

Appendix D: GEOTECHNICAL DATA REPORT

Project No.
25170.000.001

October 10, 2024

Ms. Amanda Del Bello, PE
BRADY
10089 Willow Creek Road, Suite 375
San Diego, CA 92131

Subject: Inspection and Assessment of Revetments and Seawalls
Morro Bay, California

CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS

Dear Ms. Del Bello:

As requested and authorized in our agreement dated May 20, 2024, we reviewed the data provided by BRADY (described later in this letter) and the Geophysical Investigation report by GeoVision (Reference 5), and prepared conceptual geotechnical recommendations for maintenance, rehabilitation, and repair of the seawalls and revetment within Morro Bay, California. Seawalls 1 through 3 and Revetments 1 through 12 are locations described in the Requests for Proposals (RFP) dated January 12, 2024, by the City of Morro Bay (Reference 1).

PROJECT DESCRIPTION

Three seawalls and 12 sections of revetment were identified in the RFP as study areas; these comprise approximately 395 total lineal feet of seawall and 6,239 total lineal feet of revetment (Reference 4). We understand that the revetment was constructed in the early 1940s. The RFP included an exhibit Section I-I dated 1941 showing 4 feet of Class "C" Stone Revetment inclined at 2:1 (horizontal:vertical) and extending to Elevation +10.0 feet (datum unknown) from the original ground. It is unclear if a filter layer was placed prior to the placement of stone. Common at that time, the filter layers generally consisted of a well-graded mixture of sand and gravel.

We understand that the City of Morro Bay (City) does not possess plans or as-built drawings of the seawalls and no additional historical information of the revetment was provided.

DATA PROVIDED

BRADY performed visual observations of the revetment and seawalls between June 19 and June 22, 2024, and provided us photographs, field notes, and some field measurements for review. On June 27, 2024, we also performed a site walk with BRADY to observe the 12 revetment locations and three seawalls. In addition, eTrac completed a multibeam echosounder (MBES) and LiDAR survey of the revetments and seawalls between May 21 and May 23, 2024 (References 3 and 4), which includes measured slope inclinations.

GeoVision performed a geophysical investigation using the Ground Penetrating Radar (GPR) method to identify subsurface voids at Seawall 1 and Revetments 3 and 5 through 12. Revetment 1 was not included in the survey because of the location of the revetment and lack of improvements at the top of the slope and Revetments 2 and 4 were not included because of the existing Harborwalk boardwalk would not allow subsurface measurements by the GPR equipment.

The geophysical survey by GeoVision was generally performed within 20 feet of the top of the slope at Revetments 3 and 5 through 12 and Seawall 1. The maximum depth of the survey was about 7 to 10 feet except for the area near the boat ramp of Revetment 12 where the maximum depth was about 1½ feet. GeoVision identified several high-amplitude anomalies at each seawall and revetment location surveyed; however, they concluded that the “depth below the ground surface of these anomalies is between 0.5 and 3 feet below the ground surface and their vertical extent is probably less than 6 inches. We recommend coring a range of these anomalies to verify their source and determine the vertical extent.” A high amplitude anomaly is generated when the electromagnetic signal transitions from soil to air.

FIELD EXPLORATION

We performed hand augers and potholes on September 30, 2024, and October 3, 2024, respectively. The purpose of the hand augers and potholes was to explore the subsurface at various locations of anomalies identified by GeoVision (discussed previously in this report), in addition to the tilting railing at Revetment 10. We used a 4-inch hand-operated bucket auger to perform the hand augers. To perform the potholes, we saw cut an approximately 12-inch by 12-inch section of concrete or asphalt pavement and then used a vacuum trailer with pressure washer to remove the soil and rock below. We backfilled the hand augers with cuttings and the potholes with 2-sack cement sand slurry and capped them with lean concrete. Photographs from our exploration are attached. Following, is a discussion of the observations for each exploration location.

HA-1 and HA-2

As shown in Figure 2B, we performed hand augers HA-1 and HA-2 at Revetment 12 within Tidelands Park. At both HA-1 and HA-2, we encountered poorly graded sand to silty sand with variable amounts of shells. We encountered an approximately 3-inch-thick layer of clay a depth of about 4 feet in HA-1. We encountered practical refusal in HA-1 at a depth of about 5 feet and HA-2 at about 7 feet, due to what felt like gravel or shells. No voids were observed during hand auguring.

PH-1

We performed pothole PH-1 at Seawall 1, as shown in Figure 2A. We observed 5-inch-thick concrete slab and large rock pieces at a depth of 1 foot below the ground surface. We did not observe any void between the concrete slab and the subgrade. We terminated the pothole at a depth of approximately 2¼ feet due to the rock. The anomalies identified by GeoVision may be small voids within the observed rock.

PH-2

We performed pothole PH-2 at Revetment 6, as shown in Figure 2A. We observed a 4-inch-thick concrete slab and large rock pieces directly under the concrete slab. We did not observe a void between the concrete and the subgrade. We terminated the pothole at a depth of approximately 1¼ feet due to the rock. The anomalies identified by GeoVision may be small voids within the observed rock.

PH-3

We performed pothole PH-3 at Revetment 9, as shown in Figure 2A. We observed 3½ inches of asphalt pavement, poorly graded sand, and multiple communications conduits at a depth of approximately 2 feet. We did not observe a void between the pavement and the subgrade. We terminated the pothole when the conduit was observed.

