



ITEM NO. 11

OPERATIONS & MAINTENANCE COMMITTEE AGENDA

Wednesday, February 19, 2025

4:00 PM

**East Bay Dischargers Authority
2651 Grant Avenue, San Lorenzo, CA**

Committee Members: Young (Chair); Azevedo

OM1. Call to Order

OM2. Roll Call

OM3. Public Forum

OM4. EBDA Permit Compliance

(The Committee will be updated on EBDA's NPDES compliance.)

OM5. Status Report

(The Committee will be updated on EBDA's O&M activities.)

OM6. Renewal and Replacement Fund Recap

(The Committee will review the current status of the Authority's Renewal and Replacement Fund projects.)

OM7. Adjournment

Any member of the public may address the Commission at the commencement of the meeting on any matter within the jurisdiction of the Commission. This should not relate to any item on the agenda. It is the policy of the Authority that each person addressing the Commission limit their presentation to three minutes. Non-English speakers using a translator will have a time limit of six minutes. Any member of the public desiring to provide comments to the Commission on an agenda item should do so at the time the item is considered. It is the policy of the Authority that oral comments be limited to three minutes per individual or ten minutes for an organization. Speaker's cards will be available in the Boardroom and are to be completed prior to speaking.

In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in an Authority meeting, or you need a copy of the agenda, or the agenda packet, in an appropriate alternative format, contact Juanita Villasenor at juanita@ebda.org or (510) 278-5910. Notification of at least 48 hours prior to the meeting or time when services are needed will assist the Authority staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting or service.

Agenda Explanation
East Bay Dischargers Authority
O&M Agenda
February 19, 2025

In compliance with SB 343, related writings of open session items are available for public inspection at East Bay Dischargers Authority, 2651 Grant Avenue, San Lorenzo, CA 94580. For your convenience, agenda items are posted on the East Bay Dischargers Authority website located at <http://www.ebda.org>.

**Next Scheduled Operations and Maintenance Committee is
Monday, March 17, 2025**

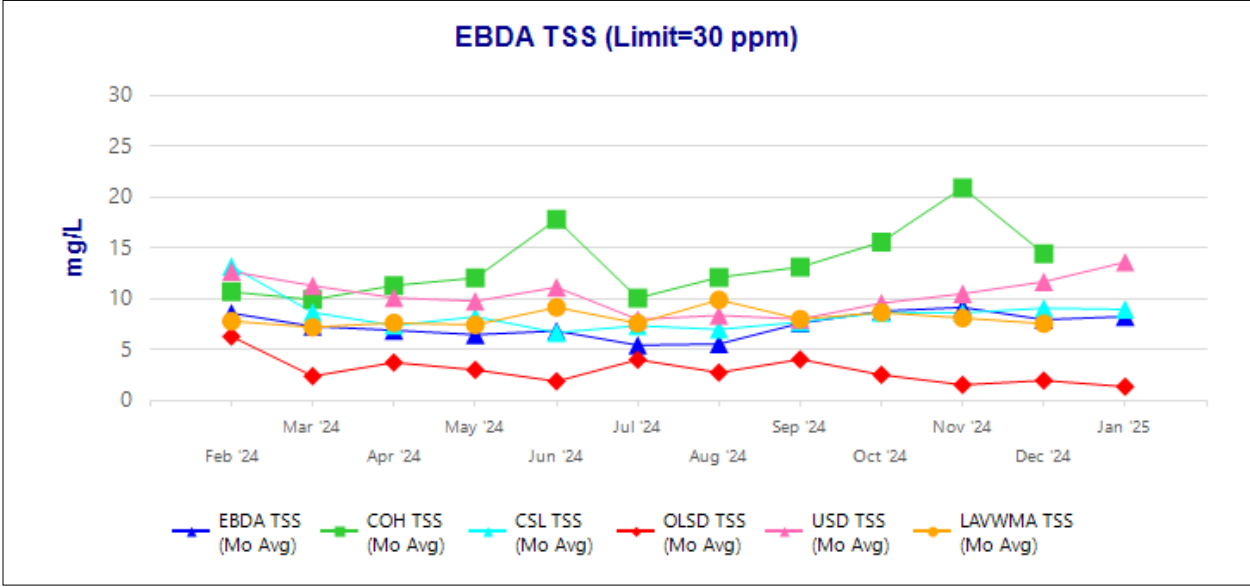
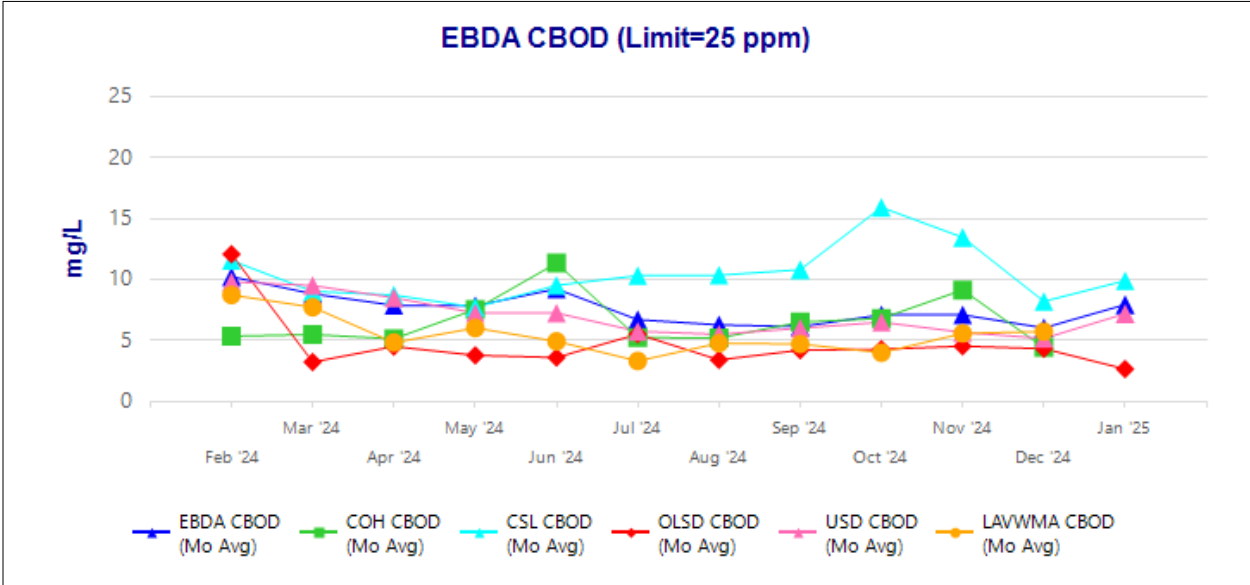
ITEM NO. OM4 EBDA PERMIT COMPLIANCE

Recommendation

For the Committee’s information only; no action is required.

Discussion

EBDA and its members continued our NPDES compliance in December, and preliminary January data indicates compliance as well. Member Agency CBOD and TSS performance are shown below. A table with bacterial indicators follows.



EBDA Bacterial Indicators

Date	FECAL	ENTERO
	MPN/ 100mL	MPN/ 100mL
Limit (90th Percentile)	1100	1100
Limit (Geomean)	500	280
February 2024 Geomean	8	15
March 2024 Geomean	6	7
April 2024 Geomean	9	3
May 2024 Geomean	12	4
June 2024 Geomean	60	9
July 2024 Geomean	59	5
August 2024 Geomean	153	21
September 2024 Geomean	109	13
October 2024 Geomean	33	4
November 2024 Geomean	24	2
12/2/2024	23	6
12/3/2024	79	< 2
12/9/2024	2	4
12/10/2024	11	< 2
12/16/2024	< 2	10
12/17/2024	4	2
12/23/2024	2	2
12/24/2024	70	8
12/30/2024	3200	97
12/31/2024	220	8
December 2024 Geomean	22	5
1/1/2025	NA	13
1/6/2025	33	20
1/7/2025	310	< 2
1/8/2025	79	2
1/13/2025	22	6
1/14/2025	33	< 2
1/15/2025	4	NA
1/20/2025	4	< 2
1/21/2025	7	8
1/27/2025	49	8
1/28/2025	NA	10
January 2025 Geomean	25	5

ITEM NO. OM5 STATUS REPORT

Union Effluent Pump Station (UEPS)

No change; all equipment is operational.

Hayward Effluent Pump Station (HEPS)

Effluent Pump Replacement Project

On January 20, vibration testing was completed on the two new HEPS pumps. The vibration testing report was sent to the pump manufacturer, and staff is waiting for their response. Both new pumps tested well below the allowable vibration limits, and both have been operating for several weeks without any issues except for an unusual intermittent noise from one of the pumps, which was previously discussed. Once the noise issue is resolved and the pump manufacturer clears both new pumps, work will start on the third new pump.

