

**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
OFFICE OF CONSERVATION AND COASTAL LANDS
HONOLULU, HAWAII**

February 9, 2018

**BOARD OF LAND AND
NATURAL RESOURCES
STATE OF HAWAII
HONOLULU, HAWAII**

REGARDING: Proposed Conservation District Use Application (CDUA) **OA-3804** and Proposed Issuance of a Non-Exclusive Easement for the Portlock Road Drainage Outfall Improvement Project

APPLICANT: City and County of Honolulu, Dept. of Design and Construction

LANDOWNER(S): State of Hawaii, Dept. of Land and Natural Resources

LOCATION: Portlock Road, Honolulu District, Island of O'ahu

TMK: *Submerged lands seaward (makai) of (1) 3-9-003:002 & 028*

AREA OF PARCELS: *Submerged lands of the State (N/A)*

AREA OF USE: 1,750 sq. ft.

SUBZONE: *Resource*

PREVIOUS REGULATORY ACTIVITY:

On *March 23, 1984*, the Board of Land and Natural Resources (BLNR) approved Conservation District Use Permit (CDUP) OA-1616 to extend an existing breakwater in order to keep the existing box drain outlet free from blockage and to alleviate flooding problems in the area (**Exhibit 1**). Condition 11 of CDUP: OA-1616 states: *That since this proposal is considered a temporary repair, a separate Conservation District Use Application (CDUA) be filled prior to initiating any long-term, permanent solution to the problem.* Due to this condition, the applicant (i.e., City and County of Honolulu, Department of Design and Construction) was required to submit a new CDUA for the proposed improvement project.

DESCRIPTION OF AREA AND CURRENT USE:

The proposed project site is a seawall and outfall structure located seaward (*makai*) of *TMK: (1) 3-9-002:028*, and *TMK: (1) 3-9-002:002* on submerged lands of the state (**Exhibit 2, 2a**); for reference the submerged lands of the State are located within the State Land Use (SLU) Conservation District, *Resource* Subzone (**Exhibit 3**). Public access to the shoreline, and the project area, is via a four (4)

foot wide public access walkway which runs adjacent to a private upland parcel (**Exhibit 4**). Additionally, an existing ten (10) foot wide City and County of Honolulu (CCH) “*Storm Drain Easement*” runs through private parcels from Portlock Road to the shoreline where the CCH storm drain culvert is located. While this easement could be utilized for construction access, it has been blocked by residential development and therefore construction access (i.e., equipment and vehicles) is limited to crossing private property. Site access for construction is being coordinated by the CCH and the private parcel owners.

An existing seawall structure fronts the entire shoreline along the project site (**Exhibit 5**). The seawall was constructed prior to 1960 along with the CCH storm drain culvert and outfall structure which are also located at the site (**Exhibit 6**). The drainage structure was built along with the development of the *Maunalua Triangle Subdivision* and local storm drain system. The existing culvert is an eight (8) foot wide and two (2) foot high storm drain box culvert that enters the ocean at the project site. The invert of the culvert is approximately zero (0) feet above mean sea level (MSL) while the outfall structure protecting the culvert is approximately the same height as the top of the seawall (i.e., 5-ft. MSL).

The outfall structure was modified in 1984 with gabion baskets to alleviate in-filling of the culvert with and debris and becoming clogged. Currently the gabion baskets and portions of the outfall structure have collapsed. Remnants of the modifications and original structure consist of reinforced concrete piles, rocks, and concrete pieces; at some point after 1960, concrete spoils were deposited at the outlet of the culvert (**Exhibit 7**).

The footprint of the existing structure, including debris from the collapsed structure and remnants of repairs, is approximately 45-feet long along the shoreline and 14-feet seaward (*makai*) of the seawall. The original structure is made from reinforced concrete piles approximately 1-foot in diameter and 10-feet long.

Environment:

The small beach observed at the project site consists primarily of marine sediments, while off-shore, the substrate consists of coral limestone and reef shelf. Aerial photographs prior to the seawall construction suggest the coastline was primarily sandy beach prior to development. The offshore submerged lands have a shallow slope and a reef shelf extends from the shoreline to 600-1100 feet offshore to a channel leading to Kuapā Pond (i.e., Hawaii Kai Marina). All the land surrounding the project site is urbanized and experiences heavy stormwater runoff from storm events (**Exhibit 8**). Stormwater is conveyed to the ocean via underground drainage culverts and open channels amid residential lots. The drainage channels are also used as public access walkways in many locations. There are no mapped or observed wetlands within the project site.

Floral and Faunal Resources:

A marine survey by an agent for the applicant was conducted in 2015 to describe the floral and faunal resources of the project area. The marine substrate at the project site was found to consist mostly of sand and cobble-sized material with some larger rocks and concrete rubble; it was noted that limited or no algae is growing on the substrate. Several *Black Rock crabs* were observed on the exposed rocks, although no mollusks or barnacles were observed. The minor amounts of algae and

coral observed during the survey are over 80 feet from the project site, and are not considered rare or threatened species. Due to the high turbidity of the site it is likely that any macro-invertebrates or small fish located in the area were not observed. The project area represents a long history of shoreline development with little to no regard for the marine or coastal resources.

Cultural and Historical Resources:

The existing seawall at the project site was constructed prior to 1960 and is therefore over 50 years old; the State Historic Preservation Division (SHPD) considers any structure over 50 years old as “historic” and requires additional review and consideration. Based on the age of the seawall and its historical significance to the nearshore development, it was determined that the seawall should not be damaged or impacted during construction activities. Construction specifications for this project require the contractor to keep heavy equipment at a sufficient offset from the seawall to avoid damage to the seawall or culvert due to the weight of the equipment. Additionally, it has been specified that hand tools must be used while working inside the culvert and directly adjacent to the seawall.

The applicant states that there are no known or recognized traditional or cultural practices conducted at the project site as it is a heavily developed residential area with limited access. Because the site is at the shoreline there are a number of common recreational activities that take place in this area, including: fishing, swimming, diving, kayaking, surfing, and sunbathing. The public shoreline access will remain open during the project, although public access at the immediate project site (i.e., outfall location) may be restricted temporarily to allow for construction equipment to conduct work at the site. The duration of the proposed project that may require restricting access to the shoreline work site is approximately three (3) to eight (8) weeks. Since fishermen do frequent the project site the applicant has stated that areas for fishing will be available on both sides of the project site even during times of restricted site access. Restricting access to the work area will be required to protect the health and safety of the public during construction activities.

PROPOSED USE/ NEED AND PURPOSE:

The applicant (i.e., *City and County of Honolulu – Department of Design and Construction*) is proposing to repair and restore the function of an existing culvert and outfall structure. At this time, the culvert structure has collapsed and debris from the structure (and previous repairs) are strewn around the site, and concrete spoils inside the outlet block the flow of storm water (**Exhibit 9**). Currently, the storm drain culvert cannot fully drain such that the water is trapped and becomes stagnant and has been observed to release turbid water directly into the ocean. It is necessary for the culvert to have full capacity in order to effectively divert stormwater from the street to the ocean. The primary purpose of this project is to remove the material blocking the end of the outlet and replace the outfall structure.

The proposed project plan is to first clean out the CCH culvert, remove all the concrete spoils and material, and remove the existing outfall structure (**Exhibit 10**). The site work will start with the installation of Best Management Practices (BMPs); fiber rolls will be installed on the landward portion of the project to retain upland runoff while a sandbag cofferdam will be installed along the shoreline to prevent sediments and other deleterious material from entering the ocean (**Exhibit 11**). Sandbags will remain in place until all in-water construction is complete and sediments have settled

or any pollutants removed. Once the BMPs are in place and secure the culvert will be cleaned out by the CCH and then the outfall structure, concrete spoils, and debris demolished and removed from the site. Approximately 130 cubic yards of material (e.g., concrete, rock, and sand) will be excavated to remove debris, and to create a clear foundation area for the replacement structure.

Once the clean-out is completed, construction of the replacement structure will begin. The proposed replacement structure will be made from precast concrete units placed on a concrete pad with a foundation of filter stone. Rocks will be placed at the toe of the structure to prevent scour and protect the structure from large waves. A grouted rip-rap "pad" will be constructed at the outlet of the culvert, behind the structure, to further prevent scour from heavy storm flows and wave energy wrapping around the structure. The stone and concrete foundation for the new outfall will be constructed first, and then the precast concrete units will be put in place (**Exhibit 12, 12a, 12b**).

During both the demolition and construction portions of the proposed project, heavy equipment such as an excavator, possibly a crane, and dump truck will be used. All heavy equipment will work from the land, immediately behind or mauka of the seawall. The applicant has stated that no heavy equipment will be in the water and hand tools will be used for demolition inside the culvert or against the seawall to avoid any damage to the structures.

The proposed structure will extend approximately 37-feet along the shoreline and approximately 14-feet seaward (makai) of the seawall. The foundation of the proposed structure will extend approximately 46-feet along the shoreline and approximately 20-feet makai of the seawall. The location of the proposed structure will be in approximately the same location as the original structure and will consist of: approximately 49 cubic yards of precast concrete, 68 cubic yards of 12-inch filter stone, 36 cubic yards of armor stone (i.e., 1,800 lbs.), and 21 cubic yards of toe stones (i.e., 3,800 lbs.).

SUMMARY OF COMMENTS:

The application was referred to the following agencies for review and comment; The Department of Land and Natural Resources (DLNR): Oahu District Land Office (ODLO), the State Historic Preservation Division (SHPD), Engineering Division, Division of Aquatic Resources (DAR), and the Division of Boating and Ocean Recreation (DOBOR). Additionally, the application was sent to the State Department of Health (DOH) – Environmental Planning Office, the Office of Hawaiian Affairs (OHA), the Hawaii Department of Transportation (HDOT) – Harbors Division, the City and County of Honolulu - Department of Planning and Permitting (CCH-DPP), the National Oceanic and Atmospheric Administration (NOAA), the US Fish and Wildlife Service (USFWS), the US Coast Guard (USCG), and the US Army Corps of Engineers – Honolulu District (USACOE) along with the Hawaii Kai Public Library and Hawaii Kai Neighborhood Board in order to make this information readily available to those who may wish to review it.

