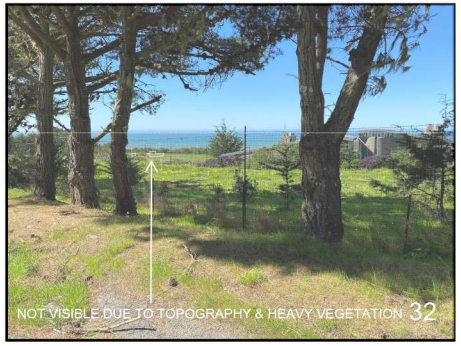
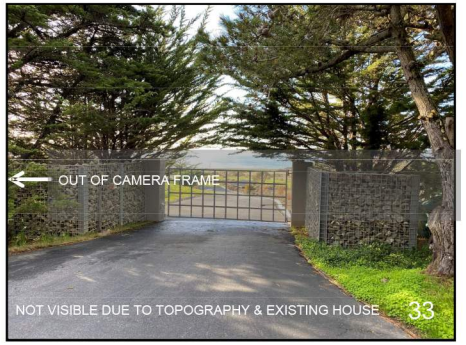
2020.12.24 SMC

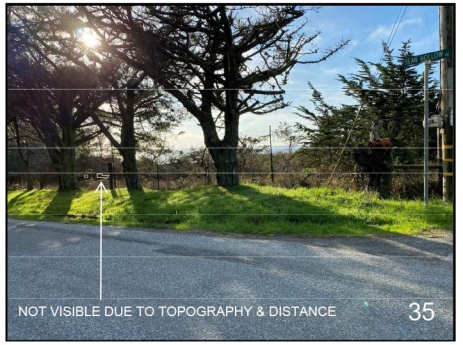
VIEWS TO SITE
VISUAL ANALYSIS

V3









VIEW FROM PEBBLE BEACH @ BEAN HOLLOW

VIEW FROM ARROYO DE LOS FRIJOLES TRAIL

BH

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2020.12.24 SMC

VIEWS TO SITE
VISUAL ANALYSIS

V4

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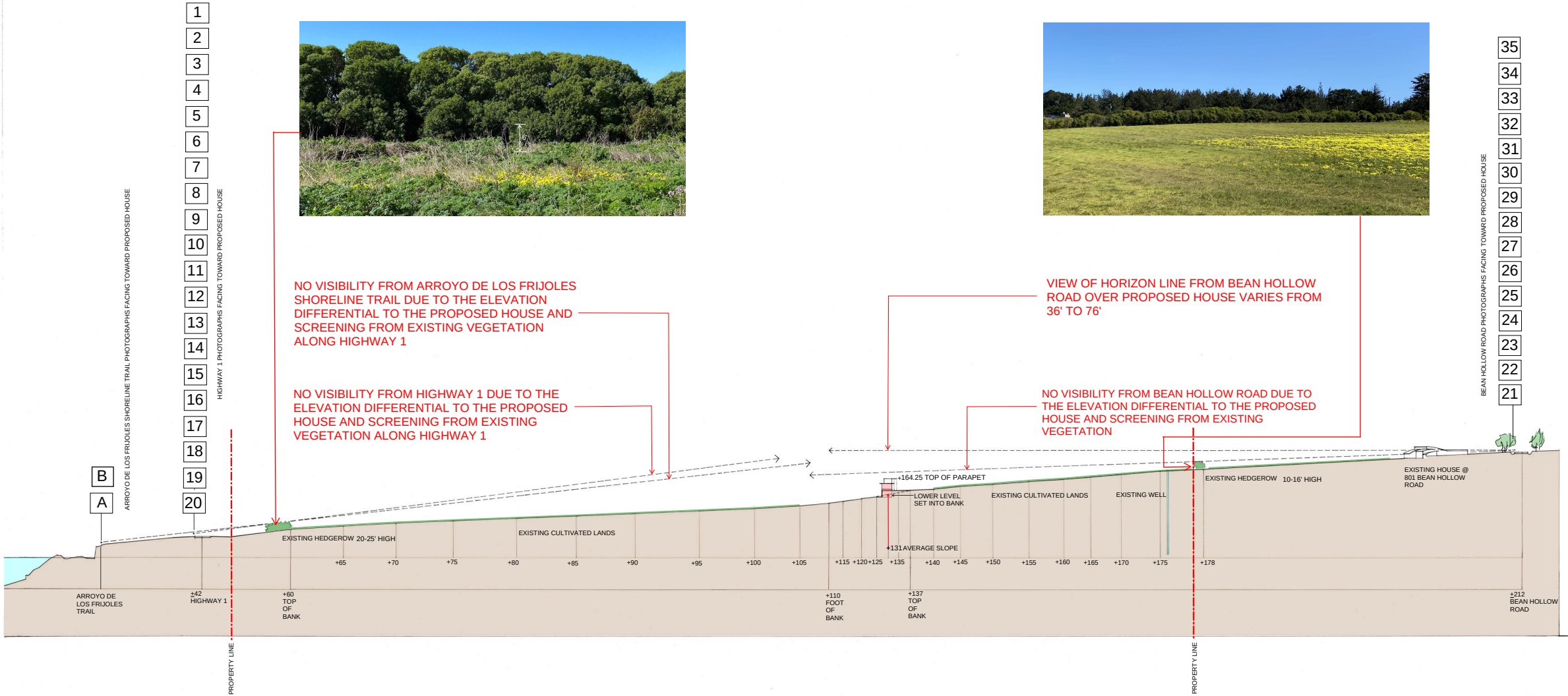
NO VISIBILITY FROM ARROYO DE LOS FRIJOLES SHORELINE TRAIL DUE TO THE ELEVATION DIFFERENTIAL TO THE PROPOSED HOUSE AND SCREENING FROM EXISTING VEGETATION ALONG HIGHWAY 1

NO VISIBILITY FROM HIGHWAY 1 DUE TO THE ELEVATION DIFFERENTIAL TO THE PROPOSED HOUSE AND SCREENING FROM EXISTING VEGETATION ALONG HIGHWAY 1

VIEW OF HORIZON LINE FROM BEAN HOLLOW ROAD OVER PROPOSED HOUSE VARIES FROM 36' TO 76'

NO VISIBILITY FROM BEAN HOLLOW ROAD DUE TO THE ELEVATION DIFFERENTIAL TO THE PROPOSED HOUSE AND SCREENING FROM EXISTING VEGETATION



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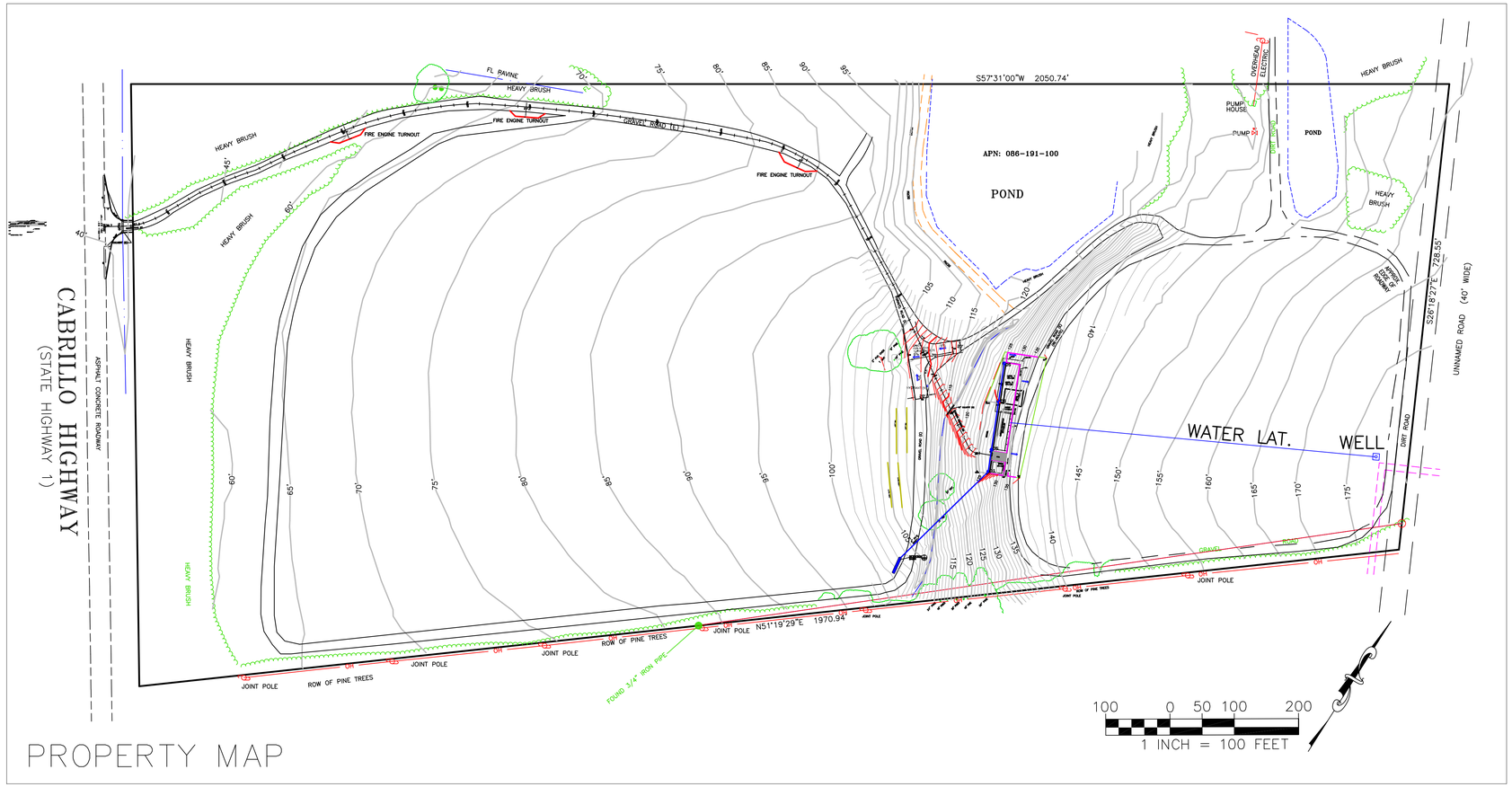
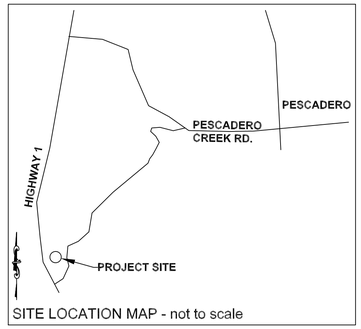
SITE SECTION
VISUAL ANALYSIS

V5



PROPERTY MAP

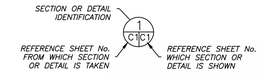


SITE LOCATION MAP - not to scale

GENERAL NOTES

1. PLANS PREPARED AT THE REQUEST OF:
   BRIAN LEE, OWNER
2. TOPOGRAPHY BY OTHERS.
3. THIS IS NOT A BOUNDARY SURVEY.
4. ELEVATION DATUM ASSUMED.
5. THE GEOTECHNICAL REPORT:
GEOTECHNICAL STUDY: LEE PROPERTY, PESCADERO, BY SIGMA PRIME GEOSCIENCES, INC. PROJECT NO. 19-143, DATED 11-30-20 SHALL BE RETAINED ON THE CONSTRUCTION SITE. THE GEOTECHNICAL ENGINEER OF RECORD IS SIGMA PRIME GEOSCIENCES, INC. ASSOCIATES, WITH THE CONTACT NUMBER (650)-728-3590. THE CONTRACTOR MUST SHALL NOTIFY THE GEOTECHNICAL ENGINEER OF RECORD AT LEAST 48 HOURS BEFORE CONSTRUCTION OF GEOTECHNICAL
RELATED WORK. THE GEOTECHNICAL PART OF CONSTRUCTION WORK, INCLUDING BUT NOT LIMITED TO, ALL THE EARTHWORK AND FOUNDATION CONSTRUCTIONS, MUST SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER OF RECORD.
6. STORMWATER MANAGEMENT CONSTRUCTION INSPECTIONS SHALL BE SCHEDULED FOR APPLICABLE DRAINAGE INSPECTIONS, WHICH INCLUDE SITE CLEARANCE AND EROSION CONTROL MEASURES INSTALLATION AS WELL AS INSPECTION OF MAJOR DRAINAGE CONTAINMENT, TREATMENT, AND CONVEYANCE DEVICES BEFORE BEING BURIED (INCLUDING REQUIRED MATERIAL LABELS, E.G. PIPES, SUG-BGRADE MATERIALS, ETC.). PLEASE FOLLOW THE INSPECTION CARD INSTRUCTIONS AND PHONE NUMBER (650-306-8405 EXT 181) TO SCHEDULE COUNTY DRAINAGE INSPECTIONS ACCORDINGLY. THERE SHALL BE THREE INSPECTIONS: ONE FOR EROSION CONTROL INSTALLATION, ONE BEFORE DRAINAGE FACILITIES ARE BURIED, AND ONE FOR FINAL WALK AROUND.

SECTION AND DETAIL CONVENTION



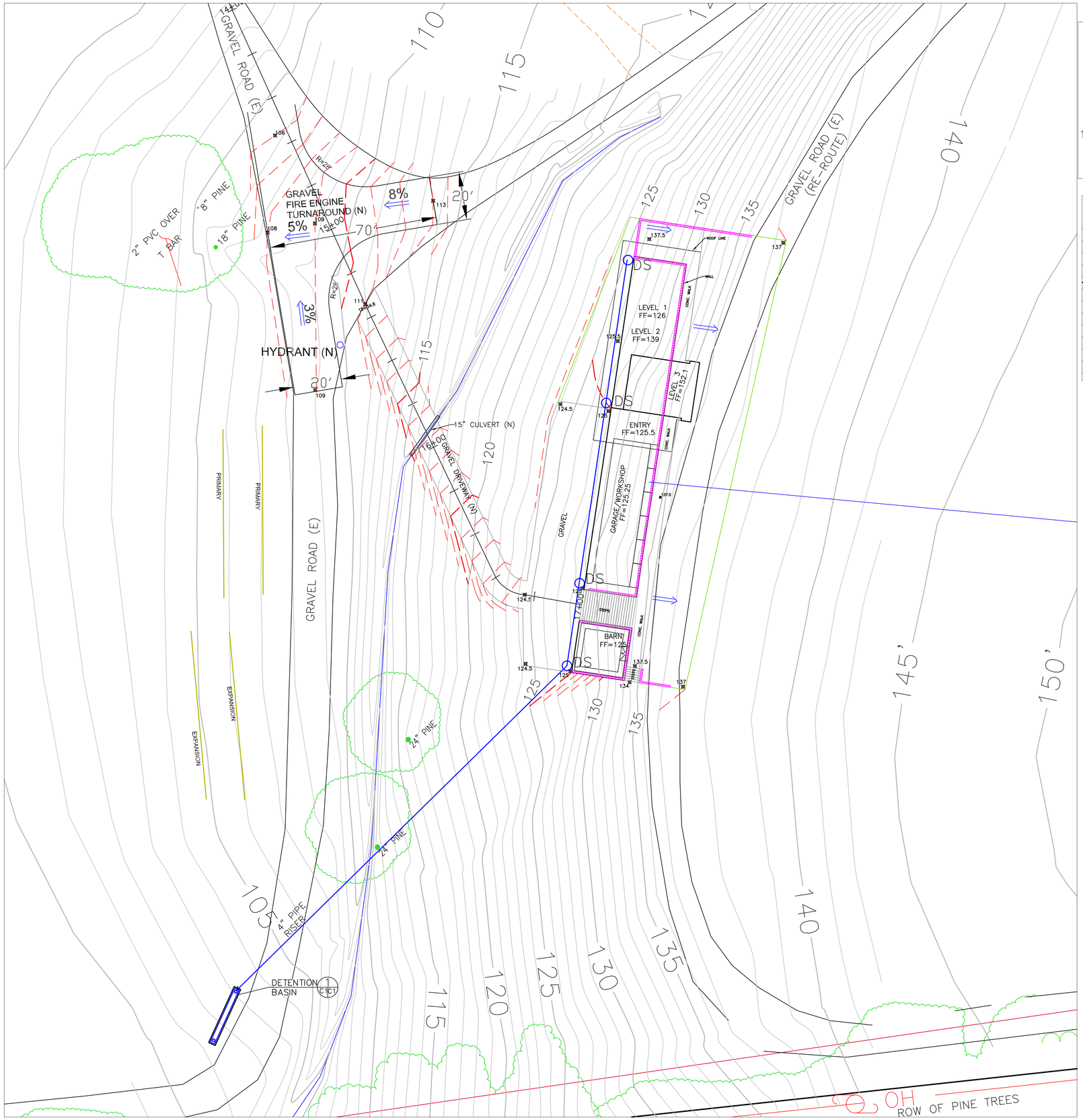
Sigma Prime Geosciences, Inc.
SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE
HALF MOON BAY, CA 94019
(650) 728-3590
FAX 726-3593

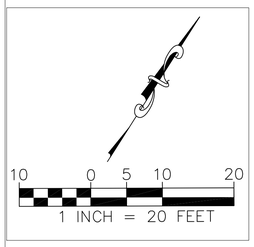
DATE: 12-15-20
DRAWN BY: CMK
CHECKED BY: AZG
REV DATE:
REV DATE:
REV DATE:
REV DATE:

SITE PLAN

LEE PROPERTY
CABRILLO HIGHWAY
PESCADERO, CALIFORNIA
APN: 086-191-100

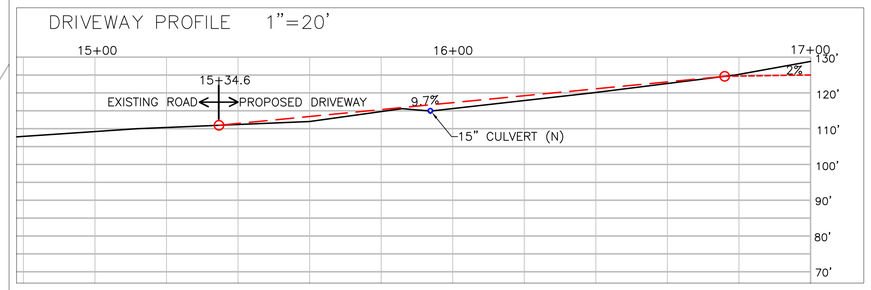
SHEET
C-1

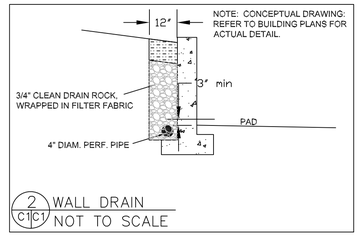




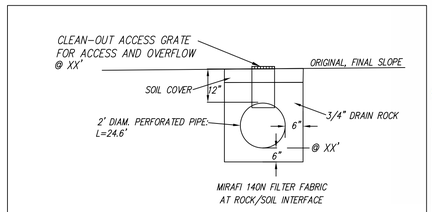
LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- 129.5 PROPOSED SPOT ELEVATION
- DS DOWNSPOUT
- 4" SOLID DRAIN PIPE
- DIRECTION OF SHEET FLOW
- RETAINING WALL





2 C1C1 WALL DRAIN
NOT TO SCALE



DESIGN BASIS: 10-YEAR STORM EVENT WITH 1 HOUR DURATION ON HARD SURFACES.
RAINFALL INTENSITY = 0.921 IN/HR

1 C1C1 DETENTION BASIN
NOT TO SCALE

DRAINAGE NOTES

1. DRAINAGE INTENT: IT IS THE INTENT OF THE DRAINAGE SYSTEM TO CONVEY ROOF RUNOFF TO A SAFE LOCATION, AND TO MINIMIZE EXCESSIVE MOISTURE AROUND FOUNDATIONS. DIRECT SLOPES SUCH THAT STORMWATER WILL NOT BE DIVERTED ONTO ADJACENT PROPERTIES.

2. ALL DOWNSPOUT DRAIN LINES SHALL LEAD TO DETENTION BASIN, AS SHOWN.

3. ALL ROOF DRAINAGE PIPES SHALL BE 4" DIAMETER MINIMUM SOLID PIPE, SLOPED AT 1% MINIMUM.

4. IT IS THE PROPERTY OWNER'S RESPONSIBILITY TO CHECK ON ALL STORMWATER FACILITIES SUCH AS ROOF GUTTERS, DOWNSPOUT LINES, AND THE DETENTION BASIN TO BE SURE THAT THEY ARE CLEAR OF EXCESSIVE DEBRIS AND OPERATING EFFICIENTLY. THE FACILITIES SHALL BE CHECKED EVERY FALL AND PERIODICALLY DURING THE RAINY SEASON.

GRADING NOTES

CUT VOLUME : 1200 CY
FILL VOLUME: 600 CY
TOTAL CUT+FILL = 1800 CY

VOLUMES ABOVE ARE APPROXIMATE.

THE SUBGRADE BELOW ALL PAVED AREAS SHALL BE BASEROCK COMPACTED TO 95%.

ALL GRADING SHALL CONFORM TO LOCAL CODES AND ORDINANCES.

ALL TRENCHES UNDER PROPOSED PAVED AREAS OR CONCRETE SHALL BE BACKFILLED TO SUBGRADE ELEVATION WITH COMPACTED APPROVED GRANULAR MATERIALS. IF TRENCHES ARE IN PROPOSED LANDSCAPE AREAS, THEY SHALL BE BACKFILLED WITH COMPACTED APPROVED GRANULAR MATERIAL TO WITHIN ONE FOOT OF FINISHED GRADE, AND THEN FILLED WITH HAND TAMPED SOILS.

REGISTERED PROFESSIONAL ENGINEER
CHARLES M. KISSICK
No. 62264
9-30-21
EXPIRES
CIVIL
STATE OF CALIFORNIA

Sigma Prime Geosciences, Inc.
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DATE: 12-15-20	DRAWN BY: CMK	CHECKED BY: AZG	
		REV. DATE:	
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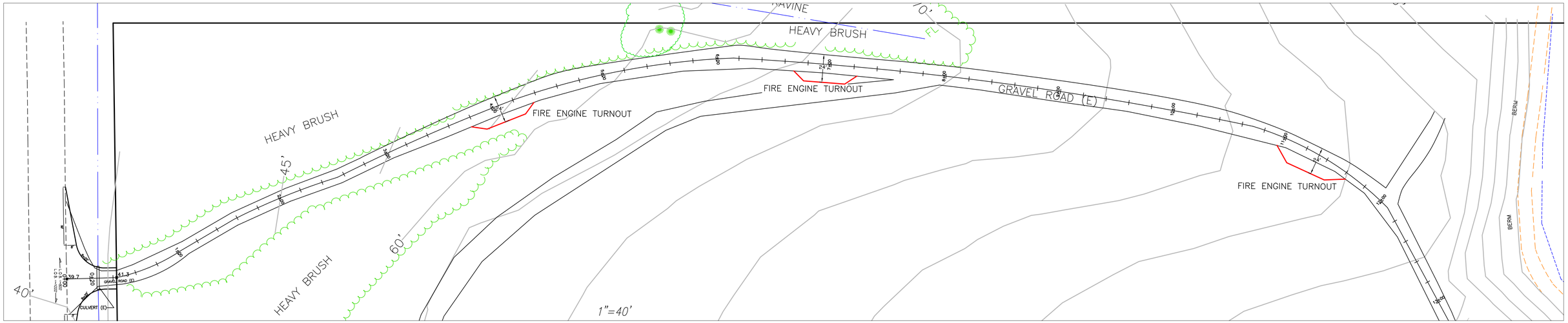
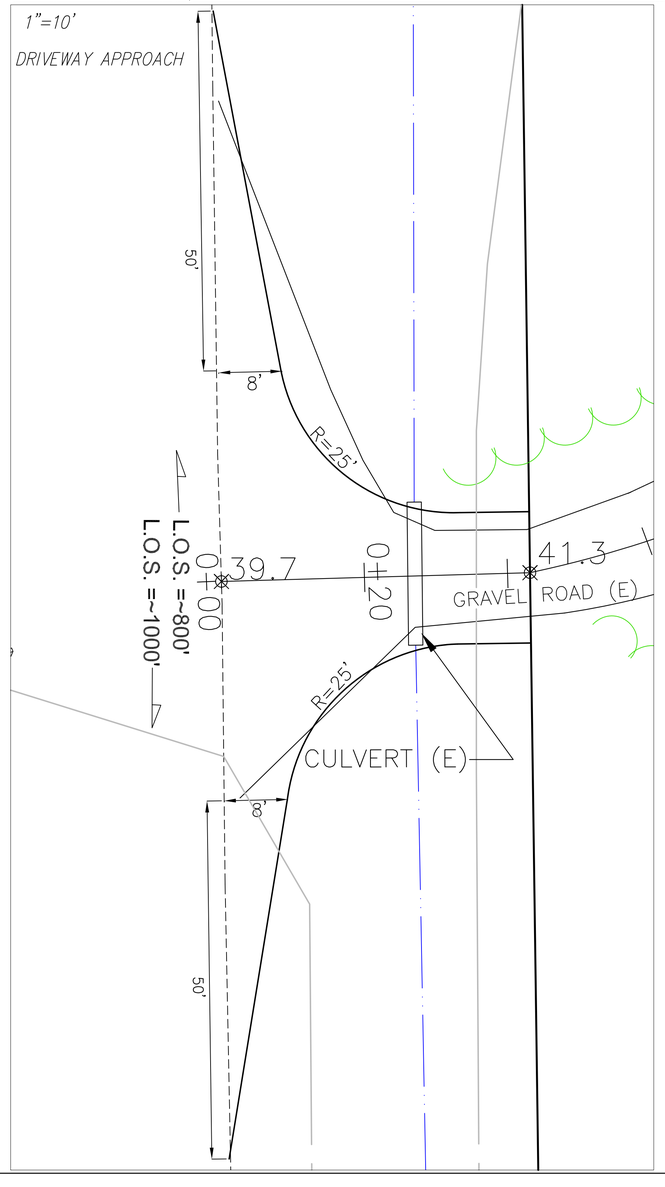
		REV. DATE:	