PH-4

We performed pothole PH-4 at the northern end of Revetment 10, as shown in Figure 2B. We observed 2½ inches of asphalt pavement over very loose poorly graded sand with shells. We did not observe a void between the pavement and the subgrade, nor in the sidewall of the excavation. We terminated the pothole at a depth of approximately 6½ feet below the ground surface.

PH-5

We performed pothole PH-5 towards the middle of Revetment 10, as shown in Figure 2B. BRADY had noted a tilted railing and movement of the concrete sidewalk. We observed 5 inches of concrete over very loose poorly graded sand with shells. We did not observe a void between the pavement and the subgrade. We terminated the pothole at a depth of approximately 3¼ feet below the ground surface due to the sidewalls collapsing.

PH-6

We performed pothole PH-6 at the southern end of Revetment 12, as shown in Figure 2B. We observed 5 inches of asphalt pavement and 13 inches of aggregate base over large rock pieces. We did not observe a void between the pavement and the subgrade. We terminated the pothole at a depth of 2½ feet due to the rock. The anomalies identified by GeoVision may be small voids within the observed rock.

Field Exploration Conclusions

We did not observe significant voids below the concrete or asphalt pavement which generally confirms the conclusions by GeoVision. The tilted railing and observed movement in the sidewalk at Revetment 10 may be caused by slope movement due to the very loose sand and loss of revetment which provides bracing of the slope.

GENERALIZED GEOTECHNICAL CONCLUSIONS AND RECOMMENDATIONS

The City indicated they are unaware of any documentation regarding the construction of the revetment and seawalls and we were limited to the data collected by BRADY, eTrac, and GeoVision. We generally understand that Morro Bay was improved to support the World War II effort by the United States military. Rock for the revetment was generally harvested from Morro Rock. Historical aerial photographs show the portion of Revetment 2 between the beach and Morro Rock being constructed in the 1930s prior to the other revetment and seawalls.

According to geologic mapping by Wigers (2021), Revetments 1 through 4 are in mapped areas of eolian deposits and young alluvial valley deposits. Revetments 5 through 12 are in mapped areas of old eolian deposits and artificial fill adjacent to the bay. We anticipate the young alluvial valley deposits and artificial fill to consist of sand like the eolian deposits.

Since there is a lack of documentation on how the revetments were constructed, we recommend a minimum of three sections be deconstructed to observe the cross-section of the revetment and underlying subgrade. This work will help us better understand the existing condition of the revetments and provide suitable recommendations for maintenance, rehabilitation, and repair. We recommend exploring both Revetments 2 and 12 and performing the third exploration within Revetments 5 through 10.

According to guidelines by the United States Army Corps of Engineers (Reference 6), stone for Revetment 1 should consist of 4-ton riprap (4.5-foot-diameter) due to being in the surf zone and stone within the harbor for Revetments 2 through 12 should consist of ¼-ton riprap (1.8-foot-diameter) due to tidal flow and proximity to pedestrians. The riprap should extend to the top of the slope to account for future sea level rise.

As shown by eTrac (References 3 and 4), many sections of revetment are inclined steeper than a 2:1 (horizontal:vertical). Riprap may be placed as steep as 1½:1 with proper benching and special care during rock placement; however, we generally recommend riprap be placed at 2:1 or flatter.

Based on the data provided by BRADY, the existing condition of the revetment locations and seawalls range from minor maintenance to complete failure. We summarize our general conceptual geotechnical recommendations in the following sections for each revetment location and seawall. We provide recommendations for each 100-foot station and the start and end of each revetment location and seawall. Stationing is shown in the survey and report by eTrac (References 3 and 4). BRADY also provided photographs and field notes for notable features between 100-foot stations.

Our common recommendations include controlling surface drainage, revetment refurbishment, and slope and revetment reconstruction. Controlling surface drainage may include grading ditches or berms; drains; concrete, metal, or plastic structures; or other methods designed by a civil engineer. As shown in attached Figure 1, revetment refurbishment should consist of stockpiling of the existing riprap, excavation of a keyway for replacement of the riprap, smoothing of the existing subgrade, placement of filter fabric, placement of a protection layer consisting of quarry fines, and then placement of the riprap, carefully seating each stone. Additional riprap should be imported to provide the minimum section thicknesses. Rebuilding of the slope and revetment includes excavating a larger keyway and rebuilding the slope face with engineered fill. Rebuilding is generally recommended where instability of the slope was observed.

For the design of new seawalls or refurbishment or rebuilding of revetment locations, additional exploration such as borings and/or test pits should be performed. This scope of work did not include assessment for seismic resiliency and would likely require significant improvements to address common seismic stability criteria.

Revetment 1

Revetment 1 is located on the northern side of Morro Rock, beginning adjacent to the power station outfall, and extends the length of the Morro Rock beach parking lot. The nearest improvement to the revetment includes a restroom about 210 feet away and Coleman Drive about 290 feet away. An unpaved parking lot is located at the top of the revetment.

TABLE 1: Conceptual Geotechnical Recommendations by Station for Revetment 1

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	Control surface drainage
0+90	Control surface drainage
1+00	Control surface drainage
2+00	Control surface drainage and place additional filter material and riprap in bare areas
3+00	Control surface drainage
4+00	Control surface drainage and place additional filter material and riprap in bare areas
5+00	Refurbish revetment and control surface drainage
5+20	Control surface drainage and place additional filter material and riprap in bare areas
6+00	Control surface drainage and place additional filter material and riprap in bare areas, reduce slope inclination to 2:1 with additional riprap
7+00	Control surface drainage and place additional filter material and riprap in bare areas
8+00	Control surface drainage and place additional filter material and riprap in bare areas

Revetment 2

Revetment 2 starts near the “Fisherman’s Family Sculpture” and extends to the end of Coleman Beach at the existing power plant in-intake structure. Coleman Drive, a paved bike path, and the Harborwalk boardwalk are located at the top of slope. The riprap ends at Station 19+60 and if the City is interested in providing protection for the existing Harborwalk boardwalk, paved bike path, or parking lot, a revetment protected slope or seawall should be constructed inland from the beach.

