**PUBLIC WORKS AGENCY – ENGINEERING SERVICES**

**PROFESSIONAL SERVICES PROCUREMENT NOTICE**

**REQUEST FOR QUALIFICATIONS (RFQ)**

**FOR**

# Professional Engineering Services for the **County Service Area 29 (North Coast) Sewer Collection System Facilities Assessment and Master Plan**

**RESPONSE DUE BY 2:00 PM**
**ON AUGUST 13, 2025**

**By E-MAIL to**
**arturo.aseo@ventura.org**

**Or Mail to:**
**County of Ventura – Public Works Agency**
**Water & Sanitation Department**
**Attention: Arturo Aseo**
**6767 Spring Road, Moorpark, CA 93020**

The County of Ventura, Public Works Agency, Engineering Services Department (Agency), as servicing agent for Ventura County Service Area NO. 29 (CSA 29), will be accepting Requests for Qualifications (RFQ) from firms to provide consulting services to assist with the assessment of operations and process of the CSA 29 sewer collection system.

All questions relating to this RFQ must be addressed in writing to **arturo.aseo@ventura.org** and received no later than 2:00 PM on JULY 30, 2025. Please use the attached Excel spreadsheet form for submitting questions. Response to questions will be sent out by e-mail to all consultants.

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**ATTACHMENTS**

## SECTION I – GENERAL INFORMATION

The Ventura County Service Area (CSA) 29 requires the assistance of a professional consultant to provide engineering and operational analysis and overall analysis of the CSA 29 sewer collection system.

The CSA 29 sewer collection system provides service to a population of approximately 810 connections in the coastal communities of Mussel Shoals, Seacliff, Faria, Solimar Beach and Ventura Beach RV Park. The service area includes 10 miles of collection system force main and gravity lines, 179 Septic Tank Effluent Pump (STEP) systems and grinder pumps, and 4 larger regional transfer lift stations.

The STEP system has been in operation since 1982. Sewage is collected by the STEP system and conveyed via a series of lift stations and force mains along with the old coastal Highway 1 alignment and is ultimately discharged to the City of Ventura sewer collection system for treatment and disposal.

The following are some of the initial concerns identified with the existing system:

- The mechanical and electrical portions of the low-pressure STEP system are antiquated and prone to failure. Many of the operational components of the system are not easily located or are buried behind landscaping or structures.

- Staff have responded to several sewer spills in the area in recent history. Collection staff spend a disproportionate amount of time keeping the sewer system minimally operating.

- The nature of how septic tanks store and break down solids (a portion of the STEP system) are contributing to the reduction in dissolved oxygen and ultimately sulfide generation which exceed sulfide limits set by the City of Ventura.

- Many of the septic tanks are made of fiber glass where some tank walls have deteriorated and have failed in the past. This is a common issue with old fiberglass tanks.

- Many control wiring installations are substandard, inefficient, and inaccessible.

- Control panels are made of fiber glass and have weathered over the years to a point of potential failure.

- Three out of four transfer lift stations are equipped with dry wells that house the non-submersible station pumps and appurtenances. These underground dry wells require intensive confined space entry procedures just to enter to perform simple routine maintenance activities, thereby increasing the overall safety risk of collection system employees.

- Past documentation indicates that the existing force main consists of an old steel oil line that has been slip-lined. The force main has recorded pressures of upwards of 200 psi. The composition of the slip lined material, and the condition of the slip lined material are not known with any degree of certainty. This risk is compounded with the relative location of the force main being in very close proximity to the ocean and crossing into railroad right of way and being subject to the Coastal Commission area of influence.

- The State Parks is also considering opening and connecting the Emma Woods State Park RV Park addition to the existing force main which will increase pressure to the force main if no upsizing of the force main is completed. Other options for connection include a SCADA based pump control system to discharge the sewage from the park when other lift stations are not pumping. In theory the SCADA controlled discharge could work but does introduce a new level of required coordination and increased risks to redundancy.

- Overall, the CSA 29 system is very maintenance intensive and uses a very high percentage of wastewater collections staff time. This intensive operation creates a shortage of proper preventative maintenance time allotted to the other six sewer districts the water and sanitation department oversees.

## SECTION II – SCOPE OF SERVICES

**Phase 1 – State of the Business:** A thorough evaluation of needs, vulnerabilities and current conditions. The assessment will be conducted through the following activities:

- Institute of Asset Management Gap Assessment: Establish the current state, the desired future state, and the identification of gaps and improvement opportunities to reach the desired state for key focus areas such as organization, information systems, software, staffing, planning and support.

- Condition Assessment: Supports the gap assessment, by focusing on the current state of the physical assets to identify deficiencies, risk, and remaining useful life. Desktop assessment utilizes existing asset lists, install date, expected useful life estimates by asset type, and CCTV condition data. Provide recommendations for technology means and methods for assessing low pressure and high-pressure collection system components.

- Vulnerability Assessment: Consider system risk and resilience for dealing with natural hazards, security, and emergency preparedness based on current condition and historical CIWQS data.

- Effect of Emma Woods State Park RV addition project or any other pending developments on force main capacity.

- Desktop review of residential single source pump station to replace STEP. Determine any potential for extending low pressure system to reduce the infrastructure related to the high-pressure system (e.g. can a lift station be removed if the low-pressure system was improved and expanded?)

- Determine recommendations for improving safety for staff (e.g. can lift stations be modified or replaced to eliminate drywells? etc.)

- Asset Management Implementation Plan (AMIP) Framework: Develop a roadmap to lay the groundwork for an AMIP including goals, stakeholders, and timeline based on the current state of the business.

**Phase 2 – In-Depth Assessment and Project Recommendations:** Based on the results of Phase 1, complete additional evaluations to identify near- and long-term project with the following tasks:

- In-Depth Condition Assessment: Continuation of field activities, including more in-depth evaluations (i.e., concrete/steel testing, electromagnetic or other methods) to verify Phase 1 results and identify additional project recommendations.

- Capacity Assessment: Update and/or establish hydraulic modeling to address low pressure collection system capacity for current service area customers as well as planned growth (e.g. Emma Wood State Park RV expansion).

- Regulatory and Discharge Agency Compliance Review: Review adherence to current and proposed federal, state, and local regulations. Field activities may include water quality sampling.

- Resources Assessment: Evaluate staffing levels, training programs, standard operating procedures, and SCADA/instrumentation and controls to maintain high levels of service and operation.

- AMIP Development: Define how asset management will be implemented at County Public Works including level of service targets, risk management, and a prioritization approach for projects.

- In-depth assessment of Step System replacement with a more efficient and modern low-pressure system expansion with the possibility of moving sewage via low pressure between communities and possibly decommissioning any antiquated transfer lift stations if no longer needed.

**Phase 3 - Prioritized CIP and Financial Planning**: Refining and prioritizing potential CIPs identified from the recommendations in Phase 2 and developing a financial plan to support implementation supported by the following activities:

- CIP Roadmap: An action plan to close the gaps identified in the gap assessment informed by the various assessments and reviews. The CIP roadmap is a prioritized, multi-year plan for capital projects for long-term reliability.

- Cost of Service: A financial plan to support the CIP that will analyze the operational costs, capital improvement needs, and customer base to develop a rate structure for financial sustainability.

- Asset Management Plan: A comprehensive strategy for addressing the gaps identified in Phase 1 and managing assets throughout their lifecycle including the documentation of management strategies and the CIPs.

**Phase 4 – Implementation:** Transition from planning and budgeting to rehabilitation or replacement of wastewater infrastructure through:

- Public Education Marketing Support for increasing reserves

- Design and Engineering

- Procurement and Bidding
- Construction and Project Management

## SECTION III - SUBMISSION OF STATEMENT OF QUALIFICATIONS

### *TEAM QUALIFICATIONS*

Team qualifications for this effort include:

- At least 1 Institute of Asset Management (IAM) certified staff member.
- Have conducted at least 2 IAM gap assessments within last five years.
- Have capability to collect condition assessment digitally and in a format to facilitate integration with the County's CMMS software.
- Have at least 1 NASSCO PACP certified staff member.
- Have at least one team member that is a certified SCADA application developer.
- Team should show a minimum of 7 years experience developing asset management implementation plans.
- Asset management lead should be a registered professional engineer in CA.
- Team should show 10 years' experience developing financial plans and rate studies and completed at least 5 rate study projects in CA.
- Team needs to have completed recent low pressure sewer conversion projects and force main projects
- Team should demonstrate experience in directing alternative non-destructive sewer force main condition assessment methodologies

### *STATEMENT OF QUALIFICATIONS INSTRUCTIONS*

By submitting a SOQ, the firm represents that they have thoroughly examined and become familiar with the Scope of Consultant Services outlined in this RFQ and that they are capable of performing the work to achieve the County's objectives.

All respondents are required to submit the information detailed below. Responses shall be organized and presented in a professional manner to assist in reviewing and scoring. Responses should be presented in appropriate detail to thoroughly respond to the requirements and expected services described herein.

For any technical or administrative questions, please contact the Agency Project Manager, Arturo Aseo. Phone: (805) 378-3015 Email: **arturo.aseo@ventura.org**

### *STATEMENT OF QUALIFICATIONS ORGANIZATION AND CONTENT*

The following information shall be included in the SOQ:

1. A letter of transmittal indicating the firm's interest in providing the service and any other information that would assist the Agency in making a selection. Include the name, address,

telephone number, and email address of the person(s) to be contacted for further information or clarification.

2. List of similar assignments completed over the past five (5) years.

3. Overall approach to addressing the needs of the Agency, understanding of the specific project and expectations, and discussion of staff availability and capacity to respond to Agency requests for assistance in a timely manner.

4. Company background information and supporting narrative describing the roles and responsibilities, and related experience of each person proposed to support this project.

Please limit submissions to a maximum of ten (10) single-sided 8½x11 pages, excluding personnel resumes. Additional information may be submitted in the form of attachments

Expected Consultant fees will not be a part of the evaluation process. Please **do not** include any pricing or schedule of fees with your submittal.

## SECTION IV – EVALUATION AND SELECTION

### *EVALUATION CRITERIA*

The following factors will be considered by the Agency when evaluating the SOQ:

1. Accuracy, overall quality, thoroughness, and responsiveness to the County's requirements as summarized herein.

2. The qualifications and experience of the firm, the designated account representative, and other key personnel and sub-consultants assigned to the project.

3. Successful performance of similar work on other projects.

4. Overall approach to providing the consultant services requested.

5. Firm's plan to meet the Agency's goals and expectations of the project.

### *SELECTION PROCESS*

Selection by the Agency for professional services is made based on demonstrated competence and on the professional qualifications necessary for the satisfactory performance of the services required, in accordance with Government Code 2425 and County Resolution of November 1998.

The Agency reserves the right to reopen the qualification process to other interested Consultants if it is determined that the number of respondents to the RFQ is insufficient to support the selection process. If the Agency elects to reopen the qualification process, Consultants that have already submitted their qualifications need not submit a second SOQ. If the qualification process is reopened, the Agency will use the same standards and criteria to evaluate the merits of the additional applicants.

The Agency's Screening Committee will review and score the SOQ received by the submittal deadline to determine which firm best meets the evaluation criteria and is best qualified to perform the work. Consultants will be ranked in the order of their qualification evaluation scores. Interviews may or may not be conducted at the sole discretion of the Agency.

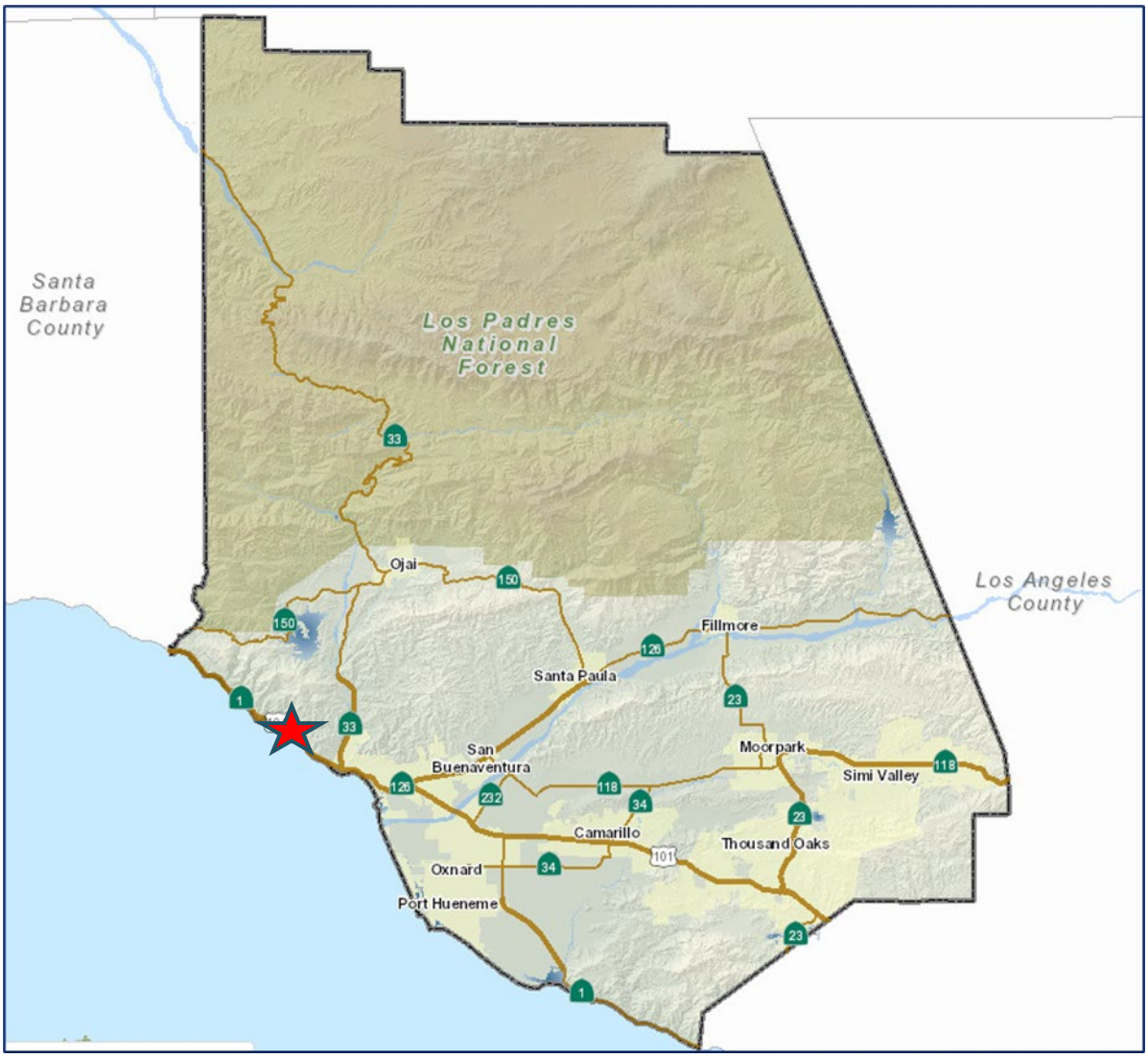
This solicitation does not commit the Agency to award a contract or to pay any costs incurred in the preparation of an SOQ in response to this request. All submittals in response to this RFQ shall become the property of the County. The Agency reserves the right to accept or reject any or all SOQs received as a result of this request, to negotiate with the selected respondents, to extend the contract for an additional period, or to cancel in part or in its entirety the RFQ, if it is in the best interests of the County to do so.

Upon selection of a preferred Consultant, the Agency will request a statement of work and fee proposal, broken down in sufficient detail to allow the Agency to determine appropriateness. Revisions to the fee proposal may be requested if the Agency determines it to be in its best interest.

The selected Consultant shall be required to execute a County Standard Professional Services Contract, a sample of which is shown in Attachment E. Any exceptions taken to the standard contract must be explained and detailed in the SOQ submittal.

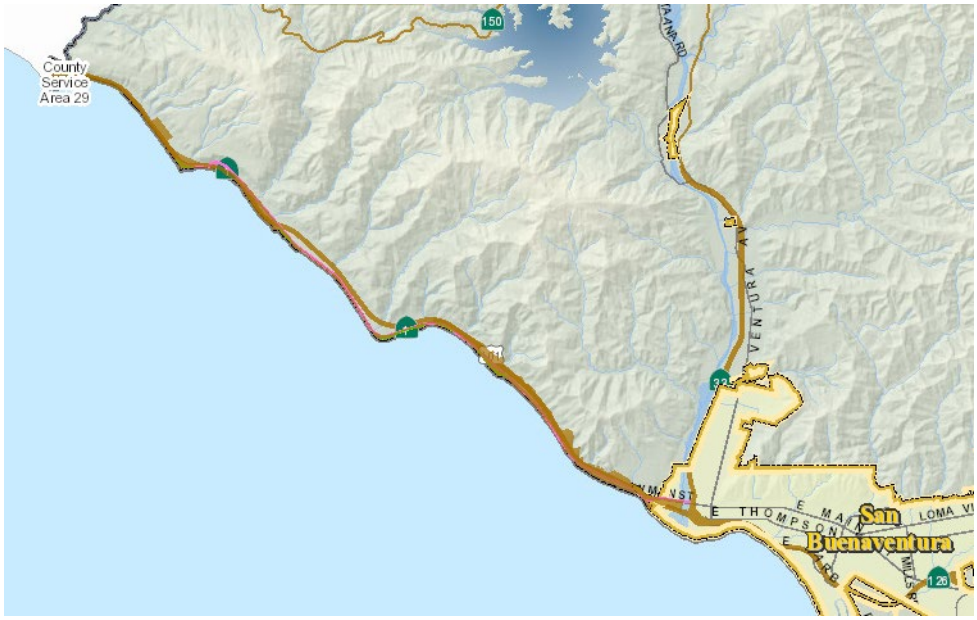
# Attachment A

# Location Map



# Attachment B

# Vicinity Map



# Attachment C

# 2018 CSA 29 Operational Observation Report
# Prepared by Phoenix Civil Engineering

# Attachment D

# 2018 CSA 29 Capital Improvement Plan
# Prepared by Phoenix Civil Engineering

# Attachment E

## Sample of the Standard Professional Services Contract

Phoenix Civil Engineering, Inc.