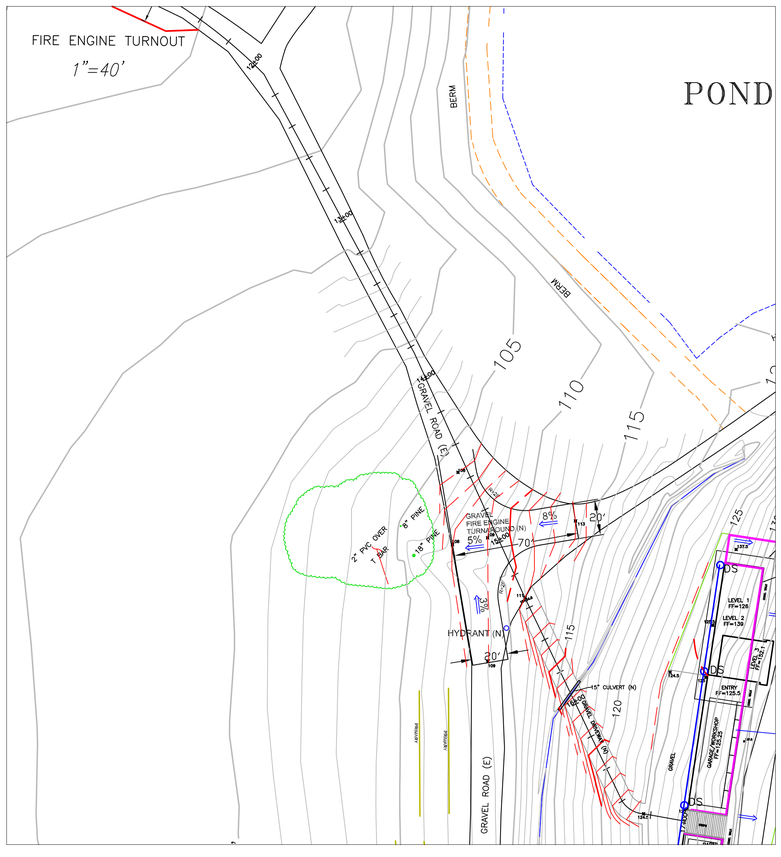
GRADING AND DRAINAGE PLAN

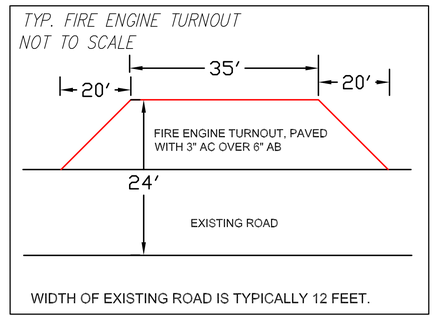
LEE PROPERTY
CABRILLO HIGHWAY
PESCADERO, CALIFORNIA
APN: 086-191-100

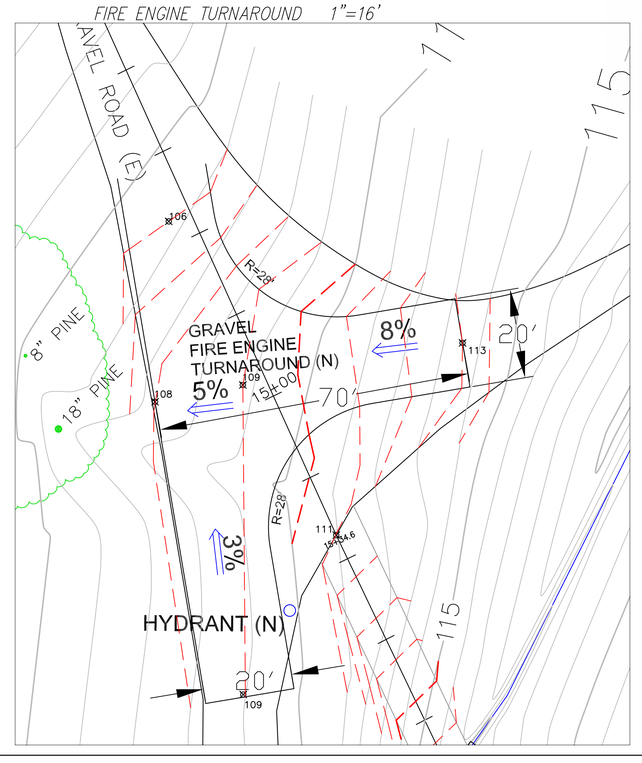
SHEET
C-2











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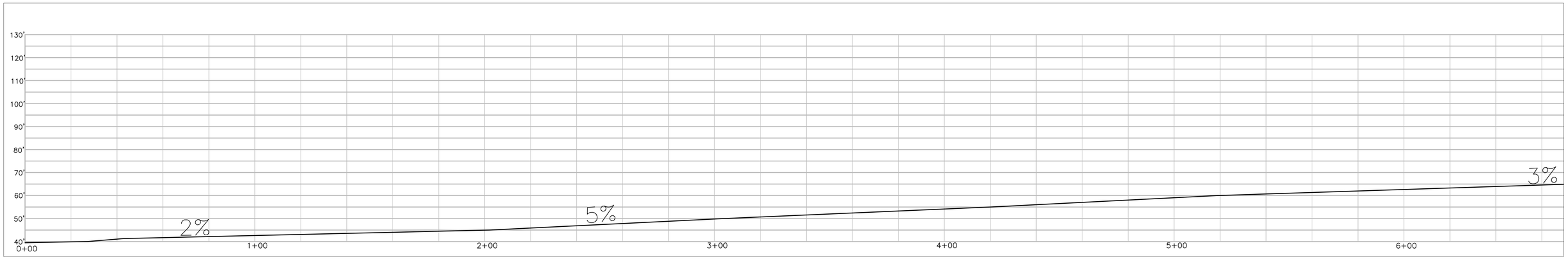
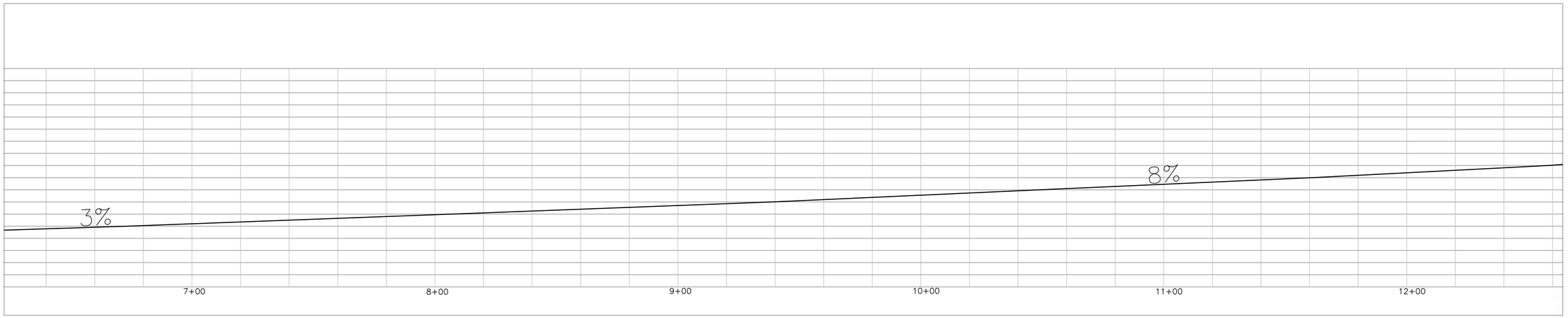
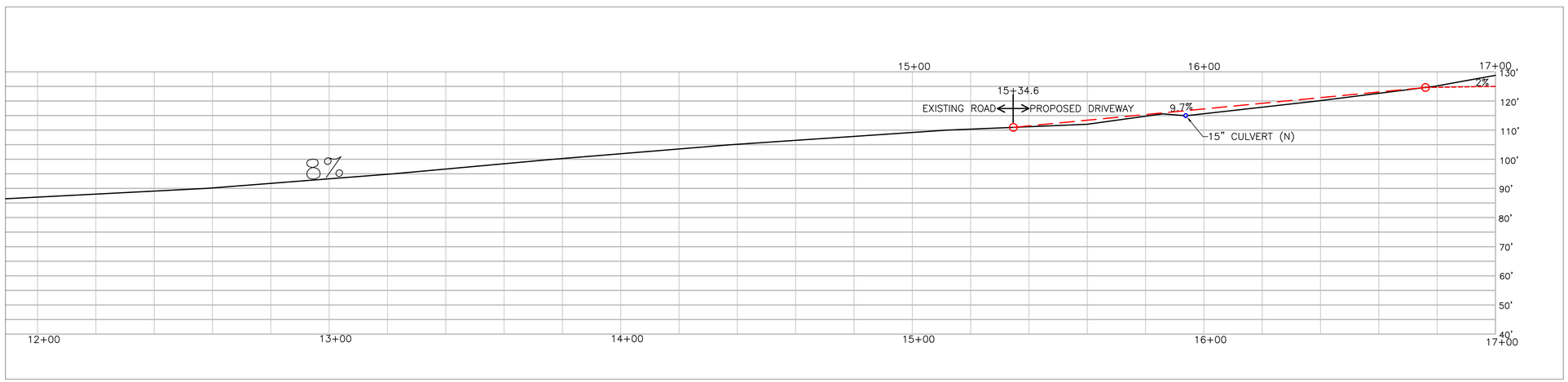
ROAD PLAN

LEE PROPERTY
CABRILLO HIGHWAY
PESCADERO, CALIFORNIA
APN: 086-191-100

SHEET
C-3







1"=20'

REGISTERED PROFESSIONAL ENGINEER
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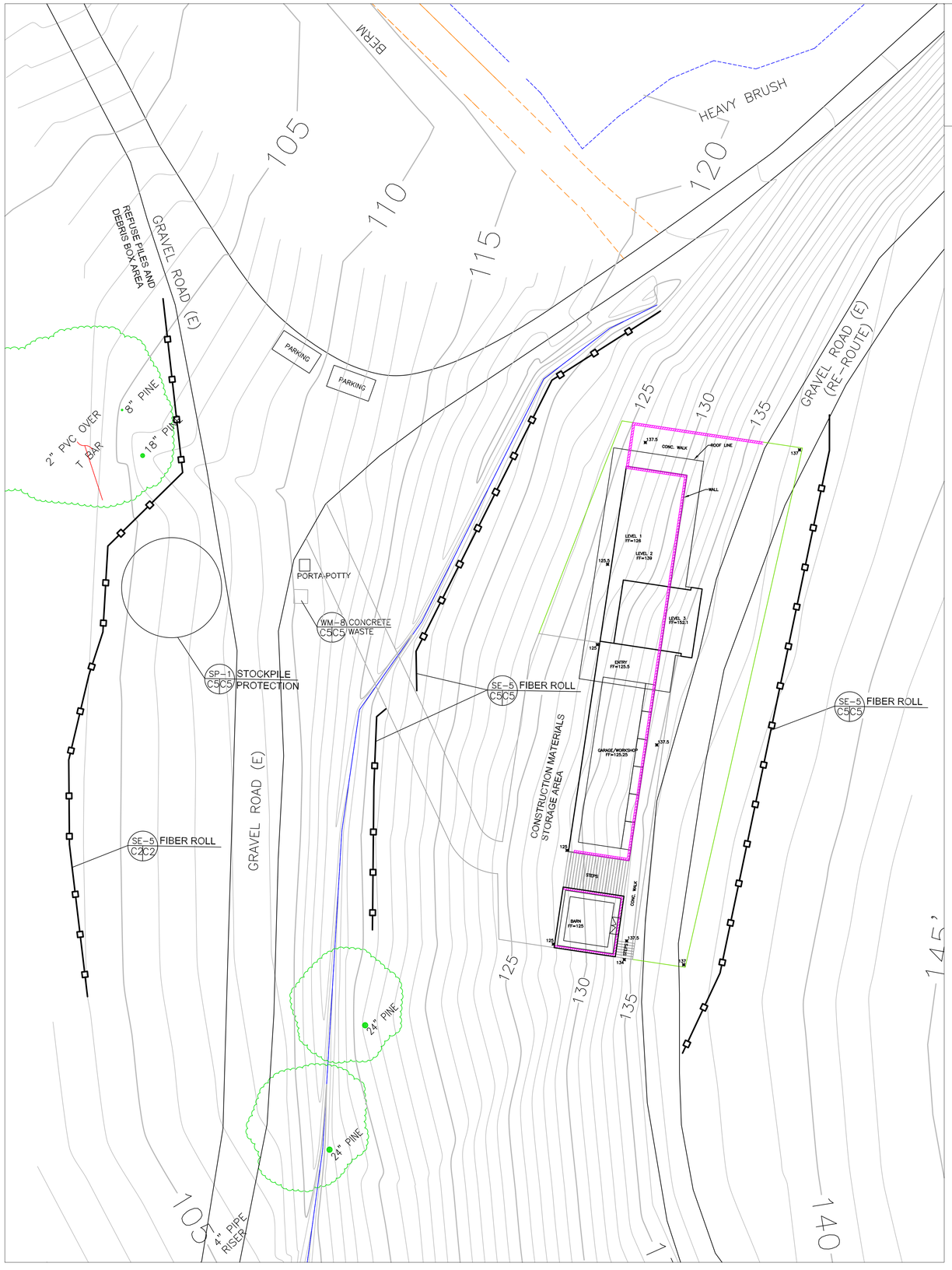
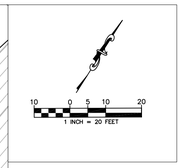
ROAD PROFILE

LEE PROPERTY
CABRILLO HIGHWAY
PESCADERO, CALIFORNIA
APN: 086-191-100

SHEET
C-4





EROSION CONTROL POINT OF CONTACT

THIS PERSON WILL BE RESPONSIBLE FOR EROSION CONTROL AT THE SITE AND WILL BE THE COUNTY'S MAIN POINT OF CONTACT IF CORRECTIONS ARE REQUIRED.

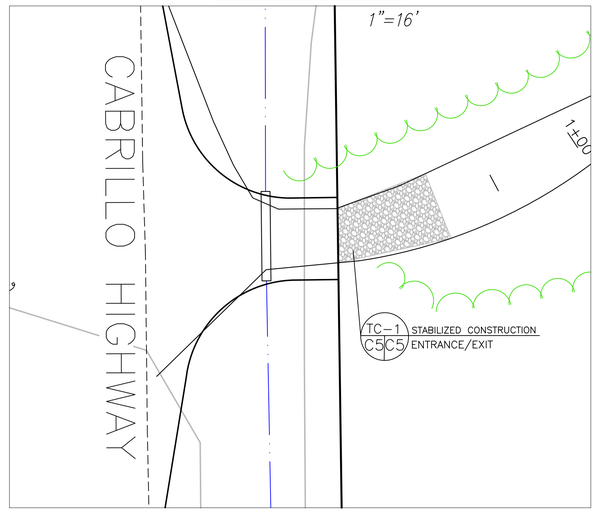
NAME: BRIAN LEE

TITLE/QUALIFICATION: OWNER

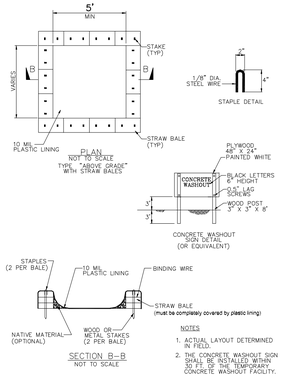
PHONE: 415-812-3294

PHONE:

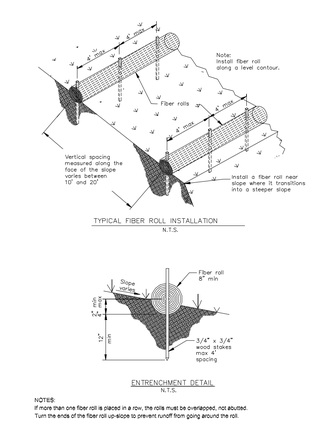
E-MAIL: brian.lee.faia@gmail.com



CONCRETE WASTE MANAGEMENT WM-8



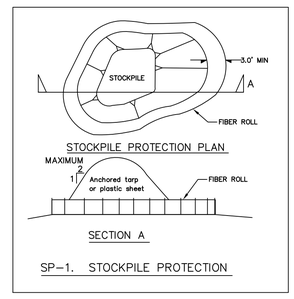
FIBER ROLLS SE-5



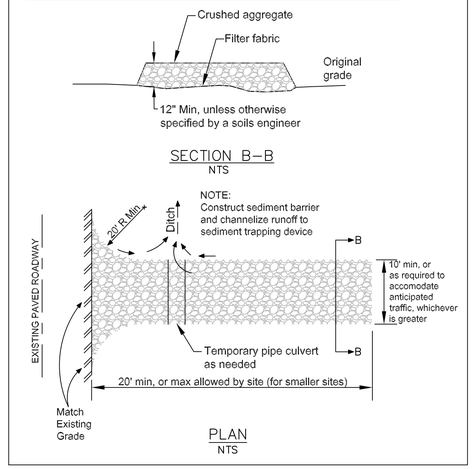
GENERAL EROSION AND SEDIMENT CONTROL NOTES

FIBER ROLE
INSTALL AT LOCATIONS SHOWN.
AFIX AS SHOWN IN DETAIL SE-5

- There will be no stockpiling of soil. All excavated soil will be hauled off-site as it is excavated.
- Perform clearing and earth-moving activities only during dry weather. Measures to ensure adequate erosion and sediment control shall be installed prior to earth-moving activities and construction.
- Erosion control materials to be on-site during off-season.
- Measures to ensure adequate erosion and sediment control are required year-round. Stabilize all denuded areas and maintain erosion control measures continuously between October 1 and April 30.
- Store, handle, and dispose of construction materials and wastes properly, so as to prevent their contact with stormwater.
- Control and prevent the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- Avoid cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- Limit and time applications of pesticides and fertilizers to prevent polluted runoff.
- Limit construction access routes to stabilized, designated access points
- Avoid tracking dirt or other materials off-site; clean off-site paved areas and sidewalks using dry sweeping methods.
- Train and provide instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.
- Placement of erosion materials is required on weekends and during rain events.
- The areas delineated on the plans for parking, grubbing, storage etc., shall not be enlarged or "run over."
- Dust control is required year-round.
- Erosion control materials shall be stored on-site.



STABILIZED CONSTRUCTION ENTRANCE/EXIT TC-1



REGISTERED PROFESSIONAL ENGINEER CHARLES M. KISSICK No. 62264 9-30-21 EXPIRES CIVIL STATE OF CALIFORNIA

Sigma Prime Geosciences, Inc.

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DATE: 12-15-20
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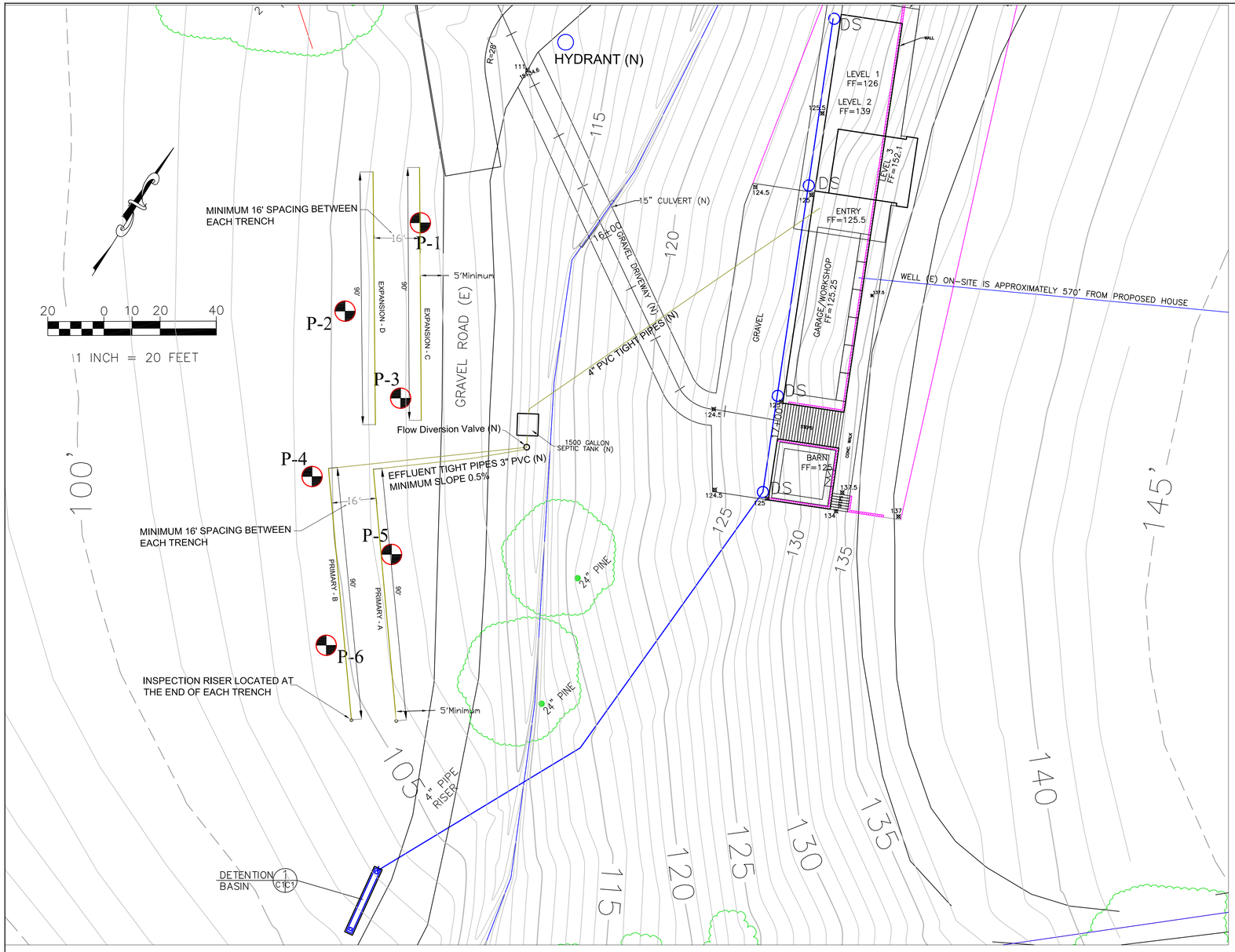
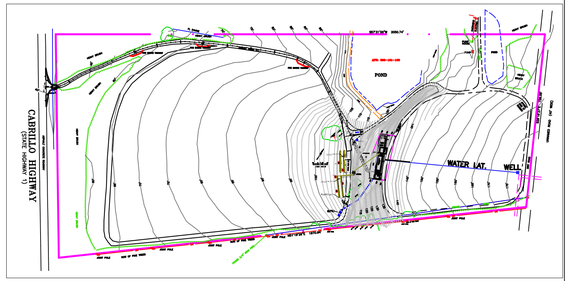
EROSION AND SEDIMENT CONTROL PLAN

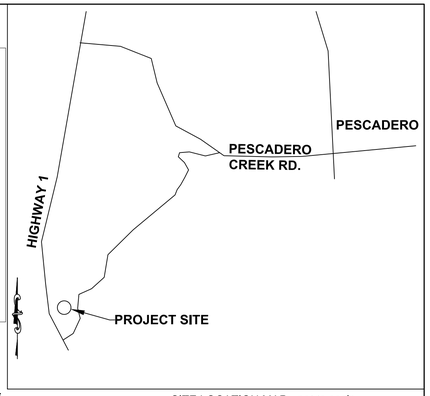
LEE PROPERTY
CABRILLO HIGHWAY
PESCADERO, CALIFORNIA
APN: 086-191-100

SHEET
C-5





SITE PLAN - 1" = 300'



SITE LOCATION MAP - not to scale

PROJECT DESCRIPTION

The proposed residence is a 3 bedroom single family dwelling. However, the design for the leach field is for a 4-bedroom home to account for the possibility of a future farm worker housing unit.

Percolation tests were performed on November 24, 2020 by Langley Hill Quarry.

Results show an "A" Percolation Rate.

180 linear feet of drain-field will be necessary for Primary and Expansion Fields with a 1,500 gallon septic tank. 4 leach fields are required, 2 leach fields "A" and "B" will be installed as the Primary leach fields. 2 leach fields "C" and "D" are shown on the plan as Expansion leach fields. This area must be protected and land in this area dedicated for future use when necessary.

Domestic water to be supplied by (e) on-site well to be converted to domestic water status.

SCOPE OF WORK

1. Install new 1,500 gallon Don Chapin Pre-Cast septic tank or equivalent as shown.
2. Install new primary leach trenches.
3. Install a new flow diversion valve and effluent filter.
4. Connect new septic tank to diversion valve and valve to tight lines and leach trenches as shown.
5. Connect new sewer lateral to inlet of new tank.

All material and methods shall comply with San Mateo County Environmental Health regulations, San Mateo County Building codes, and 2019 CBC. All work must be inspected and approved before back-filling.

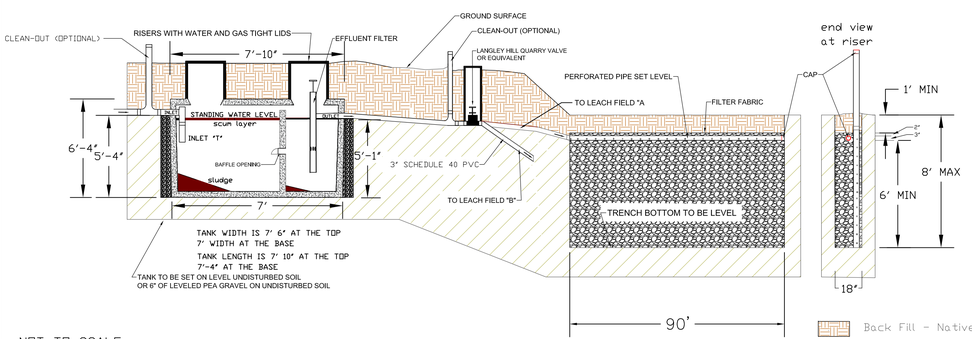
GENERAL NOTES

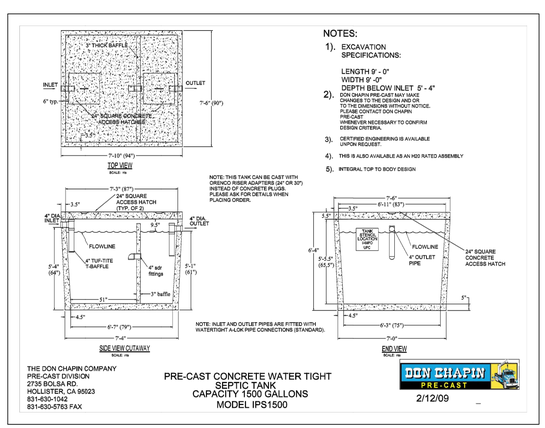
1. PLANS PREPARED AT THE REQUEST OF: BRIAN LEE, OWNER
2. SURVEY AND TOPOGRAPHY BY HUMANN COMPANY, INC. JULY, 2018
3. ELEVATION DATUM ASSUMED.
4. THIS IS NOT A BOUNDARY SURVEY.