A summary of the comments received by OCCL is listed below:

DLNR - Division of Aquatic Resources (DAR):

The Division of Aquatic Resources recommends the use of best management practices for avoiding the discharge of sediment, pollutants, runoff, or any other construction related materials or discharges into adjacent waterways or ocean. We recommend that the outfall removal and

construction planning should include specific measures for avoiding any discharges into the ocean or adjacent waterways during and after the removal/construction phase such as: erosion and sediment controls, silt fences, and stationary fuel storage containers. We recommend that all construction related materials and discharges are captured on site and disposed of at an appropriate upland waste disposal site.

***Applicant Response:** We have reviewed the comments and recommendations provided by DAR. It should be noted that this project includes best management practices (BMPs) to avoid any pollutants or discharges caused by construction activities from entering the ocean. Plans for the proposed BMPs have been provided in the application. Fiber rolls will surround the staging area and contain the materials and equipment on land to prevent disturbed soil from mobilizing into the ocean. A sandbag cofferdam will surround the in-water construction area to contain any pollutants or sediments caused by demolition or construction work from entering the ocean.*

Additionally, in the specification for the project the contractor must remove any waste or debris from the site and take it to an appropriate upland disposal facility.

DLNR - Oahu District Land Office (ODLO)

A perpetual, non-exclusive easement will be required for any man-made structure seaward of the certified shoreline (on State submerged lands). Additionally, any improvements on submerged lands, under the Land Board jurisdiction, needs a disposition from the Board.

***Applicant Response:** We acknowledge the comments concerning the CDUA from the Land Division and offer the following response:*

The applicant acknowledges that a term, non-exclusive easement will be required. The applicant has spoken with the Oahu District Land Agent and will be working with Land Division to obtain the non-exclusive easement for this project.

City and County of Honolulu – Department of Planning and Permitting

- Based on the project details we (DPP) can confirm that a Shoreline Setback Variance (SSV) and Special Management Area (SMA) Permit are not required for this project.
- Because the proposed project is fixed by a nonconforming seawall, the DPP will accept the conclusion of the Board regarding the certified shoreline survey. For the purposes of this letter, we will assume that the Board will accept the 1984 certified shoreline as accurate.
- The proposed repair work on the culvert outfall structure includes the removal of debris and concrete inside the existing culvert. You [sic] specify that the culvert outfall structure is makai of the regulatory shoreline, but inside of the culvert is landward of the regulatory shoreline. Pursuant to Section 23-1.5(a)(3), Revised Ordinances of Honolulu (ROH), the clearing of materials from existing drainage pipes, canals, and the mouths of streams is allowed within the shoreline setback as long as any sand removed is placed on adjacent areas (unless such placement will result in significant turbidity). You [sic] specify that there will be no new structures or fill within the shoreline setback area or SMA. Furthermore, during the demolition and reconstruction of the outfall structure, equipment will be placed

within the shoreline setback, but upon completion, the site will be restored to its original condition, including the replacement of any damaged planting materials.

- Work that may be necessary to fix the nonconforming seawall and drainage culvert within the shoreline setback is allowed, pursuant to Section 23-1.6, ROH, as long as it does not exceed 50% of the replacement value of the seawall.
- We note that the proposed outfall protection work is outside of the shoreline setback area administered by DPP. In August 1983, the Department of Land Utilization determined that an application for an SMA Use Permit (No. 83/SMA-56) to allow the original construction of the outfall protection was unnecessary because the SMA Ordinance did not apply.

NOAA Fisheries – Pacific Islands Regional Office

Concerns:

- i. Physical disruption of Essential Fish Habitat (EFH) resources including Submerged Aquatic Vegetation (SAV) due to the placement of the sandbag cofferdam. It is not clear from the Final Marine Survey, Portlock Road Drainage Outfall Improvement if the sandbag footprint covers survey site where Halimeda algae were observed;
- ii. The release of materials into the water during debris removal and construction that will degrade water quality; and
- iii. National Marine Fisheries Service (NMFS) is also concerned about the potential long-term cumulative adverse effects to coral and SAV EFH due to the future continued release of freshwater with elevated levels of fine sediments, nutrients, and pollutants into the bay.

Recommendations:

General BMPs:

- i. Minimize physical contact with corals and any SAV (including seagrasses and calcifying and crustose coralline algae) as much as possible while conducting project activities;
- ii. Avoid conducting work during known periods of coral spawning (typically summer months); and
- iii. Ensure that appropriate BMPs and control measures are defined and implemented to minimize any potential adverse effects to EFH from the introduction of construction-related pollutants.

Specific BMPs:

- i. More clarification is needed to determine where survey points and corresponding marine resources are located. It is best to position the cofferdam in a manner that does not enclose areas of corals or SAV; and
- ii. Avoid construction during high wave conditions.

Applicant Response:

Concerns:

- i. *A map was provided that shows the in-water construction limits overlaid with Marine Survey transect points. The map shows the estimated areas where Halimeda algae is assumed to be. The NMFS suggested examples of appropriate mitigation for the damage to the Halimeda algae. One suggestion was to remove an equivalent surface area of Avrainvillea algae and other invasive algae species prevalent in the project area. The final*

- determination regarding the impact on marine resources and mitigation will be determined during the Army Corps permitting process. Any conditions set by the Army Corps of Engineers will be adhered to for this project;*
- ii. The sandbag cofferdam serves the purpose to contain all water pollution or disturbed sediments from construction and demolition work. This best management practice has been shown in previous projects to be effective at containing pollution from in-water work; and*
 - iii. The purpose of this project is to repair the storm drainage outfall. At present the outfall is blocked and water becomes septic and contaminated. The polluted storm water can then enter the ocean during high tides. Repairing the outfall will improve the water quality in the long term. We believe that this project does not affect the volume of freshwater with elevated levels of fine sediments, nutrients and pollutants into the bay.*

Recommendations:

General BMPs:

- i. The in-water project footprint has been designed to be as small as possible to avoid physical contact with corals and any SAV, seagrasses, and coralline algae as much as possible while conducting project activities;*
- ii. Should the USACOE include in their permit conditions for construction work to be done outside of known coral spawning periods this condition will be followed; and*
- iii. BMPs will be installed to minimize construction related pollutants from entering the bay and adversely effecting EFH. Fiber rolls will be placed around construction equipment or materials on land to prevent any sediment or pollutants from equipment or materials from flowing offsite and entering the ocean.*

Specific BMPs:

- i. A supplied map details the Final Marine Survey benthic transect points with the sandbag cofferdam. The cofferdam must remain in the same position to serve its BMP function and be a safe offset away from the construction work to remain stable; and*
- ii. During extreme high wave conditions work will be stopped for both worker safety and environmental protection because the waves may overtop the cofferdam, creating a situation where pollutants cannot be contained and turbidity increases.*

No other comments were received from any agency or the public.

ANALYSIS:

Following review and acceptance for processing, the Applicant's Agent was notified, by letter dated May 27, 2015 that:

- 1. The proposed use is an identified land use in the Resource Subzone of the Conservation District, pursuant to Hawaii Administrative Rules (HAR) §13-5-22, P-8 **STRUCTURES AND LAND USES, EXISTING** Major alteration of existing structures, facilities, uses, and equipment, or topographical features which area different from what was allowed under the original permit. When county permit(s) are required for the associated plan(s), the department's approval shall also be required. Please be advised, however, that this finding does not constitute approval of the proposal;**

2. Pursuant to §13-5-40 of the HAR, a Public Hearing is not required;
3. In conformance with §343, Hawaii Revised Statutes (HRS), as amended, and HAR, §11-200-8, the OCCL has determined this project may be considered exempt from the preparation of an Environmental Assessment pursuant to **DLNR Exemption Class 2 (17) Replacement or reconstruction of existing drainageways and waterways. Concurrence for these exemptions was provided by the City and County of Honolulu Department of Design and Construction via letter dated February 9, 2017;** and
4. The project area is not within the Special Management Area (SMA) (i.e., makai of the shoreline) and therefore no SMA review was conducted.

Notice of this Conservation District Use Application (CDUA) **OA-3804** for the Portlock Road Drainage Outfall Improvements was published in the *September 23, 2017* issue of the Office of Environmental Quality Control (OEQC) publication the *Environmental Notice*.

§13-5-30 CRITERIA:

The following discussion evaluates the merits of the proposed land use by applying the criteria established in HAR §13-5-30.

- 1) *The proposed use is consistent with the purpose of the Conservation District. The objective of the Conservation District is to conserve, protect and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare.*

The applicant has stated that the proposed project does not have any anticipated long-term negative effects of the coastal environment and for public health and safety. During construction, activities such as demolition and pouring grout will have an impact on the ocean environment; however, the project includes a sandbag cofferdam around the in-water work to prevent any sediment or contaminants stirred up from demolition and construction from spreading past the work area.

The applicant states that overall the project will be beneficial for the environment and for public health. Currently the drainage culvert is almost completely blocked with concrete spoils and debris. This results in a backup of storm water and ponding inside the culvert leading to foul odors, and milky water has been observed entering the ocean during high tide. Clearing the concrete and debris will allow for proper drainage and prevent storm water from ponding inside the culvert and becoming foul.

OCCL Staff believes that the project, as designed, will improve the conditions of the environment in this area by reducing a stagnant water source that can be detrimental to the nearshore environment. While a stormwater outflow is not an environmentally sensitive conveyance, having one that is not working properly could cause more harm to the resource.

- 2) *The proposed land use is consistent with the objectives of the Subzone of the land on which the use will occur. The seawall and accreted lands are located in the Resource Subzone of*

the Conservation District, pursuant to HAR §13-5-13, the objective of the Resource Subzone is to ensure, with proper management, the sustainable use of the natural resources of the area.

The applicant states that the project is repairing and replacing an existing outfall structure and that there will be little to no long-term effect on the natural resources in this area. There will be a beneficial effect because storm water entering the ocean from the culvert will not be stagnant and contaminated after the concrete and debris is removed from the culvert.

OCCL staff notes that stormwater outfalls that empty into the ocean will never be a positive impact on the environment, however, a non-functional stormwater conveyance would be more detrimental to the environment. To that end, this project is considered positive in that it aims to make a failing stormwater conveyance functional thus lessening the impacts of stagnant water.