535 East Main Street Santa Paula, California 93060 805.658.6800
info@phoenixcivil.com www.phoenixcivil.com

Mr. Eric Keller, PE
Water and Sanitation Department
County of Ventura
6767 Spring Road.
Moorpark, CA 93021

April 9, 2018

**County of Ventura – County Service Area (CSA) 29 – North Coast – Operational Observations**

Dear Mr. Keller-

In November 2017, the County of Ventura Public Works Agency (County) retained Phoenix Civil Engineering, Inc., to prepare a capital improvement plan (CIP) for County Service Area 29 also called North Coast. County Service Area (CSA) 29 or North Coast is a collection of four distinct coastal neighborhoods that are described below in more detail. A separate report was prepared regarding the CIP task of the project. This document lists the operational issues/concerns that I have related to the existing North Coast wastewater system.

# System Issues

There are issues with the North Coast system. For ease, the analysis is divided into the following groups: interceptor tanks, control panels, pump stations, piping networks. The main consideration in the analysis is that modifications have been made over the last 35 years as parcels were developed or the original system had failures necessitating replacement.

## *Interceptor Tanks*

The system concept is to provide for storage of the wastewater from the residences and pump it to a common point from there. These tanks and the equipment contained within are the demarcation point for the County of Ventura responsibility according to VRSD operations staff.

There are approximately 15 original interceptor tanks that have been replaced since the original installation. New tanks consist of unlined concrete tank construction materials. Some of the original septic tanks have been left in service as interim gravity storage upstream of the interceptor tanks. In addition, there are numerous instances where multiple residences are connected to one interceptor tank. The groupings are sometimes across parcels or sometimes multiple individual residences located on one parcel.

### Issues

The issues with the interceptor tanks are: age, restricted access, inconsistent replacement standards, location on the parcels. No assessment of the interceptor tanks has been made on a consistent basis or program. There is one tank that has failed and it is covered by a metal road plate awaiting replacement. Tanks are located within driveways, under planters, beneath gravel, on the beach side of the residence, or

in a few instances Operations Staff have no idea where the tank is located. Several tanks are located at low points on the parcel meaning that inflow occurs at the tank causing elevated discharge flows to the City of Ventura. One tank was identified as a tank that floods anytime there is rainfall due to the allowed location on the parcel. There is no consistent requirement by the County for locating the tanks (new construction) or if replacements are being made what sort of at grade configuration is allowed/permitted. Fifty nine of the tanks have restricted access in the forms of: behind locked gates, behind locked gates or walls with no access code, underneath decks, underneath vehicles, underneath storage areas even under a jacuzzi. There is one tank located inside of an enclosed, locked garage in a residence. The tanks with access issues total 35% of the tanks in the entire system.

According to VRSD Operations Staff, the majority of the callouts for service/issues/overflows are related to the rental units. The full time residents know and understand how the interceptor tanks operate and do not flush items down the toilet that will clog or impair the pump.

## *Control Panels*

The control panels are located at or near the interceptor tanks. The control panels contain the power and the alarm notification devices for the individual interceptor tanks. The power is provided to the control panel internal equipment as well as the interceptor tank or grinder pump depending on the configuration at the parcel. The control panels are mounted on a pedestal or some parcels have the panel surface mounted to a wall. The control panels are connected in series so that they all share a common wiring network. The wires are connected to a revenue metering system which is located at a specific location within each community. The exception to this is in Mussel Shoals and Seacliff. Both of those communities have the power and alarm panels located at the community pump station site.

### Issues

The wiring of the system is original. Operations Staff have indicated that the original wiring is not located within conduits and the wiring is not capable of being replaced without excavation. In addition, there are no pull boxes located within the communities to intercept the wiring from the tanks. No comprehensive rewiring of the entire system within a community has been performed to date. The community of Seacliff has allowed seven homes to be wired to a power and control panel that is not part of the rest of the community. Some new construction has been allowed to locate the control panel within a trash enclosure located across the street from the residence. A few of the individual newer units have been allowed to not connect their power or control system to the rest of the community. The danger with these non connected systems is that there is no way for Operations Staff to be notified by the alarm system when there is a pump failure or issue that needs correction. The entire network is not connected to a SCADA (Supervisory Control and Data Acquisition) system. This means that Operations Staff have to drive to the particular community and either look for the red light flashing in the revenue metering location, the light flashing on the individual control panel or they stated that there have been times when

they have to go individually to each control panel and test circuit breakers to determine if that particular location is the one reporting the issue.

The location of each tank and control panel is completely random. There is no consistent location. Many are located at the Pacific Coast Highway side of the parcels; however, there are some that are located on the sides of the parcel or on the beach side of the parcel. A few instances are present where the control panel is completely inaccessible. One panel is located behind a mature tree which prevents the panel cover from being opened, one is located perpendicular to a property line fence. There is a panel in the fence that has to be flipped up and out of the way to access the panel. Almost all of the panels are located at ground height or within 2 feet of the ground. Many of the panels have no wiring codes, identification or wiring diagrams. The coating of the panels has failed in many places and the corrosion is completely evident.

## *Lift Stations*

The lift stations are packaged systems. Operations Staff have indicated that previously the electrical systems were removed from the interior of the lift stations and installed in cabinets above ground. This alleviated the confined space access to the lift stations just to check the cabinets. The lift station facilities contain a two pump configuration. There is a duty pump and a standby pump. All of the stations utilize progressive cavity pumps (positive displacement) for the booster pumps. The pumps range from 100 gpm to 250 gpm. In one lift station there is only one pump as the other pump is being serviced. There have not been any changes or modifications to the original lift station equipment with the exception of the replacement of the pumps.

### Issues

The age of the equipment (pumps, piping, wiring, appurtenances) is of concern. The stations have not been modified substantially since the electrical systems were brought above grade. The one exception is when the Solimar Beach lift station was relocated to a parcel adjacent to SR-1 from its location where it was closer to the beach. At many of the stations, abandoned cabinets have been left in place above grade as improvements were made. At Mussel Shoals in particular, the equipment is left onsite corroding in the weather. No removal of the equipment has been performed.

Operations Staff have been working on the pumps repairing them; however, no analysis has been performed to determine if the pump systems in place are still appropriate/adequate for the application. Hobson Park and Faria Park both have individual lift stations that pump directly into the common force main that runs from Seacliff to Faria Beach stations. It is not clear if the pumps at those two facilities are capable of overcoming the pressure of the Seacliff pumps when they are operating. Operations Staff have indicated that the pumps at Hobson have high pumping rates when there does not appear to be an increase in the use at the park. This could indicate that the pumps are operating and "dead heading" against the pressure of the larger station. At both of these facilities, the control panels are located within a pipe chase between the restrooms. Frequently, the pipe chase is filled with equipment and supplies for the snack bar

in the summer months. To access the panels, the Operations Staff have to move all of the equipment before they can reach the panel.

## *Piping Networks*

The piping networks are divided into the two systems. Piping from the interceptor tanks is captured and transported to the community lift station. The low pressure force main piping is constructed of ductile iron according to the record drawings. It ranges from 2 inches to 4 inches in diameter. The low pressure force main piping is located within the community streets or along the shoulder of Pacific Coast Highway (SR-1) in areas where there is only one row of residences between the coastline and SR-1. The high pressure force main piping is polyethylene sliplined inside of an existing 8 inch diameter welded steel pipeline. The polyethylene pipe ranges from 4 inches in diameter to 7 inches in diameter. The high pressure force main piping is located in the shoulder along the ocean side of SR-1.

### Issues

The piping is original and has not been replaced. Installed in 1983, the pipe system is 38 years old. The casing pipe for the high pressure system is of unknown age. It is not known if the polyethylene pipe installed as a sliplined system inside of the abandoned petroleum/gas pipeline is capable of being considered a stand alone pipe or if it requires the host casing to support it. There have been pipeline breaks along the alignment primarily in the high pressure system. It is known that at numerous drainage structures located underneath SR-1, the pipeline is located above the structure directly underneath the pavement section. This is particularly precarious as that is not considered sufficient burial depth for the pipeline without additional protective measures.

From approximately the entrance to Emma Wood State Beach (pipeline station 336+08.07) it is unknown where the pipeline is located. North of this station, the location of the pipeline is generally known. No definitive pipeline locating project has been conducted. There are no pipeline markers along the alignment warning of its location. South of Station 336+08.07 the pipeline alignment leaves SR-1 and is thought to be located adjacent to the Union Pacific Rail Road (UPRR) tracks. It remains west of the track facilities until it gets to Emma Wood Group Camp (pipeline station 425+69.6) where it crosses back under US 101 and is located west of Main Street through the Rincon RV Park Campground. From the record drawings, the pipeline is shown to be directly underneath approximately 40 feet of fill at the freeway crossing. There is an exposed section of the pipeline in the landscaped hillside at the RV Park and it can be seen in the Main Street bridge soffit. This means that almost 2 miles of the alignment are at an unknown location.

The condition of the pipelines in either network are not known. The marine environment along the coastline is problematic for metallic pipelines. Neither pipeline network (low pressure/high pressure) has ever been cleaned internally using pipeline pigging devices/technologies.

## *Discharge Manhole*

At the terminal location of the force main piping, the discharge enters a manhole and sampling station structure. The flow discharges into a rectangular structure where it flows by gravity into the City of Ventura collection system. There is a section of the structure that has concrete stairs that lead to an area where point of discharge sampling is performed for compliance issues before the flow enters the City of Ventura system.

## Issues

It was decided in recent years to pump air into the force main piping network to keep the wastewater from becoming anaerobic or septic so when it enters the discharge manhole it is not out of compliance. This injected air creates large air pockets in the pipeline which are released in the discharge manhole. The addition of the air mixed with the hydrogen sulfide present in the structure has caused the creation of sulfuric acid which has disintegrated the structure concrete and exposed the underlying aggregate within the walls. Left uncorrected, the structure will eventually become unstable and failure of the walls will result.

The issues identified above represent my professional opinion based on the above ground observations that I performed with VRSD staff

Sincerely,

Jon Turner, PE
Principal Engineer

Buried Tank on Beach in Backyard. Arrow Shows Location


Control Panel Located Within Landscaping

Control Panel and Tank (Panel in Landscaping)

Control Panel Location – Access Location

Tank Located Behind Fence Under Jacuzzi

Control Panel Located on Property Line – Note Fence Panel Flap

Interceptor Tank Located Under 4 feet of Landscaping – Access Issue

Control Panel Location Adjacent to Mature Landscaping

Tank Buried Underneath Gravel – Unknown Location

Tank and Control Panel Located Behind the Fence – Access Issue


Control Panel Located Behind Gate and Underneath Trash Can


Control Panel Access Issue

Tank Located Under Sand Behind Locked Gate – No Gate Access Code

Example of Recently Replaced Control Panel Interior

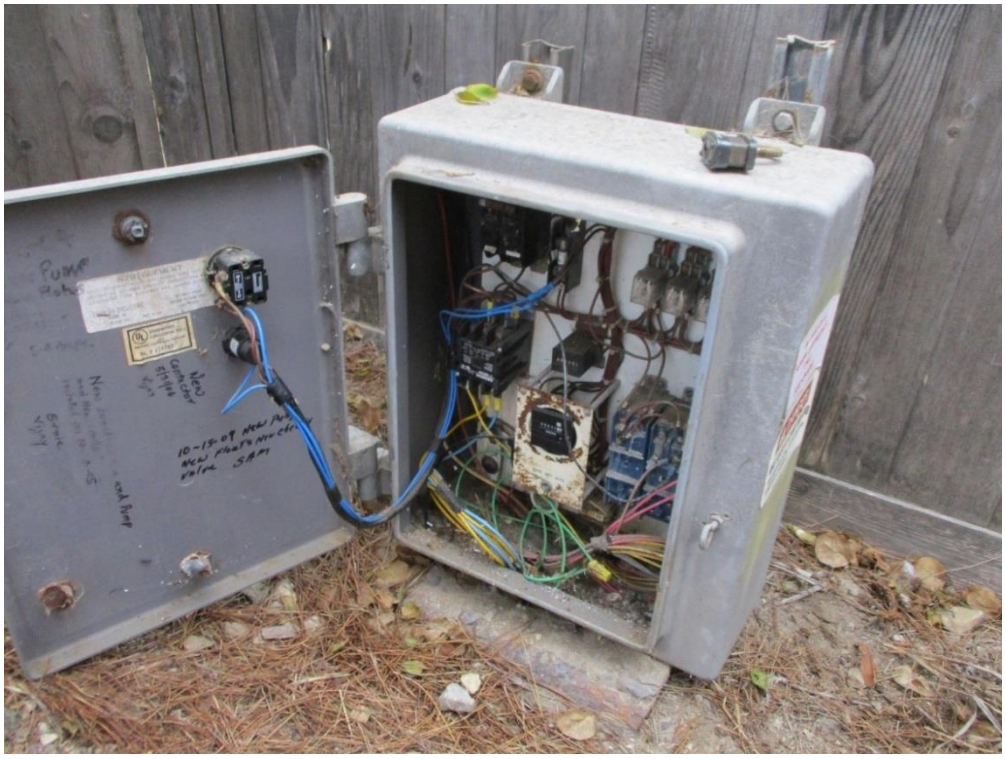

Control Panel Access Issue


Tank Located on Property Line Behind Locked Gate – Access Issue


Interceptor Tank Under Mature Landscaping

Tank Located Directly Under Exposed Soil Area – Note Proximity to Drainage Channel to Beach

Control Panel Access Issue



Typical Control Panel Interior Condition

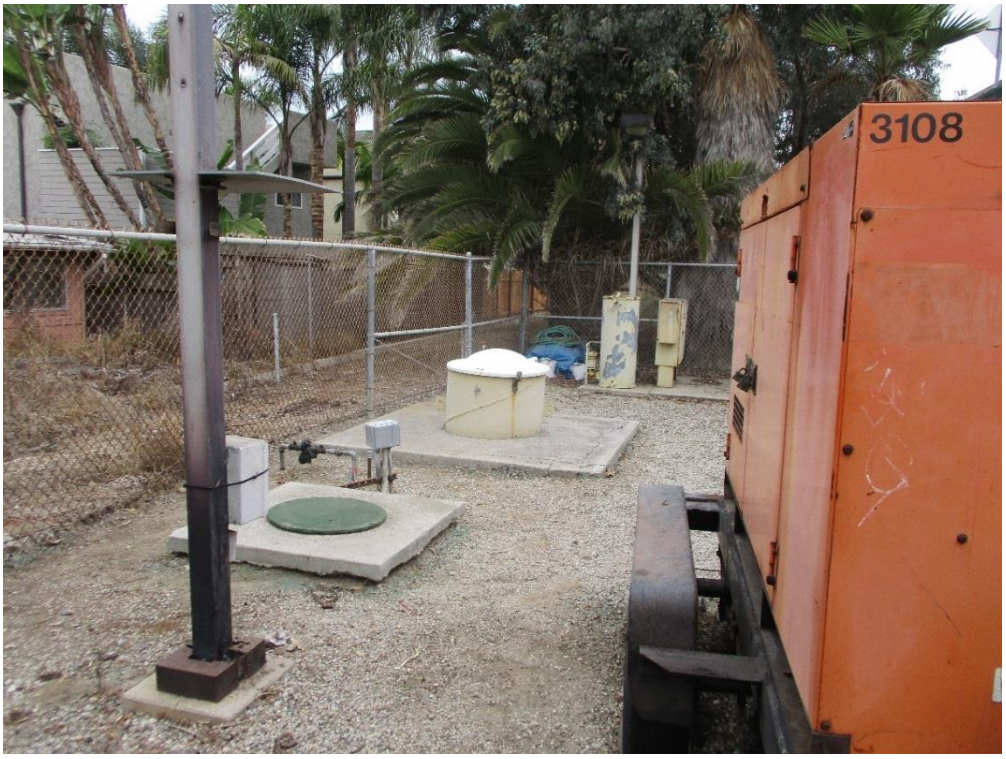
Interceptor Tank Interior Configuration From Above – Tank Located 35 feet from Shoreline