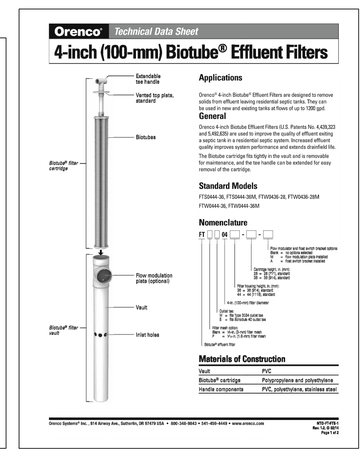
LEGEND

- P-1 PERCOLATION TEST LOCATIONS
- E EXISTING
- N NEW OR PROPOSED
- 137 PROPOSED GRADE

1500 GALLON SEPTIC TANK AND STANDARD LEACH FIELD DETAILS



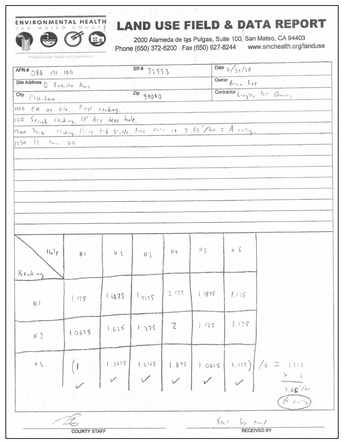




Langley Hill Quarry
Ph: 650-851-0126 * Septic Systems Installed & Repaired * Lic. No. A702033
SMC Certified Installer No. 07
SMC Soil Percolation Tester No. 07 approval pending
Observed in Field By: EK & Date: 11-24-20

1/2 HOUR INTERVALS	READINGS	HOLE #1	HOLE #2	HOLE #3	HOLE #4	HOLE #5	HOLE #6
1	FINISH	6 7/16	7"	7"	7 5/16	6"	6 5/16
	START	9"	9"	9"	9"	9"	9"
	DIFF.	2 9/16	2"	2"	1 11/16	3"	2 11/16
2	FINISH	6 15/16	6 15/16	6 15/16	6 15/16	6 15/16	6 15/16
	START	9"	9"	9"	9"	9"	9"
	DIFF.	2 1/16	2 1/16	2 1/16	2 1/16	2 1/16	2 1/16
3	FINISH	6 5/8	6 5/8	6 5/8	6 5/8	6 5/8	6 5/8
	START	9"	9"	9"	9"	9"	9"
	DIFF.	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8
4	FINISH	6 3/8	6 3/8	6 3/8	6 3/8	6 3/8	6 3/8
	START	9"	9"	9"	9"	9"	9"
	DIFF.	2 5/8	2 5/8	2 5/8	2 5/8	2 5/8	2 5/8
5	FINISH	6 1/8	6 1/8	6 1/8	6 1/8	6 1/8	6 1/8
	START	9"	9"	9"	9"	9"	9"
	DIFF.	2 7/8	2 7/8	2 7/8	2 7/8	2 7/8	2 7/8
6	FINISH	5 7/8	5 7/8	5 7/8	5 7/8	5 7/8	5 7/8
	START	9"	9"	9"	9"	9"	9"
	DIFF.	3 1/8	3 1/8	3 1/8	3 1/8	3 1/8	3 1/8
7	FINISH	5 5/8	5 5/8	5 5/8	5 5/8	5 5/8	5 5/8
	START	9"	9"	9"	9"	9"	9"
	DIFF.	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8
8	FINISH	5 3/8	5 3/8	5 3/8	5 3/8	5 3/8	5 3/8
	START	9"	9"	9"	9"	9"	9"
	DIFF.	3 5/8	3 5/8	3 5/8	3 5/8	3 5/8	3 5/8
9	FINISH						
	START						
	DIFF.						
10	FINISH						
	START						
	DIFF.						

APPLICANTS NAME: LANGLEY HILL QUARRY PHONE: 650-851-0126
OWNERS NAME: Brian Lee APN: 086-191-100
ADDRESS: 0 Cabrillo Hwy., Pescadero SMC
SIZE OF PARCEL: WATER SOURCE: ? SUBDIVISION:
WET WEATHER TESTING REQUIRED? YES V NO DEPTH TO GROUND WATER: 13' (deep h per approval)
SOIL LOG:



PROFESSIONAL GEOLOGIST
ABBIE L. GOLDSTEIN
GEO 7192
7-31-21
EXPIRES
STATE OF CALIFORNIA

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(650) 728-3590
sigmaprm@gmail.com

DATE: 12-23-2020	CHECKED BY: CMK	REV. DATE:	REV. DATE:
DRAWN BY: AZG			

SEPTIC SYSTEM PLAN

LEE PROPERTY
CABRILLO HIGHWAY
PESCADERO, CALIFORNIA
APN: 086-191-100

SHEET
OWTS-1

Project Name: Lee Property Project Number: PS-102
Location: Cabrillo Highway, Pescadero San Mateo County, California
Sigma Prime Geosciences, Inc.
Logged By: AZG
TEST-PIT LOG
Page: 1 of 1
Date(s): 11/24/2020

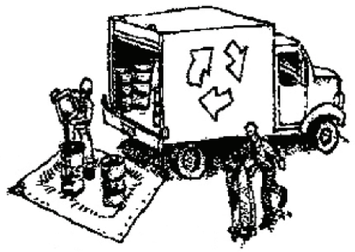
Depth (feet)	Description	Graphic Log & Cores	Comments
0	0 - 1.5' Silty Sand: with organics; dark olive brown; loose; dry.	SC	Test-pit located ~20' south of P-2
	1.5' - 3.0' Silty Sand: light olive brown; loose; dry.	SC	
	3'-13': Clayey Sand: Orange brown; medium dense; damp.	SC	
5	Mottled orange brown/olive brown		
10	Becomes more dense; moist		
15	Bottom of Hole @ 13' No Groundwater		
20			

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

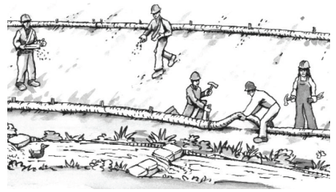
Maintenance and Parking

- ❑ 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.

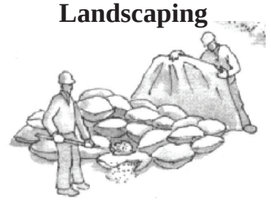
Sawcutting & Asphalt/Concrete Removal

- ❑ 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

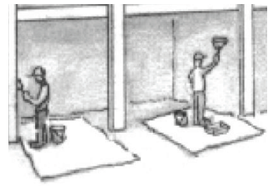
- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ☒ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that 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



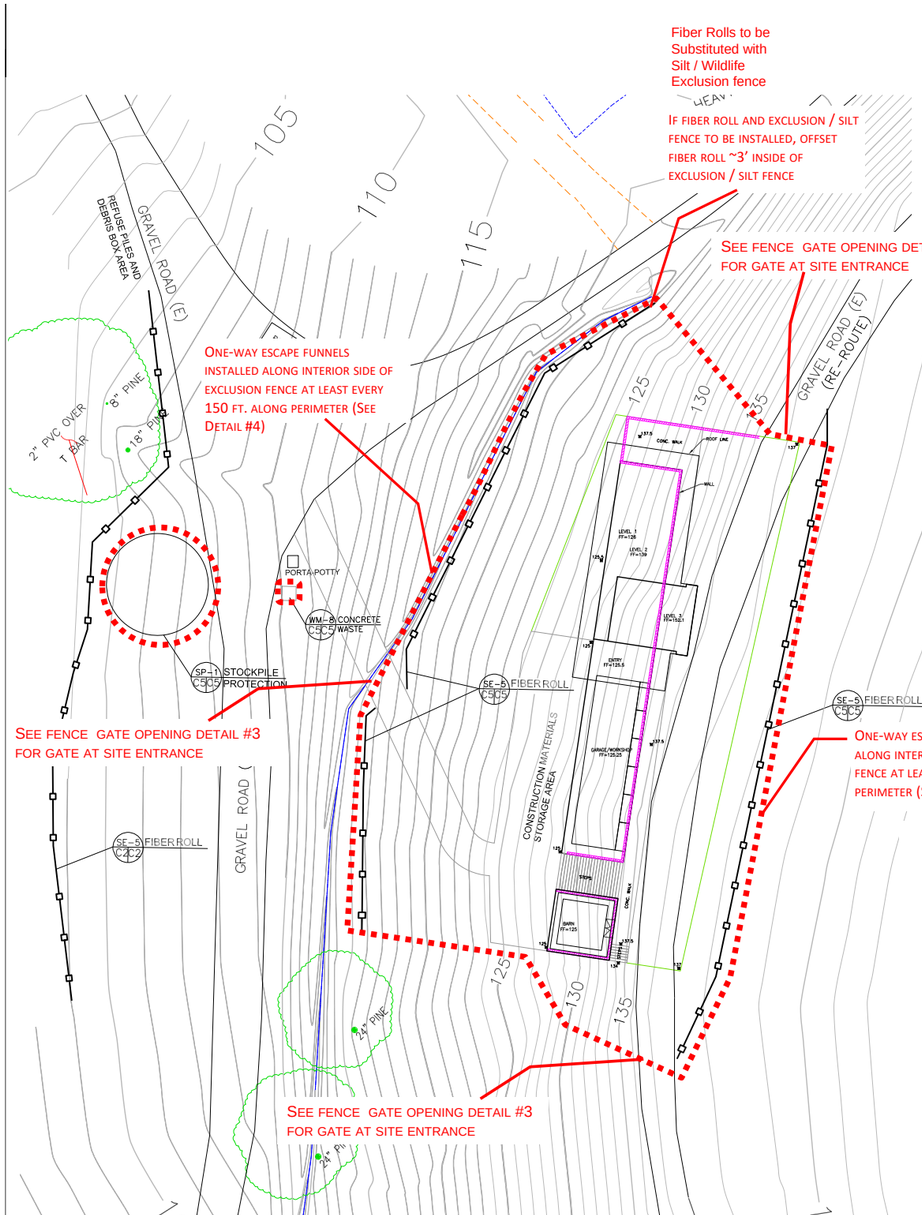
Painting Cleanup and Removal

- ☒ 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 chips 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.

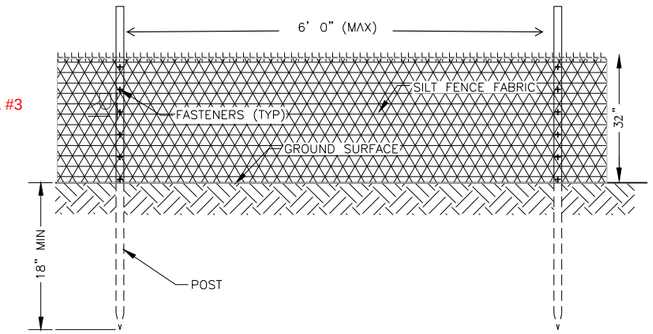
Dewatering

- ❑ 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 your 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.

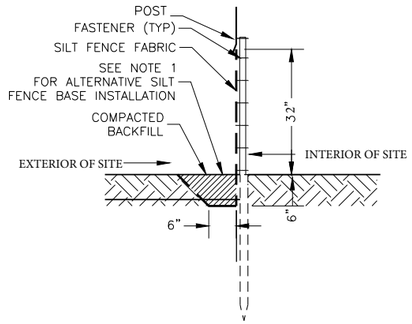
Storm drain polluters may be liable for fines of up to $10,000 per day!



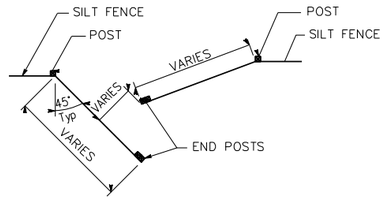
Wildlife Exclusionary Fence Detail



DETAIL #1



DETAIL #2



FENCE OPENING DETAIL

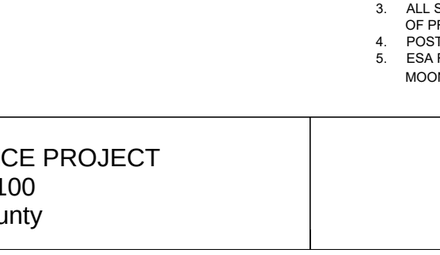
DETAIL #3

WILDLIFE EXCLUSIONARY FENCE

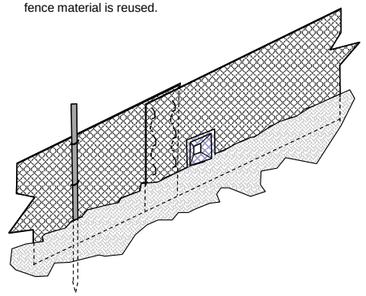
BIOLOGICAL RESOURCE AND EXCLUSION FENCE NOTES

1. THE WILDLIFE EXCLUSIONARY FENCE SHALL FUNCTION AS PERIMETER SEDIMENT CONTROL IN ACCORDANCE WITH MUNICIPAL AND CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES, ADDITIONAL FIBER ROLLS ARE LIKELY NOT NECESSARY UNLESS OTHERWISE DIRECTED BY THE CITY INSPECTOR.
2. PROJECT BIOLOGIST SHALL MONITOR AND INSPECT THE INSTALLATION OF THE WILDLIFE EXCLUSIONARY FENCING. ANY ADDITIONAL RECOMMENDATIONS FROM THE PROJECT BIOLOGIST SHALL BE IMPLEMENTED.
3. WILDLIFE EXCLUSIONARY FENCE SHALL BE INSTALLED PRIOR TO THE START OF PROJECT WORK TO PREVENT SPECIAL-STATUS SPECIES (E.G., CRLF, SFGS) FROM ENTERING THE ACTIVE WORK AREA AND STAGING AREA.
4. **PLASTIC MONO-FILAMENT NETTING OR SIMILAR MATERIAL THAT COULD CAUSE SPECIES ENTANGLEMENT SHALL NOT BE USED FOR WILDLIFE EXCLUSION FENCING OR ANY OTHER BMP INCLUDING FIBER ROLLS.**
5. THE BOTTOM OF THE FENCE SHALL BE BURIED AT LEAST FOUR (6) INCHES TO PREVENT ANIMALS FROM BURROWING UNDER FENCE. (DETAIL #1)
6. WILDLIFE ESCAPE FUNNELS SHALL BE INSTALLED A MINIMUM OF EVERY 150 FEET TO ALLOW ENTRAPPED WILDLIFE TO ESCAPE FROM THE ENCLOSED AREA.
7. FOR GROUND-DISTURBING DEMOLITION ACTIVITIES OCCURRING IN AREAS WHERE CALIFORNIA RED-LEGGED FROG (CRLF) OR SAN FRANCISCO GARTER SNAKE (SFGS) HAVE BEEN IDENTIFIED AS POTENTIALLY OCCURRING, A QUALIFIED BIOLOGIST SHALL CONDUCT PRE-CONSTRUCTION SURVEYS TO ASSESS HABITAT WITHIN AND AROUND THE PROPOSED GRADING AREA. INITIAL GROUND DISTURBING ACTIVITIES SHOULD BE MONITORED BY A QUALIFIED BIOLOGIST WITH EXPERTISE IN CRLF AND SFGS

Exclusionary Fence Accessories: One-Way Escape Funnel (Detail # 4)



Notes:
1. Install 1 Funnel every 150 feet or as otherwise specified by project biologist.
2. Install Funnel in direction as specified by project biologist. (The funnel is typically placed to allow animals to escape from the construction site into adjacent sensitive habitat).
3. Locate funnels near segment ends, where possible, to reduce waste when fence material is reused.



NOTES

1. ON HARDSCAPE SURFACE: AS ALTERNATIVE TO TRENCH KEY IN, SILT FENCE MAY BE SECURED VIA STAPLES & GRAVEL BAGS. A MINIMUM OF 1 FOOT SILT FABRIC TO BE STAPLED TO GROUND, AND MINIMUM SINGLE COURSE GRAVEL BAGS PLACED ON TOP OF STAPLED SILT FENCE.
2. FENCE OPENINGS SHALL BE CONSTRUCTED IN A MANNER TO ENSURE THAT SEDIMENT IS RETAINED BY THE TEMPORARY SILT FENCE.
3. ALL SILT FENCING SHALL BE REMOVED BY CONTRACTOR AT END OF PROJECT.
4. POSTS TO BE INSTALLED ON INSIDE ASPECT OF WORK SITE.
5. ESA FENCING MAY NOT BE REQUIRED, CHECK WITH CITY OF HALF MOON BAY

SOL ECOLOGY

APPROVED BY	DATE				
DESIGNED BY:	EDS				
DRAWN BY:	EDS				
CHECKED BY:	BLS	NO.	DATE	BY	REVISIONS

LEE RESIDENCE PROJECT
APN 086-191-100
San Mateo County

Sheet 1
Of
Scale: AS SHOWN

County of San Mateo - Planning and Building Department

ATTACHMENT C

BIOLOGICAL RESOURCES REPORT

Lee Residence Project (APN 086-191-100) - San Mateo County, CA

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Project No. 1808

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August 8, 2020

SOL ECOLOGY

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Table 2. Special Status Animals with Potential to Occur in the Project Study Area

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Appendix B – CNDDB and USFWS IPaC Results for the Project Study Area
Appendix C – Site Photographs
Appendix D – Observed Species Table

LIST OF ACRONYMS AND ABBREVIATIONS

CDFG/CDFW	California Department of Fish and Game/Wildlife
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRLF	California red-legged frog
ESA	Federal Endangered Species Act
ESHA	Environmentally Sensitive Habitat Areas
LCP	San Mateo County Local Mid-Coast Coastal Plan
NRCS	Natural Resources Conservation Service
OHWM	ordinary high-water mark
RWQCB	Regional Water Quality Control Board
SFDW	San Francisco dusky-footed woodrat
SFGS	San Francisco garter snake
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WPT	Western pond turtle

1.0 INTRODUCTION

On August 3, 2020 Sol Ecology, Inc. (Sol Ecology) performed a biological resources survey at the site on APN 086-191-100 located on Cabrillo Highway, north of Bean Hollow Road, in Pescadero, San Mateo County, California ("Project Study Area" or "study area", see Appendix A – Figure 1). Sol Ecology previously reviewed the site on February 24, 2018 to map sensitive communities for avoidance; the August 3rd visit was performed to verify and/or provide an update on site conditions since 2018.

The purpose of the Project Study Area visit was to gather information necessary to complete a review of potential biological resource impacts from development of the proposed Project, under the guidelines of the San Mateo County Local Mid-Coast Coastal Plan (LCP) for the San Mateo County Planning Department. This report describes the results of the biological resources survey of the study area for the presence of sensitive biological resources protected by local, state, and federal laws and regulations, including any Environmentally Sensitive Habitat Areas (ESHAs) and any required setbacks per the LCP if applicable. This report is based on information available at the time of the survey and on-site conditions that were observed on the date of the most recent site visit.

1.1 Project Setting

The Project Study Area is located east of Cabrillo Highway 1, south of Pescadero Point near Bean Hollow State Beach (Figure 1, Appendix A); Bean Hollow Road is located to the south. A gravel road runs along the northern boundary of the Project Study Area and there are several unmaintained dirt roads which circle two agricultural fields. The study area is relatively flat, generally sloping towards the west with elevations ranging from approximately 16 to 55 meters (55 to 180 feet) above sea level.

1.2 Project Description

The applicant is proposing to build a single-family residence including a house, garage, and barn within a small central portion of the study area (project footprint).

2.0 METHODS

On February 24, 2018 and August 3, 2020, the Project Study Area was traversed on foot to determine the presence of (1) wetland and non-wetland waters, (2) plant communities both sensitive and non-sensitive, (3) special status plant and wildlife species, and (4) presence of essential habitat elements for any special status plant or wildlife species.

2.1 Literature Review

To evaluate whether special status species or other sensitive biological resources (e.g., wetlands) could occur in the Project Study Area and vicinity, Sol Ecology biologists reviewed the following:

- California Native Plant Society's (CNPS's) Inventory of Rare and Endangered Plants of California search for U.S. Geological Survey (USGS) 7.5-minute Pigeon Point quadrangle and four adjacent quadrangles (CNPS 2020a);
- California Natural Diversity Database (CNDDB) records search for USGS 7.5-minute Pigeon Point quadrangle and four adjacent quadrangles (California Department of Fish and Wildlife [CDFW] 2020);
- U.S. Fish and Wildlife Service (USFWS) list of threatened and endangered species for the Project Study Area (USFWS 2020a);
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990);
- CDFG publication California Bird Species of Special Concern (Shuford and Gardali 2008);
- CDFW and University of California Press publication California Amphibian and Reptile Species of Special Concern (Thomson et al. 2016);
- USFWS National Wetlands Inventory, Wetlands Mapper (USFWS 2020b); and
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey (USDA 2019).

Based on information from the above sources, Sol Ecology developed lists of special status species and sensitive natural communities that could be present in the project vicinity (Appendix B). Figures 2 and 3 (Appendix A) present the results of a 5-mile CNDDB record search around the study area for special status plants and wildlife. All biological resources are evaluated for their potential to occur within the study area in Section 3.0 of this report.

2.2 Field Survey

Sol Ecology biologists conducted a wetland delineation and biological resources surveys on February 24, 2018 and August 3, 2020. Biologists walked through accessible portions of the Project Study Area identifying all plant and wildlife species encountered and mapping vegetation communities. Plant species were recorded and identified to a taxonomic level sufficient to determine rarity using the second edition of the *Jepson Manual* (Baldwin et al. 2012). All plant species observed in the study area are included in Appendix D – Observed Species Table. Vegetation communities were identified using the online version of *A Manual of California Vegetation* (CNPS 2020b). Dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting habitat) were noted for wildlife species.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of Sol Ecology biologists with experience working with the species and habitats. If a special status species was observed during the site visit, its presence is recorded and discussed. For some threatened and endangered species, a site survey at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies.

Concurrently with the botanical and wildlife surveys, biologists identified wetland and non-wetland waters potentially subject to regulation by the federal government (U.S. Army Corps of Engineers [USACE]) and the state of California (Regional Water Quality Control Board [RWQCB] and CDFW). The delineation of wetland boundaries was based on the presence/absence of indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. The boundaries of non-wetland waters were identified by locating the ordinary high-water mark (OHWM).

The Project Study Area was also evaluated to determine if any coastal wetland (one-parameter rule) is present, or if riparian habitat or a riparian corridor is present. Coastal wetlands are defined as an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground (also known as hydrophytic); in either case, hydrology must be present also. Hydrophytic plants commonly found in wetlands in San Mateo County include cordgrass, pickleweed, jaumea, frankenia, marsh mint, tule, bulrush, narrow-leaf cattail, broadleaf cattail, pacific silverweed, salt rush, and bog rush. To qualify, a wetland must contain at least a 50 percent cover of some combination of these plants, unless it is a mudflat. The prescribed setback for wetlands is 100 feet.

Riparian corridors are identified as areas along streams or drainages that naturally support native vegetation and wetlands. These areas filter runoff, provide runoff protection, and facilitate groundwater recharge. Riparian corridors are defined by the “limit of riparian vegetation” (i.e., a line determined by the association of plant and animal species normally found near streams, lakes and other bodies of freshwater: red alder, jaumea, pickleweed, big leaf maple, narrow-leaf cattail, arroyo willow, broadleaf cattail, horsetail, creek dogwood, black cottonwood, and box elder). Such a corridor must contain at least a 50% cover of some combination of the plants listed. Setbacks for riparian corridors is 50 feet from the dripline for perennial streams and 30 feet for intermittent streams. No setback other than avoidance is prescribed for riparian habitat where present along an ephemeral stream or irrigation ditch unless it provides habitat for rare, endangered, or unique species. If supporting rare species, a setback may be needed to ensure development does not impact the functional capacity (e.g. breeding, foraging, sheltering, or migration) of the habitat for any rare species.

3.0 RESULTS

3.1 Existing Conditions and General Wildlife Use

The Project Study Area encompasses six soil map units identified by the USDA, NRCS (USDA 2019):

- **Elkhorn sandy loam, thick surface, sloping, eroded**: This soil is well drained and occurs in terraces. The parent material is alluvium. Elkhorn sandy loam is not listed as hydric. Minor components include Baywood (5%), Denison (5%), and Tierra (5%).
- **Elkhorn sandy loam, moderately steep, eroded**: Similar to Elkhorn sandy loam described above. Minor components include Baywood (5%), Denison (5%), Tierra (3%), and Unnamed (2%).
- **Elkhorn sandy loam, sloping, eroded**: Similar to Elkhorn sandy loam described above. Minor components include Baywood (5%), Denison (5%), and Tierra (5%).
- **Watsonville sandy loam, moderately steep, eroded**: This soil is moderately well drained and occurs in terraces. The parent material is alluvium. Watsonville sandy loam is not listed as hydric. Minor components include Baywood (5%), Elkhorn (5%), and Tierra (5%).
- **Watsonville sandy loam, sloping, eroded**: Similar to Watsonville sandy loam described above. Minor components include Elkhorn (10%), Tierra (4%), and Unnamed (1%).
- **Botella loam, sloping, seeped**: This soil is moderately well drained and occurs in terraces, benches, and alluvial fans. The parent material is alluvium. Botella loam is not listed as hydric. Minor components include Dublin (5%), Soquel (5%), and Unnamed (5%).

Vegetation communities present in the study area were classified using the online version of *A Manual of California Vegetation* (CNPS 2020b). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Vegetation communities were classified as sensitive or non-sensitive as defined by the LCP and other applicable laws and regulations. Photographs of the study area are provided in Appendix C.

