HASEKO EXHIBIT 3

CONSERVATION DISTRICT USE APPLICATION

Kaloʻi Gulch Drainageway Improvements at Oneʻula Beach Park

District of Ewa, Oʻahu, Hawaiʻi

TMKs: (1) 9-1-011: Portion of Parcel 007 and
(1) 9-1-012: Portion of Parcel 025

Prepared by:

WILSON OKAMOTO
CORPORATION

ENGINEERS | PLANNERS | CONSULTANTS

February 2007

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

Conservation District Use Application (CDUA)

For DLNR Use

File # _____

Reviewed by _____
Date _____

Accepted by _____
Date _____

180-Day Exp. _____
EA/EIS Required _____

PH Required _____

Decision _____
Date _____

Project Location/Address: One'ula Beach Park

District: Ewa Island/County: O'ahu

Subzone: Resource Tax Map Key(s) 9-1-02:025 and 9-1-011:007

Total Area of Parcel in sq. ft or acres 28.391 and 3.365 acres

Area of Proposed Use in sq. ft. or acres approximately 21,700 sq. ft.

Commencement Date: 2008 Completion Date: 6 months from start

Indicate which of the following approvals are being sought, as specified in the Hawaii Administrative Rules (HAR), Chapter 13-5.

_X_ Board Permit

___ Departmental Permit

___ Emergency Permit

___ Temporary Permit

___ Site Plan Approval

APPLICANT
Legal Name: HASEKO (Ewa) Inc.
Street Address: 91-1001 Kaimalie Street, Suite 205
City, State and Zip+4 Code: Ewa Beach, Hawaii 96706
Mailing Address: Same
City, State and Zip+4 Code:
Contact Person & Title: Nancy H. Maeda, Executive Vice President
Phone No.: *(808)689-7772* Fax No.: *(808)689-5757*
Email:
Interest in Property: Coordinator for regional infrastructure

***Signature** N.H. Maeda **Date** 2-13-07
*If for a Corporation, Partnership, Agency or Organization, must be signed by an authorized officer.

AGENT
Name: Wilson Okamoto Corporation
Mailing Address: 1907 South Beretania Street, Suite 400
City, State and Zip+4 Code: Honolulu, Hawaii 96826
Contact Person & Position: Earl Matsukawa, AICP, Planning Director
Phone No.: *(808)946-2277* Fax No.: *(808)946-2253*
Email:

Signature Earl Matsukawa **Date** 2-15-07

PROPERTY OWNER(S) *(If other than the applicant)*
Legal Name: Department of Land and Natural Resources
Street Address: 1151 Punchbowl Street
City, State and Zip+4 Code: Honolulu, Hawaii 96813
Mailing Address:
City, State and Zip+4 Code:
Contact Person & Title:
Phone No.: Fax No.: ( )
Email:
Relationship to applicant:

Signature **Date**

CONTRACTOR
Name: N/A Contractor I.D. #
Scope of Work:
Mailing Address:
Contact Person & Position Title:
Phone No.: ( ) Fax No.: ( )
Email:

Emergency Contact Information
Company/OrganizationName:
Contact Person and Title
Phone No.: ( ) Phone No.: ( )

PRIOR CONSERVATION DISTRICT USE PERMITS (CDUP)
Please specify all prior CDUP received for the subject parcel.

None.

PROPOSED USE
Total Area of Proposed Use: (indicate in acres or sq. ft) 21,700 sq. ft.