TABLE 2: Conceptual Geotechnical Recommendations by Station for Revetment 2

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	Control surface drainage and place additional filter gravel and riprap in bare areas, reduce slope inclination to 2:1 with additional riprap
1+00	Control surface drainage and place additional filter gravel and riprap in bare areas
1+60	Control surface drainage and replace slab
2+00	Control surface drainage and place additional filter gravel and riprap in bare areas
3+00	Control surface drainage and place additional filter gravel and riprap in bare areas
4+00	Refurbish revetment and control surface drainage
5+00	Control surface drainage
5+60	Rebuild revetment and control surface drainage

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
6+00	Rebuild revetment and control surface drainage
7+00	Control surface drainage and reduce slope inclination to 2:1 with additional riprap
8+00	Control surface drainage and reduce slope inclination to 2:1 with additional riprap, replace lost fill
9+00	Control surface drainage and reduce slope inclination to 2:1 with additional riprap
10+00	Control surface drainage and reduce slope inclination to 2:1 with additional riprap
11+00	Control surface drainage and reduce slope inclination to 2:1 with additional riprap
12+00	Control surface drainage and reduce slope inclination to 2:1 with additional riprap
13+00	Control surface drainage and reduce slope inclination to 2:1 with additional riprap
14+00	Control surface drainage and reduce slope inclination to 2:1 with additional riprap
14+66	Control surface drainage and reduce slope inclination to 2:1 with additional riprap, replace lost fill
15+00	Control surface drainage and reduce slope inclination to 2:1 with additional riprap
16+00	Control surface drainage
17+00	Refurbish revetment and control surface drainage
18+00	Refurbish revetment and control surface drainage
19+00	Control surface drainage and reduce slope inclination to 2:1 with additional riprap
19+60	Add additional riprap
20+00	Add revetment
21+00	
22+00	
23+00	Construct revetment or seawall
24+00	
24+14	

Revetment 3

Revetment 3 begins south of the Morro Bay Oyster Company (1287 Embarcadero), runs parallel to the United States Coast Guard Station and the Morro Bay Harbor Department office building, and terminates at Seawall 1 on which Tognazzini's Dockside Too (1235 Embarcadero) is located. The existing riprap appears to be held in place with existing piles. The North T-Pier extends out from the southern portion of the revetment.

TABLE 3: Conceptual Geotechnical Recommendations by Station for Revetment 3

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	
1+00	
1+60	
2+00	Rebuild revetment or construct seawall. Control surface drainage with outlet structure.
3+00	
4+00	

Revetment 4

Revetment 4 is located adjacent to the Great American Fish Company (1185 Embarcadero) on the northern end of the South T-Pier and terminates at the northern boundary of DeGarimore’s Marine leasehold (1099 Embarcadero). The Harborwalk boardwalk and an existing parking lot are located above the revetment. One gangway is located near the middle of the revetment and a second gangway near the southern end of the revetment.

TABLE 4: Conceptual Geotechnical Recommendations by Station for Revetment 4

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	Newer riprap, monitor for rock and soil movement
0+80	Refurbish revetment
1+00	Refurbish revetment
1+22	Refurbish revetment and place slurry in void
1+55	Refurbish revetment and place slurry in void
2+00	Refurbish revetment
2+06	Rebuild revetment
2+60	Underpin footing or add seawall
3+00	Underpin footing or add seawall
3+50	
4+00	
4+70	Rebuild revetment
5+00	
5+18	

Revetment 5

Revetment 5 starts at Giovanni’s Fish Market and Galley (1001 Front Street) and ends at the southern end of Anchor Memorial Park (925 Embarcadero) and is also located near the northern intersection of Embarcadero and Front Street. An existing parking lot, park, and Embarcadero are located above the revetment. Existing gangways are located on the northern and southern ends of the revetment and a pier located in the middle of the revetment.

TABLE 5: Conceptual Geotechnical Recommendations by Station for Revetment 5

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	Place additional riprap
0+15	Remove pavement, backfill any voids, place base rock and hot mix asphalt
0+30	Place additional riprap
1+00	Underpin abutment and refurbish revetment
1+33	
2+00	Refurbish revetment
2+23	

Revetment 6

Revetment 6 begins at the southern boundary of Harbor Center, LLC (901 Embarcadero) and ends at the northern boundary of the Anderson Inn (895 Embarcadero) and is located near the intersection of Embarcadero and Harbor Street. An existing parking lot is located above the revetment. An existing pier and gangway extends out from the revetment.

TABLE 6: Conceptual Geotechnical Recommendations by Station for Revetment 6

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	
0+20	
0+30	Refurbish revetment. Existing piles may need to be reconstructed.
0+35	
0+49	

Revetment 7

Revetment 7 is located between the closed Libertine Pub (801 Embarcadero) and Rose's Bar and Grill (725 Embarcadero) and is located near the southern intersection of Embarcadero and Front Street. Existing concrete flatwork and a paved parking lot are located above the revetment. An existing pier and gangway extend out from the revetment.