3.1.1 Non-Sensitive Natural Communities

Cultivated Land

The majority of the Project Study Area is cultivated land. There are two agricultural fields dominated by cultivated oat (*Avena sativa*) and Brussel sprouts in 2018, now dominated by yard knotweed (*Polygonum aviculare*) in 2020. Between the agricultural fields there is a steep mound densely vegetated with California blackberry (*Rubus ursinus*), coyote brush (*Baccharis pilularis*), and poison hemlock (*Conium maculatum*). Along the southern boundary of the Project Study Area outside the project footprint there are Monterey pine (*Pinus radiata*) and Monterey cypress (*Hesperocyparis macrocarpa*). Monterey pine in this location was likely planted as a windbreak and not natural; though it may provide suitable habitat for monarch butterfly winter roosting.

California Annual Grassland

California annual grassland is scattered throughout the site. Dominant grass species include ripgut grass (*Bromus diandrus*) and rye grass (*Festuca perennis*). Forb species include Bermuda buttercup (*Oxalis pes-caprae*), field mustard (*Brassica rapa*), and radish (*Raphanus sativus*).

3.1.2 Sensitive Natural Communities (ESHAs)

Ponds

Two ponds occur in the northeastern corner of the Project Study Area. Emergent wetland and riparian vegetation surround the ponds including arroyo willow (*Salix lasiolepis*), blue elderberry (*Sambucus nigra* subsp. *caerulea*), and southern bulrush (*Schoenoplectus californicus*. Duckweed (*Lemna* sp.) was observed on the ponds. The two ponds were man-made in the 1970s. According to the LCP, for ponds that are not being used for agricultural purposes, the buffer zones extends 100 feet from the high-water point or extent of wetland vegetation. While the two ponds remain in use they are due not qualify as ESHA. However, because they are surrounded by wetland and riparian vegetation and also provide suitable breeding and foraging habitat for two federal listed species, California red-legged frog and San Francisco garter snake, they require avoidance from proposed construction activities. Appendix A, Figure 1 shows the extent of both ponds and associated wetland habitat on the site.

Seasonal Wetlands

Seasonal wetlands occur in the northeastern corner of the site, in riparian areas surrounding the two ponds, within a drainage ditch and riparian area below the two ponds north of the gravel entrance road, and at the base of the southern field near the western site boundary. These seasonal wetlands support emergent wetland and riparian vegetation including annual blue grass (*Poa annua*), arroyo willow, brass-buttons (*Cotula coronopifolia*), broad-leaved cattail (*Typha latifolia*), California figwort (*Scrophularia californica*), fringed willowherb (*Epilobium ciliatum* subsp. *ciliatum*), hyssop loosestrife (*Lythrum hyssopifolia*), small fruited bulrush (*Scirpus microcarpus*), soft rush (*Juncus effusus*), spreading rush (*J. patens*), southern bulrush, and water parsley (*Oenanthe sarmentosa*). Seasonal wetlands are considered ESHA.

Riparian

A small area of riparian vegetation has formed along an agricultural ditch that connects the upper agricultural field to the lower field based on field observations (Appendix A, Figure 1). Vegetation within this ditch is mostly comprised of non-wetland plants such as poison hemlock and California blackberry, and shows evidence of die-back from absence of flows in the past year. A small area of riparian vegetation including arroyo willow, spreading rush (*J. patens*), and flatsedge (*Cyperus eragrostis*) was observed in this location at the base of the hill near to the lower pond as shown on Figure 1. Riparian vegetation is considered an ESHA, though no setbacks are prescribed given its ephemeral nature and location within an ephemeral irrigation ditch.

3.2 Special Status Plants

Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory with California Rare Plant Ranks of 1 and 2 are also considered special status plant species.

Based upon a review of the resources and databases given in Section 2.1, thirty-five (35) special status plant species have been documented within a 9-quad search of the Project Study Area. Nine (9) special status plant species are documented within 5 miles, of which eight (8) and can be found in mesic grassland habitat on the Project Study Area (Table 1).

Other special status plant species documented in the area are unlikely or have no potential to occur on the Project Study Area for one or more of the following reasons:

- Hydrologic conditions (e.g. seeps) necessary to support the special status plants do not exist on site;
- Edaphic (soil) conditions (e.g. volcanic, rocky, or sand soils) necessary to support the special status plants do not exist on site;
- Unique pH conditions (e.g. serpentine) necessary to support the special status plant species are not present on the Project Study Area; and
- Associated vegetation communities (e.g. cismontane woodland, chaparral, broadleaved upland forest) necessary to support the special status plants do not exist on site.

Table 1. Special Status Plants with Potential to Occur in the Project Study Area.

Scientific Name/ Common Name	Status	Habitat	Blooming Period	Potential for Occurrence
Astragalus pycnostachyus var. *pycnostachyus* coastal marsh milkvetch	1B.2	Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt, streamsides). 0-30m	(Apr) Jun-Oct	**Moderate:** May be present near pond habitats; not likely to be impacted by project.
Fritillaria liliacea fragrant fritillary	1B.2	Often serpentinite; cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. 3-410m	Feb-Apr	**Low:** May be present in grassland habitats near access road. Not observed during February site visit.
Lasthenia californica subsp. *macrantha* perennial goldfields	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub; grassland, dunes along immediate coast. 5-520m	Jan-Nov	**Low:** May be present in grassland habitats near access road. Not observed during February site visit.
Leptosiphon croceus coast yellow (rose) leptosiphon	1B.1	Coastal bluff scrub, coastal prairie; local, open, grassy areas. 10-150m	Apr-Jun	**Moderate:** May be present in open grassland habitats near access road.
Limnanthes douglasii subsp. *sulphurea* Point Reyes meadowfoam	SE, 1B.2	Coastal prairie, meadows and seeps (mesic), marshes and swamps (freshwater), vernal pools. 0-140m	Mar-May	**Moderate:** May be present near pond habitats; not likely to be impacted by project.
Microseris paludosa marsh microseris	1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 5-355m	Apr-Jun (Jul)	**Moderate:** May be present in open grassland habitats near access road.
Plagiobothrys chorisianus var. *chorisianus* Choris' popcornflower	1B.2	Mesic; chaparral, coastal prairie, coastal scrub. 3-160m	Mar-Jun	**Moderate:** May be present in open grassland habitats near access road.
Silene scouleri subsp. *scouleri* Scouler's catchfly	2B.2	Coastal bluff scrub, coastal prairie, valley and foothill grassland. 0-600m	Mar-Aug (Sep)	**Moderate:** May be present in open grassland habitats near access road.

[1] SE – State Endangered; California Rare Plant Rank

1B – Plants rare, threatened, or endangered in California and elsewhere.

2B – Plants rare, threatened, or endangered in California but more common elsewhere.

0.1 – Seriously threatened in California

0.2 – Moderately threatened in California

0.3 – Not very threatened in California

3.3 Special Status Wildlife

In addition to wildlife listed as federal or state endangered and/or threatened, federal and state candidate species, CDFW Species of Special Concern, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW Special status Invertebrates are all considered special status species. Although these species generally have no special legal status, they are given special consideration under CEQA. The federal Bald and Golden Eagle Protection Act also provides broad protections to both eagle species that are roughly analogous to those of listed species. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity; bats named as a "High Priority" or "Medium Priority" species for conservation by the WBWG are typically considered special status and also considered under CEQA; bat roosts are protected under CDFW Fish and Game Code. In addition to regulations for special status species, most native birds in the United States (including non-status species) are protected by the federal Migratory Bird Treaty Act of 1918 (MBTA) and the California Fish and Game Code (CFGC), i.e., sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal.

A total of forty-six (46)special status wildlife species have been documented within a 9-quad search of the Project Study Area. Twenty-one (21) of these have been documented within five miles, and eight (8) may be present on the site (Table 2), including one species, San Francisco dusky-footed woodrat not found in the database search but commonly found in the region. The Project Study Area is located outside designated critical habitat.

Table 2. Special Status Wildlife with Potential to Occur in the Project Study Area.

Common Name /Scientific Name	Status	Habitat	Potential for Occurrence
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	SSC	Forest habitats of moderate canopy and moderate to dense understory as well as chaparral and riparian scrub habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	**Moderate:** Suitable habitat is present around ponds and near existing access road; not likely in project footprint.
common yellowthroat *Geothlypis trichas sinuosa*	BCC	Resident of fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**Moderate:** Suitable nesting habitat is present in willows surrounding ponds.
tricolored blackbird *Agelaius tricolor*	SCE, SSC, BCC	Most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets or flooded agricultural fields.	**Moderate:** Suitable nesting & foraging habitat is present; not documented in region.
Allen's hummingbird *Selasphorus sasin*	BCC	Summer resident along the California coast, breeding in a variety of woodland and forest habitats. Nest in shrubs and trees with dense vegetation; commonly found nesting in Monterey pines.	**High:** Suitable nesting habitat is present.
California red-legged frog *Rana draytonii*	FT, SSC	Associated with quiet perennial to intermittent ponds, stream pools and wetlands with dense, shrubby, or emergent riparian vegetation. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains.	**Present:** Observed above lower pond near pumphouse on Feb. 24. Not likely to occur in onsite ditches.
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	FE, SE, CFP	Vicinity of freshwater marshes, ponds, and slow-moving streams in San Mateo County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also important.	**High:** Suitable pond habitat is present. Documented in Pescadero marsh.
western pond turtle *Actinemys marmorata*	SSC	Occurs in ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat for egg-laying.	**High:** Suitable pond habitat is present. Documented within one mile.
monarch butterfly *Danaus plexippus*	SSI	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.	**Moderate**: Documented in stand of pines just south of parcel; limited habitat on-site.

FE/SE – Federal/State Endangered FT/ST – Federal/State Threatened FC/SC – Federal/State Candidate
CFP – California Fully Protected SSC – Species of Special Concern BCC – Bird of Conservation Concern SSI – Special Status Invertebrate

The remaining species found in the review of background literature were determined to be unlikely to occur due to absence of suitable habitat elements in and immediately adjacent to the Project Study Area. Habitat elements that were evaluated but found to be absent from the immediate area of the Project Study Area or surrounding habitats subject to potential indirect impacts include the following:

- No suitable burrows on or adjacent to the Project Study Area (e.g. for burrowing owl or American badger).
- No suitable stream habitat on or immediately adjacent to the property (e.g. for steelhead, longfin smelt, tidewater goby, bank swallow, California giant salamander, Santa Cruz black salamander).
- No suitable roosting habitat such as barns, old buildings, or large snags (e.g. for Townsend's big-eared bat or pallid bat).
- Suitable vegetation community such as coniferous forest, coastal prairie, sand dunes, beaches) are not present (e.g. marbled murrelet, western snowy plover, western bumble bee).
- Suitable nesting substrate is not present (e.g. bald eagle, golden eagle, albatross, etc.).
- Species has been confirmed extirpated from the area (*Myrtle's silverspot butterfly*).

4.0 CONCLUSION AND RECOMMENDATIONS

Along the southern boundary of the Project Study Area there are unnaturalized Monterey pine (*Pinus radiata*) and Monterey cypress (*Hesperocyparis macrocarpa*). The LCP requires any development to minimize their impacts to the number of Monterey pine cut in their natural habitat and declares the Monterey cypress a Class I Heritage Tree. Limbing and cutting down Monterey pine and cypress will be avoided within the Project Study Area. This will also ensure removal of potential monarch butterfly roost habitat to is avoided.

Ponds, seasonal wetlands, and riparian habitat were observed on the northern side of the Project Study Area. These natural communities are considered ESHA and avoidance is required. The two ponds and their associated surrounding wetland habitat require a setback of 100 feet from the outermost line of wetland vegetation landward in accordance with the LCP. A minimum 100-foot setback is also required along the drainage swale located to the north of the access road. No setback is required along the irrigation ditch nor its associated riparian habitat due to the ephemeral nature of this feature and absence of a natural water source. Riparian habitat at this location is not likely to be sustained without source irrigation water being directed into it. Required setbacks are shown on Figure 1 (Appendix A). No other ESHAs were found on the site.

BIO-1: Minimum wetland and riparian setbacks are prescribed for perennial and intermittent wetland and riparian habitat present in the Study Area. The proposed development will completely avoid any ESHAs on the site. BMPs are prescribed for any work occurring near setback areas.

Eight (8) special status plant species have a moderate potential to occur on the Project Study Area (Table 1); two of these species were not observed during the February 2018 visit which coincided with the blooming window for the two species. The remaining six (6) special status plants are most likely to occur in mesic conditions surrounding the ponds and seasonal wetlands which will be protected by setbacks outlined in the LCP and shown on Figure 1 (Appendix A). It is unlikely that these plants would be observed between the cultivated fields where project activities will take place. A few species may potentially be present near the access road. A pre-construction survey is recommended prior to any activities that may occur in relationship to road improvements to ensure impacts are avoided.

BIO-2: Pre-construction surveys should be performed between April and June for rose leptosiphon, marsh microseris, Choris' popcornflower, and Scouler's catchfly. If found, the plant should be avoided to extent possible, or a translocation plan shall be prepared prior to the start of activities.

Eight (8) special status animals have a moderate or high potential to occur on the Project Study Area. Nearly all of these species are likely to occur in the pond and associated wetland habitats located to the north of the proposed project footprint including western pond turtle (WPT), San Francisco garter snake (SFGS), California red-legged frog (CRLF), common yellowthroat, tricolored blackbird, and San Francisco dusky-footed woodrat (SFDW). Allen's hummingbird and monarch

butterfly may be present in Monterey pines on the site, which will be largely avoided. None of these species are likely to be present in the proposed footprint. However, construction-related activities have the potential to impact nesting birds if present and may potentially indirectly impact CRLF, SFGS, and/or SFDW if present during staging of equipment, vehicular access, and/or grading or operation of machinery on-site. The following avoidance measures are prescribed to ensure impacts to listed species are completely avoided and/or to minimize potential impacts to other sensitive species that may be present.

BIO-3: An environmental training should be provided to all construction workers prior to the start of work. The training will educate workers on: (1) any sensitive resources or special-status species that may occur in the work area, (2) procedures to follow in the event a species is observed, and (3) other environmental BMPs for ensuring take is avoided.

BIO-4: Wildlife exclusion fencing should be placed around the perimeter of project footprint and any staging areas to prevent animals including CRLF and/or SFGS from entering the work area. Fencing should be a minimum of 36 inches high, with a minimum of 4 inches trenched into the ground. Fencing should be installed under the guidance of a qualified biologist and maintained throughout the duration of ground-disturbing activities.

BIO-5: If work is to be initiated during the nesting bird season between February 1 and August 31, a pre-construction nesting bird survey should be performed in all areas within 250 feet of proposed activities. If nests are found, an appropriately sized no-disturbance buffer should be placed around the nest at the direction of the qualified biologist conducting the survey. Generally, buffers for common songbird species is 25 to 50 feet, and between 100 up to 500 feet for special status birds and/or raptors depending on the species and status of the nest. Buffers should remain in place until all young have fledged, or the biologist has confirmed that the nest has been naturally predated.

BIO-6: A pre-construction survey for SFDW nests shall be performed prior to the start of work within 25 feet of proposed activities. If an active SFDW nest is found and cannot be avoided, the biologist shall supervise dismantling of the nest by hand. If young are found, material shall be set back on the house and the house avoided for a minimum of 3 weeks to allow young to wean and leave the nest. Following completion of the dismantling, nest material shall be placed in nearby habitat where it can be completely avoided.

BIO-7: A pre-construction survey for WPT, CRLF, and SFGS shall be conducted prior to initiation of project activities within 48 hours of the start of work. Surveys are to be conducted by approved qualified biologist with experience surveying for each species. If any species is found on the Project Site, it should be allowed to leave the area on its own. If the animal does not leave the area on its own, the USFWS and CDFW should be contacted.

BIO-8: No ground-disturbing work (e.g. vegetation removal, grading, or trenchwork) shall be performed if a 70 percent or greater chance of rainfall is predicted within 72 hours of project activity or within 24 hours of any rain event (greater than 0.5 inches) occurring between October

31 and April 31 when frogs are most likely to utilize disperse into upland habitats. No work shall occur within 30 minutes of sunrise or sunset.

BIO-9: Trenches and holes should be covered and inspected daily for stranded animals. Trenches and holes deeper than one foot should contain escape ramps at a maximum slope of 2:1 to allow trapped animals to escape.

BIO-10: Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic monofilament netting (erosion control matting), rolled erosion control products, or similar material should not be used. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

BIO-11: All food and food-related trash must be enclosed in sealed trash containers at the end of each day and removed completely from the site every three days to avoid attracting wildlife that may prey on listed species in the area.

6.0 REFERENCES

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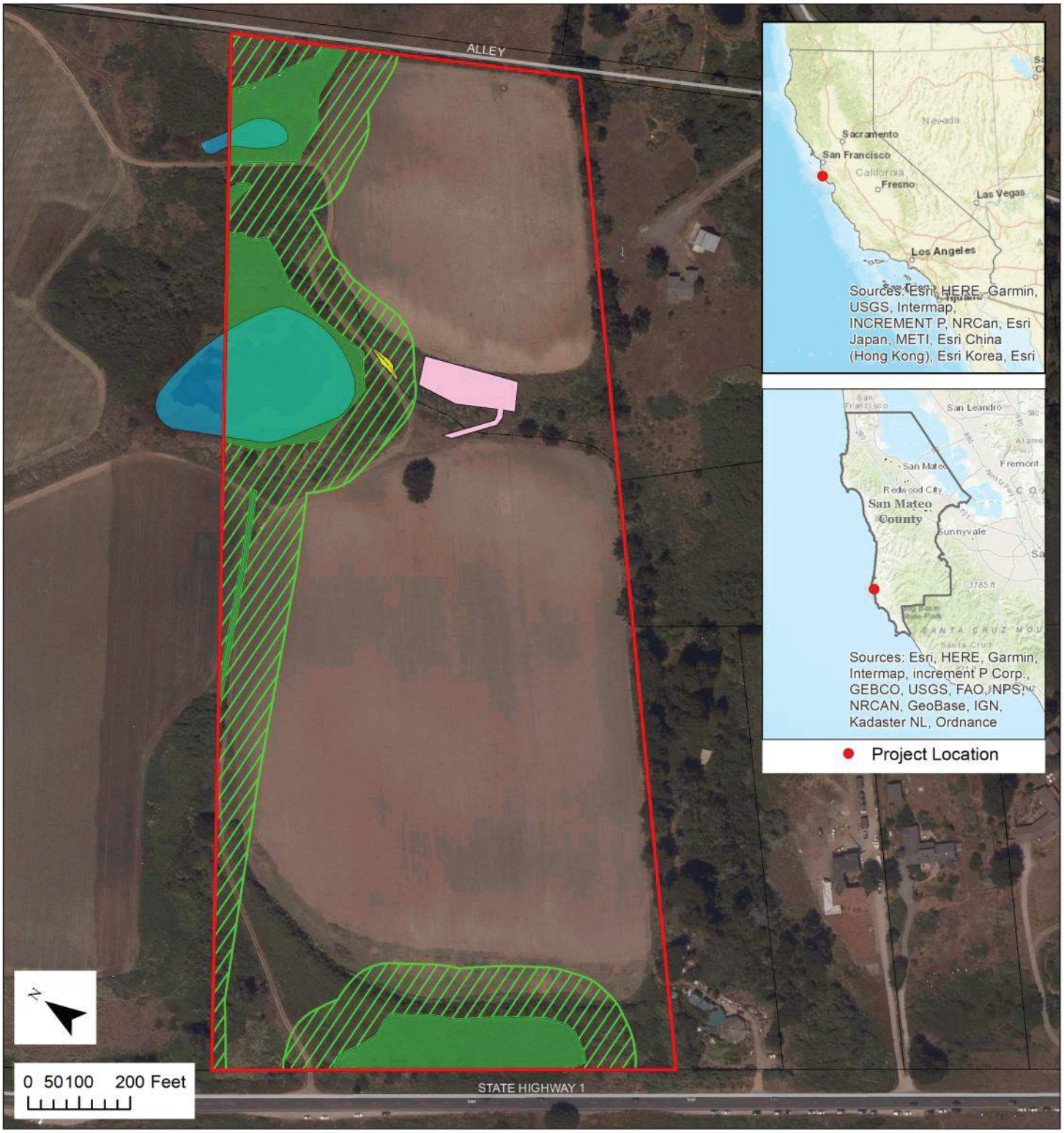
APPENDIX A

PROJECT FIGURES: PROJECT LOCATION AND CNDDB MAP RESULTS

Figure 1: Project Location

Lee Residence (APN# 086-191-100), San Mateo County, CA



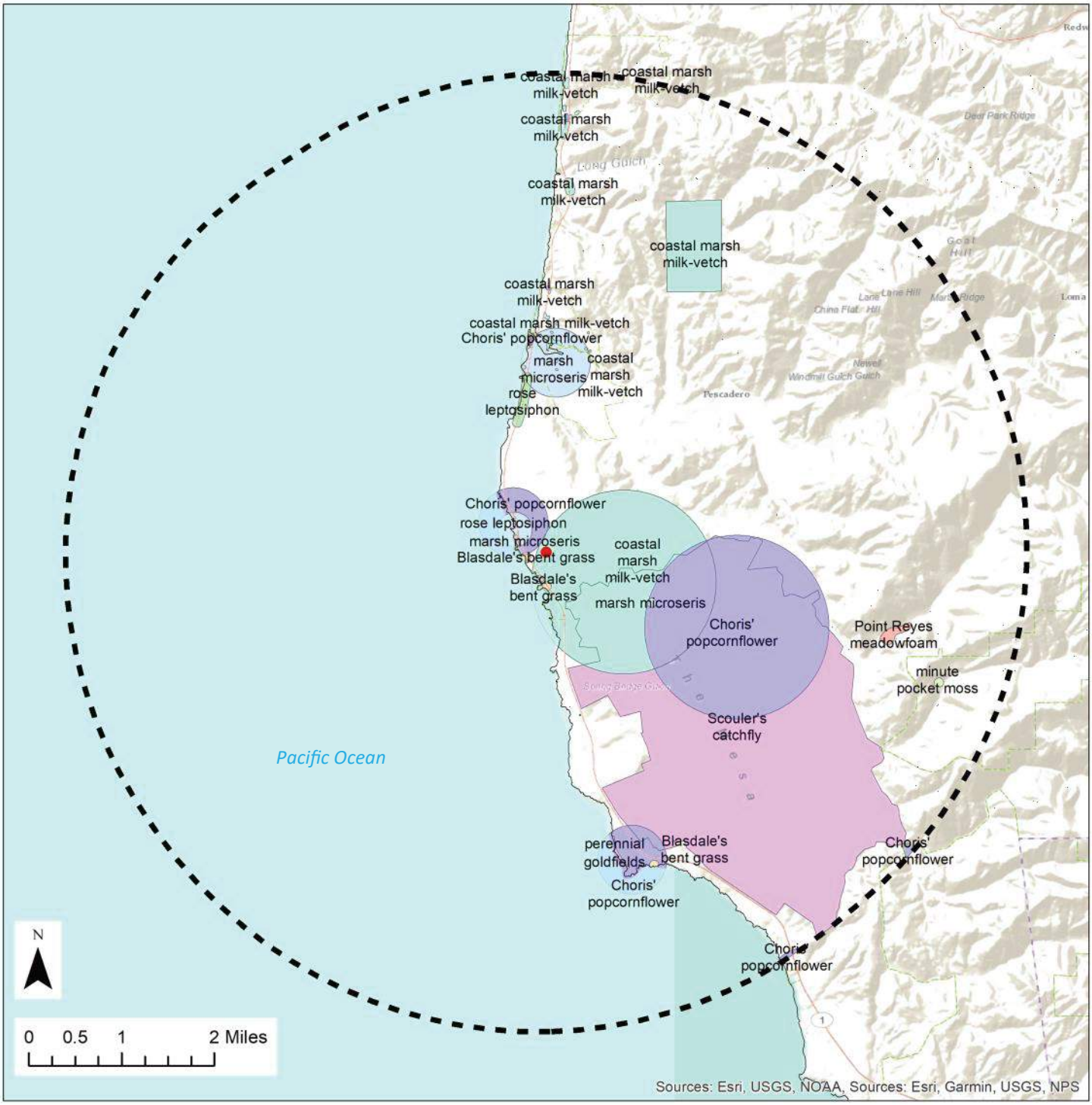
Project Study Area
Proposed Residence
Parcel Boundary
Roads and Streets
Ditch
Ponds
Riparian Vegetation
Wetland
100-Foot Buffer off Wetland Boundary

Date: 6-8-2020
Data: Sol Ecology Inc., San Mateo Co., USFWS/NWI

Base: San Mateo Co.
GIS: AJG1808

SOL ECOLOGY
solecology.com

Figure 2: Special Status Plant Species within 5 Miles of the Project Site
Lee Residence (APN# 086-191-100), San Mateo County, CA



Project Location
5 Mile Buffer
Blasdale's bent grass (3)
Choris' popcornflower (8)
Point Reyes meadowfoam (1)
Scouler's catchfly (1)
coastal marsh milk-vetch (6)
marsh microseris (3)
minute pocket moss (1)
perennial goldfields (4)
rose leptosiphon (2)

Date: 6-8-2020
Data: Sol Ecology Inc., San Mateo Co., CDFW

Base: San Mateo Co.
GIS: AJG1808

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Figure 3: Special Status Animal Species within 5 Miles of the Project Site
Lee Residence (APN# 086-191-100), San Mateo County, CA

- Project Location
- 5 Mile Buffer
- American badger (2)
- California giant salamander (2)
- California red-legged frog (24)
- Myrtle's silverspot butterfly (1)
- Santa Cruz black salamander (1)
- Townsend's big-eared bat (2)
- bank swallow (1)
- great blue heron (1)
- longfin smelt (1)
- marbled murrelet (7)
- mimic tryonia (=California brackishwater snail) (2)
- monarch - California overwintering population (4)
- obscure bumble bee (2)
- pallid bat (1)
- saltmarsh common yellowthroat (2)
- steelhead - central California coast DPS (2)
- tidewater goby (2)
- western bumble bee (2)
- western pond turtle (1)
- western snowy plover (1)