Oro Loma Effluent Pump Station (OLEPS)

Automatic Transfer Switch Upgrade

Todd Beecher, EBDA's contract electrical engineer, has updated the OLEPS electrical system single line diagrams and completed a design memorandum for two new automatic transfer switches (ATSs) at OLEPS. EBDA staff is in the process of reviewing the design, and then Mr. Beecher will present his recommendations to the MAC. The two new ATSs will improve reliability of the pump station in the event of a power outage. If PG&E power fails, the OLEPS emergency generator is the primary source of backup power. Currently, if the emergency generator fails to start, operators can manually switch to the secondary source of backup power from OLSD. The installation of two new ATSs will allow the switch from primary to secondary backup to occur automatically. This ATS work is being completed as part of Phase 2 of the OLEPS Electrical Upgrades. Replacement of the breakers and refurbishment of the Main Switchboard was completed in Phase 1 of the OLEPS Electrical Upgrades last year.

Skywest Pump Station

Recycled Water Production

During the month of January 2025, the Skywest Recycled Water System operated for two days and produced 1.12 million gallons of recycled water.

Marina Dechlorination Facility (MDF)

No change; all equipment is operational.

Force Main

Hayward Marsh Restoration Project Construction Access Route

The East Bay Regional Park District (EBRPD) is leading a project to [restore the Hayward Marsh](#) to a tidal marsh, in alignment with the [Hayward Regional Shoreline Adaptation Master Plan](#). Hayward Marsh had previously provided wastewater polishing for a portion of USD flow. That treatment function was phased out in 2019 by mutual agreement between USD, EBDA, and EBRPD, and the associated discharge permit was rescinded in 2022.

The proposed marsh restoration and sea-level rise resiliency project is currently in design, and implementation will require significant amounts of fill to be brought into the site. EBRPD staff contacted EBDA because the anticipated construction route includes trucks filled with soil, as well as empty trucks leaving the site, to transverse EBDA’s force main. EBRPD is tentatively planning to start soil import in Summer 2025, pending permits. The duration of soil import is dependent on availability of fill material, and could possibly take 5-10 years, with additional construction activities taking place after soil import is complete.

EBDA staff engaged DCM Consulting, Inc. (DCM), EBDA’s contract geotechnical engineer, to prepare a Technical Memorandum (TM) providing recommendations and requirements for construction access for the project over the EBDA force main. DCM has performed this type of geotechnical engineering review for EBDA in the past and has also worked with EBDA’s Member Agencies. The TM prepared by DCM and forwarded to the EBRPD is attached at the end of the O&M status report. EBDA staff is currently working with EBRPD staff to memorialize the recommendations and commitments EBRPD is making prior to the start of construction.

Operations Center

No change; all equipment is operational.

Miscellaneous Items

Underground Service Alerts

EBDA received thirteen (13) Underground Service Alert (USA) tickets during the month of January 2025. Five required an Electronic Positive Response (EPR) and calls/emails to the excavators, and of the five, four required field verification.

Wet Weather

During the month of January 2025, there were no significant rain events that required the operation of an OLEPS diesel pump, and there were no capacity exceedance events.

Total rainfall for the month of January 2025 (in inches) was as follows:

Oakland	Hayward	Livermore
0.24	0.34	0.20

Special Projects

Cargill Brine Project

As discussed at previous Commission Meetings, following certification of the Final Environmental Impact Report (EIR) for the proposed project, Cargill informed EBDA staff that they have made the decision to re-evaluate the “Bayside” pipeline route. Cargill is continuing to refine the route and expects it to be very similar to the Bayside alternative outlined in the EIR. Cargill is continuing to meet with landowners along the new proposed route. Cargill is also investigating an alternative that would upgrade and repurpose a former Shell pipeline.

Cargill’s preliminary schedule shows revised CEQA analysis in 2025, and construction beginning sometime between 2027 and 2030 depending on permitting, with operation commencing between 2031 and 2033. Cargill has requested that EBDA consider an interim Project Approval Agreement between the parties that would allow Cargill to begin construction on elements of the project that do not directly affect EBDA, such as reconfiguration of intakes and pond structures at Cargill’s Newark salt facility. Staff is currently working with Cargill to negotiate this agreement and expects to bring it to the Commission for consideration in the coming months. The Agreement would be accompanied by findings and a resolution to approve the EIR. Once negotiated, the Project Approval Agreement would be superseded by the final Operating Agreement.

Advanced Quantitative Precipitation Information (AQPI) Project

The regional AQPI project continues to move forward with the goal of improving the prediction of rainfall events in the Bay Area. Following a series of delays, the East Bay radar was installed at [Rocky Ridge](#) in Las Trampas Regional Wilderness Park in December 2022, and data from the site became available in December 2023. The AQPI Program Management team developed an updated website and data management tools for the 2024-2025 wet season. Agencies are currently developing additional tools to make the data more accessible for use in decision-making.

To:	Howard Cin East Bay Dischargers Authority (EBDA)	Date:	February 7, 2025
From:	Dave Mathy DCM Consulting, Inc.	File:	No. 431
Subject:	East Bay Regional Park District (EBRPD) Hayward Marsh Restoration – Construction Access Route Crossing East Bay Dischargers Authority (EBDA) 60-inch Force Main Pipeline Hayward, California		

1.0 INTRODUCTION

This technical memorandum presents the results of a geotechnical engineering review of currently available EBRPD site development plans for restoration of Hayward Marsh in Hayward, California with respect to potential impacts on EBDA’s pipeline system. The EBDA pipeline system (i.e., EBDA Transport System) consists of approximately 11.5 miles of reinforced concrete pipe (RCP) force main (i.e., pressurized) extending along the eastern margin of San Francisco Bay from Union City to San Leandro. The pipeline transports treated wastewater effluent from Union Sanitary District, the City of Hayward, Oro Loma Sanitary District, Castro Valley Sanitary District, the City of San Leandro, and the Livermore/Amador Valley Water Management Agency to EBDA’s outfall pipeline in San Francisco Bay. At the Hayward Marsh Restoration project site, the EBDA force main pipeline is a 60-inch inside diameter reinforced concrete pipe (RCP) located north and east of the marsh land. While no marsh restoration earthwork will occur over the EBDA pipeline current Hayward Marsh Restoration plans illustrate a Construction Access Route passing over EBDA’s 60-inch RCP at the location shown in Figure A.



Figure A – Location of EBRPD Construction Access Route to Whitesell St. crossing over EBDA’s 60-inch RCP force main pipeline. The Construction Access Route will be on the south side of the drainage channel west of Whitesell St.

See Figures 1 and 2 for illustrations of the EBRPD Marsh Restoration Plan and the crossing location.

The following documents have been provided to DCM Consulting, Inc. by EBDA for this geotechnical engineering evaluation of potential impacts of the EBRPD Marsh Restoration Construction Access Route crossing over the EBDA 60-inch RCP force main pipeline.

- East Bay Regional Park District
Restore Hayward Marsh – Project Overview
65% Plan
Sheet No. 2
By: Upright Engineering
Dated: 7/17/24
- Technical Memorandum
EBRPD Restore Hayward Marsh: Task 2 – Conduct Relevant Studies
Geotechnical Conditions and Conceptual Recommendations Memorandum
By: GEI Consultants
Dated: December 23, 2020
- East Bay Dischargers Authority (EBDA)
Force Main Between Hayward and Alvarado
Plan and Profile Sta. 58+50 to Sta. 73+50
By: Kennedy Engineers
Dated: August 2, 1977
- East Bay Dischargers Authority
Transport System Inspection and Condition Assessment
By: Brown and Caldwell
Dated: October 11, 2021
- Geotechnical Report
City of Hayward
Hayward Water Pollution Control Plant
By: Engeo
Dated: November 2, 2023

2.0 PROJECT DESCRIPTION

The EBDA 60-inch RCP force main pipeline was constructed in the late 1970's (circa 1977) by conventional open cut trenching. Figure 3 at the end of this technical memorandum is the Record Drawing, Plan and Profile for the 60-inch RCP force main pipeline in the vicinity of the Hayward Marsh. The EBRPD Construction Access Route is at approximately Station 64 + 00 on the EBDA Record Drawing. The 1977 ground surface elevation at the crossing location was about El. 5 (note 100 feet was added to all elevations to avoid negative numbers). The 1977 EBDA Record Drawings and elevations are based on NGVD 29 (National Geodetic Vertical Datum 1929). Current baseline elevations are based on NAVD 88 (North American Vertical Datum 1988). To convert the Record Drawing elevations to NAVD 88 in the Hayward Marsh area add 2.76 feet to NGVD 29 elevations. Therefore, the

undisturbed ground surface elevation over the top of the EBDA 60-inch RCP force main pipeline should be taken as El. 7.76.

The cover on the EBDA 60-inch RCP force main pipeline as shown in the 1977 Record Drawings was about 5 feet (see Figure 3). This is the cover thickness in the presently undisturbed marsh area south of the drainage channel shown in Figure A and Figures 1 and 2.