Interior of Interceptor Tank Equipment Arrangement

Control Panel Access Issue


Typical Control Panel and Tank Configuration


Mussel Shoals Lift Station Site from Street Looking North




Mussel Shoals Lift Station Site Overview

Abandoned Mussel Shoals Lift Station Cabinets and Generator

Mussel Shoals Control Panel Lineup

Mussel Shoals Lift Station Interior from Above

Interior of Mussel Shoals Lift Station

Example of Tank Access Issue due to Vehicles

Two Tanks Located Directly on Beach – Overflow Concern

Control Panel Cast into Block Fence

Tank Lid Located Under Potted Plant

Example of Access Issue due to Mature Landscaping

Example of Tank Buried Under Mature Landscaping


Seacliff Lift Station Overview

Seacliff Lift Station Interior


Control Panel Interior at Seacliff Lift Station


Hobson Park Control Panel in Pipe Chase

Faria Beach Lift Station Control Panel

Faria Beach Lift Station Interior

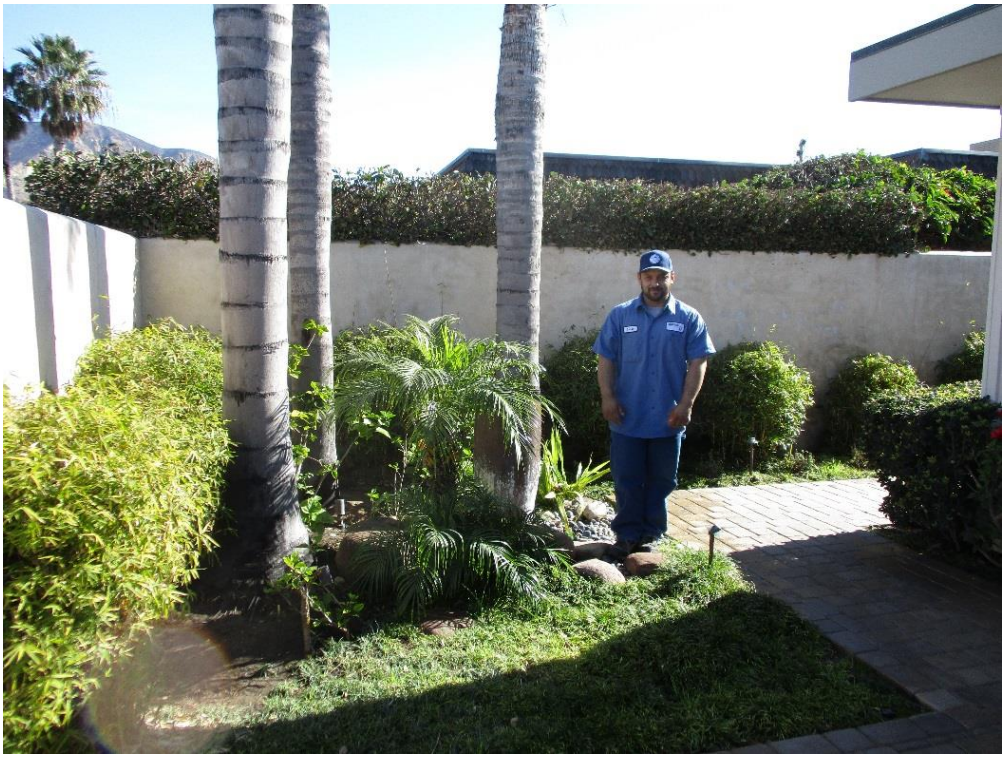

Faria Beach Lift Station Overview


Tank Located Behind Wall – No Access

Tank Located Behind Fence Between Houses – Floods When Rainfall Causes Runoff

Control Panel Located Behind Hydrant on Wall – Access Issue


Tank Location Under Landscaping – Lid Location Being Shown for Reference



Tank Buried Under Landscaping – Lid Location Being Shown for Reference

Solimar Beach Lift Station Interior

Force Main Alignment Trench from Emma Wood Beach Entrance Looking North

Exposed Force Main Piping in RV Park Campground

Force Main Piping Exposed Under Bridge (Right Side)

Force Main Piping Exposed on Left – No Protection

Peking Street Discharge Manhole Overview

Peking Street Discharge and Sampling Manhole – City of Ventura Demarcation Point

Phoenix Civil Engineering, Inc.

535 East Main Street Santa Paula, California 93060 805.658.6800
info@phoenixcivil.com www.phoenixcivil.com

Mr. Brian D'Anna
Public Works Agency
County of Ventura
800 S. Victoria Ave.
Ventura, CA 93009

April 8, 2018

**County of Ventura – Capital Improvement Plan – County Service Area (CSA) 29 – North Coast**

Dear Mr. D'Anna-

In November 2017, the County of Ventura Public Works Agency (County) retained Phoenix Civil Engineering, Inc., to prepare a capital improvement plan (CIP) for County Service Area 29 also called North Coast. County Service Area (CSA) 29 or North Coast is a collection of four distinct coastal neighborhoods that are described below in more detail. The CIP included in this report is based on a site review of the service area boundaries, documentation of the condition of equipment at the locations, discussions with the operations staff and a review of the original construction plans and specifications.

# Background

The North Coast area covers the residential communities along the Pacific Coast between the cities of Ventura and Carpinteria. The communities are: Mussel Shoals, Seacliff, Faria Beach, and Solimar Beach. These communities have sewer service and are not on septic systems. The County of Ventura undertook a capital improvement project in 1980 which converted the beach communities from septic tanks, into a pressurized force main collection network that collects the residential wastewater flows into STEP tanks which contain a submerged pump and associated piping. From each residential tank, the flow is discharged into a common force main pipeline that typically empties the flow into a neighborhood lift station. The pumps stations discharge the sewage southerly to the City of Ventura in a series arrangement. For example, wastewater from a house in Mussel Shoals (northernmost neighborhood) will be pumped to the Mussel Shoals lift station in a small diameter, low pressure force main pipeline. That lift station will pump it to the Seacliff lift station in a high pressure force main pipeline. Then it will go to the Faria Beach lift station, the Solimar Beach lift station and eventually the flow is discharged to the City of Ventura at the Peking Street manhole. It is at that location where the wastewater is introduced to the city's collection system through a gravity connection. The County of Ventura contracts with Ventura Regional Sanitation District (VRSD) for operation and maintenance of the entire North Coast system. Figure 1 shows the overall location of the different communities along the coastline.

Originally, the individual designs included a holding tank with a submersible pump, a power supply and control panel for the tank with an alarm and the discharge piping. The holding tank is called a STEP tank or Septic Tank Effluent Pump tank. It is understood that the modifications made to the residences in 1980 involved disconnection/elimination of the original septic tank and rerouting the wastewater piping from the house structure to the new STEP tank system. In some cases, the septic tank was left in place as a "wide spot in the pipeline" due to reasons that are not clear. That tank is the responsibility of the parcel

owner. STEP tanks were constructed of precast concrete and consisted of a round tank section with a flat bottom and top. A 4- or 6-inch diameter pipe inlet from the residence was connected on one end and the submersible discharge pump was located on the other end with an access manhole. The inlet side of the tank contained a riser pipe to the ground surface and tee configuration at the inlet so the tank level could be determined and if there was a blockage at the inlet, it could be accessed from the ground surface. The tanks varied in size from 750 gallon to 3000 gallons. The dimensions from the construction record drawings are shown in Table 1.

**Table 1: Existing STEP Tank Sizing**

| Nominal Tank Volume (gallons) | Tank Height (ft) | Tank Length (ft) | Tank Width (ft) |
|---|---|---|---|
| 750 | 4'-11" | 8 | 5'-3" |
| 1000 | 5'-3" | 8 | 5'-11" |
| 1250 | 5'-11" | 8 | 5'-11" |
| 1500 | 5'-11" | 8 | 6'-11" |
| 2000 | 5'-3" | 16 | 5'-11" |
| 3000 | 5'-11" | 16 | 6'-11" |

Table Note:

Tank sizing shown on Sheet C-31 of North Coast Wastewater Facilities record drawings, 6/20/1983.

According to County Water and Sanitation Department staff, the County of Ventura has an easement that covers the location of the STEP tank.

The pumps are controlled through a wall or pedestal mounted panel. The panel also contains provisions for documenting an alarm when the individual system experienced an issue. The power and alarm system were connected all together and wired back to a central location which was either the community lift station site or one of the revenue meters located at various locations within the communities. As mentioned previously, the individual pumps would discharge into a low pressure force main common pipe that would transport the wastewater to a community lift station. From that location, a high pressure force main would transport the collected wastewater to the next community central lift station wet well. The low pressure force main piping is constructed of ductile iron according to the record drawings. It ranges from 2 inches to 4 inches in diameter. The low pressure force main piping is located within the community streets or along the shoulder of Pacific Coast Highway (SR-1) in areas where there is only one row of residences between the coastline and SR-1. The high pressure force main piping is polyethylene sliplined inside of an existing 8 inch diameter welded steel pipeline. The polyethylene pipe ranges from 4

inches in diameter to 7 inches in diameter. According to operations staff the 8-inch diameter welded steel pipeline was previously used as a petroleum/gas transmission pipeline. The four community lift stations are located below grade. All are packaged lift stations. Faria Beach and Solimar Beach facilities are larger than Mussel Shoals and Seacliff. There are three campground/day use areas that have larger STEP tanks and pump directly into the high pressure force main system. Those locations are: Hobson Beach, Faria Beach and Ventura River RV Park.

Figure 2 shows the locations of the tanks and the parcels that are served as well as the lift station locations and the high pressure force main pipeline located near the communities. Figure 3 shows typical installations of the control panels, STEP tanks, lift stations, discharge manhole and the force main alignment in one location.

# System Issues

There are issues with the North Coast system. For ease, the analysis is divided into the following groups: STEP tanks, control panels, lift stations, piping networks. The main consideration in the analysis is that modifications have been made over the last 40 years as parcels were developed or the original system had failures necessitating replacement.

## *STEP Tanks*

The system concept is to provide for storage of the wastewater from the residences and pump it to a common point from there. These tanks and the equipment contained within are the demarcation point for the County of Ventura responsibility according to VRSD operations staff. The tank statistics are shown in Table 2.

**Table 2: STEP Tanks by Community**

| Community | STEP Tanks | Grinder Pump Tanks | Total Tanks By Community | Parcels |
|---|---|---|---|---|
| Mussel Shoals | 22 | 11 | 33 | 40 |
| Seacliff | 25 | 1 | 26 | 49 |
| Faria Beach | 59 | 15 | 74 | 130 |
| Solimar Beach | 38 | 8 | 46 | 70 |
| **Total All Systems** | **144** | **35** | **179** | **289** |

Table Notes:

Parcels are shown in the table. Multiple addresses or structures may exist on one parcel, therefore, it is important to distinguish between the parcels and the individual residences.

There are approximately 15 original STEP tanks that have been replaced since the original installation. New tanks consist of unlined concrete tank construction materials. Some of the original septic tanks have been left in service as interim gravity storage upstream of the STEP tanks. In addition, there are numerous instances where multiple residences are connected to one STEP tank. The groupings are sometimes across parcels or sometimes multiple individual residences located on one parcel.

### Issues

The issues with the STEP tanks are: age, restricted access, inconsistent replacement standards, location on the parcels. No assessment of the STEP tanks has been made on a consistent basis or program. Tanks are located generally within driveways on the street side of the structure. There are some instances where the tank is located on the beach side of the residence. There are approximately eight tanks that are located at low points on the parcel meaning that inflow occurs at the tank causing elevated discharge flows to the City of Ventura.

### Recommendation

A tank assessment program is recommended for the STEP tanks to determine a replacement or rehabilitation program if the tank construction is still in a condition that can be repaired. Low lying tanks should be raised as part of a capital improvement program or further assessment made to determine a remedy to potential flooding. It is recommended that the County determine a consistent requirement for locating the tanks (new construction) or if replacements are being made what sort of at grade configuration is allowed/permitted.

## *Control Panels*

The control panels are located at or near the STEP tanks. The control panels contain the power and the alarm notification devices for the individual STEP tanks. The power is provided to the control panel internal equipment as well as the STEP tank or grinder pump depending on the configuration at the parcel. The control panels are mounted on a pedestal or some parcels have the panel surface mounted to a wall. The control panels are connected in series so that they all share a common wiring network. The wires are connected to a revenue metering system which is located at a specific location within each community. The exception to this is in Mussel Shoals and Seacliff. Both of those communities have the power and alarm panels located at the community lift station site.

### Issues

The wiring of the system is original. In addition, there are no pull boxes located within the communities to intercept the wiring from the tanks. No comprehensive rewiring of the entire system within a community has been performed to date. The community of Seacliff has allowed seven homes to be wired to a power and control panel that is not part of the rest of the community. Some new construction has been allowed to locate the control panel within a trash enclosure located across the street from the residence. A few of the individual newer units have been allowed to not connect their power or control

system to the rest of the community. The entire network is not connected to a SCADA (Supervisory Control and Data Acquisition) system. Almost all of the panels are located at ground height or within 2 feet of the ground. Many of the panels have no wiring codes, identification or wiring diagrams. The coating of the panels has failed in many places and the corrosion is completely evident.

### Recommendation

It is recommended that a SCADA system (wired or wireless) be implemented in the communities to better monitor the control panels. A complete assessment of all of the control panels should be performed. Standardization of the control panel layout and sizing should be performed and a replacement program implemented.

## *Lift Stations*

The lift stations are packaged systems. Operations Staff have indicated that previously the electrical systems were removed from the interior of the lift stations and installed in cabinets above ground. This alleviated the confined space access to the lift stations just to check the cabinets. The lift station facilities contain a two pump configuration. There is a duty pump and a standby pump. All of the stations utilize progressive cavity pumps (positive displacement) for the booster pumps. The pumps range from 100 gpm to 250 gpm. In one lift station there is only one pump as the other pump is being serviced. There have not been any changes or modifications to the original lift station equipment with the exception of the replacement of the pumps.

### Issues

The age of the equipment (pumps, piping, wiring, appurtenances) is of concern. The stations have not been modified substantially since the electrical systems were brought above grade. The one exception is when the Solimar Beach lift station was relocated to a parcel adjacent to SR-1 from its location where it was closer to the beach. At many of the stations, abandoned cabinets have been left in place above grade as improvements were made. At Mussel Shoals in particular, the equipment is left onsite corroding in the weather. No removal of the equipment has been performed.

Operations Staff have been working on the pumps repairing them; however, no analysis has been performed to determine if the pump systems in place are still appropriate/adequate for the application. Hobson Park and Faria Park both have individual lift stations that pump directly into the common force main that runs from Seacliff to Faria Beach stations. It is not clear if the pumps at those two facilities are capable of overcoming the pressure of the Seacliff pumps when they are operating. Operations Staff have indicated that the pumps at Hobson have high pumping rates when there does not appear to be an increase in the use at the park. This could indicate that the pumps are operating and "dead heading" against the pressure of the larger station.

## Recommendation

It is recommended that the abandoned equipment be removed from the different lift station sites to eliminate confusion about what equipment is currently in operation. A pump analysis should be performed at Faria and Hobson campground pumps to ensure that they are capable of pumping into the high pressure force main pipeline when it is operational. A lift station analysis should be performed to determine a long term capital improvement program to replace the aging lift stations.

# *Piping Networks*

The piping networks are divided into the two systems. Piping from the STEP tanks is captured and transported to the community lift station. The low pressure force main piping is constructed of ductile iron according to the record drawings. It ranges from 2 inches to 4 inches in diameter. The low pressure force main piping is located within the community streets or along the shoulder of Pacific Coast Highway (SR-1) in areas where there is only one row of residences between the coastline and SR-1. The high pressure force main piping is polyethylene sliplined inside of an existing 8 inch diameter welded steel pipeline. The polyethylene pipe ranges from 4 inches in diameter to 7 inches in diameter. The high pressure force main piping is located in the shoulder along the ocean side of SR-1.

## Issues

The piping is original and has not been replaced. Installed in 1983, the pipe system is 35 years old. The casing pipe for the high pressure system is of unknown age. It is not known if the polyethylene pipe installed as a sliplined system inside of the abandoned petroleum/gas pipeline is capable of being considered a stand alone pipe or if it requires the host casing to support it. There have been pipeline breaks along the alignment primarily in the high pressure system. It is known that at numerous drainage structures located underneath SR-1, the pipeline is located above the structure directly underneath the pavement section. This is particularly precarious as that is not considered sufficient burial depth for the pipeline without additional protective measures.

From approximately the entrance to Emma Wood State Beach (pipeline station 336+08.07) it is unknown where the pipeline is located. North of this station, the location of the pipeline is generally known. No definitive pipeline locating project has been conducted. There are no pipeline markers along the alignment warning of its location. South of Station 336+08.07 the pipeline alignment leaves SR-1 and is thought to be located adjacent to the Union Pacific Rail Road (UPRR) tracks. It remains west of the track facilities until it gets to Emma Wood Group Camp (pipeline station 425+69.6) where it crosses back under US 101 and is located west of Main Street through the Rincon RV Park Campground. From the record drawings, the pipeline is shown to be directly underneath approximately 40 feet of fill at the freeway crossing. There is an exposed section of the pipeline in the landscaped hillside at the RV Park and it can be seen in the Main Street bridge soffit. This means that almost 2 miles of the alignment are at an unknown location.

The condition of the pipelines in either network are not known. The marine environment along the coastline is problematic for metallic pipelines. Neither pipeline network (low pressure/high pressure) has ever been cleaned internally using pipeline pigging devices/technologies.

### Recommendation

It is recommended that a comprehensive pipeline locating program be performed to positively identify the high pressure force main pipeline along its alignment. A pipeline pigging program would also provide a cleaning of the pipeline interior. Access points along the pipeline should be installed to provide access in an emergency in case temporary pumping was needed.