Date: 6-8-2020
Data: Sol Ecology Inc., San Mateo Co., CDFW

Base: San Mateo Co.
GIS: AJG1808

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APPENDIX B

CNDDB AND USFWS IPAC RESULTS FOR THE PROJECT STUDY AREA

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Pigeon Point (3712224) OR San Gregorio (3712234) OR La Honda (3712233) OR Franklin Point (3712223) OR Ano Nuevo (3712213))
 AND Taxonomic Group IS (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Agrostis blasdalei Blasdale's bent grass	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCSC-UC Santa Cruz	25 400	62 S:5	0	1	0	0	0	4	2	3	5	0	0
Amsinckia lunaris bent-flowered fiddleneck	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_UCBG-UC Botanical Garden at Berkeley SB_UCSC-UC Santa Cruz	300 300	93 S:1	0	0	0	0	0	1	1	0	1	0	0
Arctostaphylos andersonii Anderson's manzanita	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	950 1,700	64 S:4	0	1	0	1	0	2	1	3	4	0	0
Arctostaphylos glutinosa Schreiber's manzanita	G1 S1	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz SB_USDA-US Dept of Agriculture	1,100 1,100	7 S:1	0	1	0	0	0	0	1	0	1	0	0
Arctostaphylos regismontana Kings Mountain manzanita	G2 S2	None None	Rare Plant Rank - 1B.2	2,000 2,000	17 S:1	0	1	0	0	0	0	0	1	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Astragalus pycnostachyus var. pycnostachyus coastal marsh milk-vetch	G2T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	10 500	25 S:8	0	5	1	0	1	1	2	6	7	1	0
Cirsium andrewsii Franciscan thistle	G3 S3	None None	Rare Plant Rank - 1B.2	80 80	31 S:1	0	0	0	0	1	0	1	0	0	1	0
Coastal Brackish Marsh Coastal Brackish Marsh	G2 S2.1	None None			30 S:1	0	0	0	0	0	1	1	0	1	0	0
Collinsia multicolor San Francisco collinsia	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	50 300	36 S:5	0	1	0	0	0	4	3	2	5	0	0
Dirca occidentalis western leatherwood	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	430 1,800	71 S:6	2	1	1	0	0	2	1	5	6	0	0
Eriophyllum latilobum San Mateo woolly sunflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden		8 S:1	0	0	0	0	1	0	1	0	0	1	0
Erysimum ammophilum sand-loving wallflower	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CRES-San Diego Zoo CRES Native Gene Seed Bank SB_SBBG-Santa Barbara Botanic Garden	100 100	58 S:1	0	0	0	0	0	1	1	0	1	0	0
Fissidens pauperculus minute pocket moss	G3? S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	250 300	22 S:2	0	0	0	0	0	2	0	2	2	0	0
Fritillaria agrestis stinkbells	G3 S3	None None	Rare Plant Rank - 4.2	30 30	32 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Fritillaria liliacea fragrant fritillary	G2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	33 33	82 S:1	0	1	0	0	0	0	0	1	1	0	0
Hesperocyparis abramsiana var. butanoensis Butano Ridge cypress	G1T1 S1	Threatened Endangered	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	1,400 1,400	1 S:1	0	0	0	0	0	1	0	1	1	0	0
Horkelia cuneata var. sericea Kellogg's horkelia	G4T1? S1?	None None	Rare Plant Rank - 1B.1 SB_UCSC-UC Santa Cruz USFS_S-Sensitive	400 400	58 S:1	0	0	0	0	0	1	1	0	1	0	0
Horkelia marinensis Point Reyes horkelia	G2 S2	None None	Rare Plant Rank - 1B.2	400 400	36 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasthenia californica ssp. macrantha perennial goldfields	G3T2 S2	None None	Rare Plant Rank - 1B.2	25 40	59 S:4	0	2	0	2	0	0	0	4	4	0	0
Leptosiphon rosaceus rose leptosiphon	G1 S1	None None	Rare Plant Rank - 1B.1		31 S:2	0	0	0	0	2	0	2	0	0	2	0
Limnanthes douglasii ssp. sulphurea Point Reyes meadowfoam	G4T1 S1	None Endangered	Rare Plant Rank - 1B.2	240 240	12 S:1	0	0	1	0	0	0	1	0	1	0	0
Malacothamnus arcuatus arcuate bush-mallow	G2Q S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	450 450	30 S:1	0	0	0	0	0	1	1	0	1	0	0
Microseris paludosa marsh microseris	G2 S2	None None	Rare Plant Rank - 1B.2 SB_SBBG-Santa Barbara Botanic Garden SB_UCSC-UC Santa Cruz	40 520	38 S:4	1	0	0	0	2	1	3	1	2	1	1
Mielichhoferia elongata elongate copper moss	G5 S3S4	None None	Rare Plant Rank - 4.3 USFS_S-Sensitive	20 20	20 S:1	0	0	0	0	0	1	1	0	1	0	0
Monolopia gracilens woodland woollythreads	G3 S3	None None	Rare Plant Rank - 1B.2		68 S:1	0	0	0	0	0	1	1	0	1	0	0
Monterey Pine Forest Monterey Pine Forest	G1 S1.1	None None		400 400	11 S:2	0	0	0	0	0	2	2	0	2	0	0

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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
N. Central Coast Calif. Roach/Stickleback/Steelhead Stream N. Central Coast Calif. Roach/Stickleback/Steelhead Stream	GNR SNR	None None		130 200	2 S:2	0	2	0	0	0	0	2	0	2	0	0
North Central Coast Short-Run Coho Stream North Central Coast Short-Run Coho Stream	GNR SNR	None None		40 50	2 S:2	0	0	2	0	0	0	2	0	2	0	0
North Central Coast Steelhead/Sculpin Stream North Central Coast Steelhead/Sculpin Stream	GNR SNR	None None		160 160	1 S:1	0	1	0	0	0	0	1	0	1	0	0
Northern Interior Cypress Forest Northern Interior Cypress Forest	G2 S2.2	None None		1,510 1,510	22 S:1	0	0	0	0	0	1	1	0	1	0	0
Pinus radiata Monterey pine	G1 S1	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	400 400	5 S:1	1	0	0	0	0	0	0	1	1	0	0
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	G3T1Q S1	None None	Rare Plant Rank - 1B.2 SB_UCSC-UC Santa Cruz	25 600	42 S:19	1	5	2	0	0	11	9	10	19	0	0
Plagiobothrys diffusus San Francisco popcornflower	G1Q S1	None Endangered	Rare Plant Rank - 1B.1 SB_UCSC-UC Santa Cruz	160 480	17 S:2	1	0	1	0	0	0	2	0	2	0	0
Rosa pinetorum pine rose	G2 S2	None None	Rare Plant Rank - 1B.2		14 S:1	0	0	0	0	0	1	1	0	1	0	0
Sacramento-San Joaquin Coastal Lagoon Sacramento-San Joaquin Coastal Lagoon	GNR SNR	None None		10 10	2 S:2	0	2	0	0	0	0	2	0	2	0	0
Silene scouleri ssp. scouleri Scouler's catchfly	G5T4T5 S2S3	None None	Rare Plant Rank - 2B.2		23 S:1	0	0	0	0	0	1	0	1	1	0	0
Silene verecunda ssp. verecunda San Francisco campion	G5T1 S1	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	100 400	20 S:5	0	0	0	1	0	4	3	2	5	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Stebbinsoseris decipiens	G2	None	Rare Plant Rank - 1B.2	300	19	0	0	1	0	0	6	5	2	7	0	0
Santa Cruz microseris	S2	None	SB_RSABG-Rancho Santa Ana Botanic Garden SB_UCSC-UC Santa Cruz	875	S:7											
Stuckenia filiformis ssp. alpina	G5T5	None	Rare Plant Rank - 2B.2	50	21	0	0	0	0	0	1	1	0	1	0	0
slender-leaved pondweed	S2S3	None		50	S:1											
Trifolium buckwestiorum	G2	None	Rare Plant Rank - 1B.1	157	64	0	0	0	0	0	2	0	2	2	0	0
Santa Cruz clover	S2	None	BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden SB_UCSC-UC Santa Cruz SB_USDA-US Dept of Agriculture	334	S:2											
Valley Needlegrass Grassland	G3	None		400	45	0	0	0	0	0	1	1	0	1	0	0
Valley Needlegrass Grassland	S3.1	None		400	S:1											

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Query Criteria: Quad IS (Pigeon Point (3712224) OR San Gregorio (3712234) OR La Honda (3712233) OR Franklin Point (3712223) OR Ano Nuevo (3712213))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Agelaius tricolor tricolored blackbird	G2G3 S1S2	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	600 600	955 S:1	0	0	0	0	0	1	0	1	1	0	0
Aneides niger Santa Cruz black salamander	G3 S3	None None	CDFW_SSC-Species of Special Concern	49 1,487	78 S:6	0	0	0	0	0	6	2	4	6	0	0
Antrozous pallidus pallid bat	G5 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	240 240	420 S:1	0	0	0	0	0	1	1	0	1	0	0
Ardea herodias great blue heron	G5 S4	None None	CDF_S-Sensitive IUCN_LC-Least Concern	5 5	155 S:1	0	0	0	0	0	1	1	0	1	0	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	713 713	1989 S:1	0	0	0	0	0	1	0	1	1	0	0
Bombus caliginosus obscure bumble bee	G4? S1S2	None None	IUCN_VU-Vulnerable	40 500	181 S:3	0	0	0	0	0	3	3	0	3	0	0
Bombus occidentalis western bumble bee	G2G3 S1	None Candidate Endangered	USFS_S-Sensitive XERCES_IM-Imperiled	40 100	279 S:3	0	0	0	0	0	3	3	0	3	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Brachyramphus marmoratus marbled murrelet	G3G4 S1	Threatened Endangered	CDF_S-Sensitive IUCN_EN-Endangered NABCI_RWL-Red Watch List	200 1,800	110 S:23	0	0	0	0	0	23	14	9	23	0	0
Charadrius alexandrinus nivosus western snowy plover	G3T3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	10 10	138 S:4	0	0	0	0	1	3	4	0	3	0	1
Cicindela hirticollis gravida sandy beach tiger beetle	G5T2 S2	None None		50 50	34 S:1	0	0	0	0	1	0	1	0	0	0	1
Corynorhinus townsendii Townsend's big-eared bat	G3G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	30 1,040	635 S:5	0	0	0	0	0	5	2	3	5	0	0
Cypseloides niger black swift	G4 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_YWL-Yellow Watch List USFWS_BCC-Birds of Conservation Concern	20 540	46 S:5	0	3	0	0	0	2	5	0	5	0	0
Danaus plexippus pop. 1 monarch - California overwintering population	G4T2T3 S2S3	None None	USFS_S-Sensitive	40 200	383 S:6	0	3	1	0	0	2	5	1	6	0	0
Dicamptodon ensatus California giant salamander	G3 S2S3	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	80 1,845	234 S:9	0	0	0	0	0	9	3	6	9	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	21 949	1385 S:4	1	2	0	0	0	1	0	4	4	0	0
Eucyclogobius newberryi tidewater goby	G3 S3	Endangered None	AFS_EN-Endangered CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	15 20	127 S:4	0	2	1	0	0	1	4	0	4	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Eumetopias jubatus Steller (=northern) sea-lion	G3 S2	Delisted None	IUCN_EN-Endangered MMC_SSC-Species of Special Concern	5 5	15 S:1	0	0	1	0	0	0	0	1	1	0	0
Geothlypis trichas sinuosa saltmarsh common yellowthroat	G5T3 S3	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	10 40	112 S:4	1	0	1	0	0	2	4	0	4	0	0
Lasiurus cinereus hoary bat	G5 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		238 S:1	0	0	0	0	0	1	1	0	1	0	0
Laterallus jamaicensis coturniculus California black rail	G3G4T1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	10 10	303 S:1	1	0	0	0	0	0	1	0	1	0	0
Margaritifera falcata western pearlshell	G4G5 S1S2	None None		50 50	78 S:1	0	0	0	0	0	1	1	0	1	0	0
Oncorhynchus kisutch pop. 4 coho salmon - central California coast ESU	G4 S2?	Endangered Endangered	AFS_EN-Endangered	40 40	23 S:2	0	1	1	0	0	0	2	0	2	0	0
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	G5T2T3Q S2S3	Threatened None	AFS_TH-Threatened	40 400	44 S:6	0	0	0	0	0	6	6	0	6	0	0
Rana boylii foothill yellow-legged frog	G3 S3	None Candidate Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened USFS_S-Sensitive	37 400	2468 S:7	0	1	0	0	1	5	7	0	6	1	0
Rana draytonii California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	30 726	1543 S:41	13	8	6	0	0	14	16	25	41	0	0
Riparia riparia bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	30 30	298 S:2	0	0	0	0	0	2	2	0	2	0	0
Speyeria zerene myrtleae Myrtle's silverspot butterfly	G5T1 S1	Endangered None	XERCES_CI-Critically Imperiled	28 28	17 S:1	0	0	0	0	1	0	1	0	0	0	1

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Spirinchus thaleichthys longfin smelt	G5 S1	Candidate Threatened		20 20	46 S:1	0	0	0	0	0	1	1	0	1	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	30 1,599	592 S:8	0	0	0	0	0	8	1	7	8	0	0
Thamnophis sirtalis tetrataenia San Francisco gartersnake	G5T2Q S2	Endangered Endangered	CDFW_FP-Fully Protected	5 1,355	66 S:35	6	6	7	0	0	16	28	7	35	0	0
Tryonia imitator mimic tryonia (=California brackishwater snail)	G2 S2	None None	IUCN_DD-Data Deficient	3 40	39 S:2	0	1	0	0	0	1	1	1	2	0	0

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

San Mateo County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

NOT FOR CONSULTATION

Southern Sea Otter Enhydra lutris nereis — Threatened
Marine mammal
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8560

Birds

NAME	STATUS

California Least Tern Sterna antillarum browni — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8104

Marbled Murrelet Brachyramphus marmoratus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/4467

Short-tailed Albatross Phoebastria (=Diomedea) albatrus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/433

Western Snowy Plover Charadrius nivosus nivosus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8035

Reptiles

NAME	STATUS

Green Sea Turtle Chelonia mydas — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6199

San Francisco Garter Snake Thamnophis sirtalis tetrataenia — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5956

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2891

Fishes

NOT FOR CONSULTATION

NAME	STATUS
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Insects

NAME	STATUS
San Bruno Elfin Butterfly *Callophrys mossii bayensis* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3394	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

NOT FOR CONSULTATION

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NOT FOR CONSULTATION

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black Oystercatcher Haematopus bachmani This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Black-vented Shearwater Puffinus opisthomelas — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

NOT FOR CONSULTATION

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Pink-footed Shearwater Puffinus creatopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-throated Loon Gavia stellata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Scripps's Murrelet Synthliboramphus scrippsi — Breeds Feb 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

NOT FOR CONSULTATION

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

APPENDIX C

SITE PHOTOGRAPHS

Photo 1. One of the ponds and surrounding vegetation.

Photo 2. One of the ponds and surrounding vegetation.

Photo 3. Cultivated field within the Project Study Area.

Photo 4. Access road within Project Study Area.

APPENDIX D

OBSERVED SPECIES TABLE

Scientific Name	Common Name	Wetland Indicator Status*
PLANT SPECIES		
Achillea millefolium	yarrow	FACU
Avena sativa	cultivated oat	UPL
Baccharis pilularis	coyote brush	NL
Brassica rapa	field mustard	NL
Bromus diandrus	ripgut grass	NL
Carpobrotus chilensis	sea fig	FAC
Cirsium vulgare	bull thistle	FACU
Conium maculatum	poison hemlock	FAC
Cortaderia jubata	purple pampas grass	FACU
Cotula coronopifolia	brass-buttons	OBL
Cyperus eragrostis	flatsedge	FACW
Daucus carota	carrot	NL
Dipsacus sativus	Fuller's teasel	NL
Epilobium ciliatum subsp. *ciliatum*	fringed willowherb	FACW
Eriophyllum staechadifolium	seaside woolly sunflower	NL
Erythranthe guttata	common monkeyflower	NL
Festuca perennis (Lolium perenne)	rye grass	FAC
Fragaria chiloensis	beach strawberry	FACU
Frangula californica	California coffee berry	NL
Helminthotheca echioides	bristly ox-tongue	FAC
Hesperocyparis macrocarpa	Monterey cypress	NL
Hirschfeldia incana	summer mustard	NL
Holcus lanatus	common velvet grass	FAC
Hordeum murinum	wall barley	FAC
Juncus effusus	soft rush	FACW
Juncus patens	spreading rush	FACW
Lemna sp.	duckweed	OBL
Lysimachia arvensis	scarlet pimpernel	FAC
Lythrum hyssopifolia	hyssop loosestrife	OBL
Medicago polymorpha	California burclover	FACU
Morella californica	wax myrtle	NL
Myoporum laetum	myoporum	UPL
Oenanthe elata	evening primrose	FACW
Oenanthe sarmentosa	water parsley	NL
Oxalis pes-caprae	Bermuda buttercup	NL
Phalaris aquatica	harding grass	FACU
Pinus radiata	Monterey pine	NL
Plantago lanceolata	English plantain	FACU
Poa annua	annual blue grass	FAC

Polygonum aviculare	yard knotweed	FAC
Polystichum munitum	western sword fern	FACU
Potentilla anserina subsp. *pacifica*	Pacific silverweed	OBL
Raphanus sativus	radish	NL
Rubus armeniacus	Himalayan blackberry	FAC
Rubus ursinus	California blackberry	FACU
Rumex crispus	curly dock	FAC
Salix lasiolepis	arroyo willow	FACW
Sambucus nigra subsp. *caerulea*	blue elderberry	FAC
Schoenoplectus californicus	southern bulrush	OBL
Scirpus microcarpus	small fruited bulrush	OBL
Scrophularia californica	California figwort	FAC
Sequoia sempervirens	redwood	NL
Sonchus asper subsp. *asper*	prickly sow thistle	FACU
Stachys sp.	Hedge-nettle	--
Typha latifolia	broad-leaved cattail	OBL
Veronica americana	American brooklime	OBL
Vicia sp.	vetch	UPL
Zantedeschia aethiopica	calla-lily	OBL

*Wetland Indicator Status and expected frequency:

OBL	Obligate	Always found in wetlands	>99% frequency
FACW	Facultative Wetland	Usually found in wetlands	67-99%
FAC	Facultative	Equal in wetland or non-wetlands	34-66%
FACU	Facultative Upland	Usually found in non-wetlands	1-33%
UPL/NL	Upland	Upland/Not listed (upland)	<1%

WILDLIFE SPECIES		**Status**
	Amphibians and Reptiles	
Rana draytonii	California red-legged frog	Federal Threatened and CDFW Species of Concern
	Birds	
Bucephala albeola	Bufflehead	
Buteo jamaicensis	Red-tailed hawk	
Callipepla californica	California Quail	
Calypte anna	Anna's Hummingbird	
Cathartes aura	Turkey Vulture	
Corvus corax	Common Raven	
Elanus leucurus	White-tailed Kite	California Fully Protected
Fulica americana	American Coot	
Melospiza melodia	Song Sparrow	
Mergus merganser	Common Merganser	
Pipilo maculatus	Spotted Towhee	
Troglodytes pacificus	Pacific Wren	
Zonotrichia atricapilla	Golden-crowned sparrow	
	Mammals	
Odocoileus hemionus	Mule deer	

BH

BEAN HOLLOW FARMHOUSE
CABRILLO HWY APN 086191100
SAN MATEO COUNTY, CA

BRIAN LEE ARCHITECT
brian.lee.faia@gmail.com
1.415.812.3294

Parcel Boundary
100-Foot Buffer off Wetland Boundary
Wetland
Prime Agricultural Soils

Date: 03-01-2018
Data: Sol Ecology Inc., San Mateo Co., USFWS NWI

Base: ESRI
GIS: AJG

SOL ECOLOGY
solecology.com

County of San Mateo - Planning and Building Department

ATTACHMENT D

County of San Mateo
Planning and Building Department

INITIAL STUDY
ENVIRONMENTAL EVALUATION CHECKLIST
(To Be Completed by Planning Department)

1. **Project Title:** Bean Hollow Farm Project

2. **County File Number:** PLN2021-00022

3. **Lead Agency Name and Address:**
   County of San Mateo Planning and Building Department
   455 County Center, 2nd Floor
   Redwood City, CA 94063

4. **Contact Person and Phone Number:** Kanoa Kelley; Kkelley@smcgov.org

5. **Project Location:** Bean Hollow Road, east of Cabrillo Highway in the community of Pescadero

6. **Assessor's Parcel Number and Size of Parcel:** 086-191-100; 38.2 acres

7. **Project Sponsor's Name and Address:**
   Bean Hollow Farm LLC
   Brian Douglas Lee
   340 E. Randolph Street #5802c
   Chicago, IL 60601

8. **Name of Person Undertaking the Project or Receiving the Project Approval (if different from Project Sponsor):** Brian Lee

9. **General Plan Designation:** Agriculture

10. **Zoning:** Planned Agricultural District (PAD) / Coastal Development (CD)

11. **Description of the Project:** The applicant is seeking a Coastal Development Permit (CDP), Planned Agricultural District (PAD) Permit, and Grading Permit for a new 3,658 sq. ft. single-family residence, attached 1,358 sq. ft. garage/workshop/unconditioned storage, and a 718 sq. ft. greenhouse. The project includes the conversion of an agricultural well to domestic use with the addition of a water lateral connecting the well to the new home, a new septic system, new water tanks, and 1,800 cubic yards of grading (1,200 c.y. of cut and 600 c.y. of fill) for the residence, 4 fire engine turnouts and a new driveway. The new driveway includes a 15 foot culvert to span over an existing man made drainage ditch. The legality of the 38 acre parcel was established by a determination for a Certificate of Compliance, Type A (COC 92-0001). No tree removal is proposed. The parcel is not under a Williamson Act contract.

12. **Surrounding Land Uses and Setting:** The legal 38-acre project parcel borders Cabrillo Highway on the parcel's west side and is accessed via Bean Hollow Road from Cabrillo Highway (Hwy 1). The parcel is located in a rural area surrounded by single-family residential and dedicated farmland developed parcels ranging in size between 5 to 45 acres. The parcel is currently used as an agricultural operation. The site is mostly cleared farmland with a few mature trees and ponds. Topography in the area consists of relatively gentle sloped terrains.

13. **Other Public Agencies Whose Approval is Required:** N/A

14. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?:**

    This project is subject to California Public Resources Code 21080.3.1 which requires a tribal consultation request be sent within 14 days of determining that an application has been deemed complete or a public agency decides to undertake a project. The County of San Mateo has received a request for formal notification from the Tamien Nation of the greater Santa Clara County. Additionally, a list of local tribes was obtained from the Native American Heritage Commission (NAHC). A notice for consultation was sent to the Tamien Nation and all tribes on the list provided by the NAHC on May 23, 2022. California Native American Tribes have 30 days from the date the tribal consultation notice was received to request consultation. As of the date of this report, no tribes have contacted the County requesting formal consultation on this project.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Significant Unless Mitigated" as indicated by the checklist on the following pages.

X	Aesthetics		Energy		Public Services
	Agricultural and Forest Resources		Hazards and Hazardous Materials		Recreation
X	Air Quality		Hydrology/Water Quality		Transportation
X	Biological Resources		Land Use/Planning	X	Tribal Cultural Resources
	Climate Change		Mineral Resources		Utilities/Service Systems
X	Cultural Resources		Noise		Wildfire
X	Geology/Soils		Population/Housing		Mandatory Findings of Significance

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.

4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in 5. below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other California Environmental Quality Act (CEQA) process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources. Sources used or individuals contacted should be cited in the discussion.

1.	**AESTHETICS**. Except as provided in Public Resources Code Section 21099, would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
1.a.	Have a substantial adverse effect on a scenic vista, views from existing residential areas, public lands, water bodies, or roads?			X	

Discussion: The subject parcel is located entirely within the Cabrillo Highway State Scenic Corridor. The scenic corridor begins at the Pacific Ocean shoreline and expands east of Highway 1 (Cabrillo Highway). The parcel is located east of Cabrillo Highway and the new single-family residence will be located approximately 1,000 feet east of Cabrillo Highway. Due to the vertical slope from Cabrillo Highway and existing vegetation, no proposed structures will be seen from Cabrillo Highway. Photo simulations have been included in the submitted plans showing views from 35 different angles along Cabrillo Highway and Bean Hollow Road. The photo simulations demonstrate that the home will not be visible from Cabrillo Highway and will minimally impact views from the Bean Hollow access road. The project does not propose the removal of any existing vegetation or trees, therefore, the project will not have an adverse effect on scenic vistas or views.

Source: Project Plans, Project Location.

1.b.	Substantially damage or destroy scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X

Discussion: There are no historic buildings or rock outcroppings located on the site, as the parcel has been maintained as farmland. No trees or grading is proposed adjacent to the State Scenic Highway.

Source: Project Plans, Project Location.

1.c.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings, such as significant change in topography or ground surface relief features, and/or development on a ridgeline? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				X

Discussion: The project site is located in a rural coastal area in the community of Pescadero. Given the rural project parcel consists of relatively flat farmland there are no scenic qualities on the site that would be impacted by the project proposal. All existing trees and vegetation onsite would be preserved.

Source: Project Plans, Project Location.

1.d.	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?		X		

Discussion: New light sources and glare from development has the potential to generate adverse impacts on day and nighttime views. The following mitigation measures are recommended to minimize any adverse daytime or nighttime view impacts from light or glare that the project may introduce to the area:

Mitigation Measure 1: All proposed exterior lighting shall be designed and located so as to confine direct rays to the subject property and prevent glare in the surrounding area. Manufacturer cut sheets for any exterior light fixtures shall be submitted for review and approval prior to the issuance of a building permit.

Mitigation Measure 2: Final finishes of all exterior materials and/or colors, including glass windows and/or panels, shall be non-reflective.

Source: Project Plans, Project Location.

1.e.	Be adjacent to a designated Scenic Highway or within a State or County Scenic Corridor?				X

Discussion: See discussion in response to 1.a.

Source: Project Location, Project Plans.

1.f.	If within a Design Review District, conflict with applicable General Plan or Zoning Ordinance provisions?				X

Discussion: The project site is not located within a Design Review District and will not conflict with any applicable General Plan or Zoning Ordinance provisions.