- 3) *The proposed land use complies with the provisions and guidelines contained in Chapter 205A, HRS entitled "Coastal Zone Management", where applicable. The Coastal Zone Management Program recognizes a number of objectives and policies to monitor when determining potential impacts to the coastal zone area. While not all of the objectives and policies are relevant to each project, some objectives have the potential to be influenced by the proposed project.*

Recreational resources: The applicant states that a public walkway to the shoreline is located next to the project site and the site is occasionally used by the public for recreational fishing and leisure. This project will provide a drainage outfall structure that is more stable and structurally sound in the long term, making the site more accessible. OCCL staff note that the dilapidated condition of the shoreline in this area due to broken concrete and a failing outfall system is detrimental to any person visiting the site. Clearing the debris and improving the outfall structure will improve the recreation potential, however minimal, in this area.

Historic Resources: The applicant has stated that there are no registered historical sites in the project vicinity. However, the seawall was constructed prior to 1960, making it over 50 years old. This project does not change or damage the seawall in any way. The contractor is required to stage equipment and work offset from the seawall to best prevent damage to the seawall. Although, the purpose of this project was not to protect or preserve the seawall, efforts are made to protect it while conducting the work for this project. OCCL staff concurs that the seawall, while not a storied location of historical significance, will be repaired and maintained in its present condition which is in line with the objective of preservation within the SLU conservation district.

Scenic and open space resources: The applicant states the property is not located within any significant view planes. The proposed use will not affect existing coastal scenic and open space resources, and, as such, are not expected to have a significant visual impact on the community. The existing seawall will remain unaltered. OCCL staff notes that because a) this seawall has been existing for decades, b) similar structures line this coastal area, and c) the structure is considered low-profile, there should be no influence on coastal scenic

vistas or view planes. Additionally, the project area is littered with delapidated concrete remnants and broken rock such that clearing this material and fixing the shoreline outfall will improve the aesthetic value of the area.

Coastal Ecosystems: The applicant states that the storm drain culvert at the site currently emits an “odor” due to blockage in the culvert. The proposed project aims to clean up the blocked drainage culvert so that storm water can flow unimpeded, thus improving the site for local residents and the public. Additionally, the applicant states the storm water “odor” indicates the water trapped inside the culvert may have become septic (*of, relating to, or causing putrefaction*). During high tides water does flow into the ocean potentially contaminating nearby waters. This proposed project would prevent septic water from developing and then polluting the ocean.

OCCL staff notes that an outfall system that funnels stormwater from upland urban development and directs it to the nearshore and ocean waters without treatment can be detrimental to the environment and ocean resources. Outfall systems are only a conveyance for stormwater and effluent that is carried during storm events. Staff agrees that making a dilapidated outfall more functional will aim to improve the conditions of the water that makes it to the ocean.

Economic uses: The applicant states that repairing the seawall will increase the value of the property by reducing the odors and unappealing visual appearance. OCCL staff notes that the project will involve the use of construction workers for a short period of time.

Coastal hazards: The applicant states that the replacement structure is designed to meet current coastal engineering standards including accounting for sea level rise (SLR); the project was designed to take into account sea-level changes over the expected design life of the structure. This will provide more stability for the existing seawall and coastal property. OCCL staff notes that the removal of broken concrete and unstable rock material from the shoreline will reduce the current hazards associated with accessing this site and shoreline.

Managing Development and Public Participation: The applicant states that the project does not have any effect on managing development and public participation. However, all the potentially affected agencies have been contacted such as the USACOE, City and County of Honolulu Department of Planning and Permitting, Department of Health Clean Water Branch, State of Hawaii CZM (OP), and SHPD.

OCCL staff notes this project’s objective is to repair an existing public stormwater conveyance system in order to improve stormwater management and minimize the septic water conditions that currently exist. The private property access has been coordinated by the applicant, and has stated that any impacts to private property will be mitigated and returned to their original condition (**Exhibit 13**).

Beach Protection: The applicant states that the replacement structure was designed to follow a similar footprint to the original structure in order to minimize any impacts on the currents and sediment transport which could affect the existing beach or any beaches located in the vicinity of the project site. OCCL staff notes a report that discusses the beach

resources was submitted as part of this application review. Based on the observations from several field visits throughout 2015 and 2016, most of the shoreline fronting the Portlock Road seawall is sediment starved, and sediment accumulation was noted only at isolated locations. The small beach at the project site and nearby pocket beaches along the seawall are considered unstable. A review of the University of Hawaii – Coastal Geology Group *Hawaii Coastal Erosion* map for Portlock indicates an overall trend of erosion for the area adjacent to the work site, although no direct measurement has been made at the work site due to the presence of seawall structures. While the *Shoreline Change Rate* data does not include the work site, erosion rates of -1.0 ft./year is noted for the parcels closest to the project area which could indicate erosion is dominant along this shoreline (**Exhibit 14**). It is anticipated that due to the local shoreline change rate, coupled with the effects of sea level rise on coastal areas of Hawaii, the erosion trend in this area is likely to continue.

A *Coastal Assessment Report* (compiled by an agent for the applicant) determined that although a longshore current is present at the project site and sediment is moving along the seawall, little sediment accumulates along the seawall at the project site. OCCL staff notes that the seawall has not been undermined, and little to no erosion was observed behind the seawall (*mauka* side). It was also noted that the seawall appears to have prevented any erosion to the shoreline *mauka* of the seawall.

OCCL staff believes the slightly larger footprint of the replacement structure should not have a significant impact on shoreline processes. The main effect this project will have on the shoreline would be its function as a sand containment device which would reduce the longshore sediment transport leading to accumulation of sediment on the up-drift side of the outfall structure.

- 4) *The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.*

The applicant states that the proposed project will have little to no negative impact on the ocean environment, flora and fauna, in the adjacent areas or nearby ocean or land areas. This project has a relatively small footprint affecting less than 50-feet of coastline. The existing seawall was constructed prior to 1960 and the residential neighborhood was also developed at that time. Therefore, the applicant believes this is not a pristine coastline and this project is replacing an existing structure that has been part of this shoreline since it was developed. The proper flow of storm water and avoiding stagnant waters avoids contaminates from festering and growing and becoming hazardous for humans, animals, and the ocean ecosystem. This project will help restore a more functional drainage system for this area.

OCCL staff notes that any shoreline development (*i.e.*, *seawall*, *outfalls*, *groins*) have the potential to influence shoreline processes and beach formation. Seawalls and groins can alter sediment accumulation and littoral transport thus changing the nearshore dynamics and natural character of the shoreline. Staff believes that outfalls deposit effluent from urban-derived stormwater into the nearshore and ocean environments causing potentially negative impacts to coastal resources. OCCL staff indicates that there are always impacts due to coastal development, however, in this case they may be nominal because the proposed

project replaces a structure on a heavily degraded shoreline with little to no beach. Additionally, improving the functionality of this outfall should allow stormwater to flow un-impeded to the ocean, thus reducing the influence and accumulation of stagnant and septic water.

- 5) *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

The applicant has stated that the structure at this site is an outfall of a storm drain culvert and is a critical component to urban development in this area. Without a functional storm drain system, flooding can cause infrastructure damage, hazardous conditions for public safety, and deleterious water impacts due to impounded stagnant water. The applicant believes this project is appropriate for this site because the surrounding lands are fully developed residential lots. The storm-drain culvert and outfall protection structure aids in keeping the urban development clean and safe.

Staff notes that the project appears to be consistent with the urban and upland development located in this area; the structure has also been existing for over 50 years and is now part of the shoreline seawall and shoreline hardening. While the outfall may be appropriate and necessary to the site and urban development, OCCL staff notes that outfall structures carry all effluent that lands on roadways into the drain system which can be detrimental to the long-term health of the nearshore and ocean environments.

- 6) *The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable.*

The applicant states that the primary natural beauty at this site is the ocean and small beach area. Based on historical aerial imagery, ocean currents, and the shoreline characteristics at the site, it is likely the small beach is in place because of the existing outfall structure. OCCL staff notes the outfall has created a small "sand containment device" that allows for sand to accumulate in this area. The applicant states that the beach should remain relatively the same size and depth, as the proposed replacement structure will extend a similar distance out into the ocean. This structure will not impede access to the beach or alter views of the ocean. The applicant believes that the project will help to preserve the natural beauty of the site by improving the function of the drainage culvert and maintain the existing beach with a structure of comparable extent. OCCL staff believes that by clearing the shoreline of debris and improving the drainage capacity of this outfall (thus reducing stagnant water influences) the natural beauty of the site will be enhanced.

- 7) *Subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.*

The proposed use will not require the subdivision of land in the Conservation District.

- 8) *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

The applicant states that the proposed project will benefit the public health and safety by providing a means for the storm drain culvert to fully convey storm-water to the ocean and not hold stagnant, septic water for extended periods. The replacement structure follows a similar footprint and serves the same purpose as the existing outfall structure. The applicant believes there are no anticipated hazards or negative impacts to the public health, safety, or welfare caused by this project.

OCCL staff agrees that the proposed project, as designed, will reduce stagnant and potentially septic water from entering the ocean thus improving public health and welfare. Removing dilapidated concrete and rock fragments from the shoreline will aim to improve public safety at the site.

CULTURAL AND HISTORICAL IMPACT REVIEW:

Please provide the identify and scope of cultural, historical, and natural resources in which traditional and customary native Hawaiian rights are exercised in the area:

The applicant states that the Portlock area is known to have been a popular site for fishing by Hawaiians, and local residents report that fishermen occasionally come to fish at this site and other public beach access ways along Portlock Road. This project will not impede or affect this resource in the long-term. During the construction period, the beach access will remain open most of the time. Should beach access have to be temporarily closed for safety reasons during construction, there are other beach access ways nearby that can provide the access to the same area or other fishing sites. While heavy equipment is operating or being transported to/from the site, the area under construction will be closed to the public for safety reasons. There are no known traditional and customary native Hawaiian rights that are exercised directly at this site or in the general vicinity.

OCCL staff notes this project area is a heavily developed urban environment, with only the shoreline area approximating a natural system. Staff notes that the most common cultural or traditional practices would involve fishing, swimming, diving, and/or gathering of ocean resources from the water or beach, however, very little evidence for these activities was documented. By clearing the shoreline of broken concrete and rock, access to the site would be improved and may provide additional areas for fishing and gathering.

Identify the extent to which those resources, including traditional and customary Native Hawaiian rights, will be affected or impaired by the proposed action:

The applicant states that the proposed project is not anticipated to have any long-term effect on traditional and customary Native Hawaiian rights. As mentioned above, there will be available shoreline space on both sides of the project site to allow fishermen to continue to utilize this area. Also, the duration of construction that would require a portion of the shoreline to be closed to the public is approximately three (3) to eight (8) weeks, with only approximately 50-feet of the shoreline closed during this time.