Areas where the pipeline has become exposed should be either buried and protected in place or supported to carry the weight of the pipeline and not create unanticipated loading of the pipeline joints.

## *Discharge Manhole*

At the terminal location of the force main piping, the discharge enters a manhole and sampling station structure. The flow discharges into a rectangular structure where it flows by gravity into the City of Ventura collection system. There is a section of the structure that has concrete stairs that lead to an area where point of discharge sampling is performed for compliance issues before the flow enters the City of Ventura system.

### Issues

It was decided in recent years to pump air into the force main piping network to keep the wastewater from becoming anaerobic or septic, so when it enters the discharge manhole, it is not out of compliance. This injected air creates large air pockets in the pipeline which are released in the discharge manhole. The addition of the air mixed with the hydrogen sulfide present in the structure has caused the creation of sulfuric acid which has disintegrated the structure concrete and exposed the underlying aggregate within the walls. Left uncorrected, the structure will eventually become unstable and failure of the walls will result.

### Recommendation

This manhole structure should be drained, cleaned and an assessment made as to the condition of the structure. From the limited view above, the structure may not be a candidate for lining, but replacement may be the only option.

# Security

The control cabinets have a padlock on the panel doors. The lift station sites are secured with chain link fencing. STEP tanks are not secured and can be opened by unauthorized personnel.

# Phasing

Due to the magnitude of the scope of work, it is recommended that phasing of the replacement/upgrades be performed in phases. One potential phasing concept would be to perform the improvements based on individual communities (four potential phases or five if Faria Beach was divided into two phases as it is the largest of the communities).

The high pressure pipeline could be a final phase of the improvements or it could also be divided into phases stretching from community to community: Mussel Shoals to Seacliff, Seacliff to Faria Beach, Faria Beach to Solimar Beach and Solimar Beach to the City of Ventura.

# Right of Way

The tanks are located on private parcels. The County maintains an access easement on the parcels. It is assumed that the County has easements for the pipelines and conduits that are located within the individual communities and along State of California right of way.

# Conceptual Opinion of Probable Construction Cost

An Opinion of Probable Construction Cost (OPCC) was prepared for the improvements that are recommended as part of the system wide analysis. The improvements are shown collectively and then divided into a typical 5 year Capital Improvement Program. Table 3 is a summary of the total capital costs for the project improvements. Tables 4 through 7 reflect the recommended improvements and associated costs on a 5 year annual basis.

**Table 3: System Wide Capital Improvement Summary**

| Item | Description | Quantity | Unit | Total Price Range |
|---|---|---|---|---|
| 1 | STEP Tank Assessment | 1 | LS | $15,000 to $25,000 |
| 2 | STEP Tank Replacements | 1 | LS | $3,500,000 to $3,750,000 |
| 3 | Control Panel Replacements | 1 | LS | $1,200,000 to $1,375,000 |
| 4 | Wiring Replacements | 1 | LS | $2,750,000 to $3,000,000 |
| 5 | Mussel Shoals Lift Station Upgrades | 1 | LS | $150,000 to $250,000 |
| 6 | Seacliff Lift Station Upgrades | 1 | LS | $150,000 to $250,000 |
| 7 | Faria Beach Lift Station Upgrades | 1 | LS | $200,000 to $300,000 |
| 8 | Solimar Beach Lift Station Upgrades | 1 | LS | $250,000 to $350,000 |
| 9 | High Pressure Pipeline Assessment and Cleaning | 1 | LS | $75,000 to $100,000 |
| 10 | Electrical System Corrections | 1 | LS | $35,000 to $45,000 |
| 11 | Discharge Manhole Lining | 1 | LS | $25,000 to $35,000 |
| 12 | Pipeline Locating | 1 | LS | $25,000 to $50,000 |
| 13 | SCADA Upgrades | 1 | LS | $550,000 to $750,000 |
| | Subtotal | | | $8,925,000 to $10,280,000 |
| | Contingency | 15% | | $1,340,000 to $1,542,000 |
| | Overhead/Profit/Bonds/Insurance | 20% | | $1,785,000 to $2,056,000 |
| | Design | 10% | | $893,000 to $103,000 |
| | Construction Management | 8% | | $715,000 to $822,000 |
| | Total | | | $13,658,000 to $14,803,000 |

Notes:

STEP tank costs are based on replacement of the STEP tanks with a self-contained pump system such as E/One systems. Control panel replacements are based on replacement of 179 panels with a new cabinet. SCADA upgrades are a separate line item.
Wiring replacement is associated with the replacement of the wiring systems from the individual STEP tanks to the common revenue meter or lift station location depending on community.
Mussel Shoals Lift Station Upgrades is the cost associated with the installation of replacement pump equipment and internal dry well rehabilitation. Wet well lining is included in this cost.
Seacliff, Faria Beach and Solimar lift station upgrades include the same equipment upgrades as Mussel Shoals.
High pressure pipeline assessment and cleaning includes costs to install an internal pipeline cleaning device (pig) and clean the high pressure force main from Mussel Shoals to the Peking Street manhole location.
Electrical system corrections costs include the work associated with linking the private systems that are not connected to the common alarm system similar to the rest of the STEP tank control panel systems.
Discharge manhole lining includes the cost for a condition assessment, cleaning, preparation and lining of the structure to reduce the effects of corrosion on that structure.
Pipeline locating includes the costs associated with positively locating, documenting, and marking the existing high pressure pipeline location along the entire length.
SCADA upgrades includes the cost for a web based SCADA portal system for every STEP tank.
Contingency is estimated at 15%, but should reduce once design is completed. It is based on the subtotal of the project.
Design and Construction Management percentages are industry accepted ranges and are based only on the subtotal of the project.

**Table 4: Year 1 – Capital Improvement Program (Assessments)**

| Item | Description | Quantity | Unit | Total Price Range |
|---|---|---|---|---|
| 1 | STEP Tank Assessment | 1 | LS | $15,000 to $25,000 |
| 2 | High Pressure Pipeline Assessment and Cleaning | 1 | LS | $75,000 to $100,000 |
| 3 | Discharge Manhole Lining | 1 | LS | $25,000 to $50,000 |
| 4 | Pipeline Locating | 1 | LS | $25,000 to $50,000 |
| | Subtotal | | | $140,000 to $225,000 |
| | Contingency | 15% | | $21,000 to $34,000 |
| | Overhead/Profit/Bonds/Insurance | 20% | | $28,000 to $45,000 |
| | Design | 10% | | $14,000 to $23,000 |
| | Construction Management | 8% | | $12,000 to $18,000 |
| | Total | | | $215,000 to $345,000 |

Notes:

STEP tank assessment involves opening each tank, photo documentation, and assessment of the tank interior for signs of corrosion or imminent failure.
High pressure pipeline assessment and cleaning includes retaining the professional services of a pipeline cleaning contractor to assess the cleaning of the force main.
Discharge manhole lining includes the assessment and the installation of the protective lining system.
Pipeline locating is assumed to include not only the physical determination of the pipeline, but also installation of at grade or above grade pipeline marking devices. As an option, the pipeline can be marked using a buried locating device placed at various locations along the alignment.
Contingency is estimated at 15%, but should reduce once design is completed. It is based on the subtotal of the project.
Design and Construction Management percentages are industry accepted ranges and are based only on the subtotal of the project.

**Table 5: Year 2 – Capital Improvement Program (Control Panel Replacements)**

| Item | Description | Quantity | Unit | Total Price Range |
|---|---|---|---|---|
| 1 | Control Panel Replacements | 1 | LS | $1,200,000 to $1,375,000 |
| | Subtotal | | | $1,200,000 to $1,375,000 |
| | Contingency | 15% | | $180,000 to $206,000 |
| | Overhead/Profit/Bonds/Insurance | 20% | | $240,000 to $275,000 |
| | Design | 10% | | $120,000 to $138,000 |
| | Construction Management | 8% | | $96,000 to $110,000 |
| | Total | | | $1,836,000 to $2,104,000 |

Notes:

Replacement control panels are estimated to cost $7,000 each.
Contingency is estimated at 15%, but should reduce once design is completed. It is based on the subtotal of the project.
Design and Construction Management percentages are industry accepted ranges and are based only on the subtotal of the project.

**Table 6: Year 3 – Capital Improvement Program (Lift Station Upgrades)**

| Item | Description | Quantity | Unit | Total Price Range |
|---|---|---|---|---|
| 1 | Mussel Shoals Lift Station Upgrades | 1 | LS | $150,000 to $250,000 |
| 2 | Seacliff Lift Station Upgrades | 1 | LS | $150,000 to $250,000 |
| 3 | Faria Beach Lift Station Upgrades | 1 | LS | $200,000 to $300,000 |
| 4 | Solimar Beach Lift Station Upgrades | 1 | LS | $250,000 to $350,000 |
| 5 | Electrical System Corrections | 1 | LS | $35,000 to $45,000 |
| 6 | SCADA Upgrades | 1 | LS | $550,000 to $750,000 |
| | Subtotal | | | $1,335,000 to $1,945,000 |
| | Contingency | 15% | | $200,000 to $292,000 |
| | Overhead/Profit/Bonds/Insurance | 20% | | $267,000 to $389,000 |
| | Design | 10% | | $134,000 to $195,000 |
| | Construction Management | 8% | | $107,000 to $156,000 |
| | Total | | | $2,143,000 to $2,977,000 |

Notes:

Lift station assessment is included in the cost.
Electrical system corrections are related to areas in the communities where specific addresses are not electrically consistent with the remaining system.
SCADA upgrades includes the cost for a web based SCADA portal system for every STEP tank.
Contingency is estimated at 15%, but should reduce once design is completed. It is based on the subtotal of the project.
Design and Construction Management percentages are industry accepted ranges and are based only on the subtotal of the project.

**Table 7: Year 4 – Capital Improvement Program (Electrical and SCADA Upgrades)**

| Item | Description | Quantity | Unit | Total Price Range |
|---|---|---|---|---|
| 1 | Wiring Replacements | 1 | LS | $2,750,000 to $3,000,000 |
| | Subtotal | | | $2,750,000 to $3,000,000 |
| | Contingency | 15% | | $413,000 to $450,000 |
| | Overhead/Profit/Bonds/Insurance | 20% | | $550,000 to $600,000 |
| | Design | 10% | | $275,000 to $300,000 |
| | Construction Management | 8% | | $220,000 to $240,000 |
| | Total | | | $4,208,000 to $4,590,000 |

Notes:

Contingency is estimated at 15%, but should reduce once design is completed. It is based on the subtotal of the project.
Design and Construction Management percentages are industry accepted ranges and are based only on the subtotal of the project.

**Table 8: Year 5 – Capital Improvement Program (STEP Tank Replacements)**

| Item | Description | Quantity | Unit | Total Price Range |
|---|---|---|---|---|
| 1 | STEP Tank Replacements | 1 | LS | $3,500,000 to $3,750,000 |
| | Subtotal | | | $3,500,000 to $3,750,000 |
| | Contingency | 15% | | $525,000 to $563,000 |
| | Overhead/Profit/Bonds/Insurance | 20% | | $700,000 to $750,000 |
| | Design | 10% | | $350,000 to $375,000 |
| | Construction Management | 8% | | $280,000 to $300,000 |
| | Total | | | $5,355,000 to $ 5,738,000 |

Notes:

Contingency is estimated at 15%, but should reduce once design is completed. It is based on the subtotal of the project.
Design and Construction Management percentages are industry accepted ranges and are based only on the subtotal of the project.

# Conclusion

The North Coast wastewater system (CSA 29) is a system in need of an upgrade. The original system was installed in the 1980s and there have been minor improvements or repairs made over the past 35 years. The system is comprised of four distinct components. In preparing the 5 year Capital Improvement Plan (CIP), the budgetary items were divided such that the budget for each year increases as time goes on. This will allow for the necessary rate increases to cover the needed improvements to take effect and have a period of time to accrue, albeit only slightly. The CIP was developed so the immediate issues can be assessed in the first year and then the improvements made the following 4 years. At the

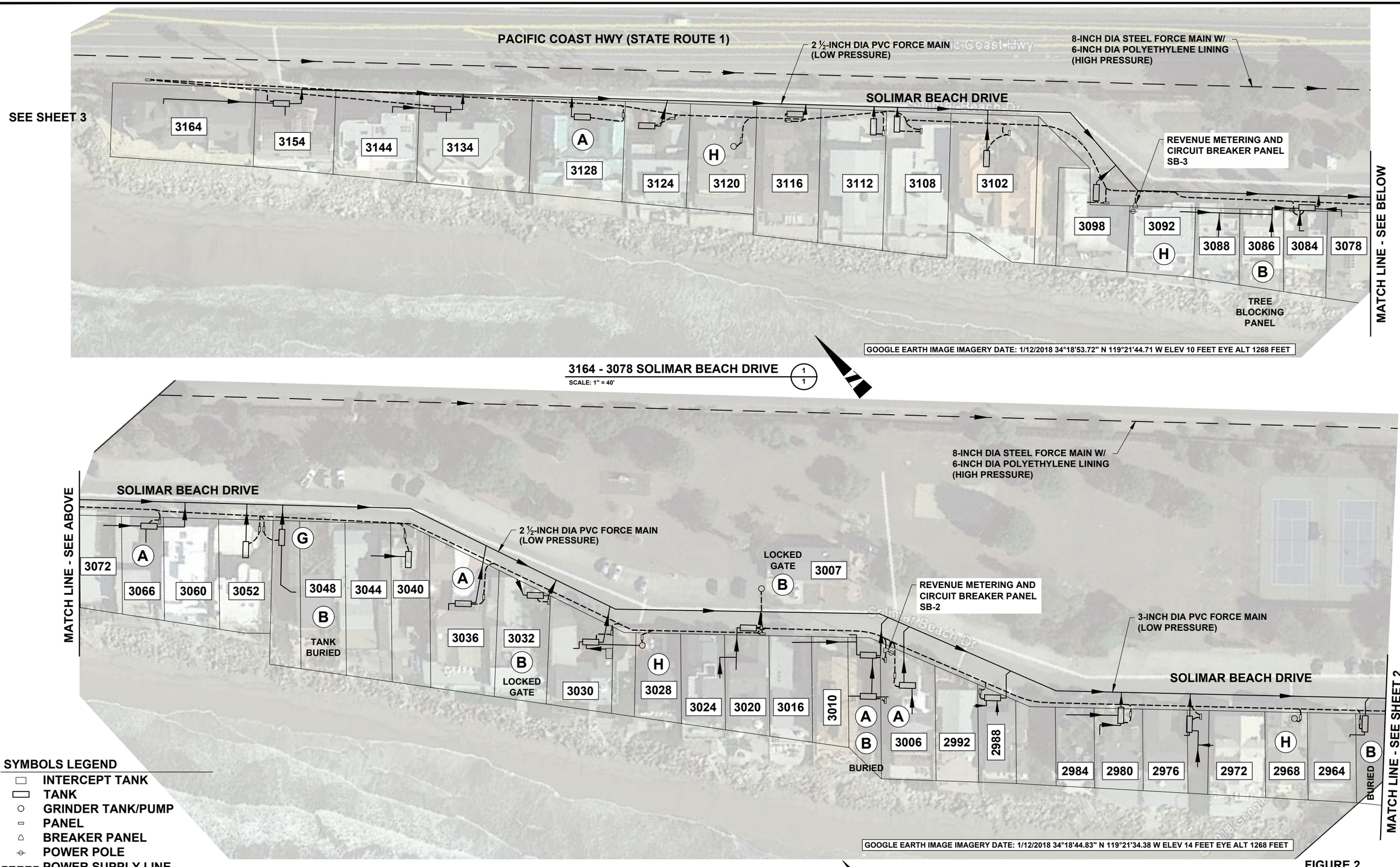
completion of the improvements, the entire system will be rehabilitated or replaced allowing for the continuation of the operation of the collection system for the future.