Source: San Mateo County Zoning Regulations, San Mateo County General Plan, San Mateo County GIS, Project Location.

1.g.	Visually intrude into an area having natural scenic qualities?			X	

Discussion: The site is located east of Cabrillo Highway and is not visible due to an upward slope from the freeway and existing trees and vegetations. The project would not block scenic views which are west of Cabrillo Highway. See staff's discussion in Section 1.a. - 1.d. above.

Source: Project Plans, Project Location.

2.	**AGRICULTURAL AND FOREST RESOURCES**. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
2.a.	For lands outside the Coastal Zone, convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
Discussion: The project is located inside of the Coastal Zone. **Source:** California Department of Conservation Farmland Mapping and Monitoring Program (2017), Project Plans, Project Location.					
2.b.	Conflict with existing zoning for agricultural use, an existing Open Space Easement, or a Williamson Act contract?				X
Discussion: The project parcel is zoned Planned Agricultural District (PAD) which permits residential uses subject to a PAD Permit. The parcel is not protected by an existing Open Space Easement or Williamson Act contract. An Agricultural Land Management Plan has been submitted by the applicant that proposes to maintain an agricultural operation on the site, which is consistent with the existing zoning. **Source:** San Mateo County Zoning Regulations, San Mateo County Agricultural Preserves Map, Project Plans.					
2.c.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?			X	
Discussion: The project parcel is located in an area suitable for farmland and has been maintained as farmland since the early 1900's. The design of the single-family home and septic system has avoided all areas designated important farmland according to the Farmland Mapping and Monitoring					

Program Map The placement of all structures will avoid prime farmland therefore, no viable farmland will be converted. There is no forestland on the subject parcel.

Source: California Department of Conservation, Farmland Mapping and Monitoring Program Map (2017); Public Resources Code Section 12220(g); Project Location, Project Plans.

2.d.	For lands within the Coastal Zone, convert or divide lands identified as Class I or Class II Agriculture Soils and Class III Soils rated good or very good for artichokes or Brussels sprouts?			X	

Discussion: The project site is located within the Coastal Zone in the community of Pescadero. The site contains both Class 3 and Class 2 prime soils. All proposed structures will be placed on non-prime soils located in the center of the parcel, therefore, avoiding any conversion of prime soils to residential uses. No subdivision has been proposed as part of this project.

Source: Project Location, Agricultural Land Management Plan, County of San Mateo GIS

2.e.	Result in damage to soil capability or loss of agricultural land?			X	

Discussion: The project site is designated as productive soil for irrigated crops as shown on the Productive Soil Resources Map. Due to the location of proposed development no agricultural land would be lost. The applicant has proposed to continue farming operations on the parcel. See discussion in 2.d. for additional information.

Source: San Mateo County General Plan, Productive Soil Resources Map, Project Agricultural Management Plan.

2.f.	Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? *Note to reader: This question seeks to address the economic impact of converting forestland to a non-timber harvesting use.*				X

Discussion: The property is zoned Planned Agricultural District (PAD). No proposed zoning changes are included as part of this project as the addition of a single-family residence is permitted by current zoning with a PAD Permit. Additionally, the project is not located in forestland or timberland preserve areas.

Source: Project Plans, San Mateo County Zoning Regulations.

3.	**AIR QUALITY**. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
3.a.	Conflict with or obstruct implementation of the applicable air quality plan?			X	

Discussion: The Bay Area 2017 Clean Air Plan (CAP), developed by the Bay Area Air Quality Management District (BAAQMD), is the current regulating air quality plan for San Mateo County. The CAP was created to improve Bay Area air quality and to protect public health and the climate.

The project would not conflict with or obstruct the implementation of the BAAQMD's 2017 CAP. During construction of required shared infrastructure and installation of utilities and residential construction, air emissions would be generated from site grading, equipment, and work vehicles; however, any such grading-related emissions would be temporary and localized. Once constructed, residential use of the project site would have minimal impacts to the air quality standards set forth for the region by the BAAQMD.

Source: BAAQMD 2017 Clean Air Plan, Project Plans.

3.b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?		X		

Discussion: The San Francisco Bay Area is in non-attainment for ozone and particulate matter (PM), including PM 10 (state status) and PM 2.5 (state status), including the 24-hour PM 2.5 national standard. Therefore, any increase in these criteria pollutants is significant. Implementation of the project will generate temporary increases in these criteria pollutants due to construction vehicle emissions and dust generated from earthwork activities. Mitigation Measure 3 below will minimize increases in non-attainment criteria pollutants generated from project construction to a less than significant level. Furthermore, the California Air Resources Board (CARB) provides regulation over vehicles of residents in the State of California, including the operation of any vehicles that would be associated with the future development of single-family residences, to ensure vehicle operating emissions are minimized in the effort towards reaching attainment for ozone, among other goals. The current project is not expected to generate a significant change.

Mitigation Measure 3: The applicant shall require construction contractors to implement all the Bay Area Air Quality Management District's Basic Construction Mitigation Measures, listed below:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent paved roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

f. All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified visible emissions evaluator.

g. Idling times shall be minimized either by shutting equipment or vehicles off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of the California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

h. Post a publicly visible sign with the telephone number and person to contact at the project site regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Bay Area Air Quality Management District's phone number shall also be visible to ensure compliance with applicable regulations.

Source: Bay Area Air Quality Management District, Project Plans.

3.c.	Expose sensitive receptors to substantial pollutant concentrations, as defined by the Bay Area Air Quality Management District?		X		

Discussion: Any pollutant emissions generated from construction will primarily be temporary in nature. Additionally, Mitigation Measure 3 will minimize any potential significant exposure to nearby sensitive receptors to a less than significant level.

Source: Project Plans, Project Location.

3.d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Discussion: Once constructed, the proposed project will not result in adverse emissions. The project has the potential to generate emissions during grading and construction such as noise and odor. However, any such noise and odors will be temporary and are expected to be minimal.

Source: Project Plans.

4. BIOLOGICAL RESOURCES. Would the project:

		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
4.a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in		X		

local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				

Discussion: A biological resources report has been prepared by Sol Ecology dated August 8, 2020. As shown in Tables 1 and 2 below, the report identified eight special-status plant species and eight special-status animal species with potential habitat on the subject parcel. The potential for occurrence of these plant and animal species range from low to high with the presence of California red-legged frog observed during the biological inspection. There are two ponds on site that, although man-made, are surrounded by wetland and riparian vegetation that create an ideal environment for special-status plant and animal species. Due to the high potential for special-status and endangered plants and animals to occur within the riparian and wetland areas, mitigation measures as recommended by the project biologist have been added to reduce the impacts to biological resources to a less than significant level. These mitigations include a pre-construction survey, wildlife exclusion fencing, environmental training for workers and other avoidance measures during construction. A 15 foot culvert is proposed as part of the new driveway providing access to the house from the existing access road. The culvert spans an existing ditch dug by early farmers. Per the biological report the ditch is not riparian as the vegetation is not comprised of wetland plants and the ditch is ephemeral in nature, therefore no setback or mitigation measures are necessary.

Table 1. Special Status Plants with Potential to Occur in the Project Study Area.

Scientific Name/ Common Name	Status	Habitat	Blooming Period	Potential for Occurrence
Astragalus pycnostachyus var. *pycnostachyus* coastal marsh milkvetch	1B.2	Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt, streamsides). 0-30m	(Apr) Jun-Oct	**Moderate:** May be present near pond habitats; not likely to be impacted by project.
Fritillaria liliacea fragrant fritillary	1B.2	Often serpentinite; cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. 3-410m	Feb-Apr	**Low:** May be present in grassland habitats near access road. Not observed during February site visit.
Lasthenia californica subsp. *macrantha* perennial goldfields	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub; grassland, dunes along immediate coast. 5-520m	Jan-Nov	**Low:** May be present in grassland habitats near access road. Not observed during February site visit.
Leptosiphon croceus coast yellow (rose) leptosiphon	1B.1	Coastal bluff scrub, coastal prairie; local, open, grassy areas. 10-150m	Apr-Jun	**Moderate:** May be present in open grassland habitats near access road.
Limnanthes douglasii subsp. *sulphurea* Point Reyes meadowfoam	SE, 1B.2	Coastal prairie, meadows and seeps (mesic), marshes and swamps (freshwater), vernal pools. 0-140m	Mar-May	**Moderate:** May be present near pond habitats; not likely to be impacted by project.
Microseris paludosa marsh microseris	1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 5-355m	Apr-Jun (Jul)	**Moderate:** May be present in open grassland habitats near access road.
Plagiobothrys chorisianus var. *chorisianus* Choris' popcornflower	1B.2	Mesic; chaparral, coastal prairie, coastal scrub. 3-160m	Mar-Jun	**Moderate:** May be present in open grassland habitats near access road.
Silene scouleri subsp. *scouleri* Scouler's catchfly	2B.2	Coastal bluff scrub, coastal prairie, valley and foothill grassland. 0-600m	Mar-Aug (Sep)	**Moderate:** May be present in open grassland habitats near access road.

[1] SE – State Endangered; California Rare Plant Rank
1B – Plants rare, threatened, or endangered in California and elsewhere.
2B – Plants rare, threatened, or endangered in California but more common elsewhere.
0.1 – Seriously threatened in California
0.2 – Moderately threatened in California
0.3 – Not very threatened in California

Table 2. Special Status Wildlife with Potential to Occur in the Project Study Area.

Common Name /Scientific Name	Status	Habitat	Potential for Occurrence
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	SSC	Forest habitats of moderate canopy and moderate to dense understory as well as chaparral and riparian scrub habitats. Constructs nests of shredded grass, leaves, and other material. May be limited by availability of nest-building materials.	**Moderate:** Suitable habitat is present around ponds and near existing access road; not likely in project footprint.
common yellowthroat *Geothlypis trichas sinuosa*	BCC	Resident of fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**Moderate:** Suitable nesting habitat is present in willows surrounding ponds.
tricolored blackbird *Agelaius tricolor*	SCE, SSC, BCC	Most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets or flooded agricultural fields.	**Moderate:** Suitable nesting & foraging habitat is present; not documented in region.
Allen's hummingbird *Selasphorus sasin*	BCC	Summer resident along the California coast, breeding in a variety of woodland and forest habitats. Nest in shrubs and trees with dense vegetation; commonly found nesting in Monterey pines.	**High:** Suitable nesting habitat is present.
California red-legged frog *Rana draytonii*	FT, SSC	Associated with quiet perennial to intermittent ponds, stream pools and wetlands with dense, shrubby, or emergent riparian vegetation. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains.	**Present:** Observed above lower pond near pumphouse on Feb. 24. Not likely to occur in onsite ditches.
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	FE, SE, CFP	Vicinity of freshwater marshes, ponds, and slow-moving streams in San Mateo County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also important.	**High:** Suitable pond habitat is present. Documented in Pescadero marsh.
western pond turtle *Actinemys marmorata*	SSC	Occurs in ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat for egg-laying.	**High:** Suitable pond habitat is present. Documented within one mile.
monarch butterfly *Danaus plexippus*	SSI	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby.	**Moderate**: Documented in stand of pines just south of parcel; limited habitat on-site.

FE/SE – Federal/State Endangered FT/ST – Federal/State Threatened FC/SC – Federal/State Candidate
CFP – California Fully Protected SSC – Species of Special Concern BCC – Bird of Conservation Concern SSI – Special Status Invertebrate

Mitigation Measure 4: Pre-construction surveys shall be performed between April and June for rose leptosiphon, marsh microseris, Choris' popcornflower, and Scouler's catchfly. If found, the plant shall be avoided to extent possible, or a translocation plan shall be prepared prior to the start of activities and submitted for review and approval by the San Mateo County Planning and Building Department prior to implementation.

Mitigation Measure 5: An environmental training shall be provided to all construction workers prior to the start of work. The training will educate workers on: (1) any sensitive resources or special-status species that may occur in the work area, (2) procedures to follow in the event a species is observed, and (3) other environmental BMPs for ensuring take is avoided.

Mitigation Measure 6: Wildlife exclusion fencing shall be placed around the perimeter of project footprint and any staging areas to prevent animals including California Red-Legged Frog and/or San Francisco Garter Snake from entering the work area. Fencing should be a minimum of 36 inches high, with a minimum of 4 inches trenched into the ground. Fencing shall be installed under the guidance of a qualified biologist and maintained throughout the duration of ground-disturbing activities.

Mitigation Measure 7: If work is to be initiated during the nesting bird season, between February 1 and August 31, a pre-construction nesting bird survey shall be performed in all areas within 250 feet of proposed activities. If nests are found, an appropriately sized no-disturbance buffer shall be placed around the nest at the direction of the qualified biologist conducting the survey. Buffers for common songbird species is 25 to 50 feet, and between 100 up to 500 feet for special-status birds and/or raptors depending on the species and status of the nest. Buffers shall remain in place until all young have fledged, or the biologist has confirmed that the nest has been naturally predated.

Mitigation Measure 8: A pre-construction survey for San Francisco Dusky-Footed Wood Rat (SFDW) nests shall be performed prior to the start of work within 25 feet of proposed activities. If an active SFDW nest is found and cannot be avoided, the biologist shall supervise dismantling of the

nest by hand. If young are found, material shall be set back on the house and the house avoided for a minimum of 3 weeks to allow young to wean and leave the nest. Following completion of the dismantling, nest material shall be placed in nearby habitat where it can be completely avoided.

Mitigation Measure 9: A pre-construction survey for Western Pond Turtle, California Red-Legged Frog, and San Francisco Garter Snake shall be conducted prior to initiation of project activities within 48 hours of the start of work. Surveys are to be conducted by approved qualified biologist(s) with experience surveying for each species. If any species is found on the Project Site, it should be allowed to leave the area on its own. If the animal does not leave the area on its own, the USFWS and CDFW shall be contacted.

Mitigation Measure 10: No ground-disturbing work (e.g. vegetation removal, grading, or trenchwork) shall be performed if a 70 percent or greater chance of rainfall is predicted within 72 hours of project activity or within 24 hours of any rain event (greater than 0.5 inches) occurring between October 31 and April 31 when frogs are most likely to disperse into upland habitats. No work shall occur within 30 minutes of sunrise or sunset.

Mitigation Measure 11: Trenches and holes shall be covered and inspected daily for stranded animals. Trenches and holes deeper than one-foot should contain escape ramps at a maximum slope of 2:1 to allow trapped animals to escape.

Mitigation Measure 12: Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic monofilament netting (erosion control matting), rolled erosion control products, or similar material shall not be used. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

Mitigation Measure 13: All food and food-related trash must be enclosed in sealed trash containers at the end of each day and removed completely from the site every three days to avoid attracting wildlife that may prey on listed species in the area.

Source: California Natural Diversity Database, San Mateo County Local Coastal Program, San Mateo County General Plan, Biological Report (Sol Ecology, 2020).

4.b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	

Discussion: As discussed in Section 4.a, the parcel contains riparian and wetlands. In compliance with LCP Policy 7.11 (Establishment of Buffer Zones [Riparian Corridors]) and 7.18 (Establishment of Buffer Zones [Wetlands]), a minimum buffer zone of 50 feet from riparian habitat and 100 feet from wetlands must be maintained. In consultation with a qualified biologist, the project has mapped a 100-foot buffer from all ponds and wetlands and riparian habitat, where no project construction will occur. The project therefore complies with the LCP policies and will not have substantial effect on any riparian habitat or wetland, thus, no mitigation is required.

Source: San Mateo County General Plan; San Mateo County Local Coastal Program, Project Plans, Biological Report (Sol Ecology, 2020).

4.c.	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	

Discussion: According to the National Wetlands Inventory, the pond located in the center of the parcel, identified using photo interpretation, is classified as System: Palustrine (P), Class: Unconsolidated Bottom (UB), Water Regime: Permanently Flooded (H), Diked/Impounded (h). The proposed project will not impact the pond and a 100-foot buffer has been established from all wetlands where no development can occur. The project therefore will not impact protected wetlands.

Source: U.S. Fish and Wildlife Service, Wetland Mapper, Project Plans, Biological Report (Sol Ecology, 2020).

4.d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		

Discussion: See discussion section 4.a that details construction mitigation measures to avoid impacts to endangered or special-status wildlife. Mitigation measures will ensure that habitat and nests of migratory birds are not disturbed during construction. The construction of the single-family home as documented in the biological report will not disturb habitat for protected or endangered species and will have no impact to the functional capacity for migration of animals. If habitat for rare or endangered species are found during pre-site surveys, additional setbacks may be required. The proposed pasture fencing does pose a risk to the migration of wildlife mitigation measure 14 has been added to ensure the fencing is designed in coordination with a biologist to ensure safe passage of wildlife.

Mitigation Measure 14: All fencing shall be designed in consultation with a biologist to facilitate the safe passage of wildlife through the subject site. The final design of all fencing on site shall be reviewed and approved by the community development director prior to issuance of a building permit.

Source: California Natural Diversity Database, Project Plans, Biological Report (Sol Ecology, 2008).

4.e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (including the County Heritage and Significant Tree Ordinances)?			X	

Discussion: There are two (2) pine trees in close proximity to the construction area. All trees will be protected during construction in compliance with the County's Significant Tree Ordinance Section 12,020.5. A tree protection plan will be submitted and approved prior to the commencement of any grading or construction and a pre-construction inspection to ensure approved tree protection measures are installed is required pursuant to County Ordinance. Therefore, no mitigation is required.

Source: Project Plans, San Mateo County Zoning Regulations, San Mateo County Significant Tree Ordinance, San Mateo County Heritage Tree Ordinance.				
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or state habitat conservation plan?				X
Discussion: There are no adopted Habitat Conservation Plans, Natural Conservation Community Plans or other approved local, regional, or State habitat conservation plans for the project site. **Source:** California Department of Fish and Wildlife, Habitat Conservation Planning, California Regional Conservation Plans Map.				
4.g. Be located inside or within 200 feet of a marine or wildlife reserve?				X
Discussion: The project site is not located inside or within 200 feet of a marine or wildlife reserve. **Source**: U.S. Fish and Wildlife Services, National Wildlife Refuge System Locator.				
4.h. Result in loss of oak woodlands or other non-timber woodlands?				X
Discussion: State Senate Concurrent Resolution No. 17 requires state agencies to preserve and protect native oak woodlands to the maximum extent feasible or provide replacement plantings when oak woodlands are removed. For the purposes of the measure, "oak woodlands" means a five-acre circular area containing five or more oak trees per acre. The project parcel does not contain areas defined as oak woodlands pursuant to State Senate Resolution. Additionally, the project does not have the potential with future development to remove non-timber woodlands as there are no woodlands on site and no tree removal is proposed. **Source**: State Senate Concurrent Resolution No. 17, Project Location.				

5. CULTURAL RESOURCES. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
5.a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?				X
Discussion: According to a search of the California Historical Resources Information System, the project site does not contain any historical resources. **Source**: Project Plans, Project Location, California Office of Historic Preservation, Northwest Information Center.				

5.b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?		X		

Discussion: According to a search of the California Historical Resources Information System there is no record of archeological resources at the subject site. However, the database is not comprehensive and the discovery of subsurface archaeological materials during grading or construction work is always a possibility, therefore, the following mitigation measure is recommended:

Mitigation Measure 15: In the event that archaeological resources are inadvertently discovered during construction, work in the immediate vicinity (within 50 feet) of the find must stop until a qualified archaeologist can evaluate the significance of the find. Construction activities may continue in other areas beyond the 50-foot stop work area. A qualified archaeologist is defined as someone who meets the Secretary of the Interior's Professional Qualifications Standards in archaeology. The Current Planning Section shall be notified of such findings, and no additional work shall be done in the stop work area until the archaeologist has recommended appropriate measures, and those measures have been approved by the Current Planning Section and implemented.

Source: Project Plans, Project Location, California Office of Historic Preservation, Northwestern Information Center.

5.c.	Disturb any human remains, including those interred outside of formal cemeteries?		X		

Discussion: In the inadvertent event that human remains are discovered during ground disturbance and/or construction related activities, the following mitigation measure is recommended:

Mitigation Measure 16: Should any human remains be discovered during construction, all ground disturbing work shall cease and the County Coroner shall be immediately notified, pursuant to Section 7050.5 of the State of California Health and Safety Code. Work must stop until the County Coroner can make a determination of origin and disposition of the remains pursuant to California Public Resources Code Section 5097.98 for the naming of a Most Likely Descendant and the recommendations for disposition. Additionally, the State Native American Heritage Commission may need to be notified to seek recommendations from a Most Likely Descendant (Tribal Contact) before any further action at the location of the find can proceed.

Source: Project Location, Northwestern Information Center.

6.	**ENERGY**. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
6.a.	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption			X	

of energy resources, during project construction or operation?				

Discussion: Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission[CEC]) in June 1977 and are updated every 3 years (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On May 9, 2018, the CEC adopted the 2019 Building Energy Efficiency Standards, which went into effect on January 1, 2020. Under the 2019 Standards, residential buildings are 28 percent more energy efficient and nonresidential buildings are 5 percent more energy efficient than under the previous 2013 Standards. Development at the project site would be required to comply with the current Building Energy Efficiency Standards which would be verified by the San Mateo County Building Division prior to the issuance of building permits. Future development would also be required to adhere to the provisions of CAL Green, which establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.

Construction

The residential development of the project site would require the consumption of nonrenewable energy resources, primarily in the form of fossil fuels (e.g., fuel oil, natural gas, and gasoline) for automobiles (transportation) and construction equipment. Transportation energy use during grading and construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Most construction equipment during grading and construction would be gas-powered or diesel-powered, and the later construction phases would require electricity-powered equipment.

Operation

During residential development, energy consumption would be associated with resident and visitor vehicle trips and delivery and supply trucks. The project would support future residential development near Cabrillo Highway served by existing road infrastructure. Pacific Gas and Electric (PG&E) provides electricity to the project area. Currently, the existing site does not use any electricity because it is an undeveloped parcel. Therefore, =future residential development would result in a permanent increase in electricity over existing conditions. However, such an increase to serve future residential development would represent an insignificant percent increase compared to overall demand in PG&E's service area. The nominal increased demand is expected to be adequately served by the existing PG&E electrical facilities and the projected electrical demand would not significantly impact PG&E's level of service. Any future development would be required to conform with all applicable energy and utility service standards to support the development density proposed at that time. It is expected that nonrenewable energy resources would be used efficiently during operation and construction of the project given the financial implication of the inefficient use of such resources. As such, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources.

Source: California Building Code, California Energy Commission, Project Plans, Project Location.

6.b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.			X	

Discussion: The proposed project is not expected to conflict with or obstruct any state or local plan for renewable energy or energy efficiency and the development is not expected to cause inefficient, wasteful, and/or unnecessary energy consumption. Furthermore, the project would be required to comply with all State and local building energy efficiency standards, appliance efficiency regulations, and green building standards.

Source: Project Plans.

7. GEOLOGY AND SOILS. Would the project:

		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
7.a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the following, or create a situation that results in:				
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? *Note: Refer to Division of Mines and Geology Special Publication 42 and the County Geotechnical Hazards Synthesis Map.*			X	

Discussion: A geotechnical report was prepared by Sigma Prime Geosciences, Inc., dated November 30, 2020. The project site is located in the coastal Pescadero area, an area of high seismicity. The closest active fault is the San Gregorio Fault located 4 kilometers east of the parcel. According to the report, the site is not located in an Alquist-Priolo special studies area or zone where fault rupture is considered likely (California Division of Mines and Geology, 1974). Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is low.

All development is subject to the issuance of a building permit and all work shall be completed in accordance with the California Building Code and subject to recommendations made by the applicant's geotechnical engineer to ensure the health and safety of occupants.

Source: Project Location; County GIS, Association of Bay Area Governments Resilience Program Map, Geotechnical Report (Sigma Prime Geosciences, November 30, 2020)

	ii. Strong seismic ground shaking?			X	

Discussion: The project site is subject to violent shaking as it is in an active seismic area. A soils report and an updated geotechnical investigation will be required at the building permit stage when development is proposed subject to approval by the County's Geotechnical Section. All future development will be subject to the issuance of a building permit and all work shall be completed in accordance with the California Building Code and subject to recommendations made by the applicant's engineer to ensure the health and safety of occupants. The design of the home will be subject to the latest earthquake resistance standards. **Source:** San Mateo County Earthquake Shaking Fault Maps (San Andreas Fault); Geotechnical Report (Sigma Prime Geosciences, November 30, 2020)				
iii. Seismic-related ground failure, including liquefaction and differential settling?			X	
Discussion: The project site is in an area with low susceptibility for liquefaction and is not in an area of known liquefaction according to the County of San Mateo liquefaction maps. The geotechnical report (Sigma Prime Geosciences, November 30, 2020) indicates that there may be saturated loose silty sands beneath the house and has made recommendations accounting for minor settling due to site conditions. **Source:** Association of Bay Area Governments Resilience Program; Geotechnical Report (Sigma Prime Geosciences, November 30, 2020)				
iv. Landslides?			X	
Discussion: Based on site reconnaissance and geologic maps there are no indications that the project site is susceptible to landslides. The project is required to comply with the current California Building Code (CBC) and at the time of building permit is required to submit an updated geotechnical report in compliance with CBC 2019, or current edition, and follow all design recommendations outlined in the geotechnical report. **Source:** California Geological Survey; Association of Bay Area Governments Resilience Program, Purcell, Geotechnical Report (Sigma Prime Geosciences, November 30, 2020)				
v. Coastal cliff/bluff instability or erosion? *Note to reader: This question is looking at instability under current conditions. Future, potential instability is looked at in Section 7 (Climate Change).*				X
Discussion: The project site is not located on a coastal cliff or bluff. **Source:** Project location, Geotechnical Report (Sigma Prime Geosciences, November 30, 2020)				
7.b. Result in substantial soil erosion or the loss of topsoil?		X		
Discussion: The project includes 1,800 cubic yards (c.y.) of grading, including 1200 c.y. of cut and 600 c.y. of fill. Given the topography of the project site, there is a potential for erosion to occur if proper erosion control measures are not implemented. The applicant has developed an erosion control plan that includes straw wattles placed at the top of the project site adjacent to the gravel access road, biological protection fencing will be placed around the perimeter of the project site. A				

stabilized construction entrance will be placed at the emergency vehicle access point off of Cabrillo Highway, and other best management erosion control measures will be implemented. Staff is recommending the following mitigation measures to further minimize erosion and runoff from the project area and to ensure that grading and erosion control measures are implemented appropriately:

Mitigation Measure 17: The applicant shall submit an erosion control plan in compliance with the County's General Erosion and Sediment Control Plan Guidelines Checklist for review and approval as part of the building permit plans submittal.