OCCL staff agrees that the projects effects on the resources and traditional uses at this site would be minimal to non-existent due to the nature of the shoreline (i.e., developed with seawalls) and the

project goal of removing deleterious material from the beach, and improved water quality at the outfall location.

What feasible action, if any, could be taken by the Board of Land and Natural Resources in regard to your application to reasonably protect Native Hawaiian rights?

OCCL staff notes that since no effects on native and traditional uses was determined, and the goal of the project is to improve nearshore water quality, public health and safety and access, staff believes the BLNR does not need to take additional actions to protect or preserve native use in this area.

DISCUSSION:

The Department and Board of Land and Natural Resources has jurisdiction over land makai of the shoreline as evidenced by the upper reaches of the wash of the waves other than storm and seismic waves, at high tide during the season of the year in which the highest wash of the waves occurs, usually evidenced by the edge of vegetation growth, or the upper limits of debris left by the wash of the waves, pursuant to Hawaii Revised Statutes (HRS) §205A-1.

This Conservation District Use Permit (CDUP) is being pursued in order to conduct improvements to an existing outfall structure that has become an ineffective stormwater management device. The work includes the removal of deleterious material that has accumulated at the shoreline (i.e., broken concrete, rock rubble, and construction material), and the reconstruction of the outfall structure that extends approximately 50-feet along the shoreline. This work is required to keep the existing drain outlet clear of blockage by sand and other debris, and to alleviate flooding issues in the area. Additionally, the impounded water that is trapped by the current blockage produces septic or stagnant effluent which is deleterious to the environment, and public health and safety.

Coastal development can be a serious impediment to protecting and preserving coastal ecosystems, recreation, and processes. In this case, the residential and urban development was created at a time (c. 1960) when mean sea level was at a lower elevation, and coastal erosion, sea level rise, and climate change were not necessary attributes for regulatory discussions. OCCL staff notes that the applicant did incorporate future Sea Level Rise (SLR) measurements into the design of the replacement outfall structure, however, significant changes to the project design were constrained by a "historical" seawall that could not be expanded, and development along the shoreline that is considered static. Staff notes the replacement drainage culvert outfall will be made of fiber reinforced concrete with a stone foundation; no steel reinforcement will be used in the structure as steel can be heavily impacted by salt water. Staff believes the project was designed for long-term functionality in an effort to avoid resource intensive repairs or future large-scale replacement.

A majority (if not all) of the residential lots located in the vicinity of the subject property are protected by hardened shoreline structures such that this existing seawall and outfall structure is in line with the development along this shoreline.

OCCL staff believes this project will have a positive effect on the coastal environment by improving the quality of storm water entering the ocean, by providing a more stable structure for the safety of

the public who utilize the shoreline and wall, and improve the aesthetics of the shoreline area by the removal of broken concrete and construction materials.

Staff, therefore, recommends as follows:

RECOMMENDATION (1):

Staff recommends that the Board of Land and Natural Resources **APPROVE** this Conservation District Use Application (CDUA) for proposed improvements to an existing outfall structure located on submerged lands of the state in Portlock, Honolulu District, Island of Oahu, seaward of *Tax Map Keys: (1) 3-9-003:002 & :028* and subject to the following conditions pursuant to HAR §13-5-42:

1. The permittee shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, state, and county governments, and applicable parts of this chapter;
2. The permittee, its successors and assigns, shall indemnify and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, and death arising out of any act or omission of the applicant, its successors, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit;
3. The permittee shall obtain appropriate authorization from the department for the occupancy of state lands, if applicable;
4. The permittee shall comply with all applicable department of health administrative rules;
5. Unless otherwise authorized, any work or construction to be done on the land shall be initiated within one year of the approval of such use, in accordance with construction plans that have been signed by the chairperson, and shall be completed within three years of the approval of such use. The permittee shall notify the department in writing when construction activity is initiated and when it is completed;
6. The permittee understands and agrees that the permit does not convey any vested right(s) or exclusive privilege;
7. In issuing the permit, the department and board have relied on the information and data that the permittee has provided in connection with the permit application. If, subsequent to the issuance of the permit such information and data prove to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and the department may, in addition, institute appropriate legal proceedings;
8. When provided or required, potable water supply and sanitation facilities shall have the approval of the department of health and the county department of water supply;
9. Provisions for access, parking, drainage, fire protection, safety, signs, lighting, and changes on the landscape shall be provided;

10. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the permittee shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
11. Obstruction of public roads, trails, lateral shoreline access, and pathways shall be avoided or minimized. If obstruction is unavoidable, the permittee shall provide alternative roads, trails, lateral beach access, or pathways acceptable to the department;
12. During construction, appropriate mitigation measures shall be implemented to minimize impacts to off-site roadways, utilities, and public facilities;
13. Use of the area shall conform with the program of appropriate soil and water conservation district or plan approved by and on file with the department, where applicable;
14. The permittee shall obtain a county building or grading permit or both for the use prior to final construction plan approval by the department;
15. For all landscaped areas, landscaping and irrigation shall be contained and maintained within the property, and shall under no circumstances extend seaward of the shoreline as defined in section 205A-1, HRS;
16. Artificial light from exterior lighting fixtures, including but not limited to floodlights, uplights, or spotlights used for decorative or aesthetic purposes, shall be prohibited if the light directly illuminates or is directed to project across property boundaries toward the shoreline and ocean waters, except as may be permitted pursuant to section 205A-71, HRS. All exterior lighting shall be shielded to protect the night sky;
17. Where applicable, provisions for protection of beaches and the primary coastal dune shall be established by the permittee, to the satisfaction of the department, including but not limited to avoidance, relocation, or other best management practices;
18. The permittee acknowledges that the approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native Hawaiians in the immediate area, to the extent the practices are provided for by the Constitution of the State of Hawaii, and by Hawaii statutory and case law; and
19. Other terms and conditions as prescribed by the chairperson; and
20. Failure to comply with any of these conditions shall render a permit void under the chapter, as determined by the chairperson or board.

RECOMMENDATION (2):

Staff recommends that the Board of Land and Natural Resources **AUTHORIZE** the issuance of a non-exclusive easement to the Applicant for the purposes stated in Conservation District Use Application (CDUA) OA-3804, further subject to the terms shown on the attached *Schedule A*.

Respectfully submitted,



Alex J. Roy, M.Sc., Staff Planner
Office of Conservation and Coastal Lands

Approved for submittal:



Suzanne D. Case, Chairperson
Board of Land and Natural Resources

Terms for Issuance of Non-Exclusive Easement Involving State Lands in Conservation District

Schedule A

LEGAL REFERENCE:

Sections 171-6, 13, 17, 53, and 95, Hawaii Revised Statutes (HRS), as amended and appropriate.

AREA:

1,750 square feet, more or less, subject to review and approval by the Department of Accounting and General Services, Survey Division (DAGS).

CHARACTER OF USE:

Public Purpose Use; City and County of Honolulu Stormwater Management Outfall and Drainage System.

CONSIDERATION:

Gratis

EASEMENT TERM:

Perpetual, with commencement date to be determined by the Chairperson.

CHANGE OF APPLICANT:

Authorize the subject requests to be applicable in the event of a change in the ownership of the abutting parcel described as Tax Map Key(s): (1) 3-9-003:002 & (1) 3-9-003:028, provided the succeeding owner has not had a lease, permit, easement or other disposition of State lands terminated within the last five (5) years due to non-compliance with such terms and conditions.

APPLICANT REQUIREMENTS:

1. Provide survey maps and descriptions according to State DAGS standards, and at Applicant's own cost;
2. Pay for an appraisal to determine one-time payment, *if applicable*;
3. Obtain designation of easement approval from the City and County of Honolulu, Department of Planning and Permitting, *if applicable*;
4. Obtain concurrent resolution from the Legislature pursuant to §171-53 (c), HRS, if applicable; and
5. Contact the respective district land office to follow-up with the disposition process

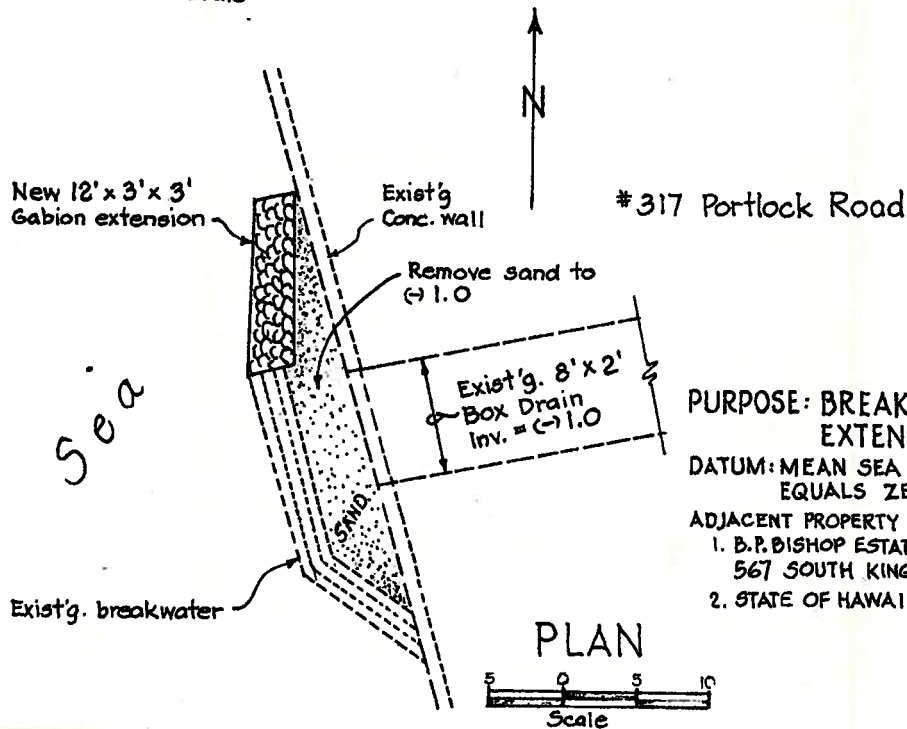
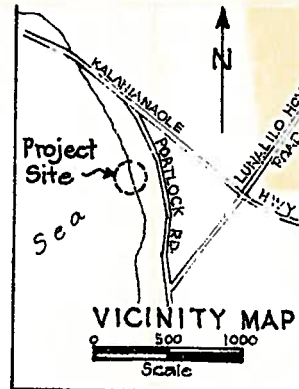
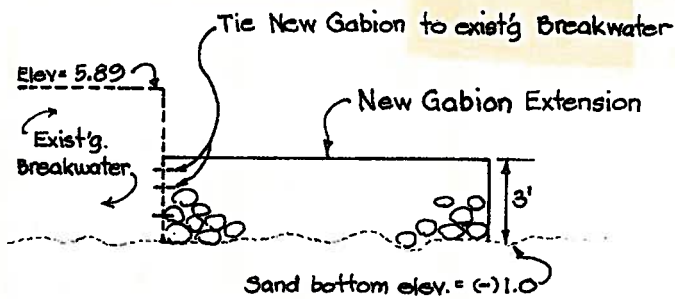
District Land Offices Contact Information

| County | Address | Tel. | Fax |
|----------|---|----------------|----------------|
| Honolulu | 1151 Punchbowl St., Room 220, Honolulu, HI 96813 | (808) 587-0433 | (808) 312-6357 |
| Maui | 54 High St., Room 101, Wailuku, HI 96793 | (808) 984-8103 | (808) 984-8115 |
| Hawaii | 75 Aupuni St., Room 204, Hilo, HI 96720 | (808) 961-9590 | (808) 961-9599 |
| Kauai | 3060 Eiwa St., Room 208, Lihue, HI 96766 | (808) 274-3491 | (808) 241-3535 |