The drainage channel currently present between Whitesell St. and the marsh area was constructed between 1980 and 1982 (taken from www.historicaerials.com). The railroad spur on the north side of the drainage channel and the commercial property at 25495 Whitesell Street on the south side of the drainage channel were also constructed between 1980 and 1982. The short berms on the north and south sides of the drainage channel and the railroad spur are at about the same elevation (see Photos 1 and 2).

From Google Earth, the elevation of the top of berms on each side of the drainage channel and railroad spur are equal at about El. 11. At the crossing location the drainage channel berms appear to have been raised by about 3 feet over the undisturbed original marsh elevation (see Photo 2). Therefore, the cover over the EBDA 60-inch RCP force main pipeline at the southern berm and EBRPD Construction Access Route is about 8 feet.

EBRPD plans are to use the southern berm of the drainage channel as the Marsh Restoration Construction Access Route. This route will be used by both loaded and empty transfer trucks bringing import fill to the marsh restoration project. All construction traffic using the Construction Access Route will enter/exit from and to Whitesell Street and as such, all construction traffic must conform to H2O loading requirements (i.e., be street/highway legal).



Photo 1 – View of drainage channel from Whitesell St. looking west. This channel was constructed after the EBDA pipeline, most likely resulting in locally reduced cover on the RCP force main. The EBRPD Construction Access Route will be on the south side berm of the drainage channel (photo left, red line). To photo right are the north side berm and railroad spur tracks.

The thickness of berm fill above natural grade at the EBDA crossing (i.e., the grade in 1977 at the time of EBDA pipeline construction) is approx. 3 feet.

Photo taken on January 2, 2025.



Photo 2 – View of drainage channel from railroad spur looking southwest. This channel was built after the EBDA pipeline, most likely resulting in locally reduced cover on the 60-inch RCP force main.

Note that the top of the EBDA pipeline is at sea level (i.e., El. 0 in 1977).

Photo taken on January 2, 2025.

Approx EBDA 60-inch RCP crossing the drainage channel

2.1. Condition of EBDA 60-inch RCP Force Main

In 2018 Brown and Caldwell completed a comprehensive inspection and condition assessment for the entire EBDA Transport System facilities (e.g., pipelines, manholes, valves, and fittings, etc.). Brown and Caldwell’s findings, conclusions and recommendations were transmitted to EBDA in their inspection and condition assessment report dated October 11, 2021. Brown and Caldwell completed interior and exterior inspections of the 11.5-mile-long Transport System pipelines at discrete locations including just south of the planned EBRPD Construction Access Route. Brown and Caldwell concluded that the Transport System pipelines were in good condition. Following are some excerpted quotes from the Brown and Caldwell report:

- “Despite its approximate 40-year age and exposure, the transport system pipelines and concrete manhole structures show no signs of structural damage or deterioration.” (page 6);
- “Joints are sound and the pipe is generally smooth.” (page 29)
- “Based on expert analysis and the current observed condition of the asset, the authority should expect a remaining useful life of 50 to 100 years.” (page 41)

Based on the Brown and Caldwell inspection and condition assessment report it is safe to assume that the EBDA 60-inch RCP force main pipeline at the proposed EBRPD Construction Access Route crossing is in good condition.

2.2. Geotechnical Conditions

The geologic setting of the Hayward Marsh area is well described in the Geotechnical Conditions and Conceptual Recommendations Technical Memorandum by GEI dated December 23, 2020. The Hayward Marsh is located on the eastern margin of San Francisco Bay and as such is underlain by variable thickness of Young Bay Mud. Young

Bay Mud is a geologically recent accumulation of sediments within San Francisco Bay consisting of fine-grained soils (silts and clays) exhibiting extremely weak shear strength and high compressibility under surcharge loading. The thickness of Young Bay Mud deposits is greatest within the Bay and thins out around the immediate Bay margins. The Young Bay Mud is underlain by older sediments consisting of much stronger, less compressible clays, silts and sands. Figure 4 excerpted from the GEI TM includes contours of the thickness of Young Bay Mud underlying the wetlands area. As seen in Figure 4 the EBRPD Access Route crossing of EBDA's 60-inch RCP force main pipeline is upgradient (i.e., east) of the Young Bay Mud deposits. Figure 4 also illustrates the locations of subsurface exploration – Cone Penetration Test (CPTs) by GEI. CPT-1 is closest to the crossing location, about 1,400 feet to the west. Figures 5 and 6 excerpted from the GEI TM are plots of the CPT-1 profile. As seen in CPT-1 the soils at the invert depth of the EBDA 60-inch RCP force main pipeline are medium stiff clays with a Standard Penetration Test blow count N-value of $N = 8$. Laboratory testing of native soils from CPT-1 at depths of 11.5 to 12 feet below ground surface include Liquid Limit = 78% and Plasticity Index = 57 which classifies as a high plasticity clay to organic clay (CH to OH).

Also in the vicinity of the crossing location is the City of Hayward's Water Pollution Control Plant (WPCP). Figure 7 is an excerpt from the most recent geotechnical investigation completed at the WPCP by Engeo showing test boring B-2, about 800 feet north of the crossing. As seen in test boring B-2 the soils at the invert depth of the EBDA 60-inch RCP force main pipeline are stiff clays with a Standard Penetration Test blow count of $N = 13$.

Both the GEI CPT-1 and Engeo test boring B-2 indicate that the EBDA 60-inch RCP force main pipeline should not be underlain by soft and highly compressible Young Bay Mud. Both CPT-1 and B-2 (see Figures 5 through 7) indicate that the EBDA 60-inch RCP force main pipeline should be directly underlain by medium stiff to stiff fine-grained clays.

With respect to geotechnical conditions the most significant unknown is the composition, consistency and strength of the drainage channel berm soils placed 45 years ago (i.e., circa 1980 to 1982).

3.0 CONCLUSIONS

The following conclusions are based on the project description and geotechnical conditions summarized above.

1. At the crossing location the depth of cover on the EBDA 60-inch RCP force main pipeline as depicted in the 1977 Record Drawings (Figure 3) is 5 feet. With construction of the drainage channel shown in Photos 1 and 2 and berm construction on the north and south sides of the channel in about 1980 to 1982, the depth of cover on the EBDA 60-inch RCP at the drainage channel raised berms is now approximately 8 feet. Assuming that all wetlands restoration construction traffic follows the south side berm of the drainage channel and conforms to H20 loading (i.e., street/highway legal), the applied live loading on the EBDA 60-inch RCP with 8 feet of cover will be less than 1 psi.

Applied live loads of 1 psi are nominal for a 60-inch RCP in good condition.

2. Soils directly supporting EBDA's 60-inch RCP force main pipeline should consist of medium stiff to stiff clays (i.e., no Young Bay Mud). These medium stiff to stiff clay soils will provide reliable support for the 60-inch RCP with low potential for long-term consolidation settlement from the approximate 3 feet of drainage channel berm fill added over the pipeline in 1980 to 1982.

As long as no new fill is added to the drainage channel berm over the EBDA 60-inch RCP there should be no settlement from native soil consolidation and live loads associated with the construction access route.

3. Impact loading caused by transfer trucks driving over a rough, rutted, or bumpy surface of the drainage channel berm, especially with fully loaded transfer trucks, will result in live impact loading on the underlying EBDA 60-inch RCP force main pipeline far in excess of the standard H20 highway/street loading.
4. At present we have no geotechnical design reports or construction testing reports (e.g., fill compaction tests) for the drainage channel berm. We do not know if the drainage channel berm was designed for long-term, repetitive construction traffic. Long-term berm stability is a concern for the EBDA 60-inch RCP force main pipeline. Given the close proximity of the top of pipe to the toe of the drainage channel berm (see Photo 1 and 2), slope failure of the berm could impact the EBDA pipeline.
5. A unique aspect of evaluating potential impacts of EBRPD's Construction Access Route over the EBDA 60-inch RCP force main pipeline is the planned long duration of the Wetlands Restoration project at 5 to 10 years. Many site conditions can change over 10 years so it is incumbent upon EBDA and EBRPD to periodically and regularly inspect the crossing location and ensure that the Construction Access Route is maintained smooth, that no fill is added to the drainage channel berm and that the drainage channel berm shows no signs of instability (e.g., surface slumping, surface cracking parallel to the channel, etc.)
6. Because of the protracted duration of traffic on the construction access route and uncertainties associated with the depth of cover, and geotechnical conditions including berm stability under protracted live loading, the EBDA 60-inch RCP force main pipeline should be monitored and documented, specifically the elevation of the top of pipe and any changes in that elevation. Specific recommendations for pipeline monitoring are included in the following section of this technical memorandum.

4.0 RECOMMENDATIONS

1. A detailed topographic survey should be completed for the area of the Construction Access Route over the EBDA 60-inch RCP force main pipeline including the elevations of the unimproved ground north and south of the drainage channel, the elevations of the top of the drainage channel berms, the slopes of the drainage channel sides and the elevation of the bottom of the drainage channel.
2. The 60-inch EBDA force main pipeline should be potholed at the crossing location on each side of the drainage channel berm/construction access route (i.e., just north of the north berm and just south of the south berm) by vacuum excavation to:
 - a. Determine the location and alignment of the EBDA pipeline under the drainage channel and berm. This pipeline crossing location should be clearly marked for additional recommendations for monitoring (see recommendation 5).