Sincerely,

_____

Jon Turner, PE
Principal Engineer


Figure 1 - CSA 29 System Overview




**SYMBOLS LEGEND**

- INTERCEPT TANK
- TANK
- GRINDER TANK/PUMP
- PANEL
- BREAKER PANEL
- POWER POLE
- POWER SUPPLY LINE
- FLOW DIRECTION ARROW

**LEGEND**

- (A) NEW PUMP TANK
- (B) ACCESS ISSUE/BURIED
- (G) TANK ADJACENT TO DRAINAGE
- (H) GRINDER PUMP

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

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DATE: Apr 06, 2018 12:04pm XREFS: PC-FIG-BDR 24x36

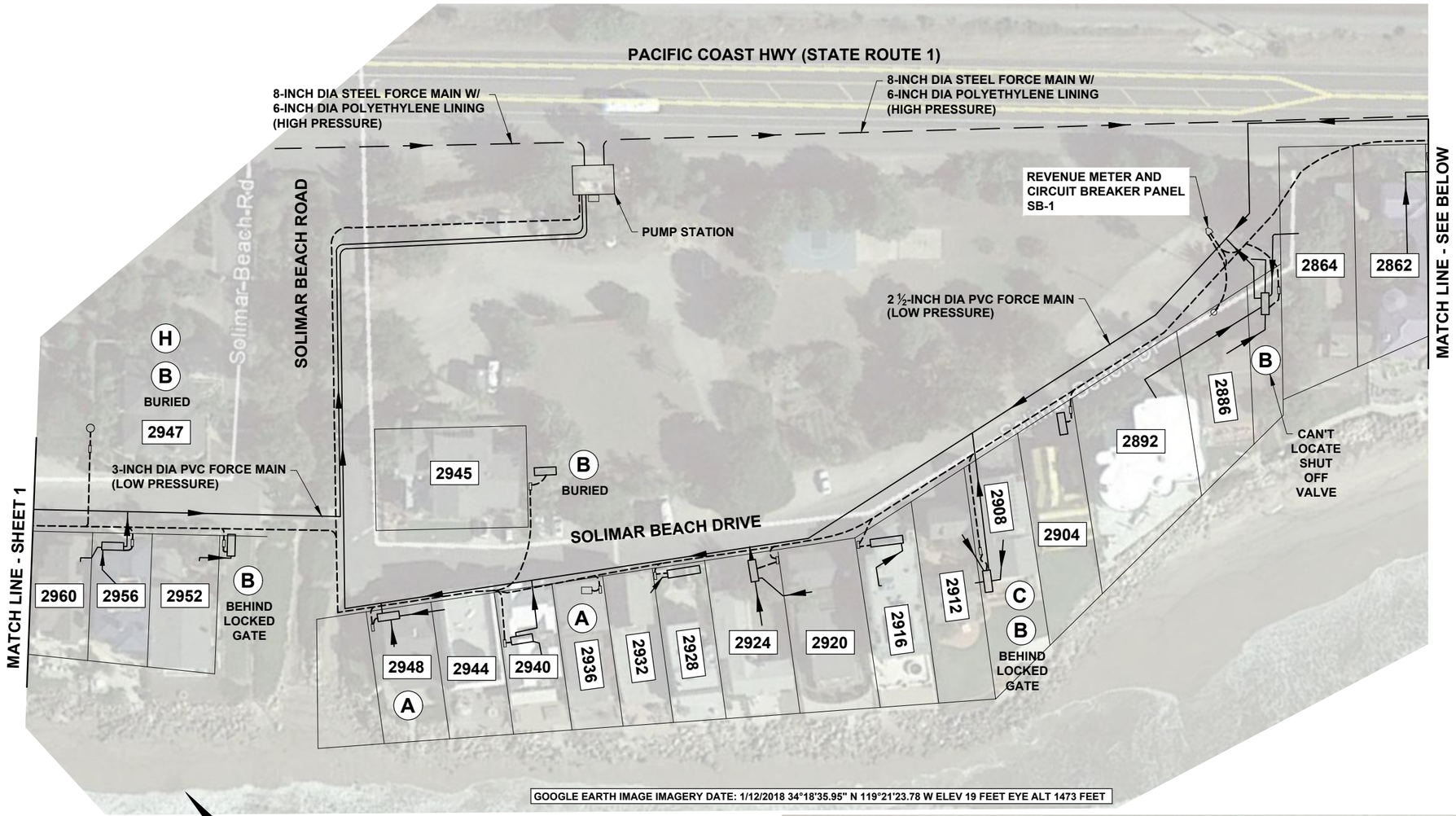
FIGURE 2

COUNTY OF VENTURA
NORTH COAST CSA 29
CAPITAL IMPROVEMENT PLAN

**SOLIMAR**

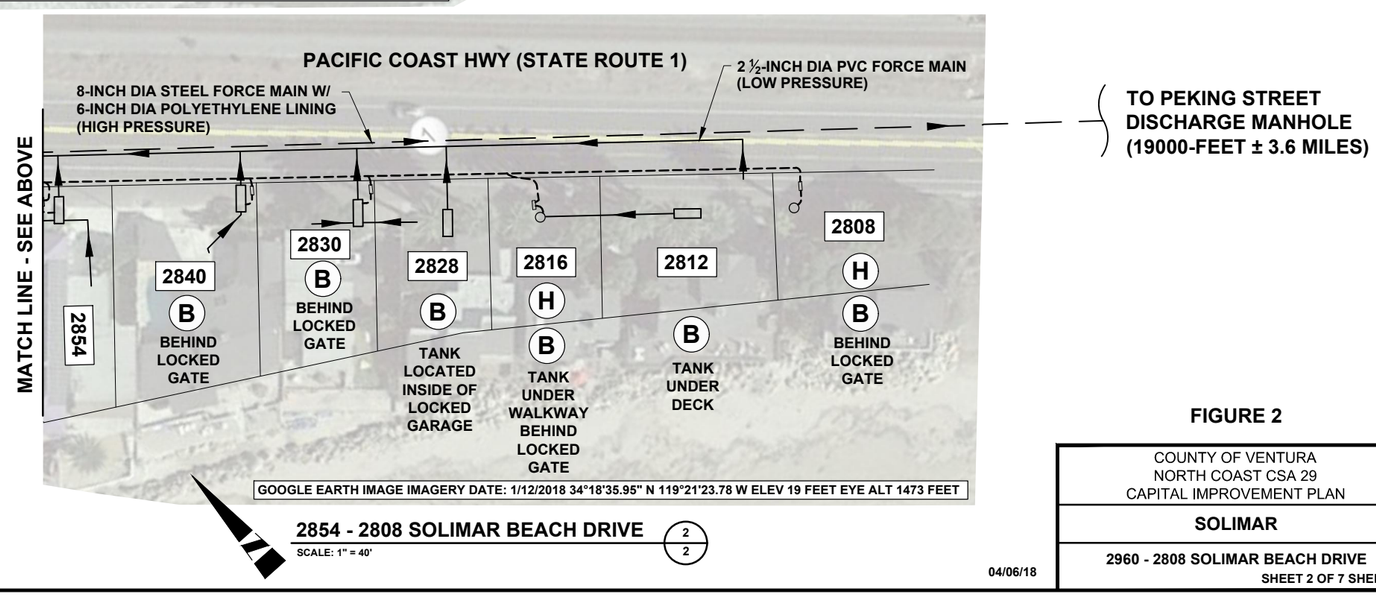
**3164 - 2964 SOLIMAR BEACH DRIVE**
SHEET 1 OF 7 SHEETS

04/06/18




## 2960 - 2862 SOLIMAR BEACH DRIVE (1/2)

SCALE: 1" = 40'




## 2854 - 2808 SOLIMAR BEACH DRIVE (2/2)

SCALE: 1" = 40'

### SYMBOLS LEGEND

- INTERCEPT TANK
- TANK
- GRINDER TANK/PUMP
- PANEL
- BREAKER PANEL
- POWER POLE
- POWER SUPPLY LINE
- FLOW DIRECTION ARROW

### LEGEND

- (A) NEW PUMP TANK
- (B) ACCESS ISSUE/BURIED
- (C) BACKYARD TANK
- (H) GRINDER PUMP

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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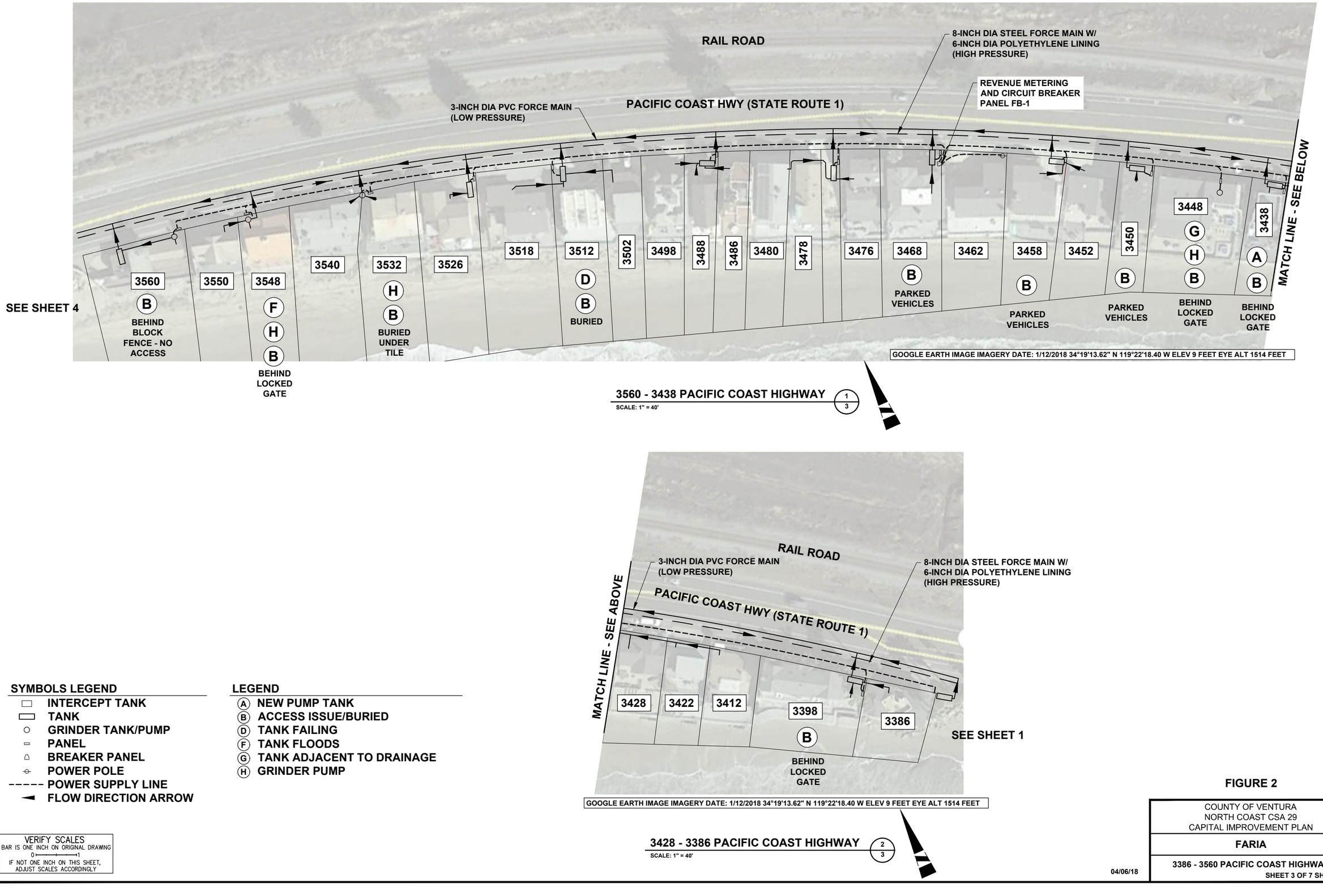
DATE: Apr 06, 2018 12:06pm XREFS: PC-FIG-BBR 24x36

**FIGURE 2**

| |
|---|
| COUNTY OF VENTURA<br>NORTH COAST CSA 29<br>CAPITAL IMPROVEMENT PLAN |
| **SOLIMAR** |
| **2960 - 2808 SOLIMAR BEACH DRIVE**<br>SHEET 2 OF 7 SHEETS |

04/06/18




3560 - 3438 PACIFIC COAST HIGHWAY (1/3)

SCALE: 1" = 40'




3428 - 3386 PACIFIC COAST HIGHWAY (2/3)

SCALE: 1" = 40'

**SYMBOLS LEGEND**

- INTERCEPT TANK
- TANK
- GRINDER TANK/PUMP
- PANEL
- BREAKER PANEL
- POWER POLE
- POWER SUPPLY LINE
- FLOW DIRECTION ARROW

**LEGEND**

- (A) NEW PUMP TANK
- (B) ACCESS ISSUE/BURIED
- (D) TANK FAILING
- (F) TANK FLOODS
- (G) TANK ADJACENT TO DRAINAGE
- (H) GRINDER PUMP

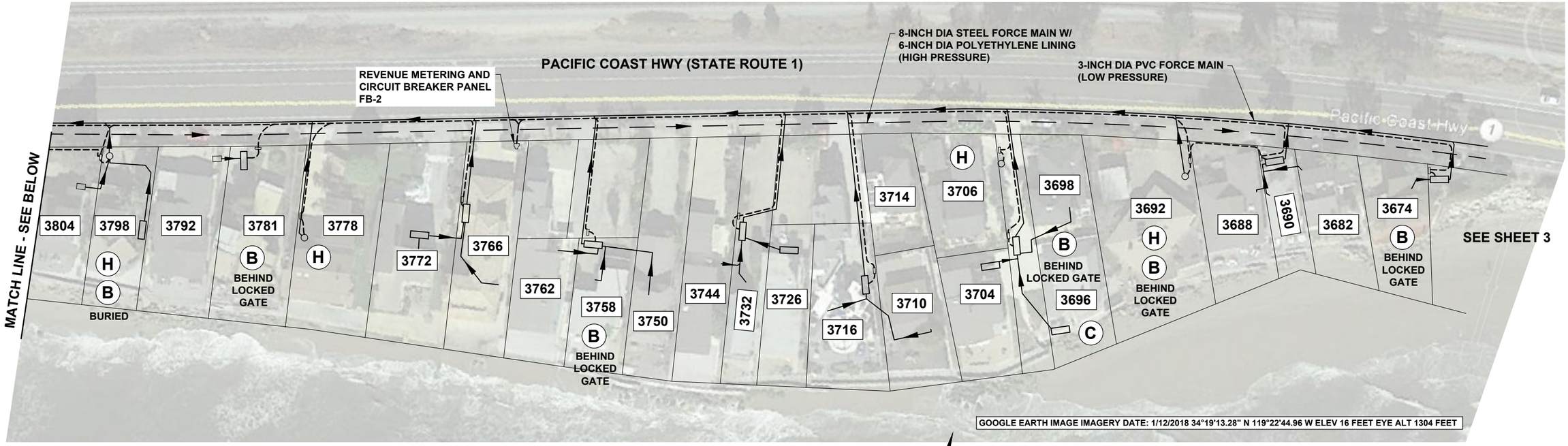
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 ——— 1
IF NOT ONE INCH ON THIS SHEET,
ADJUST SCALES ACCORDINGLY

DWG: P:\Projects\MVCW17-28 VC Wastewater CIP Update\CAD\Source Drawings\SOLIMAR FARIA SET.dwg USER: ASmith
DATE: Apr 06, 2018 12:06pm XREFS: PC-110-BDR 24x36

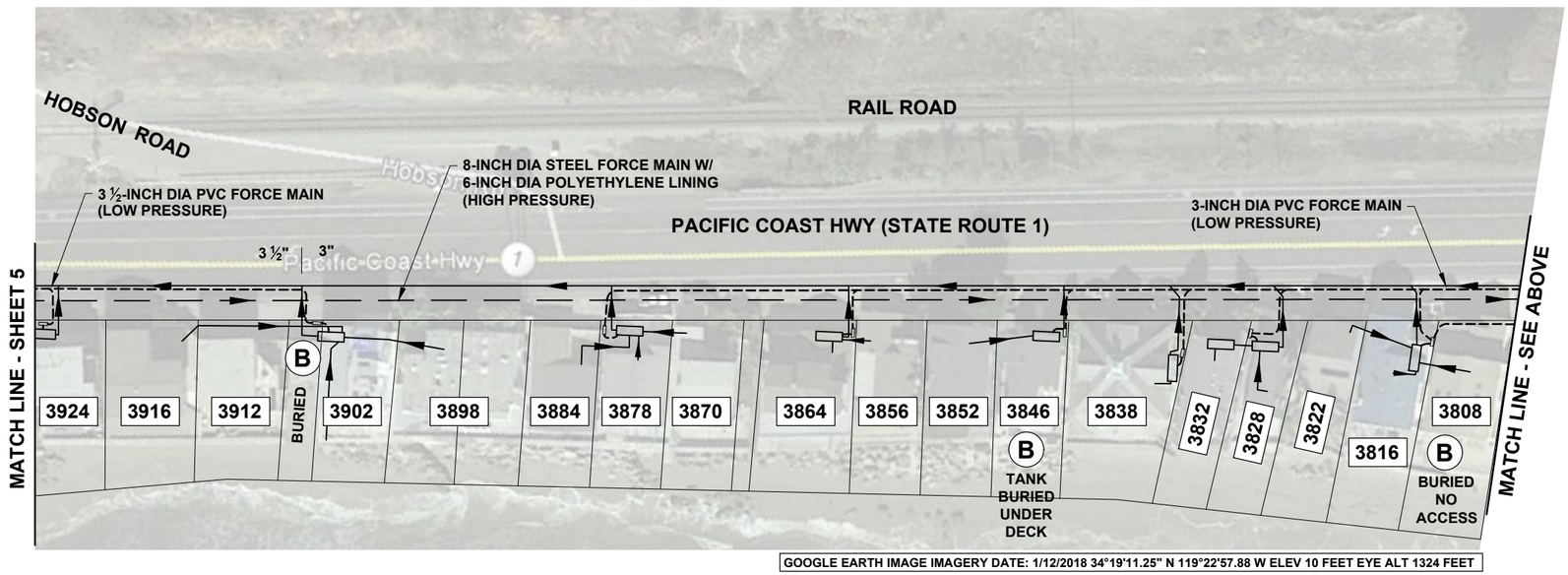
FIGURE 2

| |
|---|
| COUNTY OF VENTURA<br>NORTH COAST CSA 29<br>CAPITAL IMPROVEMENT PLAN |
| **FARIA** |
| **3386 - 3560 PACIFIC COAST HIGHWAY**<br>SHEET 3 OF 7 SHEETS |