TABLE 7: Conceptual Geotechnical Recommendations by Station for Revetment 7

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	
0+14	
0+20	Refurbish revetment. Existing piles may need to be reconstructed.
0+37	
0+56	

Revetment 8

Revetment 8 is located between Dutchman's Seafood House (701 Embarcadero) and the northern limit of Morro Bay Marina (699 Embarcadero) and is located near the intersection of Embarcadero and Pacific Street. An existing paved parking lot is located at the top of the revetment. An existing gangway extends out from the southern portion of the revetment.

TABLE 8: Conceptual Geotechnical Recommendations by Station for Revetment 8

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	
0+53	Refurbish revetment
0+63	
0+68	

Revetment 9

Revetment 9 is located between the southern limit of Morro Bay Marina (699 Embarcadero) and Three Stacks and a Rock Brewing Company (595 Embarcadero) and is located near the intersection of Embarcadero and Marina Street. An existing paved parking lot is located at the top of the revetment. An existing pier extends out from the middle portion of the revetment.

TABLE 9: Conceptual Geotechnical Recommendations by Station for Revetment 9

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	Refurbish revetment
0+50	Refurbish revetment
0+60	Refurbish revetment
0+93	Rebuild revetment

Revetment 10

Revetment 10 is located between Morro Bay Paddlesports (551 Embarcadero) and Morro Bay Yacht Club (541 Embarcadero). An existing paved parking lot is located at the top of the revetment and the metal railing is tilting.

TABLE 10: Conceptual Geotechnical Recommendations by Station for Revetment 10

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	
0+35	Rebuild revetment
0+81	

Revetment 11

Revetment 11 is located between the Estero Inn (501 Embarcadero) and 495 Embarcadero. Mariner Park is located at the top of the revetment. An existing pier and gangway extend out from the revetment.

TABLE 11: Conceptual Geotechnical Recommendations by Station for Revetment 11

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	
0+10	Refurbish revetment
0+35	
0+51	

Revetment 12

Revetment 12 starts at the southern limit of 471 Embarcadero and extends along Embarcadero, Tidelands Park, the public launch ramp and parking, and ends at Seawall 2. Improvements above the revetment include a paved walkway, Embarcadero, paved parking, landscaping, and a boat launch ramp. Three gangways, two floating docks, and an elevated platform extend out from the revetment.

TABLE 12: Conceptual Geotechnical Recommendations by Station for Revetment 12

STATION	CONCEPTUAL GEOTECHNICAL RECOMMENDATIONS
0+00	Refurbish revetment
0+74	Place additional riprap around outfall
1+00	Refurbish revetment
1+25	Refurbish revetment
2+00	Refurbish revetment
3+00	Refurbish revetment
4+00	Refurbish revetment
4+25	Repair concrete and place root barrier
5+00	Refurbish revetment
6+00	Refurbish revetment
6+38	Underpin stairs and refurbish revetment
7+00	Refurbish revetment and control surface drainage
8+00	Refurbish revetment and control surface drainage. Repair concrete
9+00	Refurbish revetment
10+00	Refurbish revetment
11+00	Refurbish revetment
12+00	Refurbish revetment
13+00	Refurbish revetment
13+40	Refurbish revetment and control surface drainage. Repair concrete
14+00	Refurbish revetment and repair concrete
15+00	Refurbish revetment
15+80	Refurbish revetment
16+00	Refurbish revetment and control surface drainage. Repair concrete
16+60	Refurbish revetment
17+00	Refurbish revetment
17+40	Refurbish revetment
18+00	Refurbish revetment and control surface drainage

Seawall 1

Seawall 1 is located south of Revetment 3 and extends to the southern limit of Tognzzini's Dockside Too (1235 Embarcadero). Due to existing shotcrete and riprap, the condition of the seawall is unclear. The report by GeoVision (Reference 5) did not indicate significant voids inland from the wall; however, the report does appear to show tiebacks extending back from the wall and potential reinforcement bars in the southern portion of wall. We generally recommend refurbishing the revetment in front of the wall and a structural engineer evaluating the wall.

Seawall 2

Seawall 2 is located immediately southeast of Revetment 12 and extends 84 feet towards 263 Main Street. Landscaping generally occupies the space above the wall. The concrete seawall is undermined and various distress was observed including broken concrete, missing segments, and overturned segments; this seawall should be considered failed. The seawall should be replaced with a new structural wall designed for saltwater contact or a new revetment slope should be constructed.

Seawall 3

Seawall 3 is located adjacent to the Inn at Morro Bay (60 State Park Road) and extends the entire length of the parking lot and consists of timber construction. Portions of the parking lot have been closed due to land loss behind the wall. The timber is decayed, and the seawall should be replaced with a new structural wall designed for saltwater contact.

If you have any questions or comments regarding the content of this letter, please do not hesitate to contact us.

Sincerely,

ENGEO Incorporated

Randy Hildebrant, PE, GE

Jeff Fippin, PE, GE

rh/jaf/cb

Attachments: Selected References
Hand Auger and Pothole Photographs
Figure 1 – Conceptual Details
Figures 2a and 2b – Pothole and Hand Auger Locations

SELECTED REFERENCES

1. City of Morro Bay. 2024. Request for Proposals, Inspection and Assessment of Revetments and Seawalls, January 12, 2024.
2. City of Morro Bay. 2024. Addendum 1, Request for Proposals, Inspection and Assessment of Revetments and Seawalls, February 6, 2024.
3. eTrac. 2024. Revetment and Seawall Survey Report, Morro Bay, California. Revision A1. June 17, 2024.
4. eTrac. 2024. Morro Bay Revetment Sewall Survey, Morro Bay, California. Sheets 1 through 29. August 27, 2024.
5. GeoVision. 2024. Geophysical Investigation – Embarcadero Boulevard Morro Bay, California. September 9, 2024, Project Number 24250.
6. United States Army Corps of Engineers. 1984. Shore Protection Manual. Coastal Engineering Research Center, Vicksburg, MS. Vol. I and II.
7. Wieggers, M. O. 2021. Preliminary Geologic Map of the West Half of the San Luis Obispo 30' x 60' Quadrangle, California. Version 2.0.