- b. Verify the existing pipeline top of pipe elevation and cover depth at the south berm, presently assumed at 8 feet. Cover depth of less than 8 feet will require reevaluation of the conclusions and recommendations of this technical memorandum.
 - c. Determine the existing pipeline top of pipe elevation and depth of cover within the drainage channel at the toe of the south side berm.
3. Limit construction traffic on the access route to rubber-tired vehicles (e.g., transfer trucks) conforming to H20 highway and street legal loading and track-mounted construction equipment to a track contact pressure of less than 10 psi.
4. Install a Surface Settlement Monitoring Point in the drainage channel berm directly over the EBDA 60-inch RCP force main pipeline to monitor the surface of the berm for any change in elevation (i.e., berm settlement from long-term repetitive construction traffic). See Figure 8 for an example of a surface settlement monitoring point (SSMP).

Survey monthly during active construction traffic on the access route. Recommended action levels:

- Report any berm settlement of more than 1 inch;
 - Stop work at any berm settlement of more than 2 inches. At this point carefully inspect the berm and check elevations of the top of the EBDA 60-inch RCP force main pipeline.
5. Install Utility Monitoring Points on each side of the drainage channel south berm and construction access route near the top of the berm but outside the construction access route traffic path. See Figure 9 for an example of a utility monitoring point.

Survey monthly during active construction traffic on the access route. Recommended action levels:

- Report any 60-inch RCP force main pipeline settlement of more than 0.5 inches;
 - Stop work at any 60-inch RCP force main pipeline settlement of more than 1 inch. At this point evaluate mitigation measures to eliminate construction traffic loading on the EBDA 60-inch force main pipeline (e.g., at-grade bridge).
6. Do not allow localized stockpiling of soils or construction materials or construction equipment on the EBDA easement.

5.0 LIMITATIONS

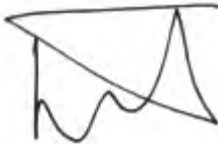
This technical memorandum has been prepared for the exclusive use of EBDA for evaluation of potential impacts of EBRPD's Hayward Marsh Restoration project construction on EBDA's 60-inch RCP force main pipeline as described herein. This technical memorandum may not be used for any other purpose or for any other project. The Hayward Marsh Restoration project is a long-duration earthwork project requiring import fill. The wetlands

restoration is anticipated to take 5 to 10 years to complete as import fill becomes available. The protracted duration earthwork activities and construction traffic on the Construction Access Route described herein presents unique conditions for the EBDA pipeline crossing. Periodic and regularly scheduled inspections of the pipeline crossing for the 5-to-10-year wetlands restoration duration should be completed by EBDA. Any change in site conditions from those described herein should be re-evaluated for impacts on the EBDA 60-inch force main pipeline.

This technical memorandum does not include an evaluation of the drainage channel berm stability and potential impacts of long-term construction equipment traffic on berm stability.

Within the limitations of scope, schedule and budget, DCM Consulting Inc.'s services have been provided in accordance with generally accepted practices in the field of geotechnical engineering as practiced in the San Francisco Bay Area. The conclusions and recommendations in this technical memorandum are based on the author's professional knowledge, experience, and judgement. No warranty or other conditions express or implied should be understood.

Let me know if you have any questions or need any additional review of EBRPD's Hayward Marsh Restoration project for potential impacts on the EBDA 60-inch RCP force main pipeline.



David C. Mathy
C.E. 28082
G.E. 569



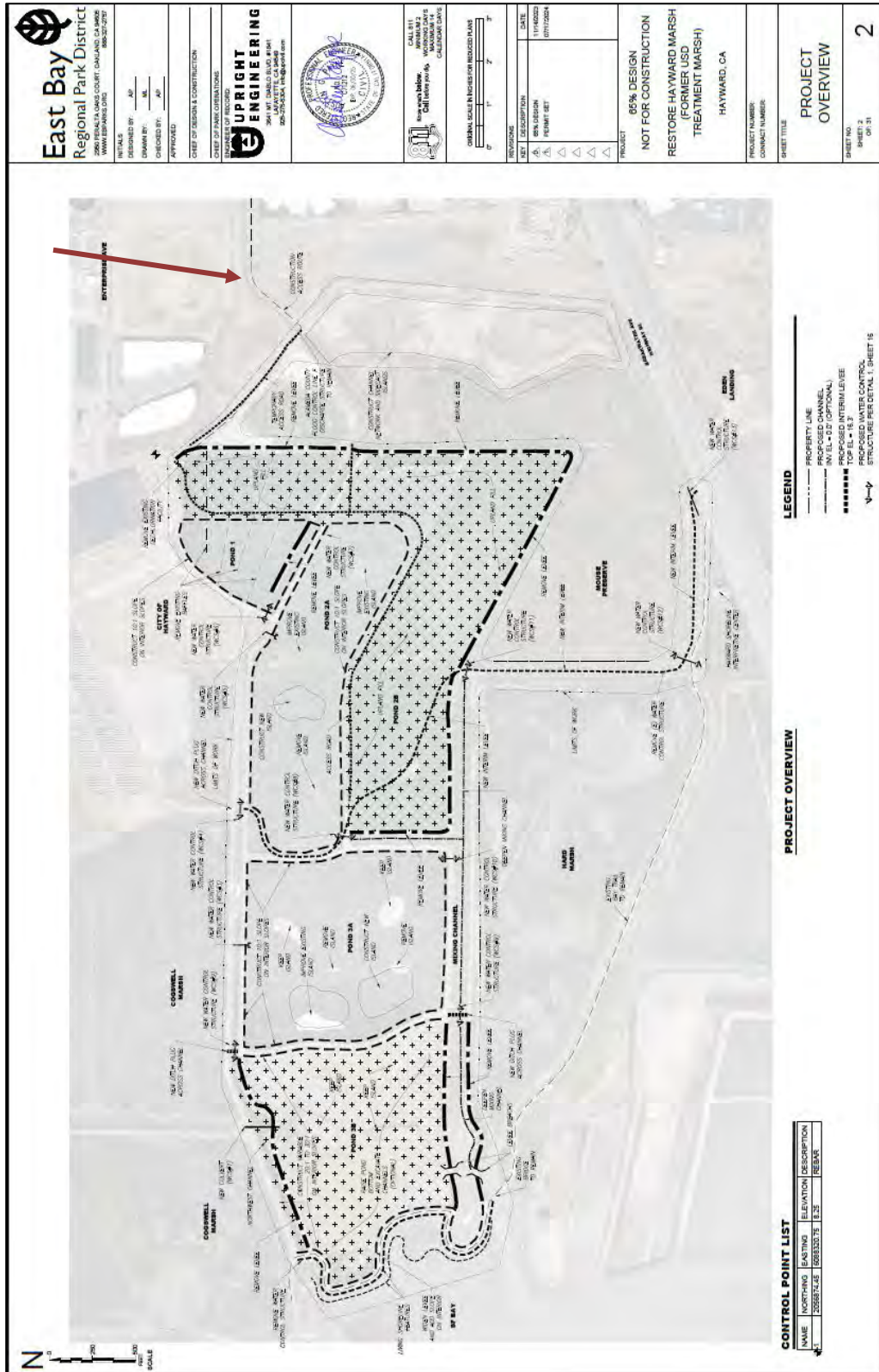


Figure 1 – East Bay Regional Park District, Hayward Marsh Restoration Site Plan. Red arrow is crossing location (see also Figure A)
 See Figure 2 for close up of crossing location.