04/06/18




**3804 - 3674 PACIFIC COAST HIGHWAY** (1/4)
SCALE: 1" = 40'




**3924 - 3808 PACIFIC COAST HIGHWAY** (2/4)
SCALE: 1" = 40'

**FIGURE 2**

**LEGEND**
- (B) ACCESS ISSUE/BURIED
- (C) BACKYARD TANK
- (H) GRINDER PUMP

**SYMBOLS LEGEND**
- INTERCEPT TANK
- TANK
- GRINDER TANK/PUMP
- PANEL
- BREAKER PANEL
- POWER POLE
- POWER SUPPLY LINE
- FLOW DIRECTION ARROW

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

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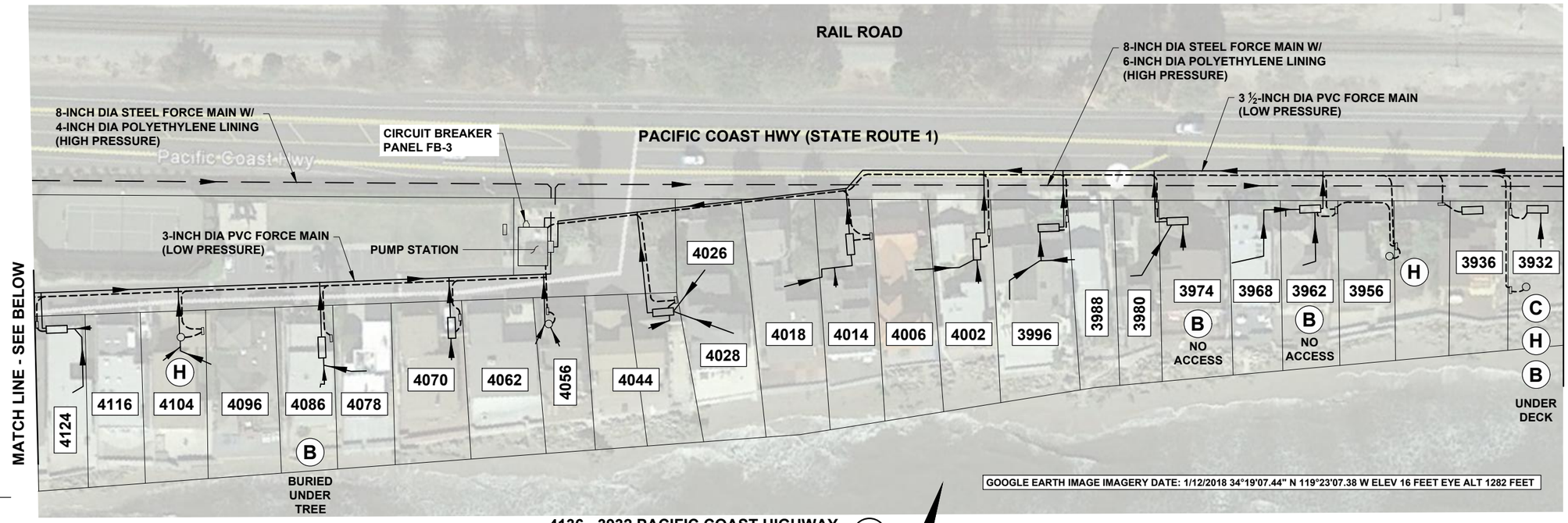
04/06/18

COUNTY OF VENTURA
NORTH COAST CSA 29
CAPITAL IMPROVEMENT PLAN

**FARIA**

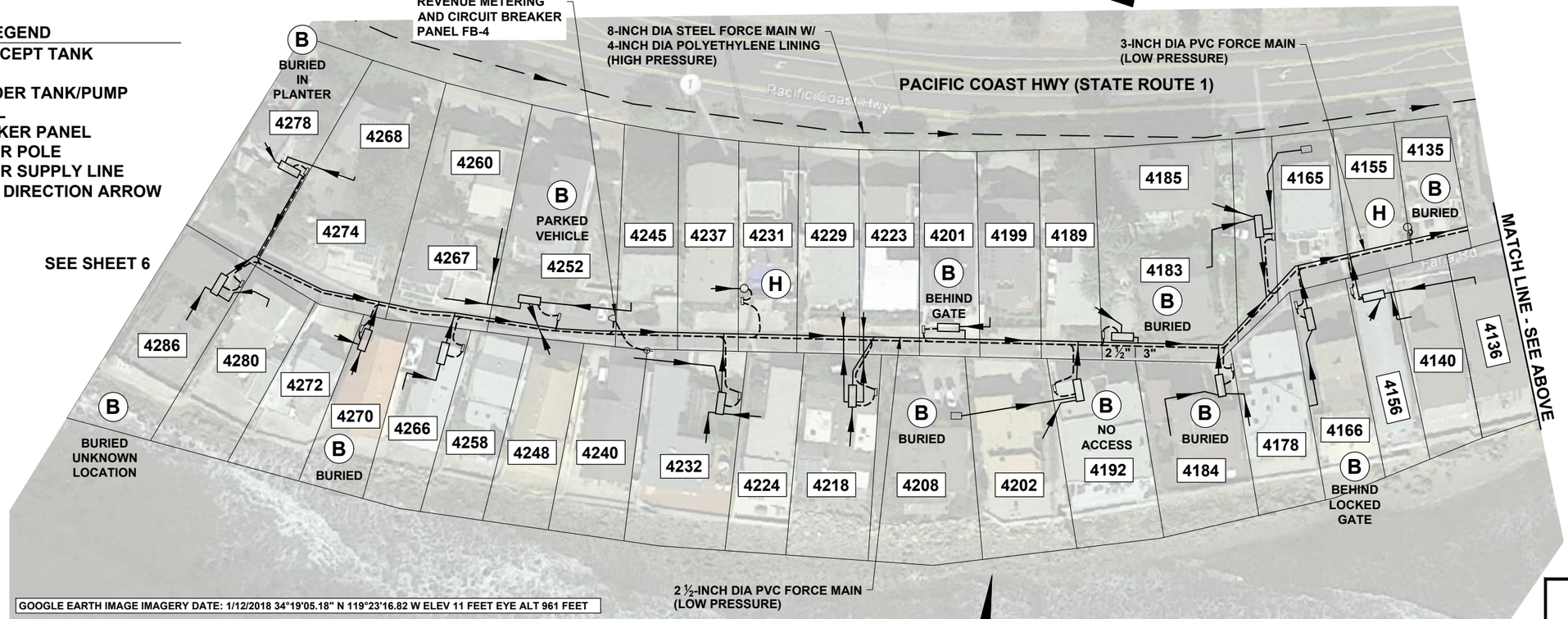
**3386 - 3560 PACIFIC COAST HIGHWAY**
SHEET 4 OF 7 SHEETS




**4136 - 3932 PACIFIC COAST HIGHWAY** (1/5)
SCALE: 1" = 40'

**LEGEND**
- (B) ACCESS ISSUE/BURIED
- (C) BACKYARD TANK
- (H) GRINDER PUMP

**SYMBOLS LEGEND**
- INTERCEPT TANK
- TANK
- GRINDER TANK/PUMP
- PANEL
- BREAKER PANEL
- POWER POLE
- POWER SUPPLY LINE
- FLOW DIRECTION ARROW




**4286 - 4135 PACIFIC COAST HIGHWAY** (2/5)
SCALE: 1" = 40'

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

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DATE: Apr 06, 2018 12:07pm XREFS: PC-FIG-BDR 24x36

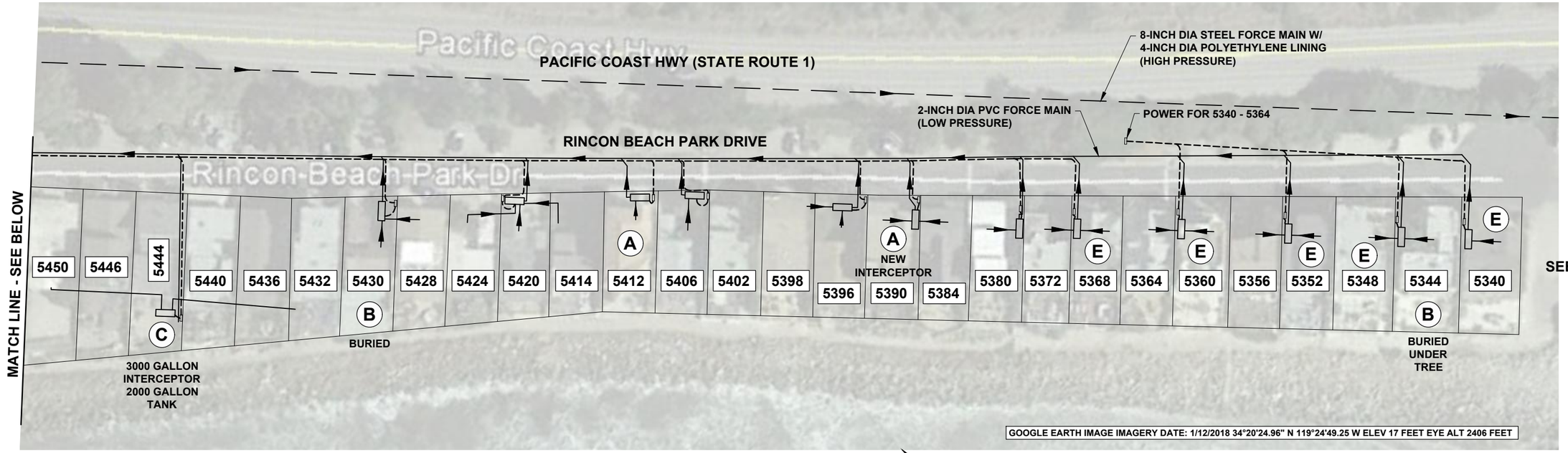
**FIGURE 2**

COUNTY OF VENTURA
NORTH COAST CSA 29
CAPITAL IMPROVEMENT PLAN

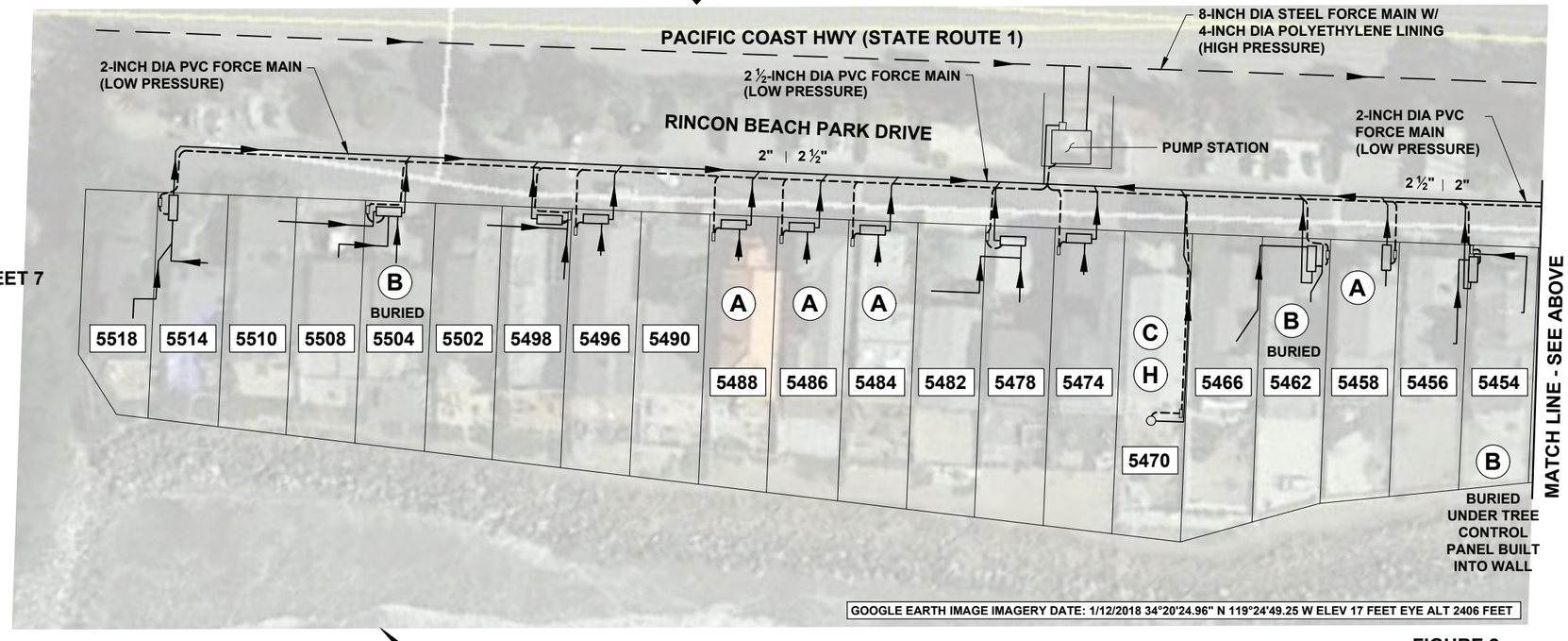
**FARIA**

**3936 - 4286 PACIFIC COAST HIGHWAY**
SHEET 5 OF 7 SHEETS

04/06/18




**5450 - 5340 RINCON BEACH PARK DRIVE** (1/6)
SCALE: 1" = 40'




SEE SHEET 7

**5518 - 5454 RINCON BEACH PARK DRIVE** (2/6)
SCALE: 1" = 40'

## SYMBOLS LEGEND

- INTERCEPT TANK
- TANK
- GRINDER TANK/PUMP
- PANEL
- BREAKER PANEL
- POWER POLE
- POWER SUPPLY LINE
- FLOW DIRECTION ARROW

## LEGEND

- (A) NEW PUMP TANK
- (B) ACCESS ISSUE/BURIED
- (C) BACKYARD TANK
- (E) NOT POWERED/ALARMED SIMILAR TO REST OF SYSTEM
- (H) GRINDER PUMP

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

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DATE: Apr 06, 2018 12:07pm XREFS: PC-FIG-BDR 24x36