HAND AUGER AND POTHOLE PHOTOGRAPHS

PHOTO 1: Hand Auger HA-1



PHOTO 2: Pothole PH-1



PHOTO 3: Pothole PH-1



PHOTO 4: Pothole PH-2



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PHOTO 5: Pothole PH-2



PHOTO 6: Pothole PH-3



PHOTO 7: Pothole PH-3



PHOTO 8: Pothole PH-4



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PHOTO 9: Pothole PH-4



PHOTO 10: Pothole PH-5



PHOTO 11: Pothole PH-5



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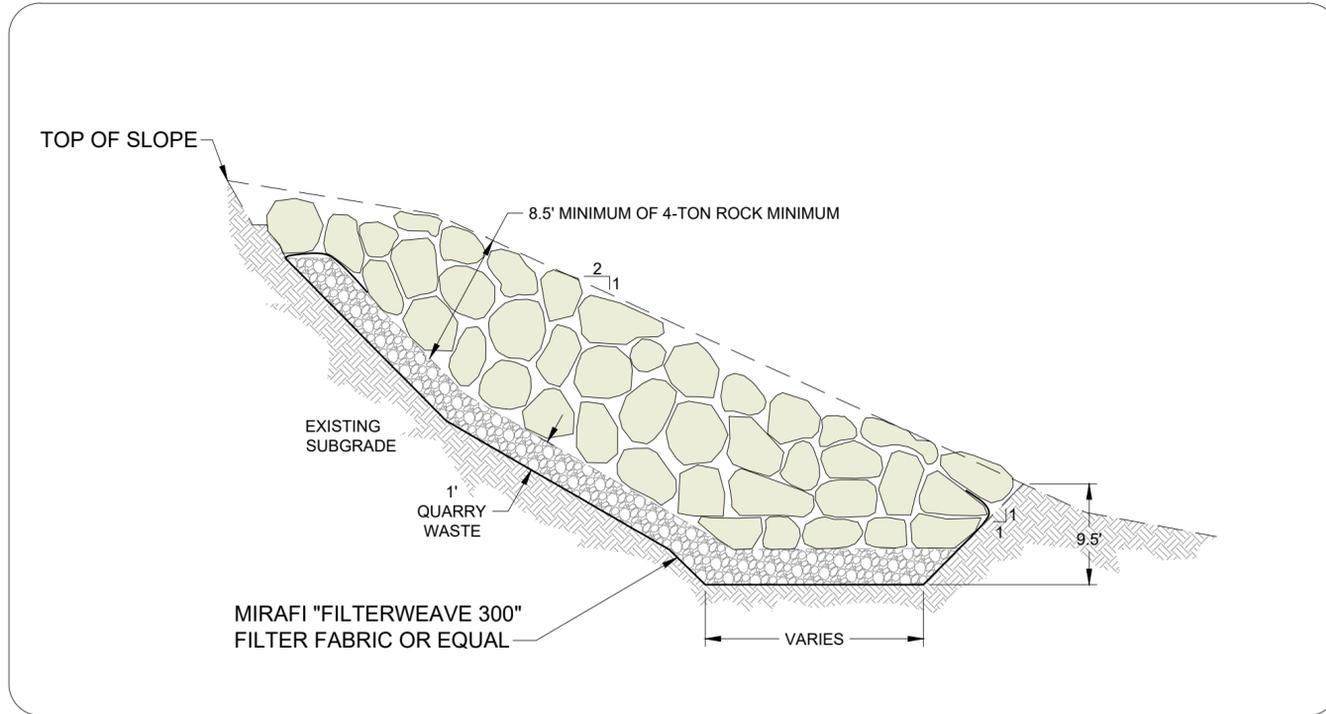
PHOTO 12: Pothole PH-6