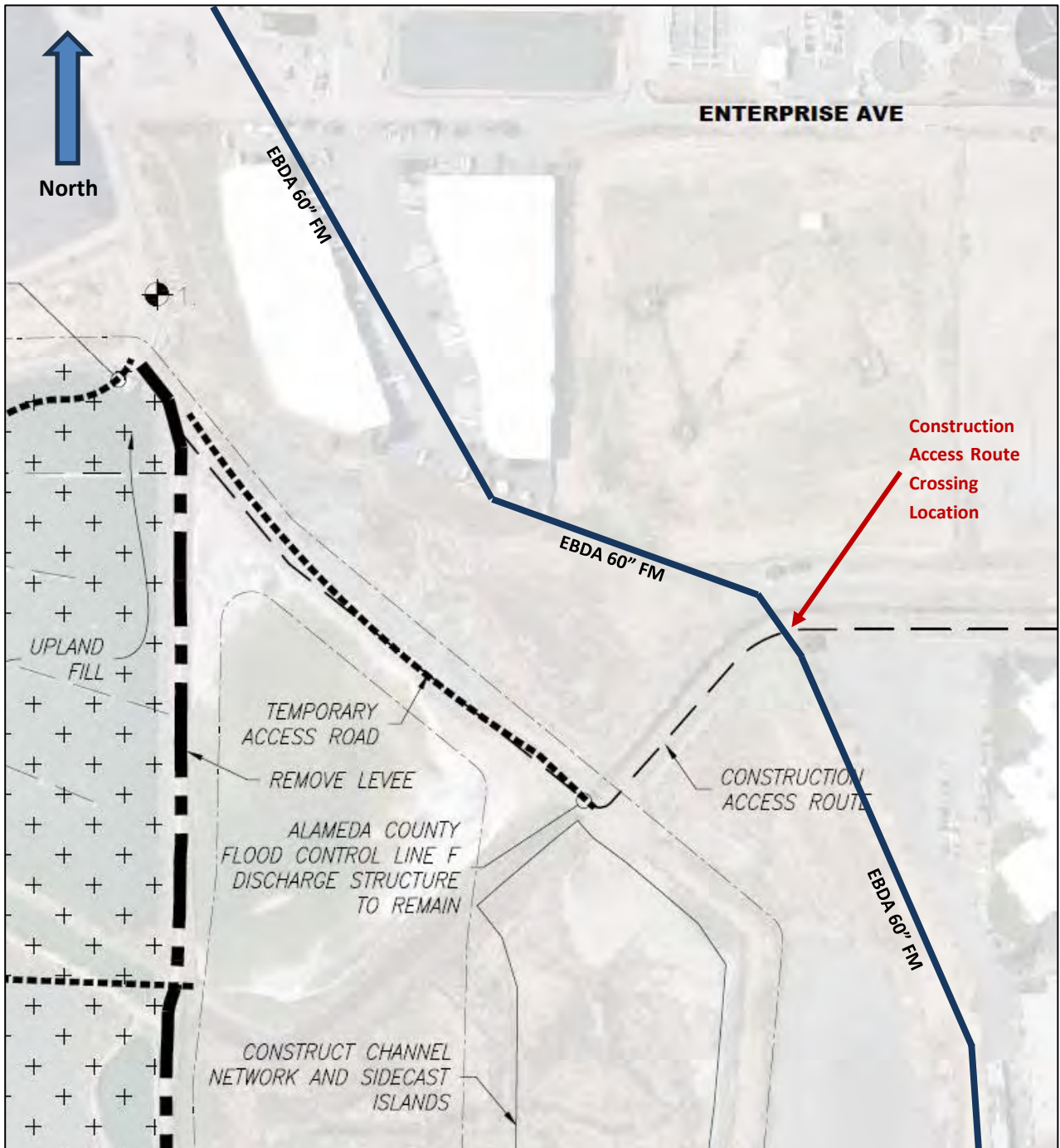


Figure 2 – Location of EBRPD Construction Access Route crossing over EBDA’s 60-inch RCP Force Main pipeline. Import fill transfer trucks (both loaded and empty) are to use this construction access route that leads to Whitesell St. and Enterprise Ave.

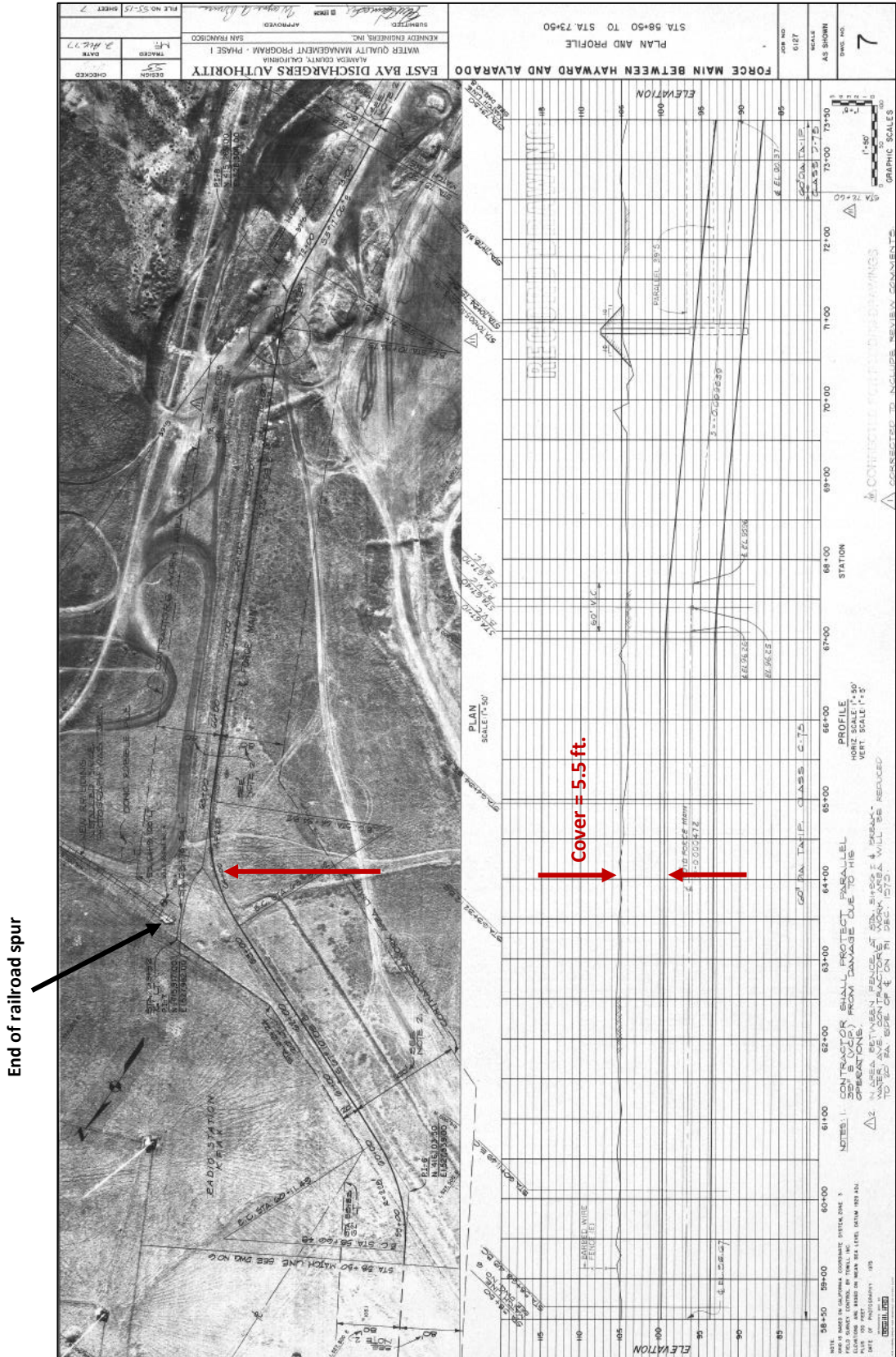


Figure 3 – EBDA 60-inch RCP Force Main, 1977 plan and profile at the EBRPD construction access road crossing.
 Note, cover on the pipeline is approx. 5.5 feet in 1977. Note that the drainage channel does not show up on this plan and profile as it was extended to Whitesell St between 1980 and 1982.

Ground Surface Elevation, 1977 = El. 5.
Datum is NGVD 1929.
For current NAVD 1988 Elevation add 2.76 ft.