ISSUANCE OF EASEMENT:

Subject to the Applicant fulfilling all of the Applicant Requirements listed above, the Board authorize the issuance of a, non-exclusive easement to the Applicant covering the subject area under the terms and conditions cited above, which are by this reference incorporated herein and further subject to the following:

- A. The standard terms and conditions of the most current shoreline easement document form, as may be amended from time to time;
- B. *Throughout the term (unless sooner abandoned or otherwise terminated herein) this easement shall run with the land and shall inure to the benefit of the real property abutting the subject easement area, provided however, that the Grantee shall carry the required liability insurance covering the easement area and comply with all other terms and conditions as provided herein, and that the Grantee, or authorized representative of the Grantee's estate, shall notify the Grantor in writing when this easement is sold, assigned, conveyed, or otherwise transferred, and Grantee shall notify the Grantee's successors or assigns of the insurance requirement in writing, separate and apart from this easement document, if applicable;*
- C. Terms and conditions of the subject CDUA;
- D. Approval by the Governor and concurrence from the Legislature pursuant to 171-53 (c), HRS;
- E. Review and approval by the Department of the Attorney General;
- F. Such other terms and conditions, including amendment(s) of the terms mentioned above, as may be prescribed by the Chairperson to best serve the interests of the State; and
- G. Any shoreline hardening policy that may be adopted by the Board prior to execution of the grant of easement.



PURPOSE: BREAKWATER EXTENSION
 DATUM: MEAN SEA LEVEL EQUALS ZERO
 ADJACENT PROPERTY OWNER
 1. B.P. BISHOP ESTATE
 567 SOUTH KING STREET
 2. STATE OF HAWAII

EXHIBIT 1

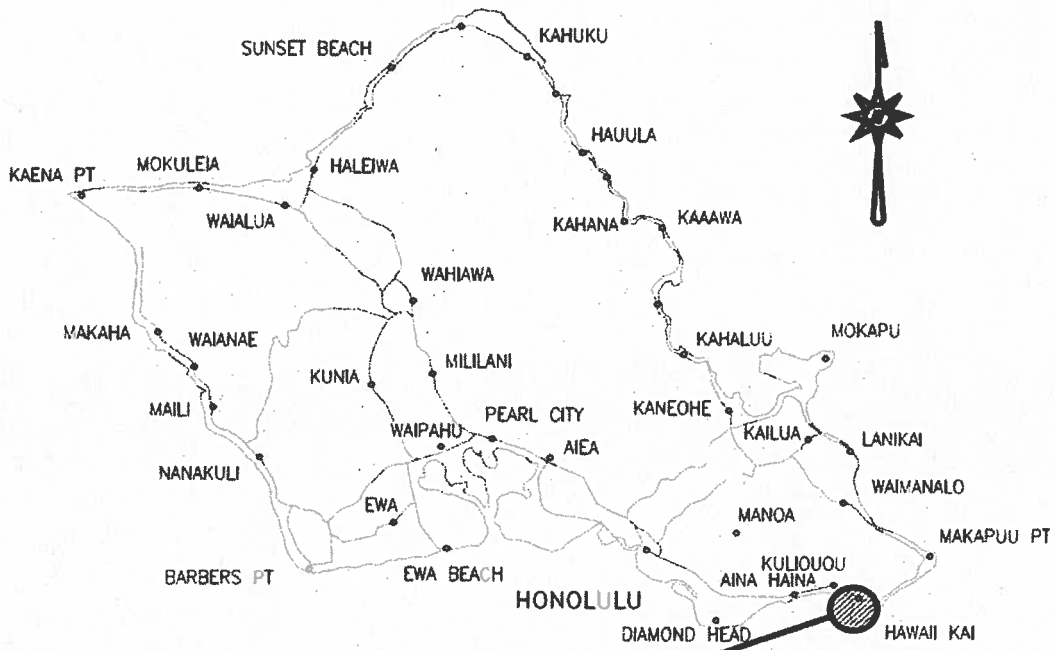
CDUA: OA-3804



CDUA no. OA-1616
 APPLICANT DR. MICHAEL CHUNG; DEPT. OF PUBLIC WORKS
 AGENT _____
 TMK 3-9-3:02 (OFFSHORE)
 SCALE _____

SUBZONE

 PROTECTIVE
 RESOURCE
 LIMITED
 GENERAL PROJECT AREA



PROJECT LOCATION

General site location of Portlock Road Drainage Improvements Project.



PROJECT SITE

Detailed location of Portlock Road project site.

EXHIBIT 2 CDMA: OA-3804

Portlock Road Drainage Outfall Improvements

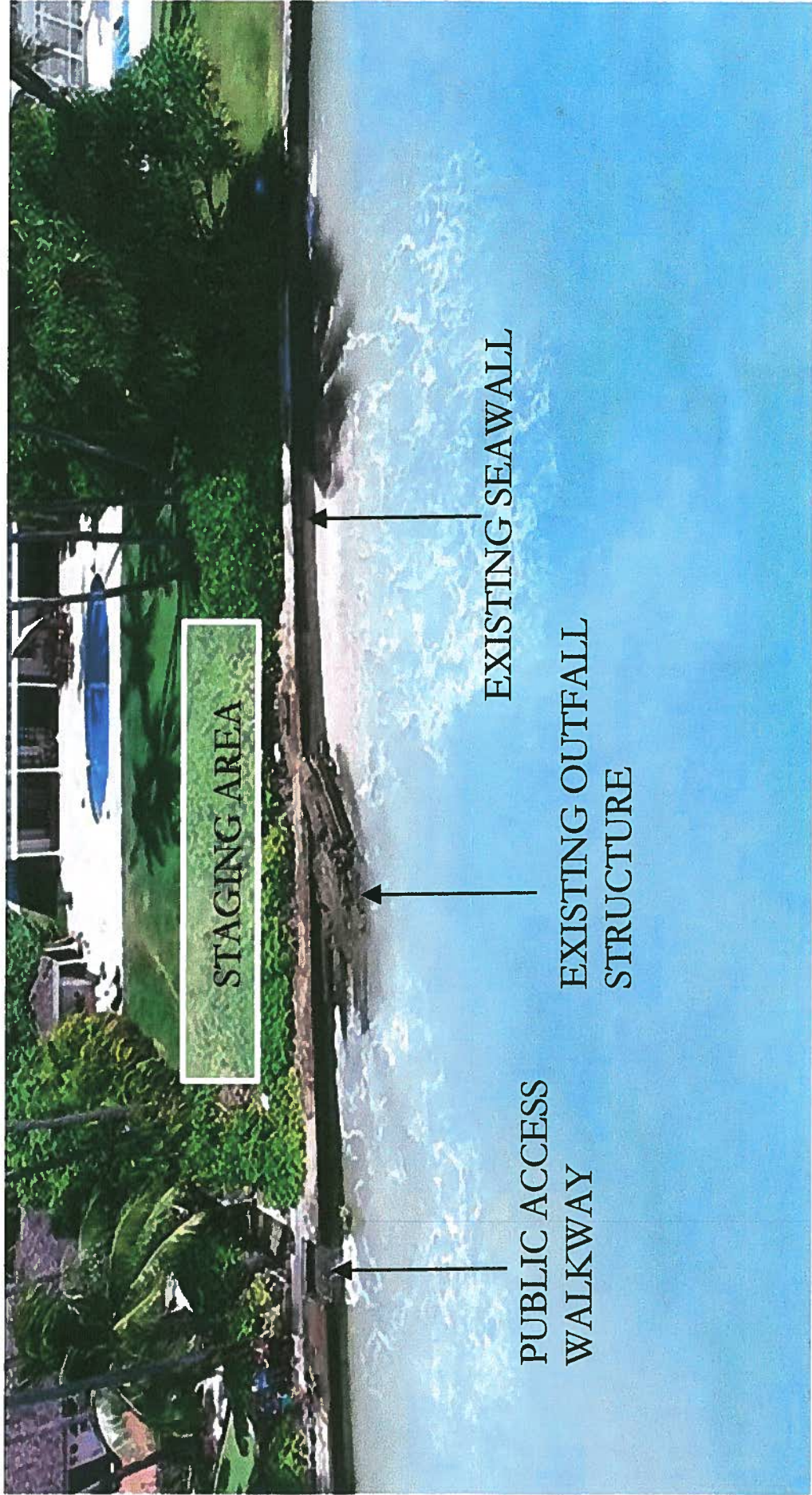
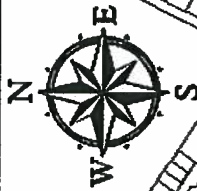
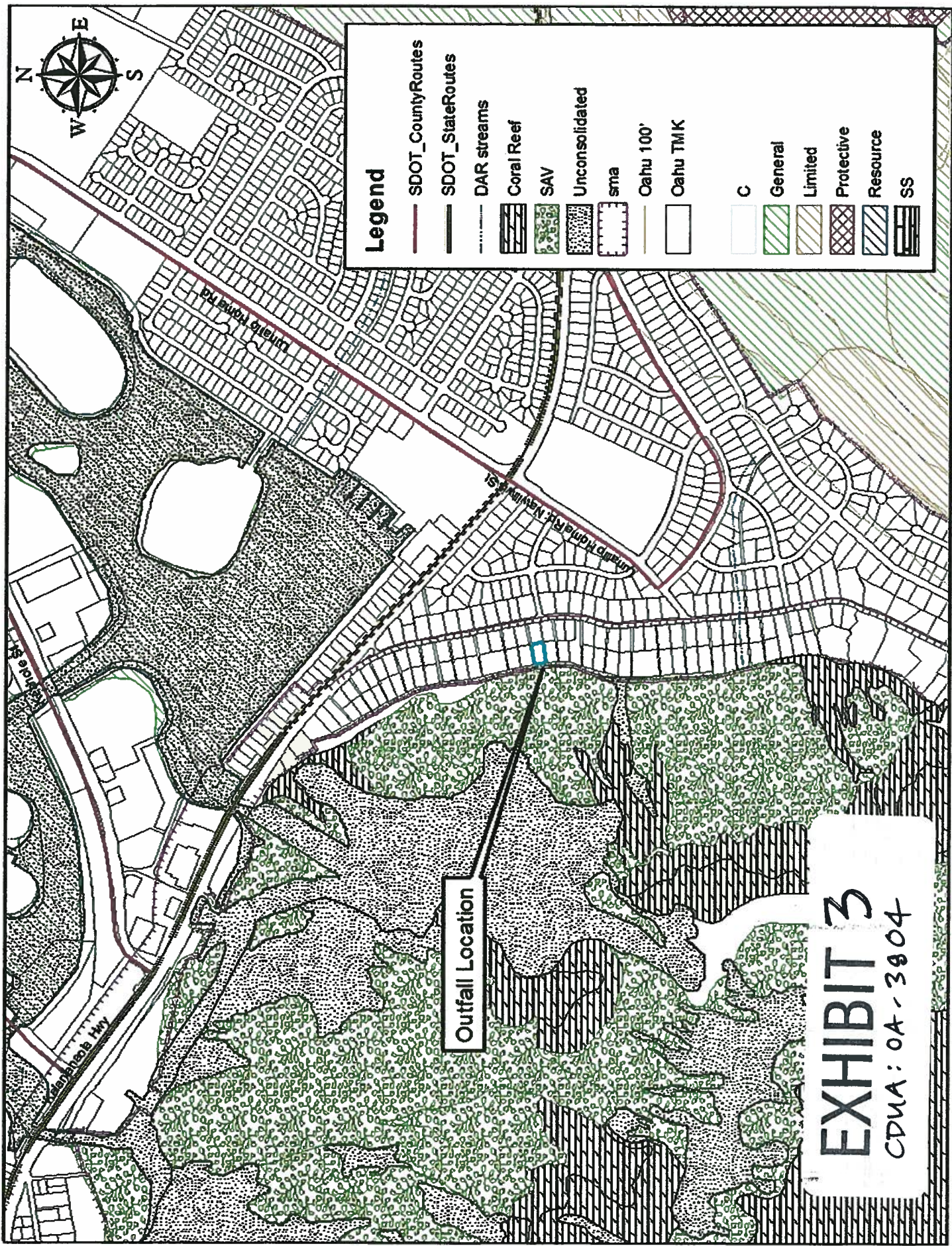