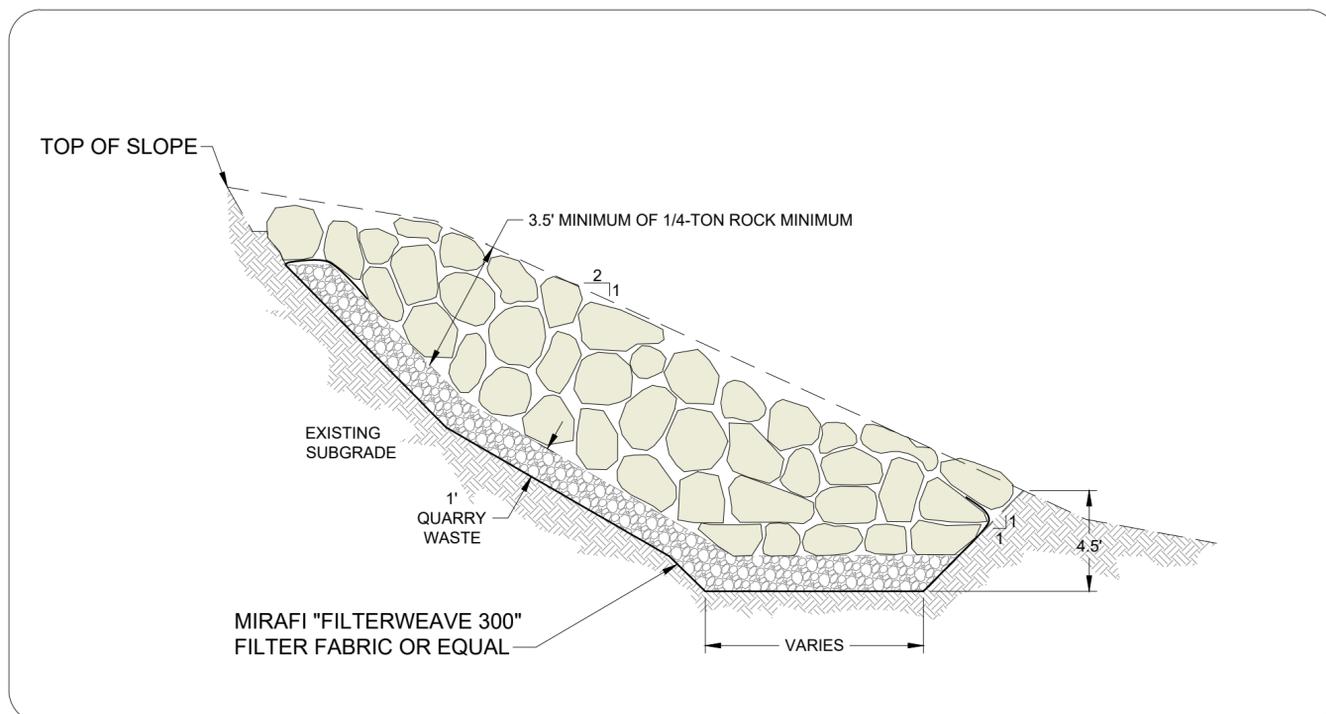
PHOTO 13: Pothole PH-6



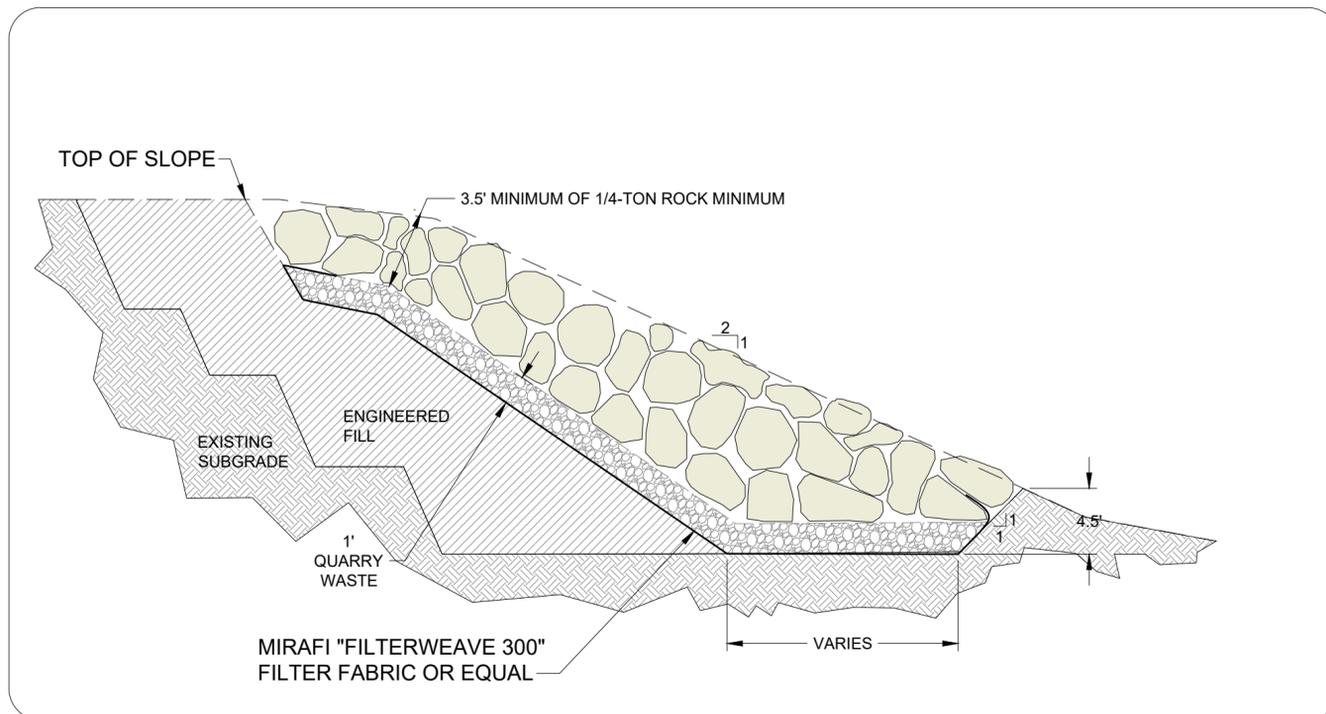
DRAFT



CONCEPTUAL REVETMENT REFURBISHMENT (REVETMENT 1)
NO SCALE



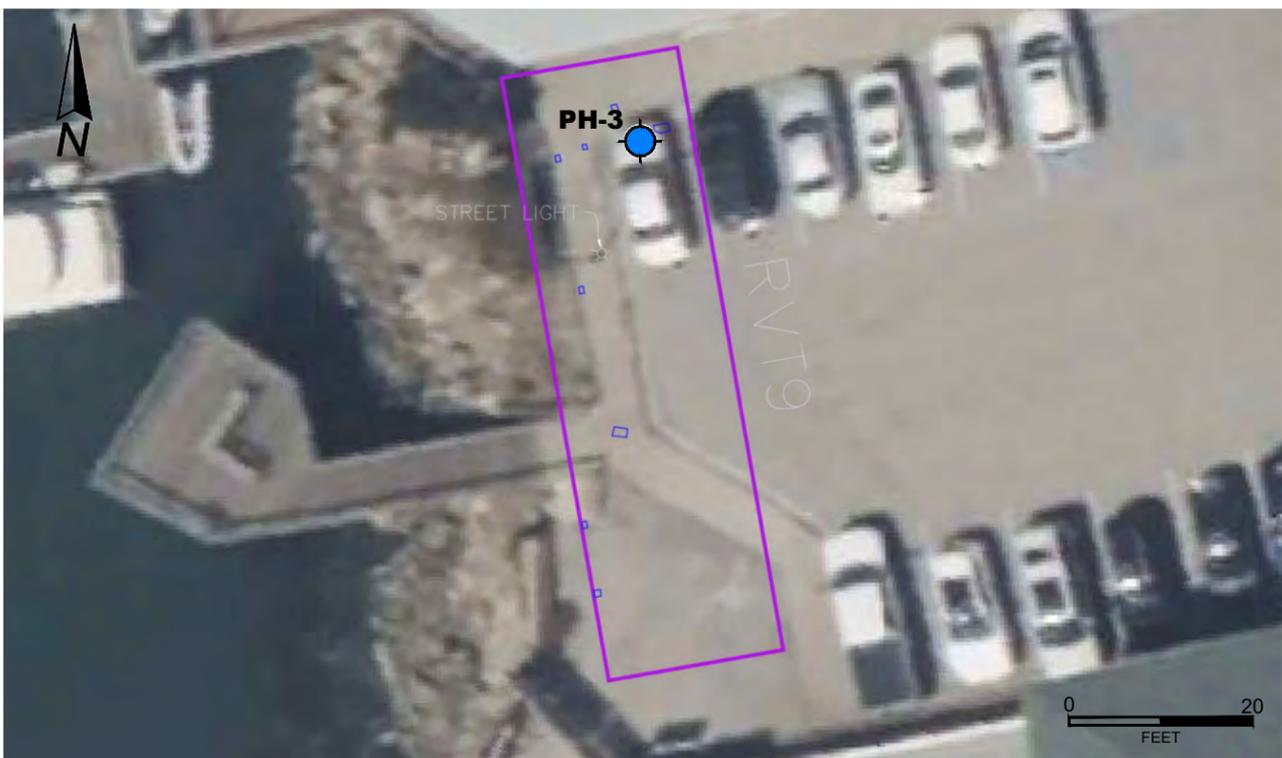
CONCEPTUAL REVETMENT REFURBISHMENT (REVETMENTS 2 THROUGH 12)
NO SCALE



CONCEPTUAL SLOPE REBUILD (REVETMENTS 2 THROUGH 12)
NO SCALE

NOTE:
1. QUARRY WASTE - ROCK FILL OF ANGULAR ROCK FRAGMENTS, WELL-GRADED, FROM 3 TO 9 INCHES IN MAXIMUM DIMENSIONS

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EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

PH-3  Pothole (ENGEO, 2024)

 Boundary of Geophysical Survey (GEOVision, 2024)

 Non Linear High Amplitude GPR Anomaly Interpreted as Possible Void (GEOVision, 2024)