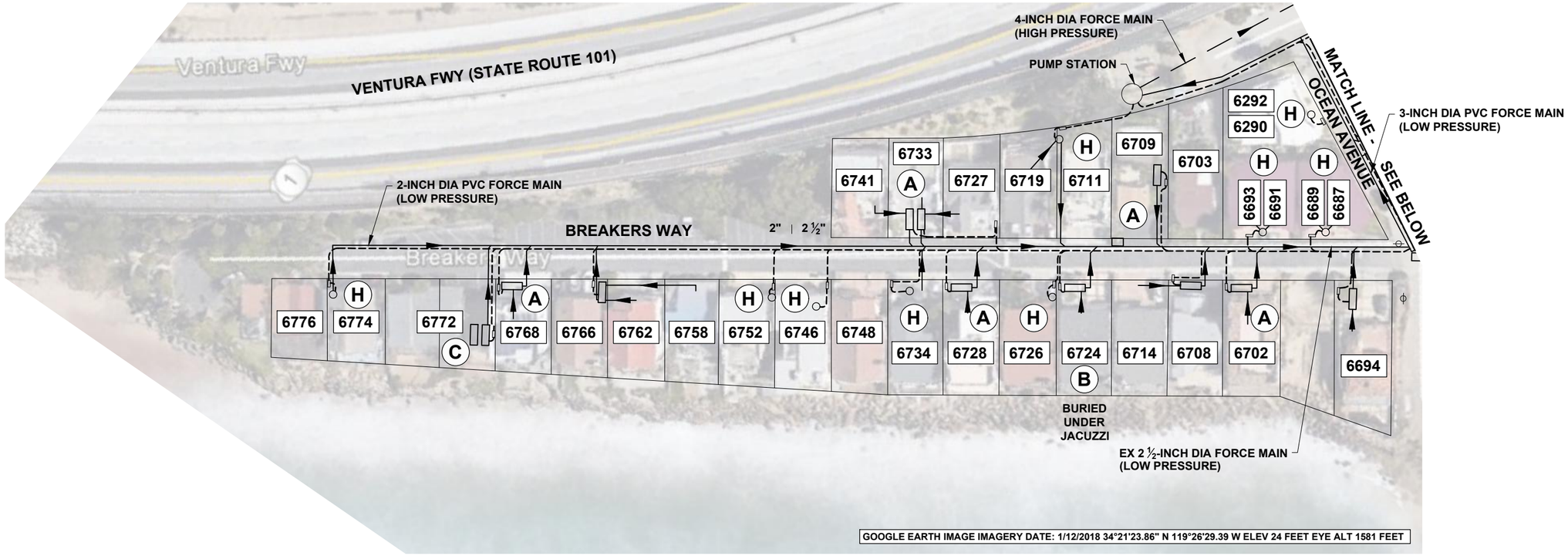
FIGURE 2

COUNTY OF VENTURA
NORTH COAST CSA 29
CAPITAL IMPROVEMENT PLAN

**SEA CLIFF**

**5340 - 5518 RINCON BEACH PARK DRIVE**
SHEET 6 OF 7 SHEETS

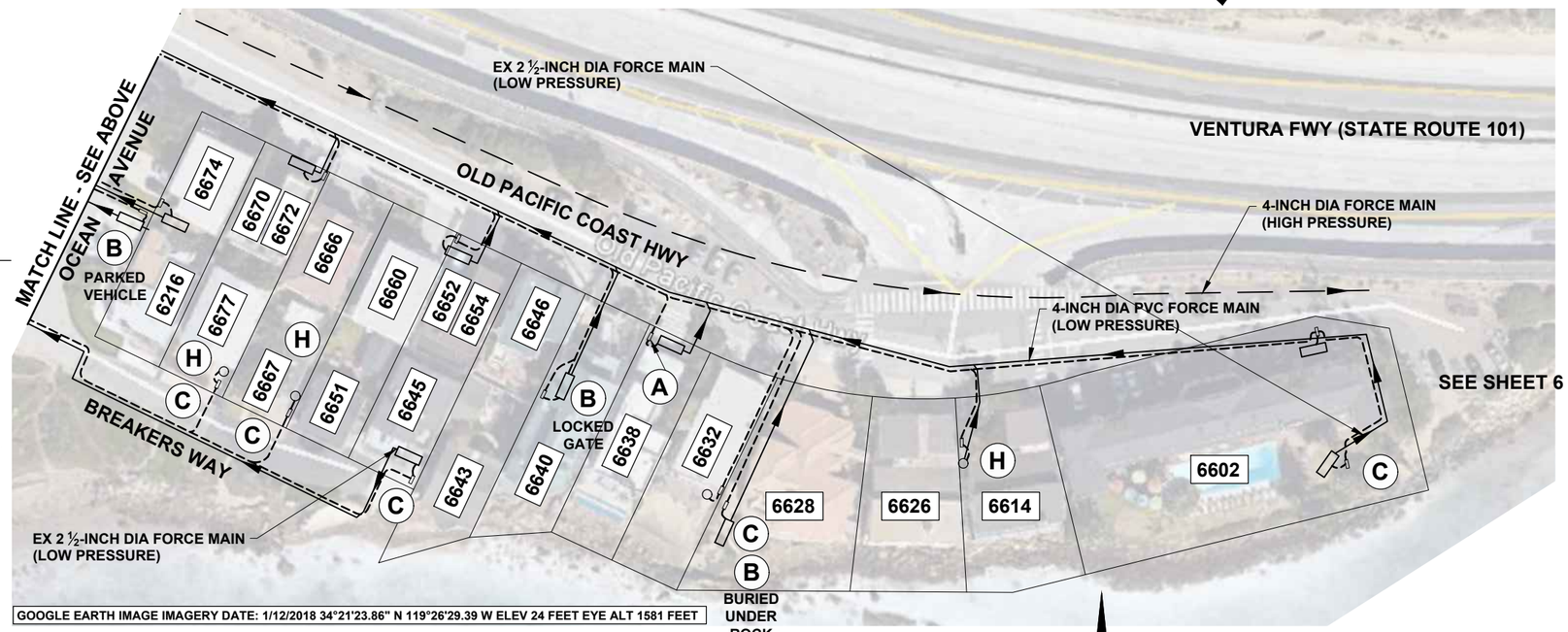
04/06/18




**6292 AND 6290 OCEAN AVENUE**
**6776 - 6687 BREAKERS WAY**

SCALE: 1" = 40'

1
7




**6219 AND 6674 OCEAN AVENUE**
**6670 - 6602 OLD PACIFIC COAST HWY**
**6677 - 6643 BREAKERS WAY**

SCALE: 1" = 40'

2
7

**LEGEND**

- (A) NEW PUMP TANK
- (B) ACCESS ISSUE/BURIED
- (C) BACKYARD TANK
- (H) GRINDER PUMP

**SYMBOLS LEGEND**

- INTERCEPT TANK
- TANK
- GRINDER TANK/PUMP
- PANEL
- BREAKER PANEL
- POWER POLE
- POWER SUPPLY LINE
- FLOW DIRECTION ARROW

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

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DATE: Apr 06, 2018 12:07pm XREFS: PC-FIG-1BDR 24x36

**FIGURE 2**

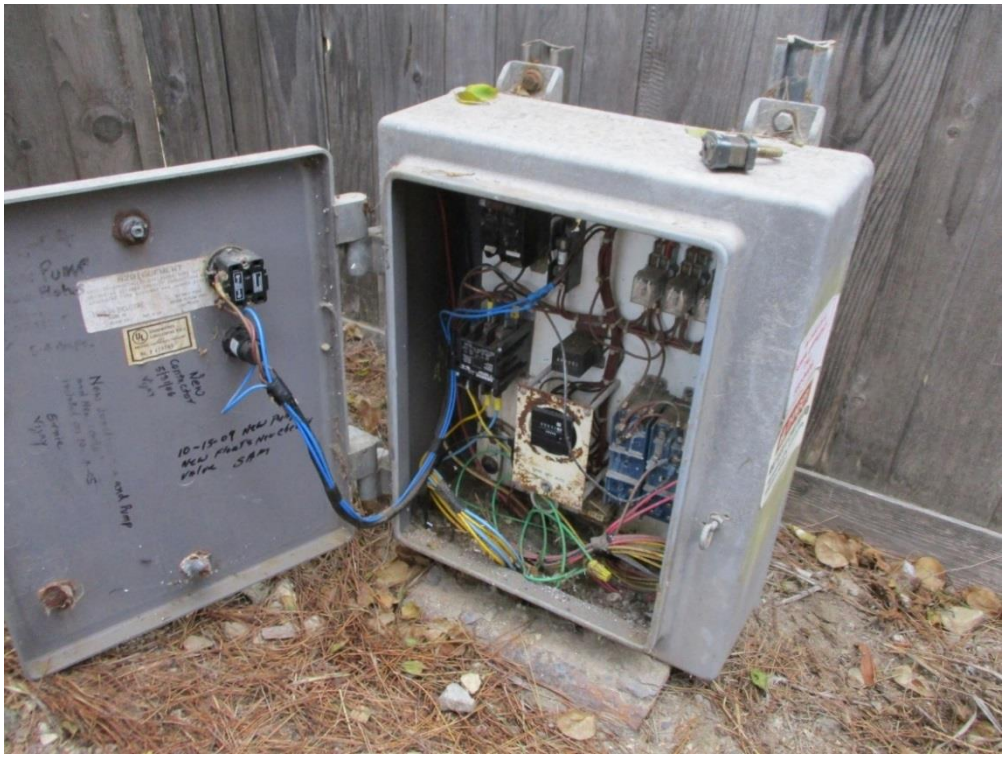
COUNTY OF VENTURA
NORTH COAST CSA 29
CAPITAL IMPROVEMENT PLAN

**MUSSEL SHOALS**

OCEAN AVENUE, OLD PACIFIC COAST HWY AND BREAKERS WAY
SHEET 7 OF 7 SHEETS

04/06/18

Example of Recently Replaced Control Panel Interior



Typical Control Panel Interior Condition

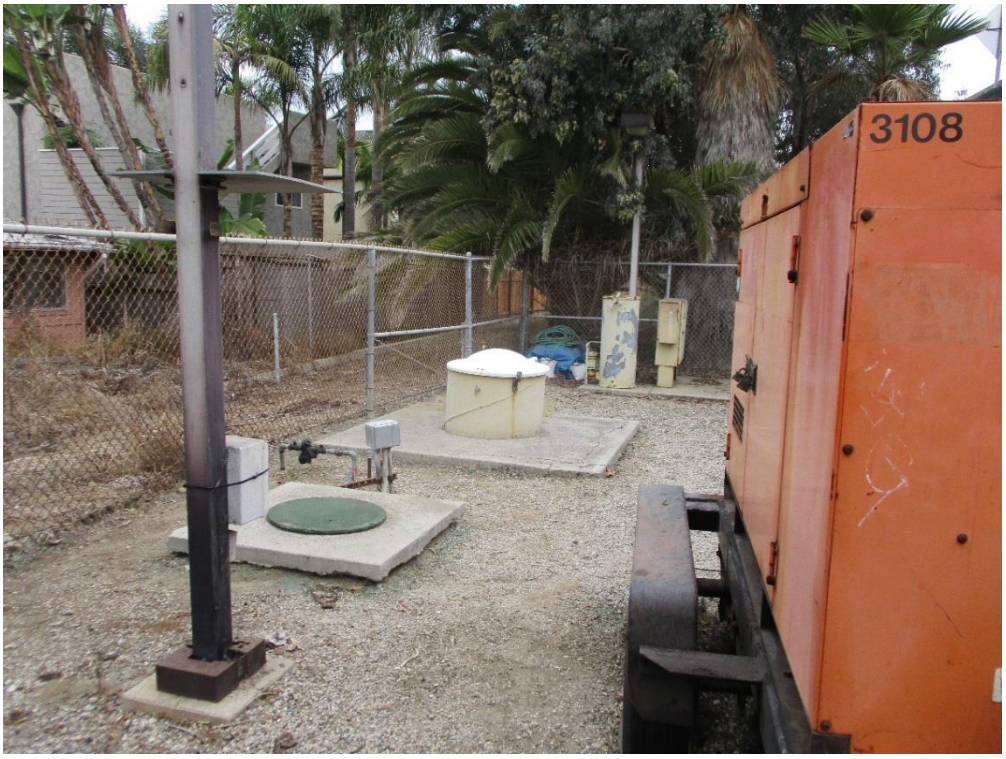
Typical Interceptor Tank Interior Configuration From Above

Typical Interior of Interceptor Tank Equipment Arrangement


Typical Control Panel and Tank Configuration – Driveway

Typical Control Panel Configuration – Property Line


Mussel Shoals Lift Station Site from Street Looking North




Mussel Shoals Lift Station Site Overview

Mussel Shoals Control Panel Lineup

Mussel Shoals Lift Station Interior from Above

Interior of Mussel Shoals Lift Station


Seacliff Lift Station Entrance


Seacliff Lift Station Overview

Seacliff Lift Station Interior


Control Panel Interior at Seacliff Lift Station

Faria Beach Lift Station Control Panel

Faria Beach Lift Station Interior


Faria Beach Lift Station Overview

Solimar Beach Lift Station Interior

Solimar Beach Lift Station Control Panel

Force Main Alignment Trench from Emma Wood Beach Entrance Looking North

Exposed Force Main Piping in RV Park Campground

Force Main Piping Exposed Under Bridge (Right Side)

Force Main Piping Exposed on Left – No Protection

Peking Street Discharge Manhole Overview

Peking Street Discharge and Sampling Manhole – City of Ventura Demarcation Point

*(Project No: )*

This contract is made and entered into this __ day of __, ____, by and between the , hereinafter referred to as AGENCY, and [Consultant], hereinafter referred to as CONSULTANT, regarding CONSULTANT's performance of the work and services described in Exhibit A hereto (the "Work"). CONSULTANT, or a principal of the firm, is registered, licensed or certified by the State of California as a [Registration], number [number].

In consideration of the mutual promises contained herein and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

**1. Scope of Work; Standard of Performance**

AGENCY hereby retains CONSULTANT to perform the Work described in Exhibit A hereto. The Work shall be performed in accordance with the terms and conditions of this contract and the County of Ventura Public Works Agency Consultant's Guide to Ventura County Procedures ("Guide") as amended from time to time, which is on file in the office of the Public Works Agency, and which by reference is made a part hereof. This contract shall take precedence over the Guide in case of conflicting provisions; otherwise, they shall be interpreted together. In performing the Work CONSULTANT shall exercise the degree of skill and care customarily exercised by professionals in the State of California when providing similar services with respect to similarly complex work and projects.

**2. Time Schedule**

All Work and any portion thereof separately identified shall be completed within the time provided in the "Time Schedule" attached hereto as Exhibit B. AGENCY will issue a suspension of the contract time if CONSULTANT is delayed by any public agency reviewing documents produced by CONSULTANT under this contract, or solely due to acts or omissions of AGENCY, provided that CONSULTANT promptly notifies AGENCY in writing of such delays.

**3. Fees and Payments**

Payment shall be made monthly, or as otherwise provided, on presentation of a completed AGENCY Consultant Services Invoice Form in accordance with the "Fees and Payment" provisions attached hereto as Exhibit C.

**4. Termination**

AGENCY retains the right to terminate this contract for any reason prior to completion of the Work upon five days written notice to CONSULTANT. Upon termination, AGENCY shall pay CONSULTANT for all Work performed prior to such termination, provided however, that such charges shall not exceed the maximum fee specified in Exhibit C for completion of any separately identified task/phase of the Work which, at the time of termination, has been started by request of AGENCY, plus the outstanding amount of contract retention withheld to date.

**5. Right to Review**

AGENCY shall have the right to review the Work at any time during AGENCY's usual working hours. Review, checking, approval or other action by the AGENCY shall not relieve CONSULTANT of CONSULTANT's responsibility for the accuracy and completeness of the Work.

**6. Work Product**

On completion or termination of the contract, AGENCY shall be entitled to immediate possession of, and CONSULTANT shall promptly furnish, on request, all reports, drawings, designs, computations, plans, specifications, correspondence, data and other work product prepared or gathered by CONSULTANT

arising out of or related to the Work (collectively, “Work Product”). AGENCY has a royalty-free nonexclusive and irrevocable right to reproduce, publish, or otherwise use, and authorize others to use, Work Product for government purposes. CONSULTANT may retain copies of the Work Product for its files. Work Product prepared by CONSULTANT pursuant to this contract shall not be modified by AGENCY unless CONSULTANT's name, signatures and professional seals are completely deleted. CONSULTANT shall not be responsible for any liabilities to AGENCY for the use of such Work Product that is modified by persons other than CONSULTANT. CONSULTANT is authorized to place the following statement on the drawings, specifications and other Work Product prepared pursuant to this contract:

> "This drawing [or These specifications], including the designs incorporated herein, is [are] an instrument of professional service prepared for use in connection with the project identified hereon under the conditions existing on [date]. Any use, in whole or in part, for any other project without written authorization of [CONSULTANT's name] shall be at the user's sole risk."

**7. Errors and Omissions**

Without limiting AGENCY’s other available remedies, if a construction change order is required for the subject project as a proximate result of an error or omission of CONSULTANT in the preparation of the construction or survey documents pursuant to this contract, regardless of whether or not such error or omission was the result of negligence, the necessary amendment or supplement to the construction documents required for such change order shall be made by CONSULTANT at no additional charge to AGENCY.

**8. Correction of Work**

If any Work performed by CONSULTANT does not conform to the requirements and professional standards of this contract, AGENCY may require CONSULTANT to correct the Work until it conforms to said requirements and standards at no additional cost to AGENCY. AGENCY may withhold payment for disputed Work until CONSULTANT correctly performs the Work or the dispute is otherwise resolved in accordance with this contract. When the Work to be performed is of such a nature that CONSULTANT cannot correct its performance, AGENCY may reduce the CONSULTANT’s compensation to reflect the reduced value of the Work received by AGENCY. If CONSULTANT fails to promptly correct non-conforming Work, AGENCY may have the Work performed by a third party in conformance with the requirements and professional standards of this contract and charge CONSULTANT, or withhold from payments due CONSULTANT, any costs AGENCY incurs that are directly related to the performance of the corrective work. AGENCY shall not unreasonably withhold or reduce payment for CONSULTANT’s Work under this section.

**9. Sub Consulting**

With the prior written consent of AGENCY, CONSULTANT may engage the professional services of subconsultants for the performance of a portion of the Work (“Subconsultants”). CONSULTANT shall be fully responsible for all Work performed by Subconsultants which must be performed in accordance with all terms and conditions of this contract. All insurance requirements set forth in section 13 below, “Insurance Requirements,” shall apply to each Subconsultant, except to the extent such requirements are modified or waived in writing by AGENCY. CONSULTANT shall ensure that each Subconsultant obtains and keeps in force and effect during the term of this contract the required insurance.

**10. Independent Contractor**

a. No Employment Relationship. CONSULTANT is an independent contractor, and no relationship of employer and employee is created by this contract. Neither CONSULTANT nor any of the persons performing services for CONSULTANT pursuant to this contract, whether said person be a principal, member, partner, officer, employee, agent, volunteer, associate, Subconsultant or otherwise of CONSULTANT, will have any claim under this contract or otherwise against AGENCY for any salary,

wages, sick leave, vacation pay, retirement, social security, workers' compensation, disability, unemployment insurance, federal, state or local taxes, or other compensation, benefits or taxes of any kind. AGENCY is not required to make any deductions from the compensation payable to CONSULTANT under the provisions of this contract. CONSULTANT shall be solely responsible for self-employment Social Security taxes, income taxes and any other taxes levied against self-employed persons. CONSULTANT does not assign such obligation to AGENCY for collection or administration except as may be required by federal and state law.

b. No AGENCY Control of Means and Methods of Performance. Except as otherwise provided in this contract, AGENCY will have no control over the means or methods by which CONSULTANT will perform services under this contract, provided, however, that CONSULTANT will perform services hereunder and function at all times in accordance with approved methods of practice in the professional specialty of CONSULTANT.

c. Third Parties Employed by CONSULTANT. If, in the performance of this contract, any third parties (including, without limitation, Subconsultants) are employed by CONSULTANT, such third parties will be entirely and exclusively under the direction, supervision and control of CONSULTANT. All terms of employment, including hours, wages, working conditions, discipline, hiring and discharging, and other applicable requirements of law will be the responsibility of and determined by CONSULTANT, and AGENCY will have no right or authority over such third parties or the terms of such employment, except as provided in this contract.

d. Compliance with Workers' Compensation Laws. CONSULTANT will comply with all applicable provisions of the Workers Compensation Insurance and Safety Act of the State of California (codified as amended commencing at Labor Code section 3200), including, without limitation, divisions 4 and 5 of the California Labor Code, and all amendments thereto, and all applicable similar state and federal acts or laws, and will indemnify and hold harmless AGENCY from and against all Third Party Claims (defined elsewhere herein) presented, brought or recovered against AGENCY, for or on account of any liability under any of said laws which may be incurred by reason of any services to be performed under this contract.

e. Indemnity for Claims of Employer-Employee Relationship. CONSULTANT agrees to defend, through attorneys approved by AGENCY, indemnify and hold harmless AGENCY and its boards, agencies, departments, officers, employees, agents and volunteers from and against any and all Third-Party Claims (defined elsewhere herein) made against AGENCY based upon any contention by any third party that an employer-employee relationship exists by reason of this contract. CONSULTANT further agrees to hold AGENCY harmless from and to compensate AGENCY for any Third-Party Claims against AGENCY for payment of state or federal income or other tax obligations relating to CONSULTANT's compensation under the terms of this contract. CONSULTANT will not settle or otherwise compromise a Third-Party Claim covered by this subsection without AGENCY's advance written approval. This subsection does not apply to any penalty imposed by any governmental agency that is not caused by or the fault of CONSULTANT.