EXHIBIT 2A
CDMA: 0A-3804

Aerial Photograph of Project Site.



Legend

- SDOT_CountyRoutes
- SDOT_StateRoutes
- DAR streams
- Coral Reef
- SAV
- Unconsolidated
- sma
- Oahu 100'
- Oahu TMK
- C
- General
- Limited
- Protective
- Resource
- SS

Outfall Location

EXHIBIT 3
 CDUA: OA-3804



Concrete and debris inside culvert.



Walkway access to shoreline.

EXHIBIT 4 CDMA: OA - 3804



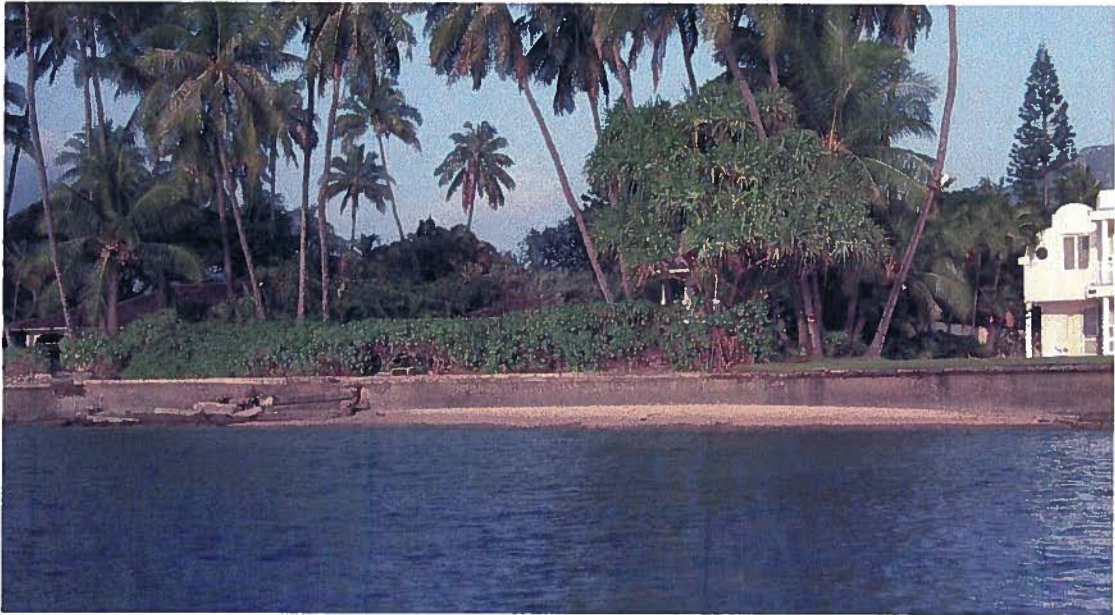
Seawall and culvert outfall structure at the project site.



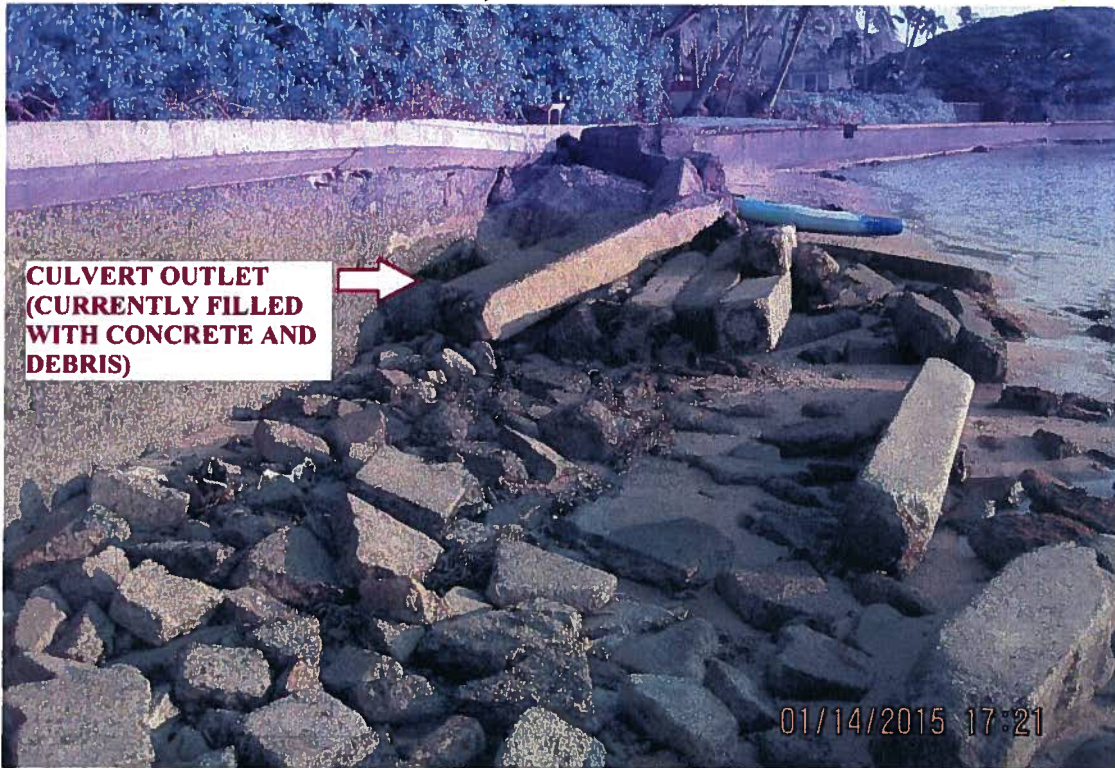
Photo of lip on seawall at project site.

CDWA: OA-3804

EXHIBIT 5



Project site. From the left: shoreline walkway; gabion and concrete rubble, culvert outfall structure; and beach at the site.