BASE MAP SOURCE: GEOVision, 2024



POTHOLE AND HAND AUGER LOCATIONS
 MORRO BAY REVETMENT AND SEAWALL ASSESSMENT
 MORRO BAY, CALIFORNIA

PROJECT NO.: 25170.000.001

SCALE: AS SHOWN

DRAWN BY: SPPE

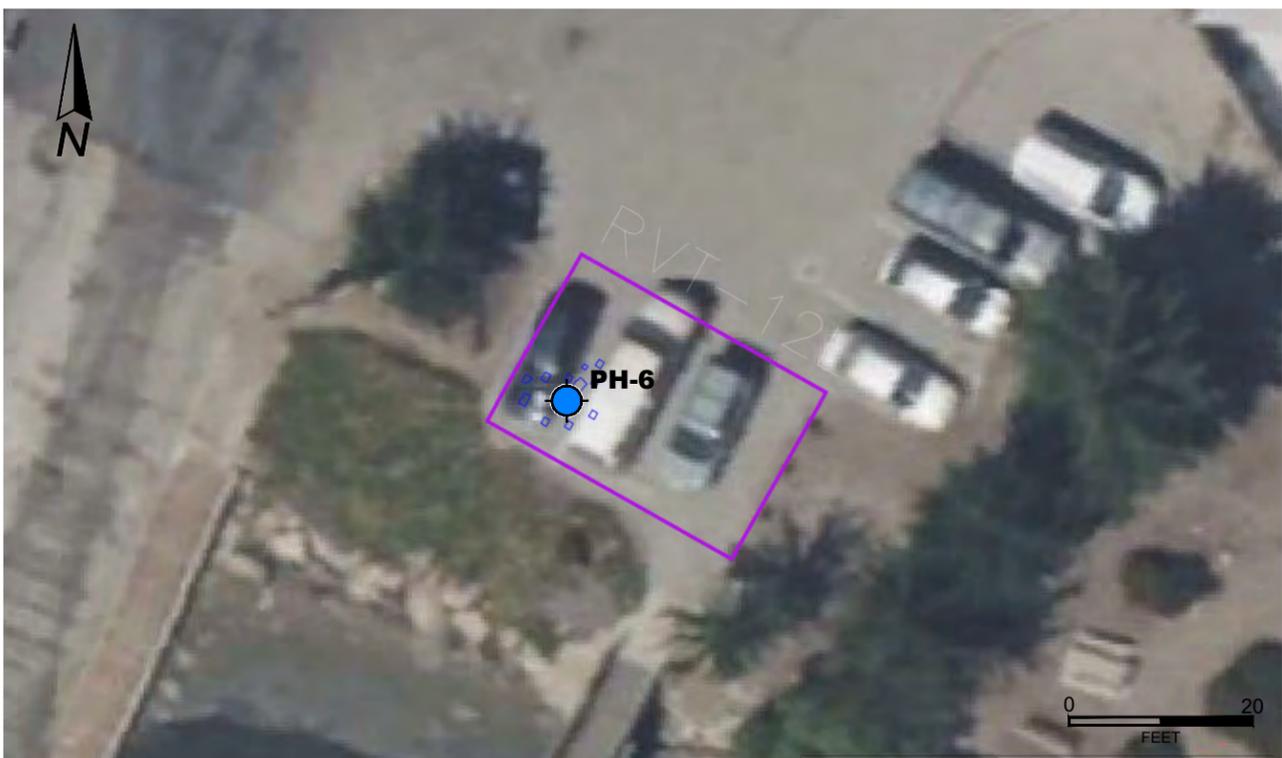
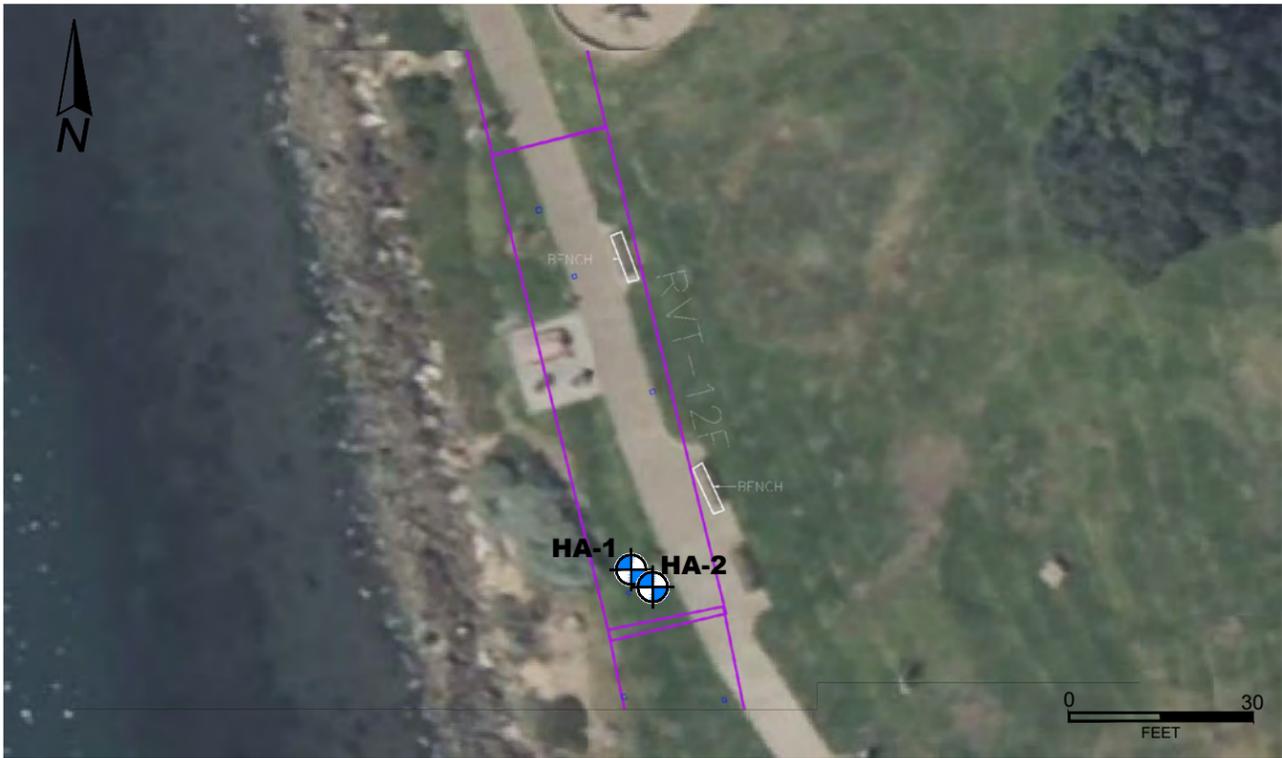
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FIGURE NO.

2A

ORIGINAL FIGURE PRINTED IN COLOR

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EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

- PH-6** Pothole (ENGEO, 2024)
- HA-2** Hand Auger (ENGEO, 2024)

Boundary of Geophysical Survey (GEOVision, 2024)

Non Linear High Amplitude GPR Anomaly Interpreted as Possible Void (GEOVision, 2024)

BASE MAP SOURCE: GEOVision, 2024



POTHOLE AND HAND AUGER LOCATIONS
MORRO BAY REVETMENT AND SEAWALL ASSESSMENT
MORRO BAY, CALIFORNIA

PROJECT NO.: 25170.000.001	FIGURE NO.
SCALE: AS SHOWN	2B
DRAWN BY: SPPE	

ORIGINAL FIGURE PRINTED IN COLOR