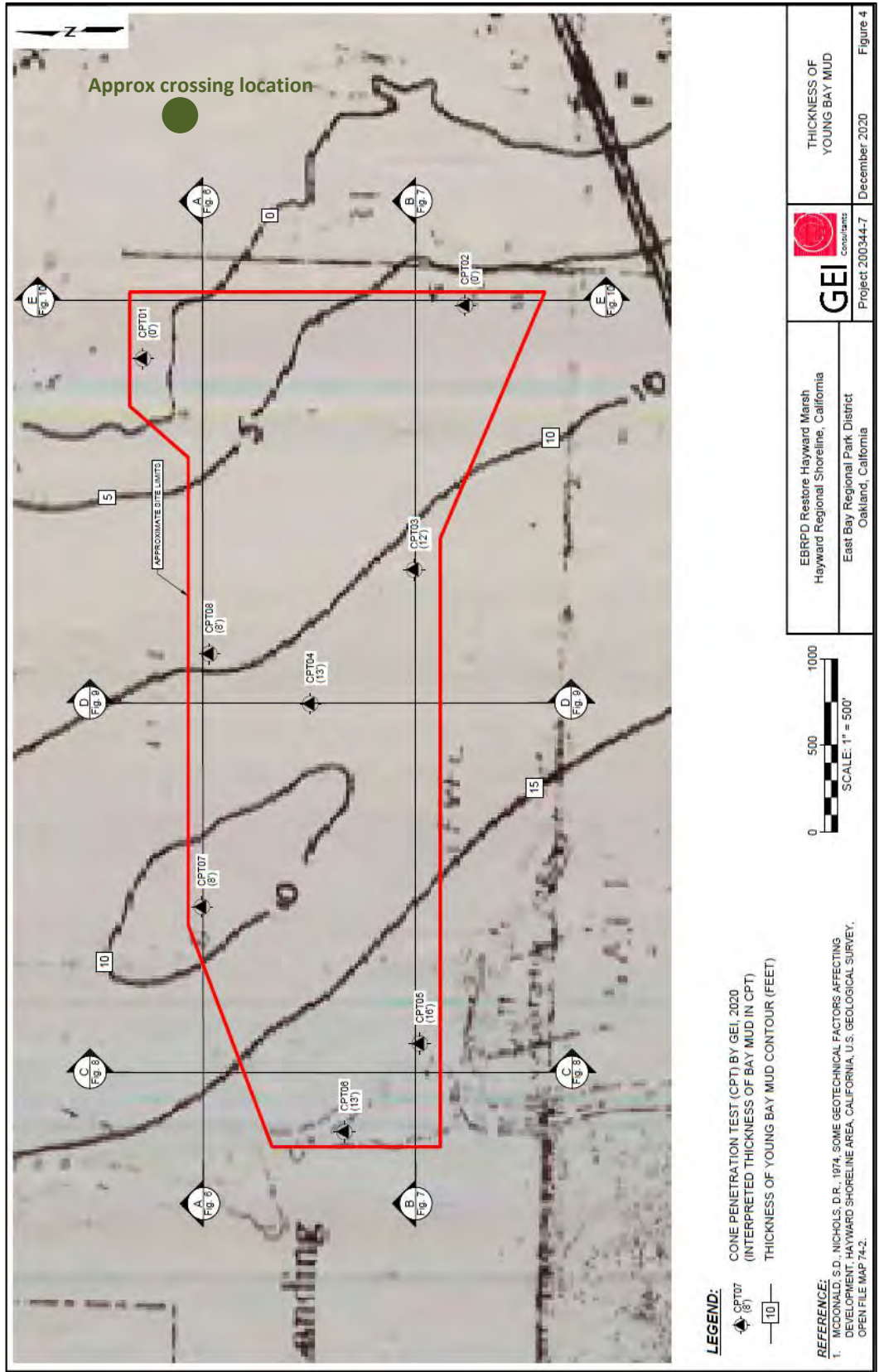


Figure 4 – GEI exploration map with Young Bay Mud Thickness Contours

Note the crossing location, shown in green, is upgradient (east) of the Young Bay Mud

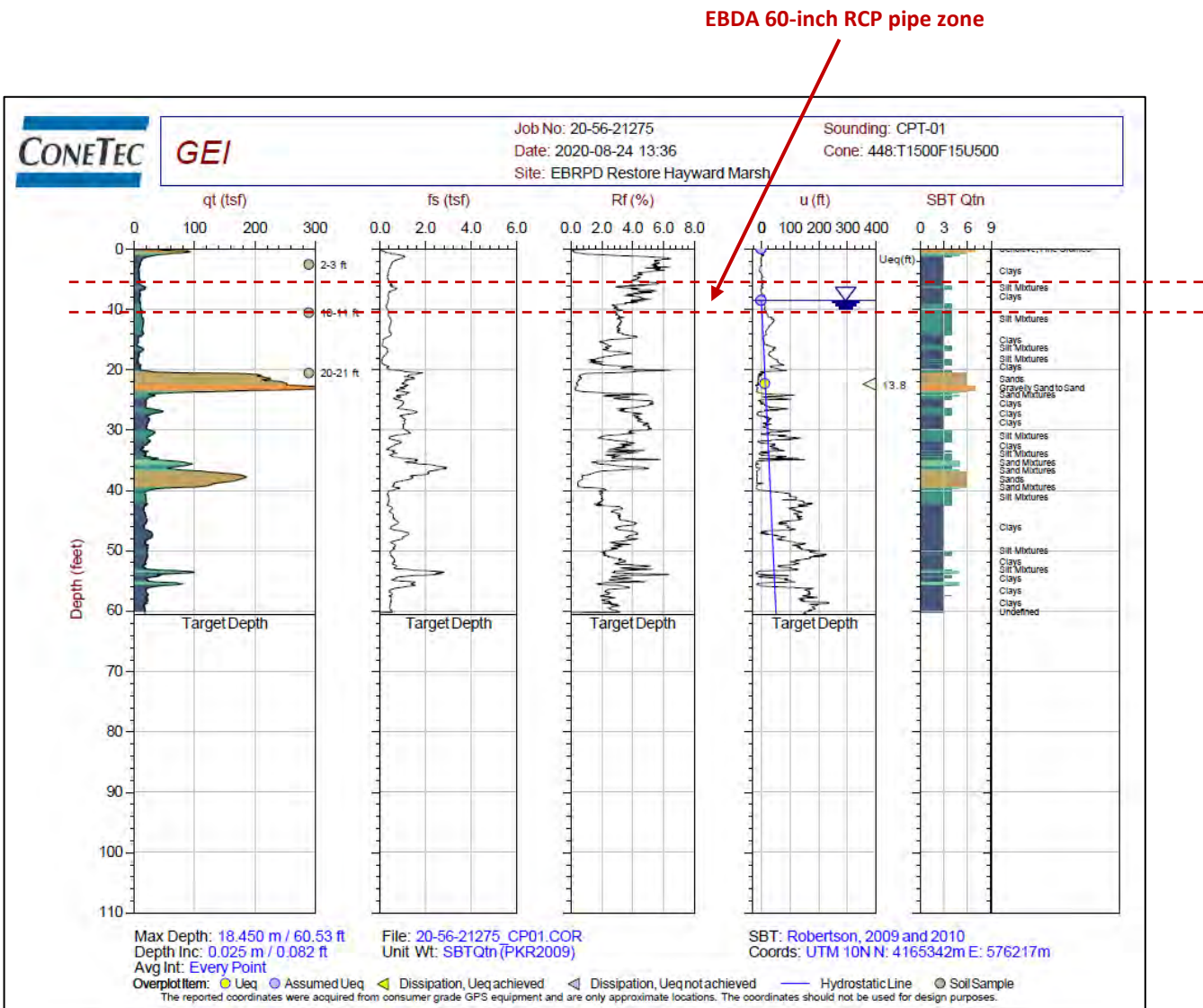


Figure 5 – Plot of CPT 01 by GEI, soil type at and below the invert depth of the EBDA 60-inch RCP force main are silt mixtures and clays

CPT 01 is approximately 1,400 feet west of the EBDA 60-inch RCP force main pipeline and EBRPD Construction Access Route crossing.

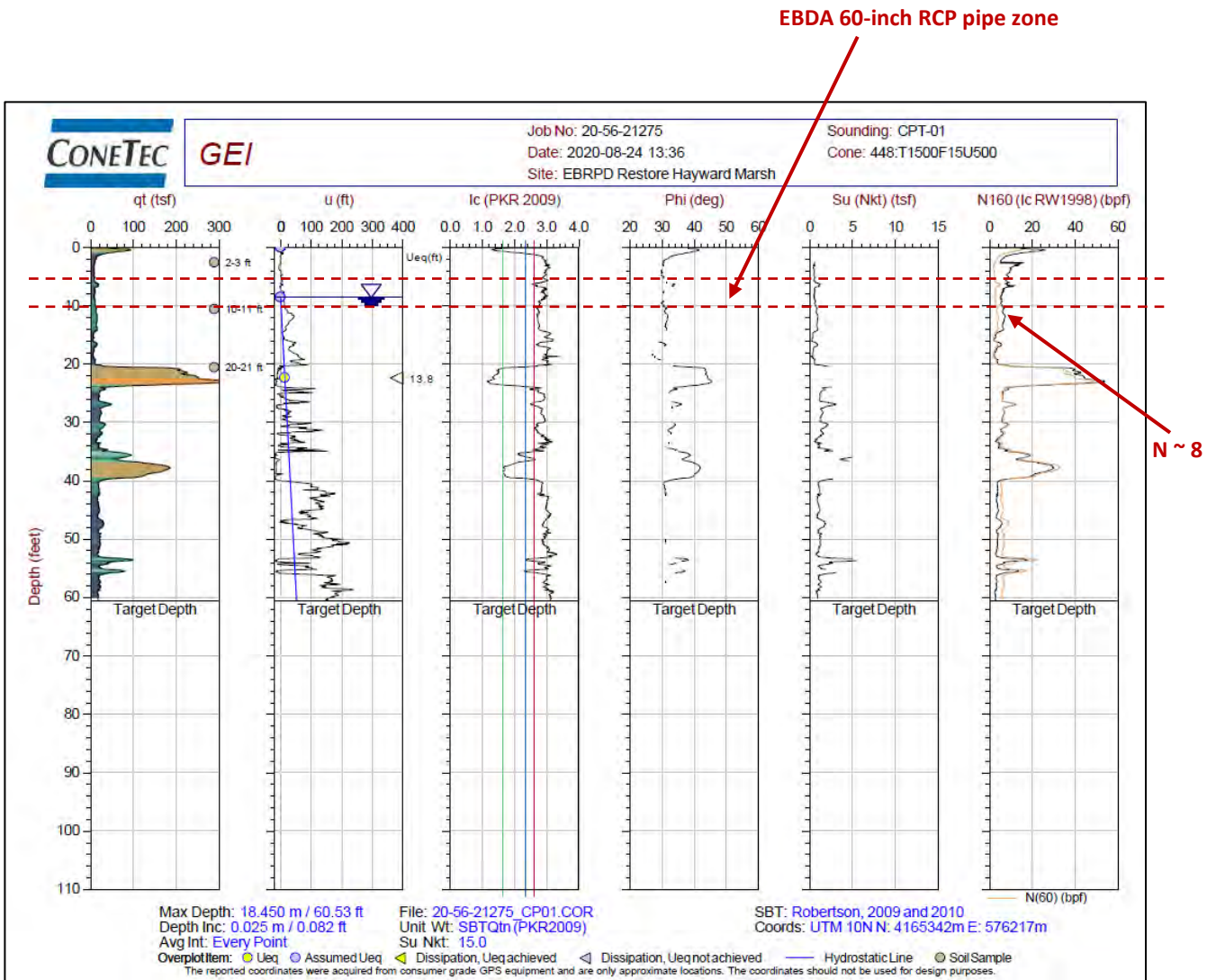
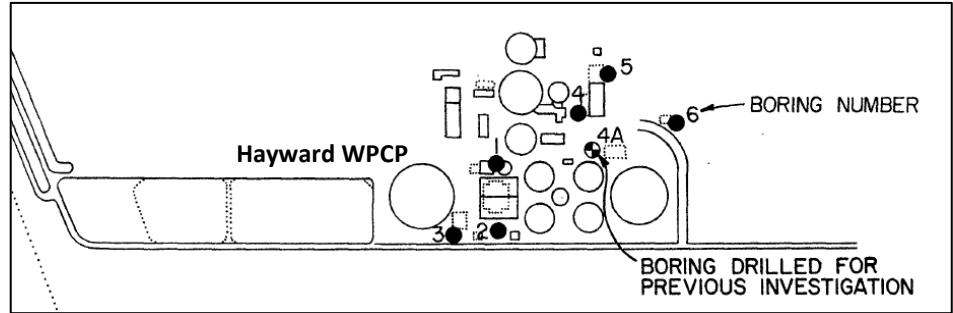