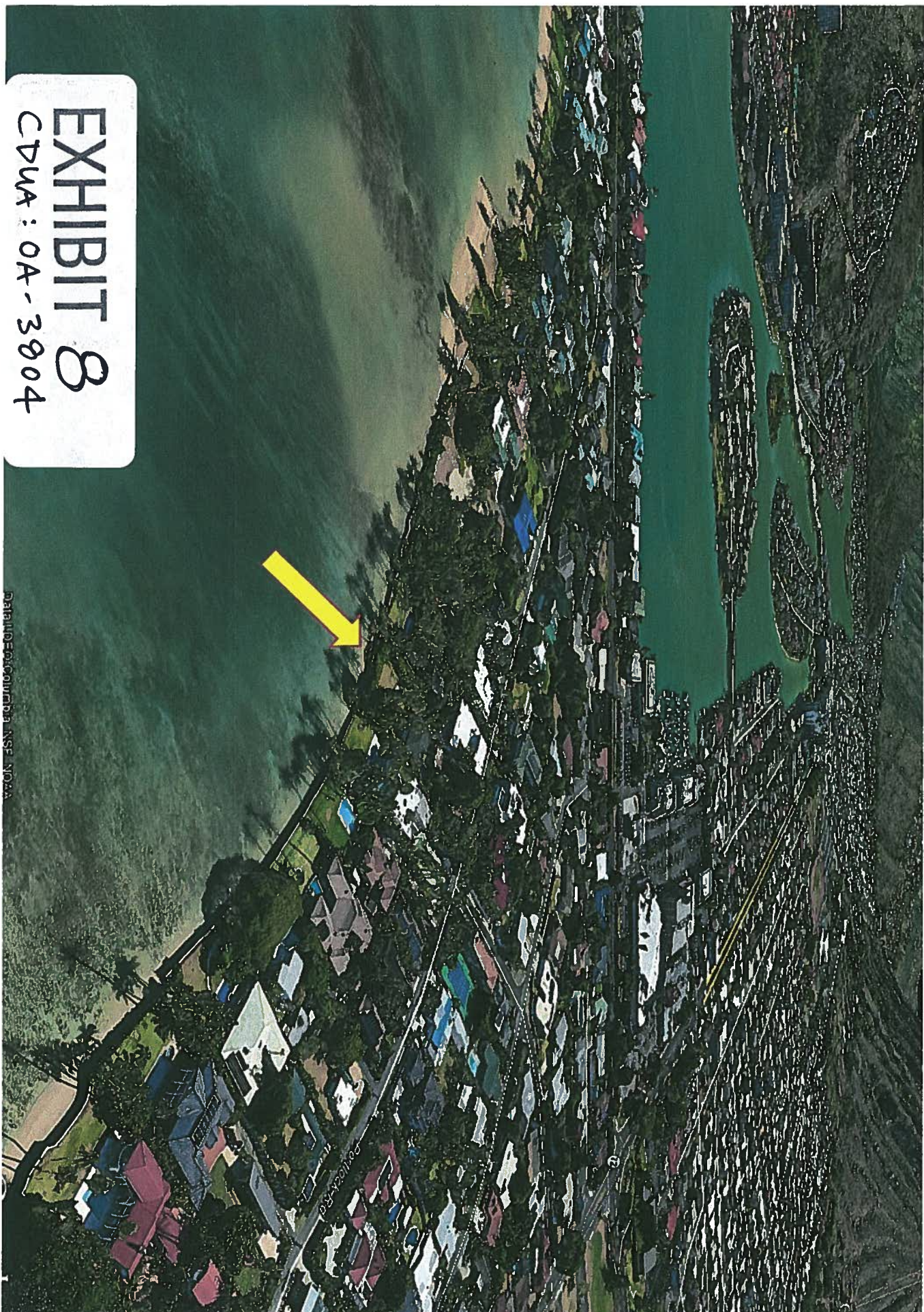
Note the concrete spoils in between the seawall and outlet protection structure. The culvert opening is primarily blocked. The small remaining opening is indicated.

EXHIBIT 6 CDWA: 0A-3804



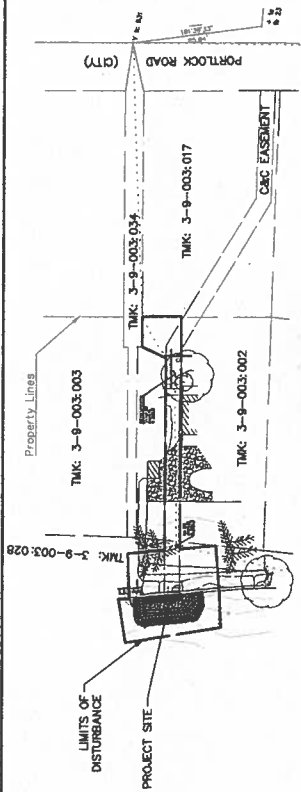
Photo of drainage outlet protection structure with rock debris and piles.

EXHIBIT 7 CDUA: OA-3804

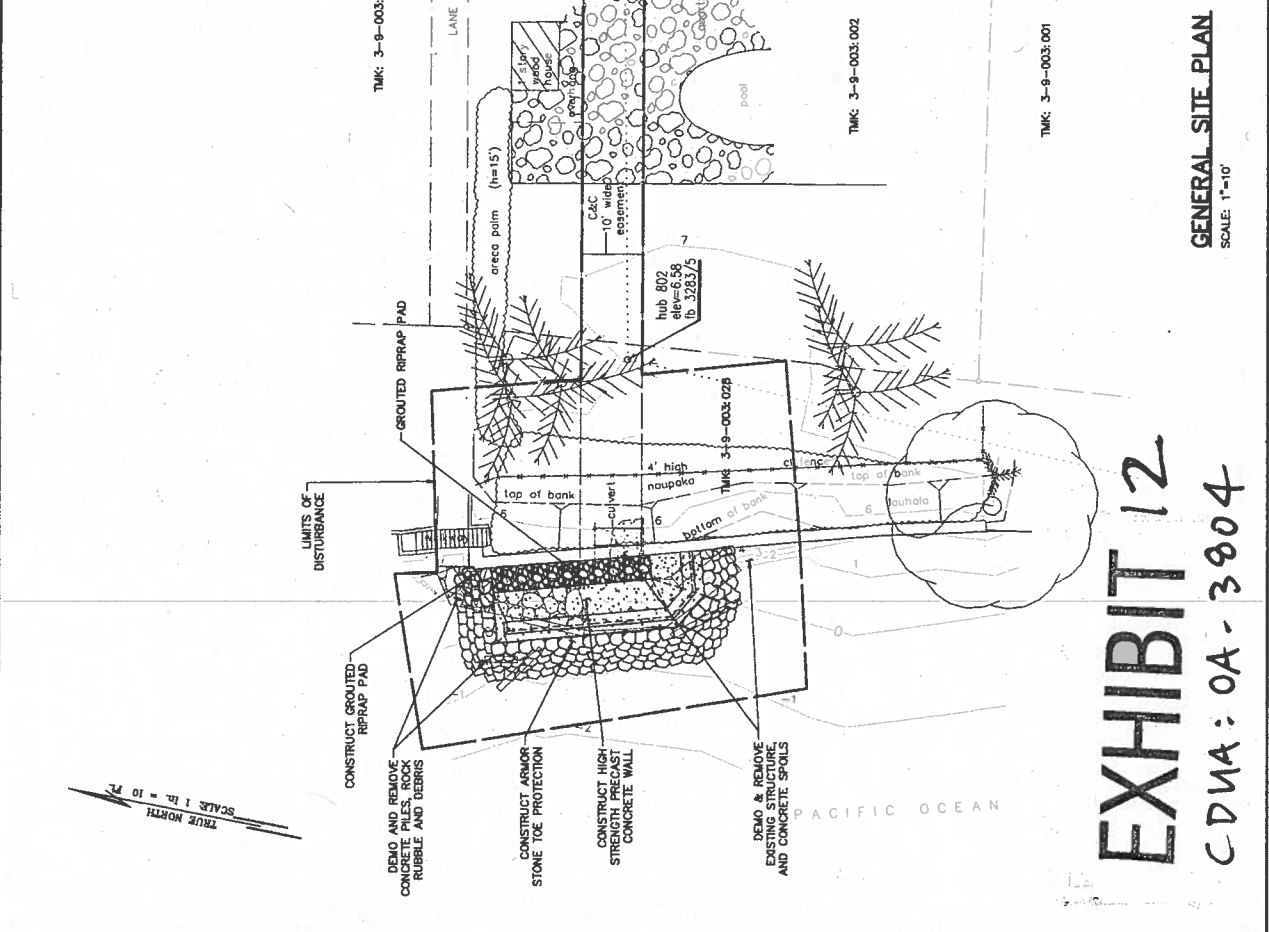


DATA SOURCE: COURTESY NSF, NOAA

EXHIBIT 8
CDWA: OA-3804



SITE LOCATION
SCALE: 1"=40'



DEPARTMENT OF DESIGN AND CONSTRUCTION
OFFICE OF THE COUNTY ENGINEER
HONOLULU, OAHU, HAWAII

PORTLOCK ROAD DRAINAGE OUTFALL IMPROVEMENTS FY 2017 (X)

GENERAL SITE PLAN

DATE: 1-10-17
DRAWN: [blank]
CHECKED: DE
JOB NO.: XX-XX

FILE: [blank] FOLDER: [blank] NUMBER: [blank]

DESIGN: [blank]
DRAWING: [blank]
CHECKED: [blank]
DATE: [blank]

APPROVED: [blank]

DATE: [blank]

SCALE: 1"=40'

SCALE: 1"=10'

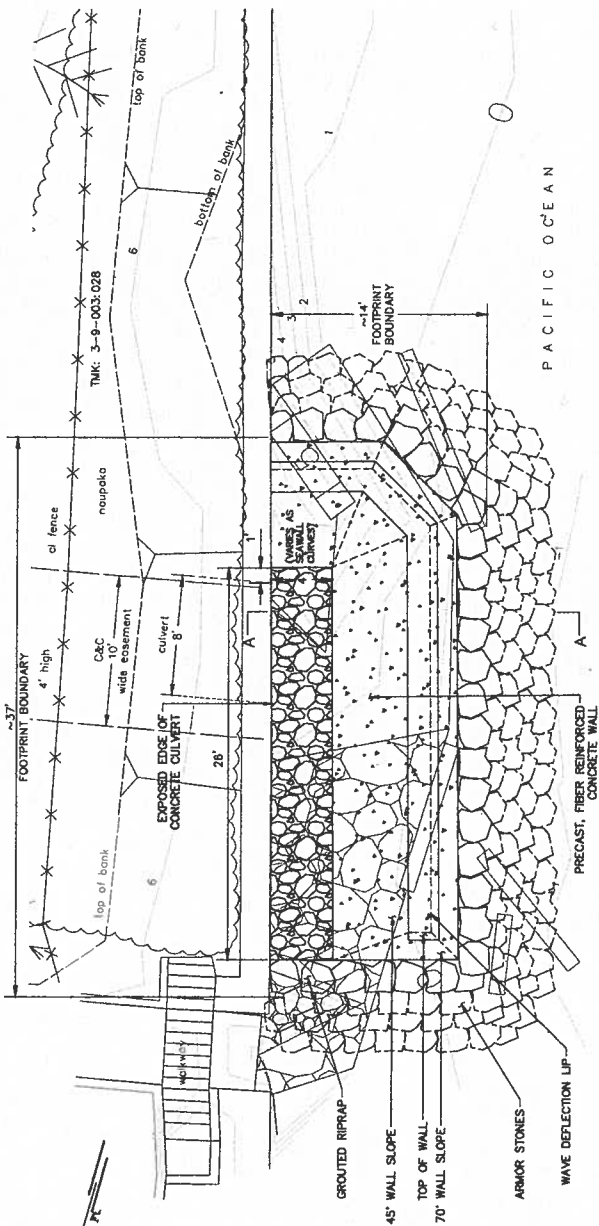
RESEARCH & ANALYSIS
LAWRENCE BERKELEY NATIONAL LABORATORY
No. 3946-C

GENERAL SITE PLAN
SCALE: 1"=10'