**11. Duty of Loyalty; Conflicts of Interest**

a. CONSULTANT owes AGENCY a duty of undivided loyalty in performing the Work under this contract, including the obligation to refrain from having economic interests and participating in activities that conflict with AGENCY's interests with respect to the Work and subject project. CONSULTANT shall take reasonable measures to ensure that CONSULTANT and its principals, officers, employees, agents and Subconsultants do not possess a financial conflict of interest with respect to the Work and subject project. CONSULTANT shall promptly inform AGENCY of any matter that could reasonably be interpreted as creating a conflict of interest for CONSULTANT with respect to the Work and subject project. This section is not intended to modify the standard of performance as set forth in Section 1.

b. CONSULTANT acknowledges that the California Political Reform Act ("Act"), Government Code section 81000 et seq., provides that principals, officers, employees and agents of consultants retained by a public agency may be deemed "public officials" subject to the Act if they make or advise AGENCY on decisions or actions to be taken by AGENCY. To the extent AGENCY determines that the Act applies to CONSULTANT or its principals, officers, employees or agents, each designated person shall abide by the Act, including the requirement for public officials to prepare and file statements disclosing specified economic interests, as directed by AGENCY. In addition, CONSULTANT acknowledges and shall abide by the contractual conflict of interest restrictions imposed on public officials by Government Code section 1090 et seq.

c. During the term of this contract CONSULTANT shall not employ or compensate AGENCY's current employees.

**12. Defense and Indemnification**

If this contract is a contract **"for design professional services"** within the meaning of Civil Code section 2782.8, then subsection b. applies, and subsection a. does not apply and is not part of this contract, notwithstanding its inclusion below. Otherwise, subsection a. applies, and subsection b. does not apply and is not part of this contract, notwithstanding its inclusion below.

a. CONSULTANT agrees to defend, through attorneys approved by AGENCY, indemnify and hold harmless AGENCY and the County of Ventura (if not defined as AGENCY) and their boards, agencies, departments, officers, employees, agents and volunteers (collectively, "Indemnitee") from and against any and all claims, lawsuits, judgments, debts, demands, and liability (including attorney fees and costs) (collectively, "Third Party Claims"), including, without limitation, those arising from injuries or death of persons and/or damage to property, whether against CONSULTANT, AGENCY or others, arising directly or indirectly out of the obligations herein described or undertaken or out of operations conducted or subsidized in whole or in part by CONSULTANT, save and except third party claims arising through the sole gross negligence or sole willful misconduct of Indemnitee. CONSULTANT shall not settle or otherwise compromise a Third-Party Claim covered by this section without AGENCY's advance written approval.

b. CONSULTANT agrees to defend, through attorneys approved by AGENCY, indemnify and hold harmless AGENCY and the County of Ventura (if not defined as AGENCY) and their boards, agencies, departments, officers, employees, agents and volunteers (collectively, "Indemnitee") from and against any and all claims, lawsuits, judgments, debts, demands and liability (including attorney fees and costs) (collectively, "Third Party Claims"), including, without limitation, those arising from injuries or death of persons and/or damage to property, that arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of CONSULTANT or its principals, officers, employees, agents or Subconsultants in the performance of this contract. This indemnity provision does not apply to Third Party Claims arising from the sole negligence or willful misconduct of Indemnitee, or to the extent caused by the active negligence of Indemnitee. The cost to defend charged to CONSULTANT or an Indemnitee shall not exceed its proportionate percentage of fault. However, notwithstanding the previous sentence, in the event one or more defendants is unable to pay its share of defense costs due to bankruptcy or dissolution of the business, CONSULTANT shall meet and confer with Indemnitee and any other defendants regarding unpaid defense costs. In the event AGENCY or Third-Party tenders, a Third-Party Claim to CONSULTANT for defense under this subsection 12.b., AGENCY and CONSULTANT shall meet and confer in good faith and make best efforts to agree to an equitable sharing of the costs of defense between them prior to any determination and apportionment of fault (or if no such determination and apportionment is made) based on the allegations of the claim. CONSULTANT shall not settle or otherwise compromise a Third-Party Claim covered by this section without AGENCY's advance written approval.

**13. Insurance Requirements**

a. Without limiting CONSULTANT's duty to defend and indemnify AGENCY as required herein, CONSULTANT shall, at CONSULTANT's sole cost and expense and throughout the term of this contract and any extensions hereof, carry one or more insurance policies that provide at least the following minimum coverage:

   i. Commercial general liability insurance shall provide a minimum of $1,000,000.00 coverage for each occurrence and $2,000,000.00 in general aggregate coverage.

   ii. Automobile liability insurance shall provide a minimum of either a combined single limit (CSL) of $1,000,000.00 for each accident or all of the following: $250,000.00 bodily injury (BI) per person, and $500,000.00 bodily injury per accident, and $100,000.00 property damage (PD). Automobile liability insurance is not required if CONSULTANT does no traveling in performing the Work.

   iii. Workers' compensation insurance in full compliance with California statutory requirements for all employees of CONSULTANT in the minimum amount of $1,000,000.00. This workers' compensation insurance requirement may only be waived by AGENCY in writing if CONSULTANT is a sole proprietor with no employees and CONSULTANT provides AGENCY with evidence of such before commencing any work under the contract.

   iv. Professional liability (errors and omissions) insurance shall provide a minimum of $1,000,000.00 coverage per claim and $2,000,000.00 in annual aggregate coverage.

   If CONSULTANT maintains higher limits than the minimums shown above, AGENCY requires and shall be entitled to coverage for the higher limits maintained by CONSULTANT. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to AGENCY.

b. With respect to any coverage written on a "claims made" basis, CONSULTANT shall, for three years after the date when this contract is terminated or completed, maintain such policy with a retroactive date that is on or before the start date of contract services or purchase an extended reporting period endorsement (tail coverage). AGENCY may withhold final payments due until satisfactory evidence of the continued maintenance of such policy or the tail coverage is provided by CONSULTANT to AGENCY. Such policy shall allow for reporting of circumstances or incidents that may give rise to future claims.

c. CONSULTANT shall notify AGENCY immediately if CONSULTANT's general aggregate of insurance is exceeded by valid litigated claims in which case additional levels of insurance must be obtained to maintain the above-stated requirements. All required insurance shall be written by a financially responsible company or companies authorized to do business in the State of California. CONSULTANT shall notify AGENCY of any and all policy cancellations within three working days of the cancellation.

d. The commercial general liability policy shall name AGENCY and the County of Ventura (if not defined as AGENCY) and their respective officials, employees, and agents as additional insureds ("Additional Insureds"). All required insurance shall be primary coverage as respects the Additional Insureds, and any insurance or self-insurance maintained by Additional Insureds shall be in excess of CONSULTANT's insurance coverage and shall not contribute to it. Coverage shall apply separately to each insured, except with respect to the limits of liability, and an act or omission by one of the named insureds shall not reduce or avoid coverage to the other named insureds. Additional Insured coverage shall include both ongoing and completed operations. In

the case of policy cancellation, AGENCY shall be notified by the insurance company or companies as provided for in the policy.

e. CONSULTANT hereby waives all rights of subrogation against AGENCY, the County of Ventura, all special districts governed by the Board of Supervisors, and each of their boards, directors, employees and agents for losses arising directly or indirectly from the activities or Work under this contract. The commercial general liability, automobile liability and workers' compensation policies shall contain a provision or endorsement needed to implement CONSULTANT's waiver of these rights of subrogation.

f. Prior to commencement of the Work, CONSULTANT shall furnish AGENCY with certificates of insurance and endorsements effecting all coverage required hereunder. Copies of renewal certificates and endorsements shall be furnished to AGENCY within 30 days of the expiration of the term of any required policy. CONSULTANT shall permit AGENCY at all reasonable times to inspect any policies of insurance required hereunder.

g. Each insurance policy required above shall state that coverage shall not be canceled except with notice to AGENCY.

**12. Claims and Disputes**

a. Administrative Review. Prior to filing a complaint in arbitration against AGENCY seeking payment of money or damages regarding the Work, an extension of contract time, or an interpretation or adjustment of the terms of this contract, including "pass-through" claims asserted by CONSULTANT on behalf of a Subconsultant (collectively referred to hereinafter as "claim"), CONSULTANT shall first exhaust its administrative remedies by attempting to resolve the claim with AGENCY's staff in the following sequence: 1) Project Manager, 2) Deputy Director of Public Works ("Department Director") and 3) Director of Public Works Agency ("Agency Director"). CONSULTANT shall initiate the administrative review process no later than 30 days after the claim has arisen by submitting to the Project Manager a written statement describing each claim and explaining why CONSULTANT believes AGENCY is at fault, as well as all correspondence and evidence regarding each claim. CONSULTANT may appeal the decision made by the Project Manager to the Deputy Director and may appeal the decision made by the Deputy Director to the Agency Director, provided that AGENCY receives such appeal in writing no later than seven days after the date of the decision being appealed. If CONSULTANT does not appeal a decision to the next level of administrative review within this seven-day period, the decision shall become final and binding and not subject to appeal or challenge.

b. Arbitration. All CONSULTANT claims not resolved through the administrative review process stated above shall be resolved by arbitration unless AGENCY and CONSULTANT agree in writing, after the claim has arisen, to waive arbitration and to have the dispute litigated in a court of competent jurisdiction. Arbitration shall be pursuant to article 7.1 (commencing with section 10240) of chapter 1 of part 2 of the Public Contract Code and the regulations promulgated thereto, chapter 4 (commencing with section 1300) of division 2 of title 1 of the California Code of Regulations (collectively, "Rules for Public Works Contract Arbitrations"). Arbitration shall be initiated by a complaint in arbitration prepared, filed and served in full compliance with all requirements of the Rules for Public Works Contract Arbitrations. CONSULTANT consents and agrees that AGENCY may join it as a party to any arbitration involving third party claims asserted against AGENCY arising from or relating to any Work performed by CONSULTANT hereunder.

**13. Compliance with Laws and Regulations; Permits and Licenses**

CONSULTANT shall perform its obligations hereunder in compliance with all applicable federal, state, and local laws and regulations. CONSULTANT certifies that it possesses and shall continue to maintain or shall cause to be obtained and maintained, at no cost to AGENCY, all approvals, permissions, permits, licenses, and other forms of documentation required for it and its principals, officers, employees, agents

and Subconsultants to comply with all applicable statutes, ordinances, and regulations, or other laws, that apply to performance of the Work. AGENCY is entitled to review and copy all such applications, permits, and licenses which CONSULTANT shall promptly make available upon AGENCY's request.

**14. Prevailing Wage Requirements**

Certain work to be performed under this contract may be considered "public works" subject to prevailing wage, apprenticeship and other labor requirements of Labor Code division 2, part 7, chapter 1, section 1720 et seq. Such public works may include work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work. CONSULTANT is solely responsible for determining whether the Work, or any portion thereof, is subject to said requirements, and for complying with all such requirements that apply. All such public works projects are subject to compliance monitoring by the California Department of Industrial Relations (DIR). AGENCY has obtained from the DIR general prevailing wage determinations for the locality in which the Work is to be performed that are on file with AGENCY's Public Works Agency and are available upon request. CONSULTANT is responsible for posting job site notices as prescribed by regulation pursuant to Labor Code section 1771.4(a)(2). CONSULTANT acknowledges that it is aware of state and federal prevailing wage and related requirements and shall comply with these requirements to the extent applicable to the Work, including, without limitation, Labor Code sections 1771 (payment of prevailing wage), 1771.1 (registration with DIR) and 1771.4 (submission of certified payrolls to Labor Commissioner).

**15. Miscellaneous**

a. Entire Understanding. This contract is an integrated agreement and constitutes the final expression, and the complete and exclusive statement of the terms of, the parties' agreement with respect to the subject matter hereof. This contract supersedes all contemporaneous oral and prior oral and written agreements, understandings, representations, inducements, promises, communications or warranties of any nature whatsoever, by either party or any agent, principal, officer, partner, employee or representative of either party, with respect to the subject matter hereof. Without limiting the foregoing, CONSULTANT acknowledges that no representation, inducement, promise or warranty not contained in this contract will be valid or binding against AGENCY.

b. No modification, waiver, amendment or discharge of this contract shall be valid unless the same is in writing and signed by duly authorized representatives of both parties.

c. Non-assignability. CONSULTANT will not assign this contract or any portion thereof to a third party without the prior written consent of AGENCY, and any attempted assignment without such prior written consent will be null and void and will be cause, at AGENCY's sole and absolute discretion, for immediate termination of this contract. AGENCY may withhold its consent to assignment at its discretion. In the event AGENCY consents to assignment, the obligations of CONSULTANT hereunder shall be binding on CONSULTANT's assigns.

d. Third Party Beneficiaries. Except for indemnitees under sections 10.e and 12 above, this contract does not, and the parties to this contract do not intend to, confer a third party beneficiary right of action on any third party whatsoever, and nothing set forth in this contract will be construed so as to confer on any third party a right of action under this contract or in any manner whatsoever.

e. Time limits stated herein are of the essence.

f. Governing Law; Venue. This contract is made and entered into in the State of California and shall, in all respects, be interpreted, governed and enforced in accordance with the laws of the State of California applicable to contracts entered into and fully to be performed therein. The venue for any action, suit, arbitration, judicial reference or other proceeding concerning this contract shall be in Ventura County, California.

g. All notices, requests, claims, and other official communications under the contract shall be in writing and transmitted by one of the following methods:

(1) Personal delivery.

(2) Courier where receipt is confirmed.

(3) Registered or certified mail, postage prepaid, return receipt requested.

Such notices and communications shall be deemed given and received upon actual receipt in the case of all except registered or certified mail; and in the case of registered or certified mail, on the date shown on the return receipt or the date delivery during normal business hours was attempted. All notices and communications shall be sent to CONSULTANT at the current address on file with AGENCY for contract payment purposes, and shall be sent to AGENCY as follows:

Public Works Agency
County of Ventura L#1670
800 South Victoria Avenue
Ventura, CA 93009-1670

Either party may change its contact information by providing written notice of the change to the other party in accordance herewith.

h. Further Actions. The parties hereto agree that they will execute any and all documents and take any and all other actions as may be reasonably necessary to carry out the terms and conditions of this contract.

i. Legal Representation. Each party warrants and represents that in executing this contract, the party has relied upon legal advice from attorneys of the party's choice (or had a reasonable opportunity to do so); that the party has read the terms of this contract and had their consequences (including risks, complications and costs) completely explained to the party by the party's attorneys (or had a reasonable opportunity to do so); and that the party fully understands the terms of this contract. Each party further acknowledges and represents that the party has executed this contract freely and voluntarily without the undue influence of any person, and the party has not relied on any inducements, promises or representations made by any person not expressly set forth in this contract.

j. No Waiver. Failure by a party to insist upon strict performance of each and every term, condition and covenant of this contract shall not be deemed a waiver or relinquishment of the party's rights to enforce any term, condition or covenant.

k. Partial Invalidity. If any provision of this contract is held by a court of competent jurisdiction to be invalid, void or unenforceable, the parties intend, and it shall be so deemed, that the remaining provisions of this contract shall continue in full force without being impaired or invalidated in any way. If such provision is held to be invalid, void or unenforceable due to its scope or breadth, such provision shall be deemed valid to the extent of the scope or breadth permitted by law.

l. Interpretation of Contract. For purposes of interpretation, this contract shall be deemed to have been drafted by both parties, and no ambiguity shall be resolved against any party by virtue of the party's participation in the drafting of the contract. Accordingly, Civil Code section 1654 shall not apply to the interpretation of this contract. Where appropriate in the context of this contract, the use of the singular shall be deemed to include the plural, and the use of the masculine shall be deemed to include the feminine and/or neuter.

m. Counterparts. This contract may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same contract.

**CONSULTANT:**

Signature

Print Name and Title

Signature

Print Name and Title

[VendorID]
Vendor Number

**AGENCY:**

Public Works Director or
Deputy Purchasing Agent

| Question # | Your Name | Consultant | Reference #, Page #, Parag. #, Etc. | Question | Response |
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