Figure 6 – Advanced Plot of CPT-01 with Standard Penetration Test (SPT) blow count correlation N1(60).

N1(60) is approx. N = 8 at the invert depth of the EBDA 60-inch RCP force main = medium stiff clays

No Bay Mud in CPT-01, see also Figure 4 for Young Bay Mud thickness contours.



EBDA 60-inch RCP pipe zone,
 top of pipe ~ El. 0

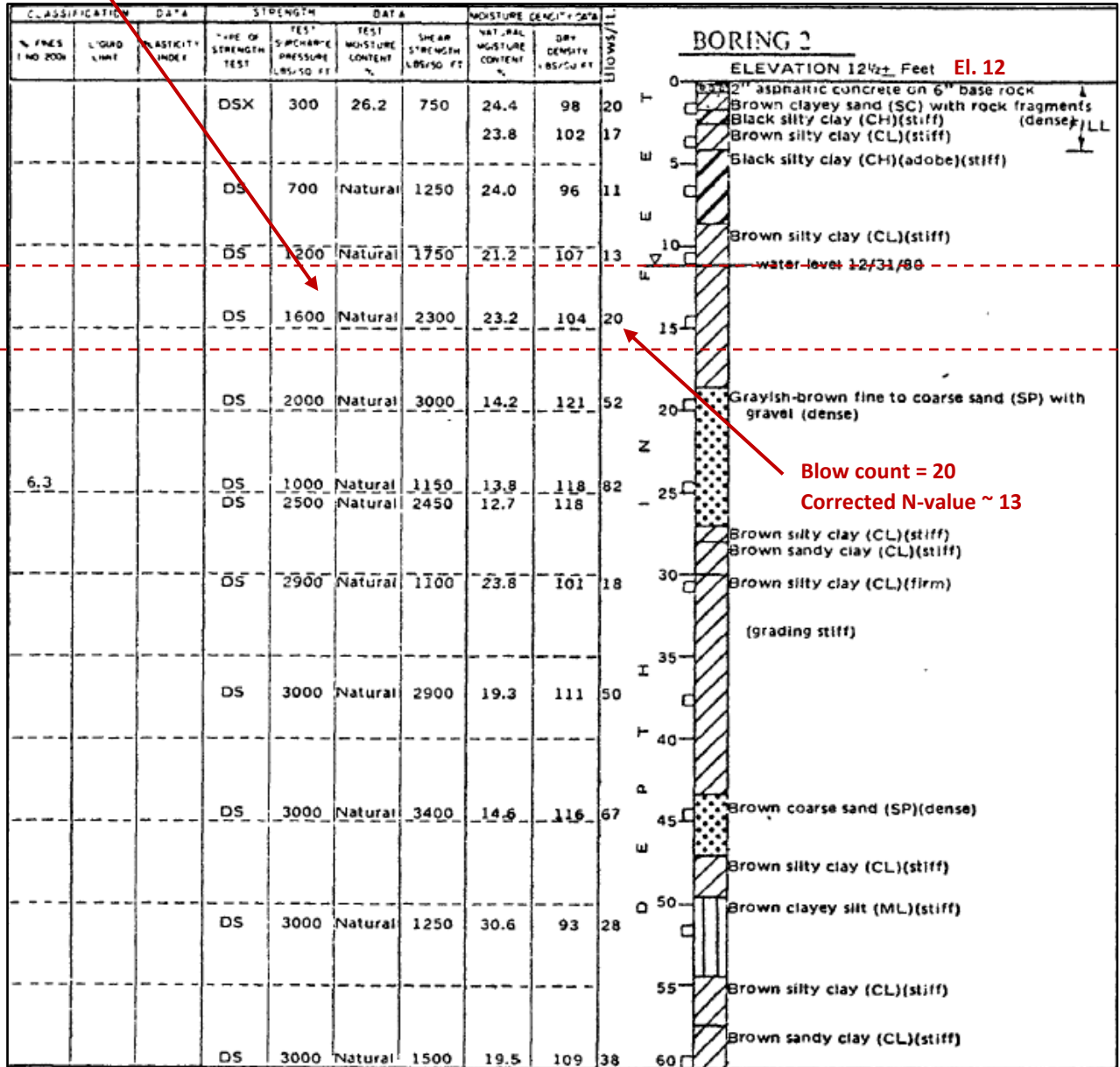


Figure 7 – Test Boring B-2 at southern border of Hayward WPCP in 1981, shortly after EBDA construction approx. 800 feet north of crossing. (B-3 only drilled to 15 feet bgs)
 Note soils at and below the invert depth of the EBDA 60-inch RCP force main = **Brown, Stiff, Silty Clays (N ~13)**.