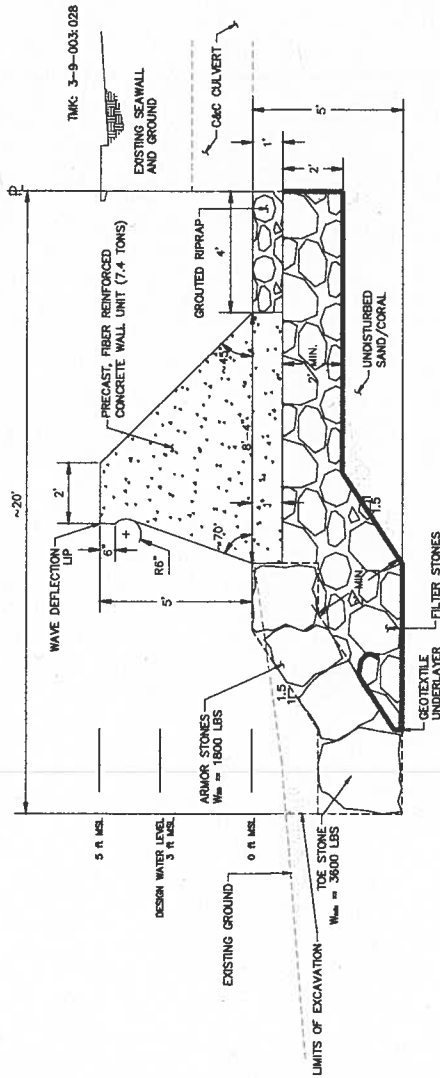
40' 20' 0' 40' 80'
SCALE: 1"=40'

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

EXHIBIT 12
CDMA: OA-3804



CULVERT OUTLET STRUCTURE PLAN
SCALE: 1/4"=1'-0"



A-A CONCRETE WALL CROSS-SECTION
SCALE: 1/2"=1'-0"

EXHIBIT 12A
CDUA: 0A-3004



DESIGNER: DM
DRAWN: DM
CHECKED: DE
DATE: 1-10-17
JOB NO. XX-XX

| | | |
|---------|------|-------------|
| SECTION | DATE | DESCRIPTION |
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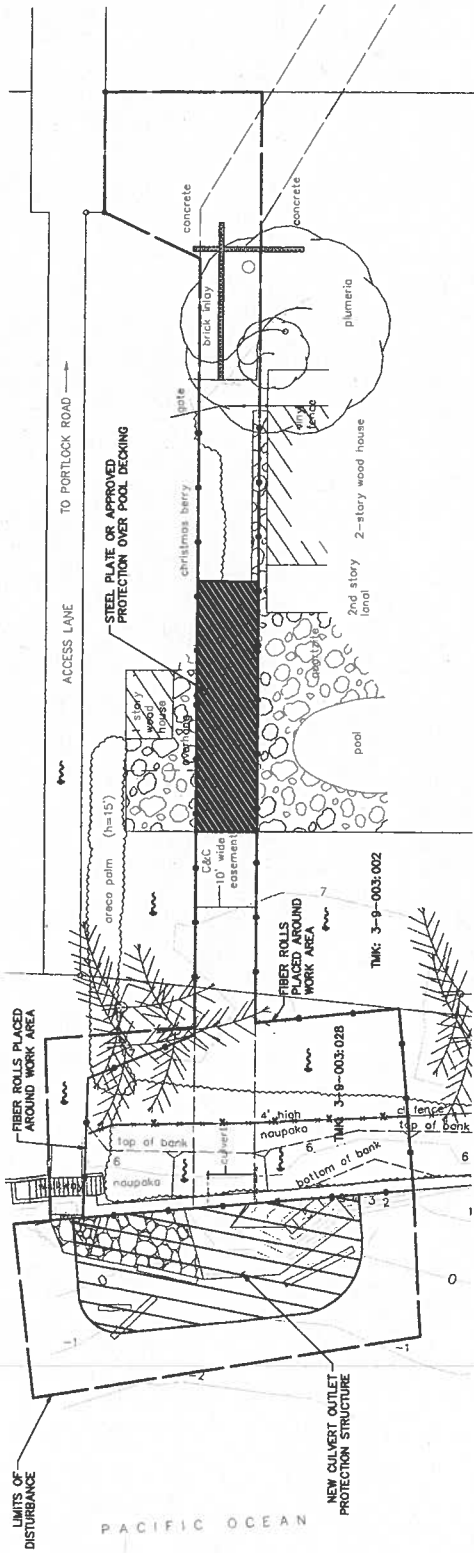
DEPARTMENT OF DESIGN AND CONSTRUCTION
CIVIL DIVISION
HONOLULU, OAHU, HAWAII

APPROVED: [Signature]

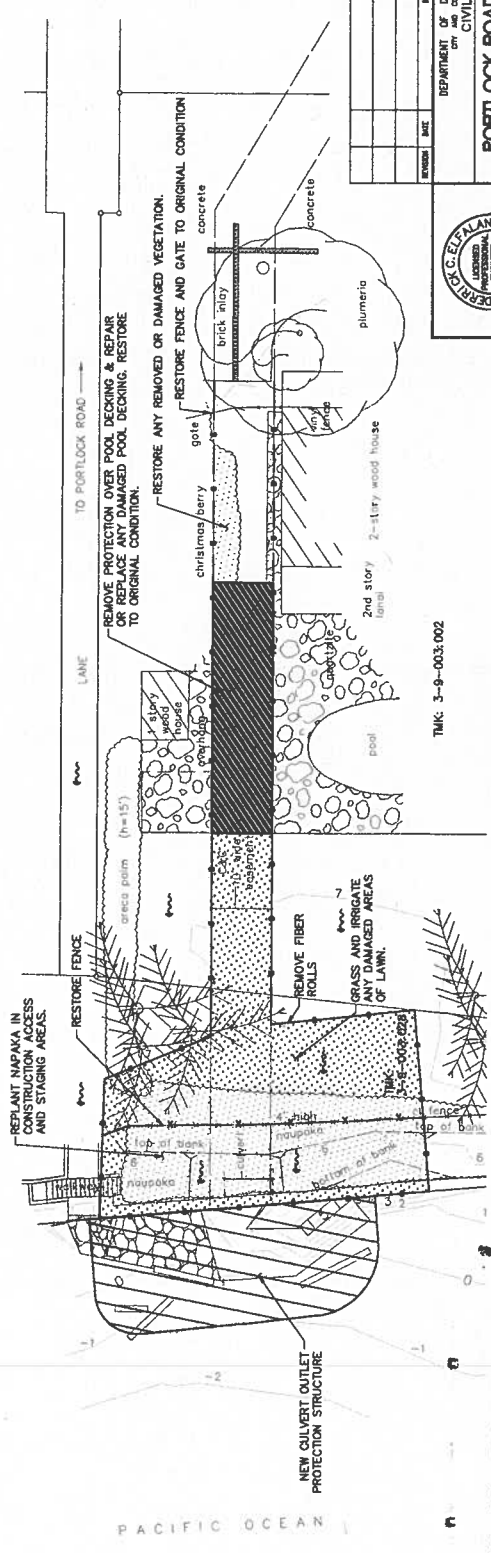
PROJECT: PORTLOCK ROAD DRAINAGE OUTFALL IMPROVEMENTS FY 2017

FILE NO. DRAW NO. FOLDER NO. NUMBER

C-4
SHEET 7
OF 10 SHEETS



EROSION CONTROL PLAN
SCALE: 1" = 10'



RESTORATION AND REVEGETATION PLAN
SCALE: 1" = 10'

EXHIBIT 13
CDUA: OA-3004

TMK: 3-9-003.002



DEPARTMENT OF DESIGN AND CONSTRUCTION
CIVIL DIVISION
HONOLULU, OAHU, HAWAII

EROSION CONTROL, RESTORATION AND REVEGETATION PLAN

APPROVED: [Signature]

DESIGNER: [Signature]
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]

DATE: 1-16-17

JOB NO. XX-XX

FILE NO. DRAW NO. POLDER NO. NUMBER

PROJECT NO. C-7
 SHEET 10
 OF 10 SHEETS



Approximate Work Area

AREA DESCRIPTION

Hawaii Kai is located on the south coast of Oahu at the east end of Maunaloa Bay. A shallow fringing reef and Kawaihoa Point (Koko Head) protect the shoreline from the full energy of seasonal southerly swells and tradewind waves year-round, which commonly affect this side of the island.

The Hawaii Kai shoreline is largely man-made. The area was developed by Henry J. Kaiser and the Kaiser-Aetna Corporation beginning in 1959. Kuapa fishpond was transformed into Hawaii Kai Marina through extensive dredging of the shallow pond and reef and filling of the marshy shoreline. The shorelines at Kuliouou Beach Park and Maunaloa Bay Beach Park were extended seaward by landfill (100 ft and 330 ft, resp.). These alterations can be seen in the seaward movement of the shoreline between 1928 and 1967.

Due to extensive shoreline reconstruction, only historical shorelines from the modern configuration of each beach (1967 - 2005) are used to calculate change rates. Kuliouou Beach Park (transects 0 - 15) is approximately stable with rates less than 0.3 ft/yr. Rates are not calculated for the shoreline between transects 15 and 16 as it is mostly rock and mud with little or no sand beach. Maunaloa Bay Beach Park (transects 26 - 56) is eroding at up to -0.6 ft/yr (around transect 22). Portlock Beach (transects 26 - 56) is eroding along most of its length (up to -0.9 ft/yr, around transects 38 and 56). The remainder of the Portlock shoreline has no beach with waves breaking against seawalls at high tide.

A previous study found shoreline accretion at Portlock Beach, except near the marina entrance, which experienced erosion (Sea Engineering, 1988). For more information see: <http://www.soest.hawaii.edu/asp/coasts/oahu/index.asp>

EXHIBIT 14
CDWA: OA-3804