Mitigation Measure 18: No grading shall be allowed during the wet weather season (October 1 through April 30) to avoid increased potential soil erosion, unless the applicant applies for an Exception to the Winter Grading Moratorium and the San Mateo County Community Development Director grants the exception. Exceptions will only be granted if dry weather is forecasted during scheduled grading operations, and the erosion control plan includes adequate winterization measures (amongst other determining factors).

Mitigation Measure 19: An Erosion Control and Tree Protection Pre-Site Inspection shall be conducted prior to the issuance of a grading permit "hard card" and/or building permit to ensure the approved erosion control and tree protection measures are appropriately implemented.

Source: Project Plans, County of San Mateo Grading Ordinance, San Mateo County Wide Stormwater Pollution Prevention Program.

7.c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse?			X	

Discussion: Liquification, lateral spreading, subsidence, and collapse are not identified as potentially significant impacts to the project according to the geotechnical analysis. There is a moderate potential for erosion from project construction, see discussion in Section 7.b. above.

Source: Project Plans, Geotechnical Report (Sigma Prime Geosciences, November 30, 2020)

7.d.	Be located on expansive soil, as defined in Table 18-1-B of Uniform Building Code, creating substantial direct or indirect risks to life or property?				X

Discussion: The submitted geotechnical report does not note any expansive soils on the subject parcel. Therefore, there are no significant impacts associated with the presence of expansive soils.

Source: Project Location; Geotechnical Report (Sigma Prime Geosciences, November 30, 2020)

7.e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?			X	

Discussion: The project site will install a new septic system to serve the single-family home. The soil analysis and design of the septic system has been reviewed and preliminary approved by San Mateo County Environmental Health Services.

Source: Project Plans.

7.f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X

Discussion: There are no mapped unique paleontological resources or geological features on the project parcel. The site is primarily flat agricultural land and possesses no unique geological features.

Source: Project Location; U.S. Geological Survey Geologic Map of the San Francisco Bay Region, 2006.

8. CLIMATE CHANGE. Would the project:

		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
8.a.	Generate greenhouse gas (GHG) emissions (including methane), either directly or indirectly, that may have a significant impact on the environment?		X		

Discussion: Grading and construction activities associated with the project will result in the temporary generation of GHG emissions primarily from construction-related vehicles and equipment. Any such potential increase in GHG emission levels will be minimal and temporary.

The project would support future residential development pursuant to local zoning regulations and any applicable State laws. Any increase in GHG emissions associated with new residential development is not expected to be significant as residential use does not generate a high demand for traffic.

The County has identified Energy Efficient Climate Action Plan (EECAP) goals which can be implemented in new development projects. Per Mitigation Measure 3, the project is required to incorporate applicable measures from the County's EECAP Development Checklist and BAAQMD Best Management Practices (BMPs) that, once implemented, will reduce the project's generation of greenhouse gas emissions.

Source: California Air Resources Board, San Mateo County Energy Efficiency Climate Action Plan.

8.b.	Conflict with an applicable plan (including a local climate action plan), policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Discussion: The project does not conflict with the San Mateo County Energy Efficiency Climate Action Plan (EECAP). Future development would be required to comply with EECAP guidelines. **Source**: San Mateo County Energy Efficiency Climate Action Plan.					
8.c.	Result in the loss of forestland or conversion of forestland to non-forest use, such that it would release significant amounts of GHG emissions, or significantly reduce GHG sequestering?				X
Discussion: The project site is located in an area zoned for agricultural uses. The parcel is relatively flat and supports agricultural crop production, therefore, the parcel does not meet the definition of forestland and would not have any impacts to the loss of forestland. **Source**: Public Resources Code, Project location.					
8.d.	Expose new or existing structures and/or infrastructure (e.g., leach fields) to accelerated coastal cliff/bluff erosion due to rising sea levels?				X
Discussion: The project is not located on or adjacent to a coastal cliff or bluff. **Source:** Project location.					
8.e.	Expose people or structures to a significant risk of loss, injury or death involving sea level rise?			X	
Discussion: The project parcel is located across Cabrillo Highway from Bean Hollow State Beach. The single-family home will be located approximately 1,800 feet from the shore with a gentle upward slope across Cabrillo Highway. Due to the location of development and terrain, sea level rise is not expected to impact the project. **Source:** Project location.					
8.f.	Place structures within an anticipated 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
Discussion: The subject parcel is located in Flood Zone X (Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level), per FEMA Panel No. 06081C0431F, effective August 2, 2017. **Source:** FEMA Panel No. 06081C0431F, effective August 2, 2017.					
8.g.	Place within an anticipated 100-year flood hazard area structures that would impede or redirect flood flows?				X

Discussion: The subject parcel is located in Flood Zone X (Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level), per FEMA Panel No. 06081C0431F, effective August 2, 2017.

Source: FEMA Panel No. 06081C0431F, effective August 2, 2017.

9. HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
9.a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (e.g., pesticides, herbicides, other toxic substances, or radioactive material)?				X
Discussion: Neither the construction nor associated grading would result in a significant impact involving the transport, use, or disposal of hazardous material or toxic substances. **Source**: Project Scope.					
9.b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
Discussion: No significant use of hazardous materials is proposed. Development of the parcel would involve earthwork and construction of residential uses. **Source**: Project Scope.					
9.c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
Discussion: No use involving significant emission of or handling of hazardous materials or waste is proposed. **Source**: Project Scope.					

9.d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
Discussion: The project site is not a listed hazardous materials site. **Source**: California Department of Toxic Substances Control, Hazardous Waste and Substances Site List (2019).					
9.e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?				X
Discussion: The site is not located within 2 miles of a public airport and is not within any airport land use areas of influence. The closest airport is Half Moon Bay airport located 22 miles north of the site. **Source:** Project Location, SFO Airport Land Use Compatibility Plan, Half Moon Bay Airport Land Use Compatibility Plan.					
9.f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
Discussion: The construction of residential structures would not permanently or significantly impede access on existing public roads. The plan has been reviewed and conditionally approved by the San Mateo County Fire Department for emergency vehicle access and by the County Department of Public Works for traffic safety. There is emergency vehicle access off of Cabrillo Highway and four firetruck turnouts proposed on the project plans to comply with Fire Department requirements. There are no changes proposed that would impede access or evacuation from Bean Hollow Road. **Source:** Project Location, Project Plans, San Mateo County Fire Department.					
9.g.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	
Discussion: The project site is not located within a Fire Hazard Severity Zone. The project was reviewed and conditionally approved by the San Mateo County Fire Department. The development of the parcel will be subject to compliance with California Building Code and County Fire requirements that include fire sprinklers, appropriate emergency vehicle access, a new hydrant with appropriate fire flow, and the maintenance of a fuel break 30 feet from structures, among other fire					

prevention requirements. No further mitigation, beyond compliance with the standards and requirements of the San Mateo County Fire Department, is necessary. **Source**: CalFire, Fire Hazard Severity Zones Maps; San Mateo County Fire Department.					
9.h.	Place housing within an existing 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
Discussion: The subject parcel is located in Flood Zone X (Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level), per FEMA Panel No. 06081C0431F, effective August 2, 2017. **Source:** FEMA Panel No. 06081C0431F, effective August 2, 2017.					
9.i.	Place within an existing 100-year flood hazard area structures that would impede or redirect flood flows?				X
Discussion: The subject parcel is located in Flood Zone X (Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level), per FEMA Panel No. 06081C0431F, effective August 2, 2017. **Source:** FEMA Panel No. 06081C0431F, effective August 2, 2017.					
9.j.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
Discussion: The project parcel is not located in an area that would be impacted by failure of a dam or levee. **Source:** Project Location, San Mateo County General Plan Hazards Map.					
9.k.	Inundation by seiche, tsunami, or mudflow?				X
Discussion: Risk of inundation by seiche, tsunami, or mudflow is considered insignificant as the project site is not located in an inundation area as identified by the San Mateo County GIS. **Source:** Project Location, San Mateo County GIS Tsunami and Seiche Inundation Areas.					

10.	**HYDROLOGY AND WATER QUALITY**. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
10.a.	Violate any water quality standards or waste discharge requirements or			X	

	otherwise substantially degrade surface or ground water quality (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?				
Discussion: Development of the project site has the potential to generate polluted stormwater runoff during site grading and construction-related activities. The residential development is estimated to introduce 1,375 sq. ft. of new impervious surfaces. As a single-family home, the project is not required to comply with Municipal Regional Permit (MRP) C.3 requirements. However, development will be required to comply with the County's Drainage Policy requiring post-construction stormwater flows to be at, or below, pre-construction flow rates. The applicant has submitted a drainage plan that includes the implementation of an infiltration-based retention feature with a detention basin and a green roof. The preliminary drainage plans have been reviewed and conditionally approved by the County Drainage Section and Department of Public Works. A final drainage analysis is required at the building permit stage. The proposed installation of a septic system will be required to comply with the County's Onsite Waste Water Treatment System Ordinance and the applicant will be required to obtain a permit from the San Mateo County Environmental Health Services, which will ensure compliance with environmental health standards that will protect ground water and wells from exposure to pathogens. **Source**: Project Plans; C.3/C.6 Development Review Checklist; County of San Mateo Drainage Policy; San Mateo County Municipal Regional Stormwater Permit, San Mateo County Sanitation and Health Code, Title 4.				
10.b.	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
Discussion: The project is not expected to deplete any groundwater supplies or interfere with groundwater recharge. The existing well on the east side of the property will be tied into the house using a new water lateral and will not be used for irrigation. According to well tests, the well is adequate to serve the single-family home. A majority of the site will remain undeveloped pervious surface allowing the Pescadero Valley water basin to be recharged by irrigation water and rain. **Source**: Project plans, San Mateo Office of Sustainability, Well Report (Simms Plumbing and Water Equipment, 2018).					
10.c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:				

i. Result in substantial erosion or siltation on- or off-site;			X	
Discussion: The project does not involve the alteration of the course of a stream or river. Existing drainage patterns, consisting of sheet flow, will be altered by grading and development of the property. An erosion and sediment control plan has been prepared by Sigma Prime Geosciences to reduce stormwater-related erosion and sediment from the project site during grading and construction. Additionally, the project has been preliminarily reviewed and conditionally approved by the County's Drainage Review Section and Department of Public Works for grading and drainage compliance. **Source**: Project Plans; County of San Mateo Drainage Review Section; Department of Public Works.				
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	
Discussion: The project would introduce new impervious surfaces to the site, however, required compliance with the County's Drainage Policy will ensure that any increased runoff is captured and released on-site in conformance with all local regulations. Furthermore, see staff's discussion in Section 10.a. and 10.c. above. **Source**: Project Plans, County Drainage Policy, County Municipal Regional Stormwater Permit.				
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
Discussion: Compliance with the County's Drainage Policy is mandatory and would prevent the creation of significant additional sources of polluted runoff. **Source**: San Mateo County Drainage Policy; San Mateo County Municipal Regional Stormwater Permit.				
iv. Impede or redirect flood flows?				X
Discussion: The subject parcel is located in Flood Zone X (Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level), per FEMA Panel No. 06081C0431F, effective August 2, 2017. The proposed project will not impede or redirect flood flows. **Source:** FEMA Panel No. 06081C0431F, effective August 2, 2017.				
10.d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
Discussion: The project parcel is not located in a flood hazard, tsunami, or seiche zone. **Source:** Project Location; San Mateo County General Plan Hazards Map.				

10.e.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X
Discussion: There are currently no ground water management plans as all 9 water basins in San Mateo County are designated as Low Priority. **Source:** Project Location, San Mateo County Department of Sustainability.					
10.f.	Significantly degrade surface or ground-water water quality?		X		
Discussion: The project is required to comply with the County's Drainage Policy and the County's Municipal Regional Stormwater Permit drainage requirements which will prevent significant degradation of surface water quality after construction. Mitigation Measures 17-19 will reduce construction-related stormwater impacts to a less than significant level. **Source**: Project Plans, County Drainage Policy, County Municipal Regional Stormwater Permit.					
10.g.	Result in increased impervious surfaces and associated increased runoff?		X		
Discussion: The project will result in increased impervious surfaces and associated increased runoff. The implementation of Mitigation Measures 17-19 will reduce project-related impacts to a less than significant level. No further mitigation measures are necessary. **Source**: Project Plans.					

11.	**LAND USE AND PLANNING**. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
11.a.	Physically divide an established community?				X
Discussion: The project does not involve a land division or development that would result in the division of an established community. The project involves construction of a single-family home on active farmland in a rural area of the County. Residential development would be as allowed by local zoning regulations and any applicable State laws at the time of development. **Source**: Project Plans; Project Location.					
11.b.	Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

Discussion: The project complies with all PAD district regulations, which permits single-family development that will not convert prime farmland. The San Mateo County General Plan land use designation is Agriculture. No exceptions or variances are proposed, therefore the project will not conflict with any County land use policy. Additionally, the project complies with all PAD district and Local Coastal Program (LCP) requirements, see staff's discussion in Section 2 (Agricultural and Forest Resources) and 4 (Biological Resources) for details on compliance with LCP and PAD policies.

Source: Project Plans, San Mateo County Zoning Ordinance, San Mateo County General Plan, San Mateo County Local Coastal Program

11.c.	Serve to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities or recreation activities)?			X	

Discussion: The project proposes improvements to serve the subject parcel only. The single-family dwelling is not anticipated to increase development intensity as it will not introduce new industry, commercial facilities, or public uses.

Source: Project Plans.

12. MINERAL RESOURCES. Would the project:

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
12.a.	Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?				X

Discussion: There are no known mineral resources identified on the project parcel.

Source: Project Location, San Mateo County General Plan.

12.b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Discussion: There are no identified locally important mineral resource recovery site(s) delineated on the County's General Plan, any specific plan, or any other land use plan.

Source: Project Location, San Mateo County General Plan.

13.	**NOISE**. Would the project result in:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
13.a.	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
Discussion: During project grading and construction, excessive noise could be generated on a temporary basis. However, such temporary noise is regulated by Section 4.88.360 (Exemptions) of the County Ordinance Code for Noise Control. Once construction is complete, the project is not expected to generate significant amounts of noise. **Source**: Project Plans, San Mateo County Noise Ordinance.					
13.b.	Generation of excessive ground-borne vibration or ground-borne noise levels?			X	
Discussion: The project would generate short-term ground-borne vibration from construction and grading activities; however, any such increase would be temporary and localized to the project site. No mitigation is necessary. **Source**: Project Plans.					
13.c.	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure to people residing or working in the project area to excessive noise levels?				X
Discussion: The site is not located within 2 miles of a public airport and is not within any airport land use areas of influence. The closest airport is Half Moon Bay airport located 22 miles north of the site. **Source:** Project location, SFO Airport Land Use Compatibility Plan, Half Moon Bay Airport Land Use Compatibility Plan.					

14.	**POPULATION AND HOUSING**. Would the project:

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
14.a.	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
Discussion: All improvements associated with the proposed project are completely within the subject parcel's boundaries and are only sufficient to serve the single-family residence. Furthermore, see staff's discussion in Section 11.c. **Source:** Project Plans.					
14.b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X
Discussion: The project does not propose to displace existing housing but proposes to create a new residential development, increasing available housing. **Source:** Project scope.					

15.	**PUBLIC SERVICES**. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
15.a.	Fire protection?				X
15.b.	Police protection?				X
15.c.	Schools?				X
15.d.	Parks?				X
15.e.	Other public facilities or utilities (e.g., hospitals, or electrical/natural gas supply systems)?				X
Discussion: The project is limited to the construction of one new single-family residence and, therefore, will not involve new or physically altered government facilities or increase the need for					

new or physically altered government facilities. Additionally, the project is not expected to affect service ratios, response times, or other performance objectives for any of the public services in the area.

Source: Project Plans.

16. RECREATION. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
16.a. Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
Discussion: The residential development would not significantly increase the use of existing neighborhood or regional parks or other recreational facilities such that significant physical deterioration of the facility is expected to occur or be accelerated. **Source:** Project Plans.				
16.b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
Discussion: The project does not include any recreational facilities and is limited to residential use. **Source:** Project Plans.				

17. TRANSPORTATION. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
17.a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, and parking?			X	
Discussion: Proposed project improvements include the construction of a new driveway off of bean Hollow Road to serve the three proposed parcels and upgrades to emergency vehicle access off of Cabrillo Highway. The project has been reviewed and conditionally approved by the San Mateo County Fire Department and the County Department of Public Works for emergency access and				

traffic safety. The grading work and construction associated with the improvements for residential development would result in a temporary increase in traffic levels and a negligible permanent increase in traffic levels after construction. Therefore, the project is not expected to conflict with any plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. **Source**: Project Scope, San Mateo County Department of Public Works, San Mateo County Fire Department.				
17.b. Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) *Criteria for Analyzing Transportation Impacts*? *Note to reader: Section 15064.3 refers to land use and transportation projects, qualitative analysis, and methodology.*				X
Discussion: The project is exempt from the requirement for a Vehicle Miles Traveled (VMT) analysis pursuant to Senate Bill (SB) 743 and Section 15064.3 of the CEQA Guidelines as a "small project" based on the State of California Governor's Office of Planning and Research's (OPR) December 2018 Technical Advisory for Evaluating Transportation Impacts in CEQA to achieve compliance with SB 743 as the residential development would be expected to generate significantly less than 110 daily trips, is consistent with the General Plan, and suggests no evidence indicating a potentially significant level of VMT would result. **Source:** Project proposal; State of California Governor's OPR December 2018 Technical Advisory; San Mateo County Department of Public Works, Board of Supervisors Members Memo, dated September 23, 2020 for Change to Vehicle Miles Traveled as Metric to Determine Transportation Impacts under CEQA Analysis; Caltrans Transportation Impact Study Guide, dated May 20, 2020.				
17.c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
Discussion: The project includes the construction of a new driveway off of Bean Hollow Road to serve the single-family development. The access design has been reviewed and conditionally approved by the County Department of Public Works for traffic safety of the proposed driveway onto Bean Hollow Road. The new driveway will tie into an existing gravel access road on the parcel and would not introduce any hazards to vehicles traveling on Bean Hollow Road. **Source**: Project Plans; San Mateo County Department of Public Works.				
17.d. Result in inadequate emergency access?				X
Discussion: The project has been reviewed and approved with conditions by the San Mateo County Fire Department, and the design of the emergency vehicle access road, which includes 4 firetruck turnouts, is adequate to serve the single-family home. **Source**: San Mateo County Fire Department.				

18. TRIBAL CULTURAL RESOURCES. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
18.a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)				X
Discussion: The project site is not listed or eligible for listing in the California Register of Historical Resources. Furthermore, the project is not listed in a local register of historical resources, pursuant to any local ordinance or resolution as defined in Public Resources Code Section 5020.1(k). **Source**: Project Location; State Parks, Office of Historic Preservation, Listed California Historical Resources; County General Plan, Background, Historical and Archaeological Resources Appendices.				
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1. (In applying the criteria set forth in Subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)		X		
Discussion: Staff requested a Sacred Lands file search of the project vicinity, which was conducted by the Native American Heritage Commission (NAHC) and resulted in no found records. A request for a search of the California Historic Resources Information System (CHRIS) was made to the Northwest Information Center and a response was provided on May 16, 2022. The Northwest Information Center found no record of any previous cultural resources field surveys at the subject site. While the proposed site for development is currently undeveloped, a majority of the parcel has				

been used for agricultural purpose since the turn of the century and has not encountered any resources which could be considered significant to a California Native American tribe. Therefore, the project is not expected to cause a substantial adverse change to any potential tribal cultural resources.

This project is subject to California Public Resources code 21080.3.1 which requires tribal consultation within 14 days of determining that an application has been deemed complete or a public agency decides to undertake a project. The County of San Mateo has received a request for formal notification from the Tamien Nation of the greater Santa Clara County. Additionally, a list of local tribes was obtained from the Native American Heritage Commission (NAHC). A notice for consultation was sent to the Tamien Nation and all tribes on the list provided by the NAHC on May 23, 2022. As of the date of this report, no tribes have contacted the County requesting formal consultation on this project. However, in following the NAHC's recommended best practices, the following mitigation measures 20 and 21 are recommended to minimize any potential significant impacts to unknown tribal cultural resources.

Mitigation Measure 20: In the event that tribal cultural resources are inadvertently discovered during project implementation, all work shall stop until a qualified professional can evaluate the find and recommend appropriate measures to avoid and preserve the resource in place, or minimize adverse impacts to the resource, and those measures shall be approved by the Current Planning Section prior to implementation and continuing any work associated with the project.

Mitigation Measure 21: In the event that tribal cultural resources are inadvertently discovered during project implementation, consultation with the affiliated Native American tribe shall be made prior to continuing any work associated with the project to ensure the resource is treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

Source: Project Plans; Project Location; Native American Heritage Commission, California Assembly Bill 52, California Historical Resources Information System

19. UTILITIES AND SERVICE SYSTEMS. Would the project:

		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
19.a.	Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	

Discussion: The project includes a new water lateral from an existing on site well to the new residence for water supply and a new septic system. Well certification has been reviewed and pump tests show there is adequate flow to serve the single-family home. Percolation tests, the design and location of the septic system, and well certification has been preliminarily approved by the San Mateo County Environmental Health Services. In order to comply with San Mateo County's drainage

policies, stormwater measures would be required to conform with all County standards as applicable to the project scope. On-site stormwater measures were designed by a licensed civil engineer and have been reviewed and preliminarily approved by the San Mateo County Drainage Review Section. There is no indication that the installation of these measures will cause any significant environmental effects. **Source**: Project Plans, Well Report (Simms Plumbing and Water Equipment, 2018).				
19.b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
Discussion: The project has access to an existing on site well to provide water for the single-family dwelling. Well tests show there is adequate water supply to serve the project. **Source:** Project Plans, Well Report (Simms Plumbing and Water Equipment, 2018).				
19.c. Result in a determination by the waste-water treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
Discussion: See Question 19.a and 19.b. The project will utilize a new on-site septic system for treatment of wastewater. **Source:** Project Plans.				
19.d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				X
Discussion: The project will have negligible impact on the capacity of local landfills. Single-family residential development has negligible impact on the capacity of local landfills. **Source**: Project Scope.				
19.e. Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?				X
Discussion: The project would support single-family residential development in an existing rural residential and agricultural community which would result in a negligible increase in solid waste disposal needs. All elements of the project will comply with regulations related to solid waste. **Source**: Project Scope.				

20.	**WILDFIRE**. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
20.a.	Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
Discussion: No revisions to the County adopted Emergency Operations Plan would be required as a result of the proposed project. The nearest public fire service is the Central County Fire Department Station 59 located approximately 3.5 miles southwest of the project site and would not be impacted because primary access to all major roads would be maintained during grading and construction of residential development, as well as habitation of the residence. As discussed in Section 9 (Hazards and Hazardous Materials), the proposed project has been reviewed and conditionally approved by the San Mateo County Fire Department and would not impair or physically interfere with an adopted emergency response or evacuation plan. Therefore, impacts would be less than significant, and no mitigation is required. **Source:** Project Plans; Project Location; San Mateo County Fire Department.					
20.b.	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
Discussion: The project is not located in a Very High/Fire Hazard State Responsibility Area as identified by the County's GIS maps but is located in a wildland urban interface. Residential development would include fire detection and extinguishing systems, water tanks, hydrants, and other fire control measures. Due to the proximity of the project site to San Mateo County Fire Station 59 and the very short response time to reported fires, the likelihood of injuries or pollutant emissions due to a wildfire is minimal. Additionally, the project site is principally used for agricultural crops with minimal unmanaged flammable vegetation. Therefore, the proposed project would not exacerbate wildfire risks or expose occupants to pollutant concentrations from a wildfire, or to the uncontrolled spread of wildfire. **Source:** Project Plans; Project Location; San Mateo County GIS.					
20.c.	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	
Discussion: The project site adjoins other single-family rural residential development and does not require the installation of new roads, fuel breaks, or power lines. The project includes the					

construction of four fire truck turnouts and water tanks that have been reviewed and conditionally approved by the San Mateo County Fire Department. No further mitigation is necessary. **Source:** Project Plans, San Mateo County Fire Department.				
20.d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X
Discussion: Overall the parcel moderately slopes upward toward the East. The proposed on-site drainage facilities have been sized and appropriately placed to retain the stormwater on-site and would allow the stormwater to percolate into the ground as determined by review from the County's Drainage Section. As the project would not increase the risk of wildfire or the severity of wildfires, the project would not expose the proposed structure to significant risk from flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. **Source:** Project Plans.				

21. MANDATORY FINDINGS OF SIGNIFICANCE.				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
21.a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
Discussion: See Section 4 (Biological Resources) for a detailed discussion of impacts to biological resources. There are wetlands and habitat for protected species on-site. Mitigation measures 4-13 will reduce biological impacts to less than significant levels. With the required mitigation measures, the construction of a single-family residence will not impact or reduce the habitat of fish or wildlife species or eliminate a plant or animal community. There are no known landmarks or natural formations that are examples of California History on the project site. **Source**: California Natural Diversity Database; San Mateo County General Plan, Sensitive Habitats Map; Project Plans; Project Location, Biological Report (Sol Ecology, 2020).				
21.b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively consider-		X		

able" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)				

Discussion: The majority of the surrounding parcels off of Bean Hollow Road support existing agricultural operations and/or single-family residences. It is not likely that the incremental effects of this project are considerable when viewed in conjunction with the effects of past, current, and future private or public projects in this area. The project site is located in a rural area within an established community where the rate and intensity of development has been, and is expected to continue to be, low. While the project will potentially result in site specific impacts as discussed in this document, incorporation of the recommended mitigation measures will reduce these impacts to a less than significant level. Currently, no other new residential development is proposed in the area. Any further future development would be required to conform with all applicable codes and standards commensurate to support the development density proposed at that time, and would be subject to the California Environmental Quality Act.

Source: Subject Document; Project Plans.