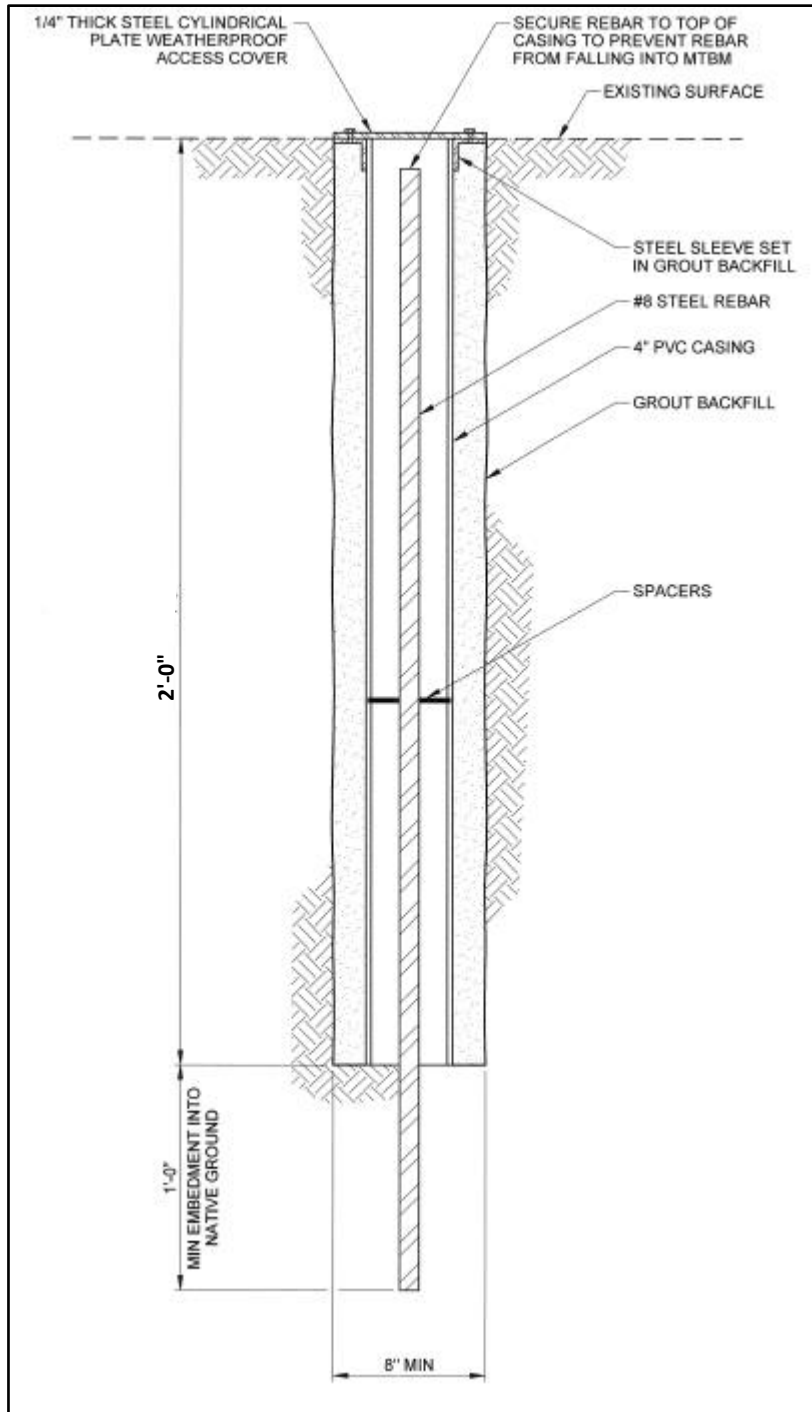


Figure 8 – Example detail for Surface Settlement Monitoring Point (SSMP)

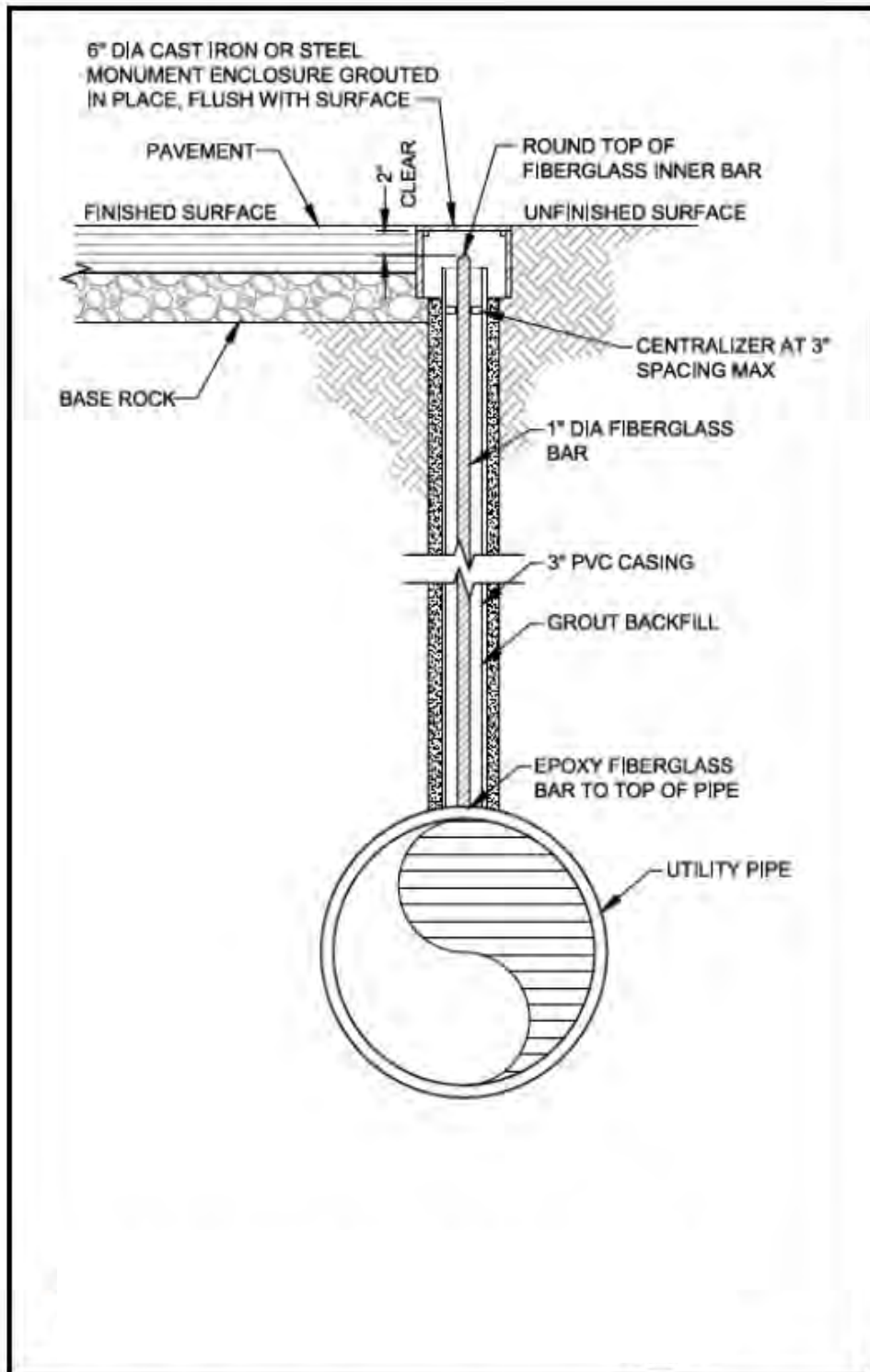


Figure 9 – Example detail for Utility Monitoring Point (UMP)

ITEM NO. OM6 RENEWAL AND REPLACEMENT FUND RECAP

Recommendation

For the Committee's information only; no action is required.

Strategic Plan Linkage

2. **Operations & Maintenance:** Ensure reliable operations and maintenance of the EBDA system to protect public health and the Bay.
 - a. Implement EBDA's Asset Management Plan.

Discussion

In May 2024, as part of adopting the Authority's budget, the Commission authorized an annual contribution to the Renewal and Replacement Fund (RRF) for Fiscal Year (FY) 2024/2025 in the amount of \$750,000. This amount is consistent with the Authority's Asset Management Plan and has been fixed at this level for the past 5 years. In June 2024, the Commission authorized a list of RRF projects totaling \$795,000 for FY 2024/2025, including \$100,000 in contingency funds to be used for unplanned projects.

The attached table provides a summary of funds expended this fiscal year-to-date on these projects, as well as projects approved in FY 2023/2024 and prior years that remain active or were recently completed. A total of \$1,245,241 was spent in FY 2023/2024, and \$687,257 has been spent this fiscal year-to-date. Excluding the HEPS Effluent Pump Replacement Project, which is not completed, EBDA has completed all of the projects in the table 5% under budget on average.

RRF Summary

Updated as of: January 31, 2025

Project Name	FY 2024/2025 YTD Expenditures	FY 2023/2024 Total Expenditures	Prior Years' Expenditures	Total Expenditures through 1/2025	Percent Spent	Percent Complete	Budget Estimate	Projected Completion Date
UEPS Payment #4 of 10 Per JPA		\$420,000		\$420,000	100%	100%	\$420,000	Completed
UEPS Payment #5 of 10 Per JPA	\$420,000			\$420,000	100%	100%	\$420,000	Completed
HEPS Effluent Pump Replacement	\$138,543	\$507,714	\$40,881	\$687,138	94%	75%	\$730,000	October 2025
OLEPS, MDF & Office Roof Replacement		\$50,462	\$458,390	\$508,851	93%	100%	\$550,000	Completed
OLEPS Emergency Outfall		\$52,647	\$11,935	\$64,582	76%	100%	\$85,000	Completed
OLEPS Wet Well Gate Repair	\$12,492	\$33,861		\$46,353	62%	100%	\$75,000	Completed
MDF Exterior Painting		\$38,900		\$38,900	86%	100%	\$45,000	Completed
EBDA Office Upgrade		\$37,085	\$6,130	\$43,215	108%	100%	\$40,000	Completed
Pickup Truck Replacement		\$33,567		\$33,567	84%	100%	\$40,000	Completed
OLEPS Water System Upgrade	\$42,350			\$42,350	141%	100%	\$30,000	Completed
OLEPS Diesel Engine #1 (Pump #2)	\$26,741			\$26,741	89%	100%	\$30,000	Completed
OLEPS Diesel Engine #2 (Pump #3)		\$25,389		\$25,389	102%	100%	\$25,000	Completed
HEPS Generator Radiator Replacement	\$23,982			\$23,982	96%	100%	\$25,000	Completed
HEPS Pond #3 Valve Actuator	\$6,565	\$10,003		\$16,568	110%	100%	\$15,000	Completed
Miscellaneous Smaller or Unfinished Projects	\$16,584	\$35,614		\$52,198				
Total	\$687,257	\$1,245,241	\$517,335	\$2,449,833			\$2,530,000	