21.c.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

Discussion: The project could result in environmental impacts that could both directly and indirectly cause impacts on human beings, including the introduction of new sources of light and glare, temporary air quality impacts from construction-related emissions, and temporary greenhouse gas emissions from construction-related activities, as discussed within this document. However, the implementation of the recommended mitigation measures included in this document, and mitigation measures proposed in the project plans, will adequately reduce any potential impacts to a less than significant level.

Source: Subject Document; Project Plans.

RESPONSIBLE AGENCIES. Check what agency has permit authority or other approval for the project.

AGENCY	YES	NO	TYPE OF APPROVAL
Bay Area Air Quality Management District		X	
Caltrans		X	
City		X	
California Coastal Commission		X	
County Airport Land Use Commission (ALUC)		X	
Other: _____		X	

AGENCY	YES	NO	TYPE OF APPROVAL
Regional Water Quality Control Board		X	
San Francisco Bay Conservation and Development Commission (BCDC)		X	
Sewer/Water District: County Environmental Health Services	X		Septic and well permits
State Department of Fish and Wildlife		X	
State Department of Public Health		X	
State Water Resources Control Board		X	
U.S. Army Corps of Engineers (CE)		X	
U.S. Environmental Protection Agency (EPA)		X	
U.S. Fish and Wildlife Service		X	

MITIGATION MEASURES

	Yes	No
Mitigation measures have been proposed in project application.	X	
Other mitigation measures are needed.	X	

The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:

Mitigation Measure 1: All proposed exterior lighting shall be designed and located so as to confine direct rays to the subject property and prevent glare in the surrounding area. Manufacturer cut sheets for any exterior light fixtures shall be submitted for review and approval prior to the issuance of a building permit.

Mitigation Measure 2: Final finishes of all exterior materials and/or colors, including glass windows and/or panels, shall be non-reflective.

Mitigation Measure 3: The applicant shall require construction contractors to implement all the Bay Area Air Quality Management District's Basic Construction Mitigation Measures, listed below:

a) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access road) shall be watered two times per day.
b) All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
c) All visible mud or dirt track-out onto adjacent paved roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
d) All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
e) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

f) All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
g) Idling times shall be minimized either by shutting equipment or vehicles off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
h) Post a publicly visible sign with the telephone number and person to contact at the project site regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Bay Area Air Quality Management District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure 4: Pre-construction surveys shall be performed between April and June for rose leptosiphon, marsh microseris, Choris' popcornflower, and Scouler's catchfly. If found, the plant shall be avoided to extent possible, or a translocation plan shall be prepared prior to the start of activities and submitted for review and approval by the San Mateo County Planning and Building Department prior to implementation.

Mitigation Measure 5: An environmental training shall be provided to all construction workers prior to the start of work. The training will educate workers on: (1) any sensitive resources or special-status species that may occur in the work area, (2) procedures to follow in the event a species is observed, and (3) other environmental BMPs for ensuring take is avoided.

Mitigation Measure 6: Wildlife exclusion fencing shall be placed around the perimeter of project footprint and any staging areas to prevent animals including California Red-Legged Frog and/or San Francisco Garter Snake from entering the work area. Fencing should be a minimum of 36 inches high, with a minimum of 4 inches trenched into the ground. Fencing shall be installed under the guidance of a qualified biologist and maintained throughout the duration of ground-disturbing activities.

Mitigation Measure 7: If work is to be initiated during the nesting bird season, between February 1 and August 31, a pre-construction nesting bird survey shall be performed in all areas within 250 feet of proposed activities. If nests are found, an appropriately sized no-disturbance buffer shall be placed around the nest at the direction of the qualified biologist conducting the survey. Buffers for common songbird species is 25 to 50 feet, and between 100 up to 500 feet for special-status birds and/or raptors depending on the species and status of the nest. Buffers shall remain in place until all young have fledged, or the biologist has confirmed that the nest has been naturally predated.

Mitigation Measure 8: A pre-construction survey for San Francisco Dusky-Footed Wood Rat (SFDW) nests shall be performed prior to the start of work within 25 feet of proposed activities. If an active SFDW nest is found and cannot be avoided, the biologist shall supervise dismantling of the nest by hand. If young are found, material shall be set back on the house and the house avoided for a minimum of 3 weeks to allow young to wean and leave the nest. Following completion of the dismantling, nest material shall be placed in nearby habitat where it can be completely avoided.

Mitigation Measure 9: A pre-construction survey for Western Pond Turtle, California Red-Legged Frog, and San Francisco Garter Snake shall be conducted prior to initiation of project activities within 48 hours of the start of work. Surveys are to be conducted by approved qualified biologist(s) with experience surveying for each species. If any species is found on the Project Site, it should be allowed to leave the area on its own. If the animal does not leave the area on its own, the USFWS and CDFW shall be contacted.

Mitigation Measure 10: No ground-disturbing work (e.g. vegetation removal, grading, or trenchwork) shall be performed if a 70 percent or greater chance of rainfall is predicted within 72

hours of project activity or within 24 hours of any rain event (greater than 0.5 inches) occurring between October 31 and April 31 when frogs are most likely to disperse into upland habitats. No work shall occur within 30 minutes of sunrise or sunset.

Mitigation Measure 11: Trenches and holes shall be covered and inspected daily for stranded animals. Trenches and holes deeper than one-foot should contain escape ramps at a maximum slope of 2:1 to allow trapped animals to escape.

Mitigation Measure 12: Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic monofilament netting (erosion control matting), rolled erosion control products, or similar material shall not be used. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

Mitigation Measure 13: All food and food-related trash must be enclosed in sealed trash containers at the end of each day and removed completely from the site every three days to avoid attracting wildlife that may prey on listed species in the area.

Mitigation Measure 14: All fencing shall be designed in consultation with a biologist to facilitate the safe passage of wildlife through the subject site. The final design of all fencing on site shall be reviewed and approved by the community development director prior to issuance of a building permit.

Mitigation Measure 15: In the event that archaeological resources are inadvertently discovered during construction, work in the immediate vicinity (within 50 feet) of the find must stop until a qualified archaeologist can evaluate the significance of the find. Construction activities may continue in other areas beyond the 50-foot stop work area. A qualified archaeologist is defined as someone who meets the Secretary of the Interior's Professional Qualifications Standards in archaeology. The Current Planning Section shall be notified of such findings, and no additional work shall be done in the stop work area until the archaeologist has recommended appropriate measures, and those measures have been approved by the Current Planning Section and implemented.

Mitigation Measure 16: Should any human remains be discovered during construction, all ground disturbing work shall cease and the County Coroner shall be immediately notified, pursuant to Section 7050.5 of the State of California Health and Safety Code. Work must stop until the County Coroner can make a determination of origin and disposition of the remains pursuant to California Public Resources Code Section 5097.98 for the naming of a Most Likely Descendant and the recommendations for disposition. Additionally, the State Native American Heritage Commission may need to be notified to seek recommendations from a Most Likely Descendant (Tribal Contact) before any further action at the location of the find can proceed.

Mitigation Measure 17: The applicant shall submit an erosion control plan in compliance with the County's General Erosion and Sediment Control Plan Guidelines Checklist for review and approval as part of the building permit plans submittal.

Mitigation Measure 18: No grading shall be allowed during the wet weather season (October 1 through April 30) to avoid increased potential soil erosion, unless the applicant applies for an Exception to the Winter Grading Moratorium and the San Mateo County Community Development Director grants the exception. Exceptions will only be granted if dry weather is forecasted during scheduled grading operations, and the erosion control plan includes adequate winterization measures (amongst other determining factors).

Mitigation Measure 19: An Erosion Control and Tree Protection Pre-Site Inspection shall be conducted prior to the issuance of a grading permit "hard card" and/or building permit to ensure the approved erosion control and tree protection measures are appropriately implemented.

Mitigation Measure 20: In the event that tribal cultural resources are inadvertently discovered during project implementation, all work shall stop until a qualified professional can evaluate the find and recommend appropriate measures to avoid and preserve the resource in place, or minimize adverse impacts to the resource, and those measures shall be approved by the Current Planning Section prior to implementation and continuing any work associated with the project.

Mitigation Measure 21: In the event that tribal cultural resources are inadvertently discovered during project implementation, consultation with the affiliated Native American tribe shall be made prior to continuing any work associated with the project to ensure the resource is treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

DETERMINATION (to be completed by the Lead Agency).

On the basis of this initial evaluation:

	I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Planning Department.
X	I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because of the mitigation measures in the discussion have been included as part of the proposed project. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

(Signature)

Date

(Title)

ATTACHMENTS

A. Vicinity/Project Location Map
B. Project Plans
C. Geological Report
D. Biological Report
E. Agricultural Land Management Plan

County of San Mateo - Planning and Building Department

ATTACHMENT E

Agricultural Land Management Plan

Bean Hollow Farm, Pescadero
Parcel # 086-191-100
2021.01.11
Updated 2022.08.10

4G Ranch Consulting
Chris Giannini
208-880-0081

Chris4granch@gmail.com

Agricultural Land Management Plan
Bean Hollow Farm, Pescadero
APN 086-191-100

Bean Hollow Farm (BHF) is a 38-acre parcel naturally divided into 5 areas by topography, soil type, and vegetation that require distinct management protocols and that have different capabilities.

1. Lower Field - prime soils - cultivated
2. Upper Field – prime soils - largest portion cultivated – a pond and water trench bisects a small northern portion
3. Pond area – irrigation and habitat areas
4. Non-prime soils – undisturbed presently and proposed residential project area
5. Natural area / buffer areas. - These areas will be managed to enhance habitat values including areas adjacent to Highway One and along the perimeter of the property. This area includes the existing access roads on the property.

Crop History
The site was originally part of the approximately 220-acre Campinotti farm and has been farmed since the turn of the century. Historical crops have included: Brussels sprouts, leeks, artichokes, pumpkins, fava beans and hay. Most recently the property has been farmed by Marchi Central Farms for approximate 20 years with fava beans, leeks, and Brussels sprouts as being historically the most agriculturally and financially productive.

Soils
The soils at the project site are forming on old marine terraces. They are predominantly deep sandy loams. The Prime Farm Lands are located on two relatively flat benches noted as Lower and Upper Fields. The non – prime soils near the middle of the property has a significant slope and different soil characteristics than the flat cultivated fields. The attached plans include the Prime Soils information map prepared by the San Mateo County Planning Department.

Water
There are two irrigation ponds on the site connect by dedicated easements to Lake Lucerne, a dependable source of agricultural water that is managed and maintained by the Lake Lucerne Water Company. Bean Hollow Farm LLC has a prorated share of ownership of the water rights. The upper pond is fed by Lake Lucerne via a shared pipeline to a reservoir on the adjacent farmlands, then by a pipeline and open trenches to the property. The larger lower pond, that is shared with the POST parcel to the north, is a surface source and overflow pond for the upper pond. The ponds store approximately 25 acre-feet of water. Water can be supplied to the fields by an onsite electric pump and movable sprinkler pipe, drip irrigation or dry farmed.

There is an existing unused agricultural well at the southeast corner of the Upper Field that will be converted for domestic use with the approval of the home.

Natural Areas
The Agricultural Land Management Plan recognizes that specific areas are not suitable for agricultural and are better maintained as natural areas. Please see the Biological Assessment map prepared by Sol Ecology that indicates the buffer areas that will be left undisturbed except for existing roadways for access.

Current and Proposed Agricultural Uses

The Lower Field and a large portion of the Upper Field (due to presence of water pond and trench) was last planted in a cover crop of bell beans by Peter Marchi in January of 2021. Peter Marchi disked both upper and lower fields in December of 2021.

Chemical pesticides were last used on the fields of the property by Marchi Farms in September 2019. BHF is pursuing organic certification for the property in September of 2022, the required three years from last use of chemical applications, and will be continuing soil improvements of having cover crops and pasture mix during the certification process. Soil testing of both the upper and lower Fields by Fruit Growers Lab is ongoing and will determine the actual soil suitability and limitations, as well as verify recommendations for crop and soil enhancement.

It is intended to move toward an organic, regenerative and sustainable farming practice, by repairing the soil health, cover cropping, crop rotation, retaining mulch, possible animal grazing, and integrated nutrient management.

To this end, BHF has engaged Parker Weiss, a local Pescadero farmer, to lease acreage and farm organic artichokes. Together, BHF and Mr. Weiss have applied for and received a California Department of Food and Agriculture funded *Healthy Soil Program* (HSP) grant for 2022-2024. The grant subsidizes organic compost application; cover crop planting of barley, bell beans, horse beans, fava beans, field pea, and common vetch; and planting hedgerows to reduce wind and erosion with ceanothus, California buckeye, buckthorn, and Monterey cypress.

Additionally, for a defined section of the property, BHF and Mr. Weiss have been selected as a participant in Project Apis m's *Seed for Bees* initiative. *Seeds for Bees* encourages the use of cover crops to increase the density, diversity, and duration of bee forage in California orchards, farms, and vineyards, while improving soil health. The seed mixes available through Seeds for Bees are designed to bloom at critical times of the year when natural forage is scarce but managed and native bees are active. Seeds for Bees serves the needs of bees, beekeepers, and growers, increasing sustainability of pollination and agriculture.

At the Lower Field, Mr. Weiss anticipates applying compost practices as outlined the HSP and the planting various organic cover crop mixes in the Fall of 2022. Test acreage of specialty artichokes will be planted in the Spring of 2023. Planting additional acreage is anticipated in the Fall of 2023. Deer fencing will be erected as needed on the Lower Field. See FM-1 for possible location.

The Upper Field will be reserved for organic farming of heritage beans, peas, and other specialty vegetables and fruits for local restaurants, CSA's, and Asian and farmer's markets. The Upper Field will either be self-farmed and or have leased arrangements similar to the Lower Field. A deer fencing will be erected as needed on the Upper Field.

Small animal (sheep and goats) rotational grazing may be contracted with local farms and designated for either the Upper or Lower fields, depending on compatibility with farming operations. It is anticipated the grazing will be part of larger ranch operations and used as part of their rotation system.

Bean Hollow Farm is discussing a collaborative relationship with POST regarding the neighboring POST parcels to the north. Bean Hollow Farm shares the ownership of the large pond with POST and have many common interests in creating viable opportunities for sustainable organic farming.

Compliance with Planned Agricultural Ordinance – Section 6355*

6355.A.1 – The encroachment of development upon land that is suitable for agricultural use be minimized

All development is minimized on land suitable for agricultural use since the home will be located on non-prime soils that have not historically utilized for agricultural uses.

6355A.2 – All development permitted on a site shall be clustered.

The residential project that includes a barn is clustered on the non-prime, non-cultivated portion of the property served by an existing access road.

6355.A3. – Every project shall conform to the Development Review Criteria in Chapter 20A.2

The project has been designed in accordance with the 20A.2 Criteria employing natural materials and colors.

The design has utilized the existing slope to fit into natural topography of the site, present less exposed building mass, and minimize grading.

6355.B.1 – Existing availability of an adequate and potable well water source

There is an existing agricultural well to be converted into a domestic well to serve the proposed home.

6355.B.2 – Adequate water supplies and buffers for agricultural production and sensitive habitats

The existing ponds provide adequate water for the sensitive habitat protection, historic and proposed agricultural production.

6355.C – Criteria for division of prime soils

There will be no division of prime soils as part of this project.

6355.D – Criteria for Conversion of Prime Soils

The proposed residential site is proposed primarily on non-prime soils except for very minor encroachment on the eastern portion of the Lower Field for the onsite wastewater treatment drain field.

6355.F.1 – Unsuitable lands

The proposed residential project will be primarily located on the non-prime soils portion of the property and served by an existing road. Drawing FM! Shows prime soils with historically cultivated areas and the buffer areas that cannot be farmed. The project site is the only viable non-prime soils location that could support a home on this legal parcel.

6355.F.2 – Continued and renewed agricultural use of the soils

This parcel has been commercially farmed in the past. The sandy soils have provided diminishing yields in the past years due to crop depletion of the soil resources and drought conditions. It has been recommended that a nourishing cover crop be planted to restore the viability and production levels of the soils. Bean Hollow Farm is pursuing organic certification during this necessary soil restoration period.

6355.F.3 – Clearly defined buffer areas

Per the site plan, the house is on an area that has not been farmed and the remaining portion of the undisturbed non-prime soils creates a buffer to the prime soils.

6355.F.4 – Productivity of any adjacent agricultural land

There are agricultural parcels to the north and east of the subject parcel. There are smaller residential parcels to the south. The parcel is bound by Highway One to the west. The proposed house site is in

the middle of the parcel and meets all required setbacks and is not a threat to surrounding properties. The proposed organic certification most likely to be considered a benefit to the surrounding agricultural and residential uses.

*** Non-applicable portions of Section 6533 not addressed due to lack of relevancy**

Agricultural Land Management Plan
Bean Hollow Farm, Pescadero
Parcel # 086-191-100

4G Ranch Consulting
Chris Giannini
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It is intended to move toward an organic, regenerative and sustainable farming practice, by repairing the soil health, cover cropping, crop rotation, retaining mulch, animal grazing, and integrated nutrient management.

It is anticipated to plant an organic grass mix in the spring of 2021. Small animal (sheep and goats) rotational grazing will be contracted with local farms and designated for the Lower Field. It is anticipated the grazing will be part of larger ranch operations and used as part of their rotation system. A new perimeter containment fencing is proposed for the Lower Field. See drawing FM1 for location.

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*** Non-applicable portions of Section 6533 not addressed due to lack of relevancy**

COUNTY OF SAN MATEO
PLANNING AND BUILDING

BH

BEAN HOLLOW FARMHOUSE
CABRILLO HWY APN 086191100
SAN MATEO COUNTY, CA

BRIAN LEE ARCHITECT
brian.lee.faia@gmail.com
1.415.812.3294

Prime Agricultural Lands: APN: 086-191-100

Parcel Fabric

Subject Parcel (APN: 086-191-100)

Area: 36.25 ac

Prime Agricultural Lands

Area within Subject Parcel: 22.37 ac

Soil Classifications and Uses

Irrigated Rowcrops and Soil Dependent Floriculture

Artichokes, Brussels Sprouts, Field Flowers

Land Capability Classification (Irrigated)

1

2

3

Feet

0 200 400 800

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

BH

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SAN MATEO COUNTY, CA

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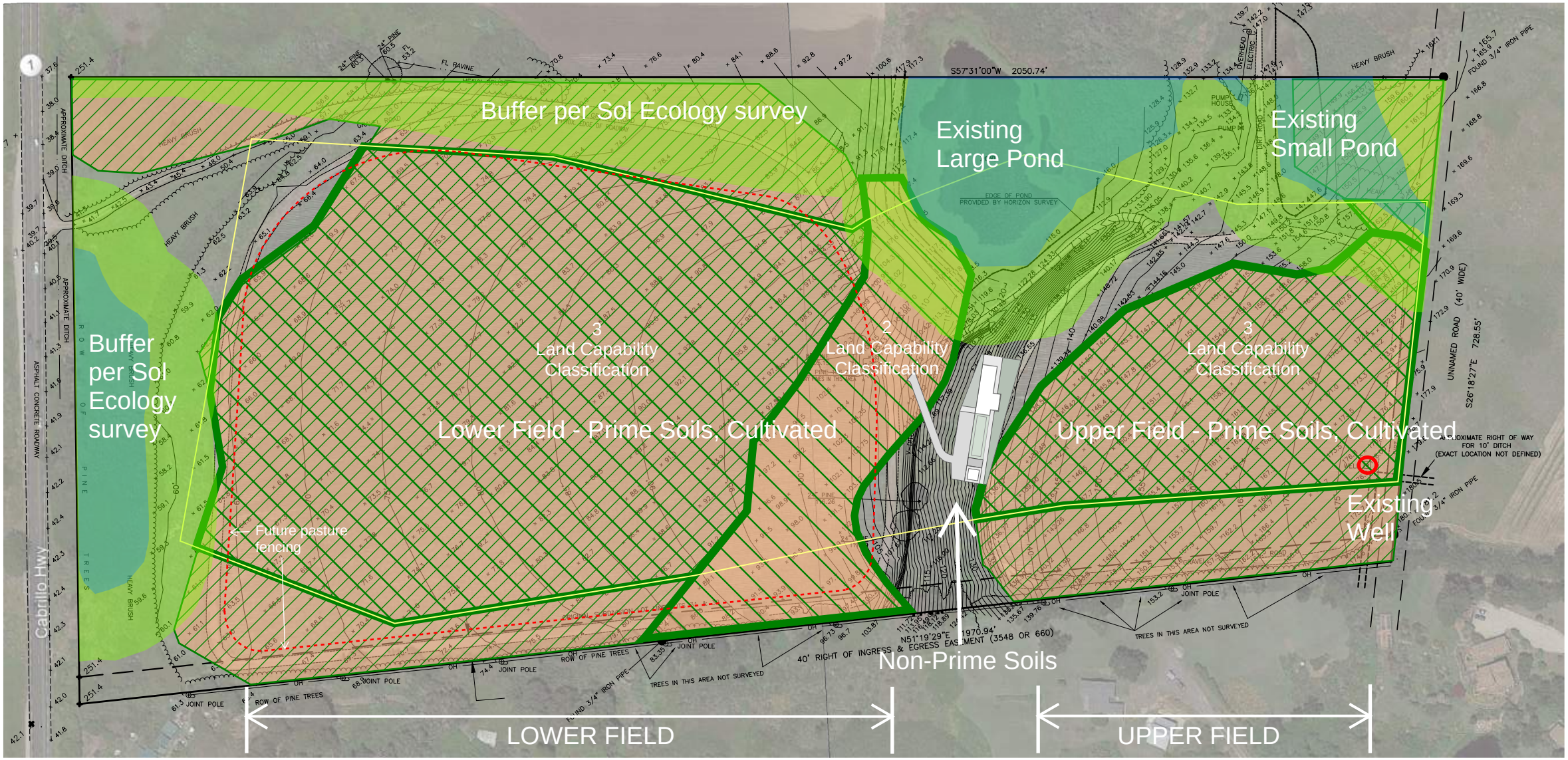
Parcel Boundary
100-Foot Buffer off Wetland Boundary
Wetland
Prime Agricultural Soils

Date: 03-01-2018
Data: Sol Ecology Inc., San Mateo Co., USFWS NWI

Base: ESRI
GIS: AJG

SOL ECOLOGY
solecology.com

Prime Agricultural Lands per San Mateo County Mapped on Survey



BH

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2020.12.24 SMC

FM 1

BEAN HOLLOW FARMHOUSE
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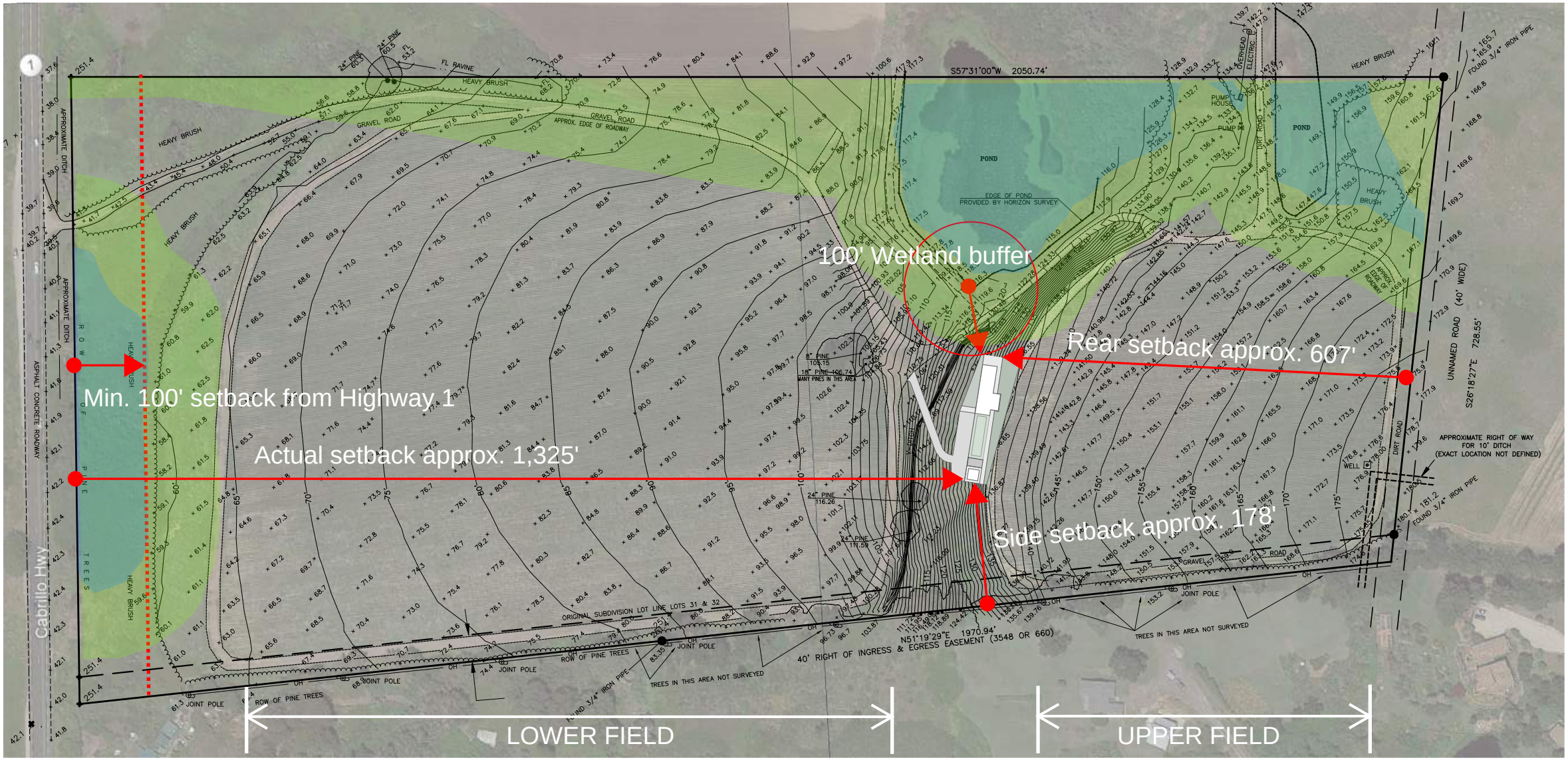

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FM 2