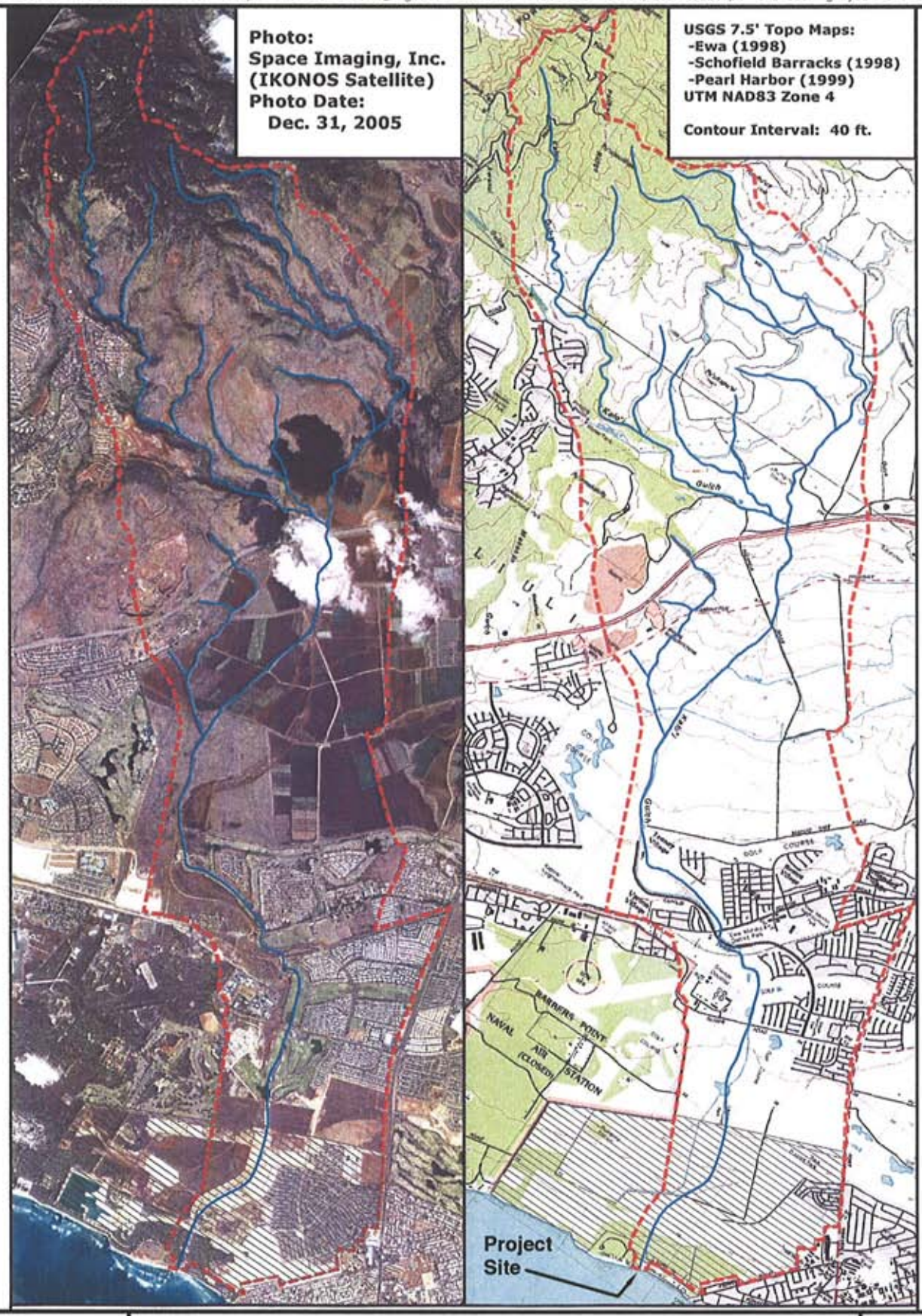
Describe the proposed use in detail. Include secondary improvements such as grading, septic tank placement, utilities, roads, driveways, fences, landscaping, etc. Illustrate general location of improvements on a TMK map; include preliminary architectural renderings with elevations and building footprints with application. Include existing (before) and proposed (after) graphics. If the parcel is or has been the subject of a violation, please include the violation number.

The proposed Kalo'i Gulch Drainageway Improvements at One'ula Beach Park project will modify and enlarge an existing, temporary emergency drainage channel in order to increase storm water discharge capacity to the ocean through the Kalo'i Gulch drainage channel. A Final Environmental Impact Statement (FEIS) for this project was prepared and approved in December 2005, pursuant to Hawaii Revised Statutes (HRS), Chapter 343, and Hawaii Administrative Rules (HAR), Title 11, Chapter 200. A detailed project description is found in Chapter 2 of the FEIS, pages 2-4 through 2-15, and is summarized below. Technical studies that were prepared for the FEIS are incorporated in this application by reference.

The drainage improvements are intended to provide flood control and address regional drainage needs for all landowners within the approximately 7,000-acre Kalo'i Gulch Watershed (see Figure 1). The improvements will benefit all upland landowners whose future development plans are currently constrained by the need to retain surface flows. Haseko is undertaking this effort to coordinate regional infrastructure development in order to integrate upland development plans with their own onsite infrastructure. Improvements to the existing drainage channel will be designed to meet the City and County of Honolulu (City) 100-year storm flow requirements in accordance with its current Storm Drainage Standards.

The proposed project is located at the eastern end of One'ula Beach Park, a 28-acre passive recreation park owned and operated by the City Department of Parks and Recreation (see Figure 2, Location Map). The entire drainage improvements project will involve an area of 6.9 acres, occupying Tax Map Keys (1) 9-1-12: portion of 25, owned by the City, and (1) 9-1-11: portion of 7, presently owned by Haseko (see Figures 3 and 4). The approximately 0.5 acre portion of the project within the conservation district is public land owned by the State of Hawaii.

The proposed drainage improvements will consist primarily of lowering a natural berm along the shoreline to allow storm-water flows to reach the ocean, and raising the channel banks to contain the flow. The shoreline berm will be lowered by approximately 2 to 4 feet down to an elevation of 4 feet above mean sea level (msl) across the 500-foot width of the channel (see Grading Plan, Figure 5). Approximately 21,700 square feet of the channel excavation will occur seaward of the certified shoreline (see Figure 6, Certified Shoreline (Portion of Lot 2697) August 22, 2006). The excavated material will be used to raise the channel banks approximately 4 to 6 feet higher than the channel bottom, to an elevation of 10 feet msl. The entire site will be landscaped to merge with the rest of the park.



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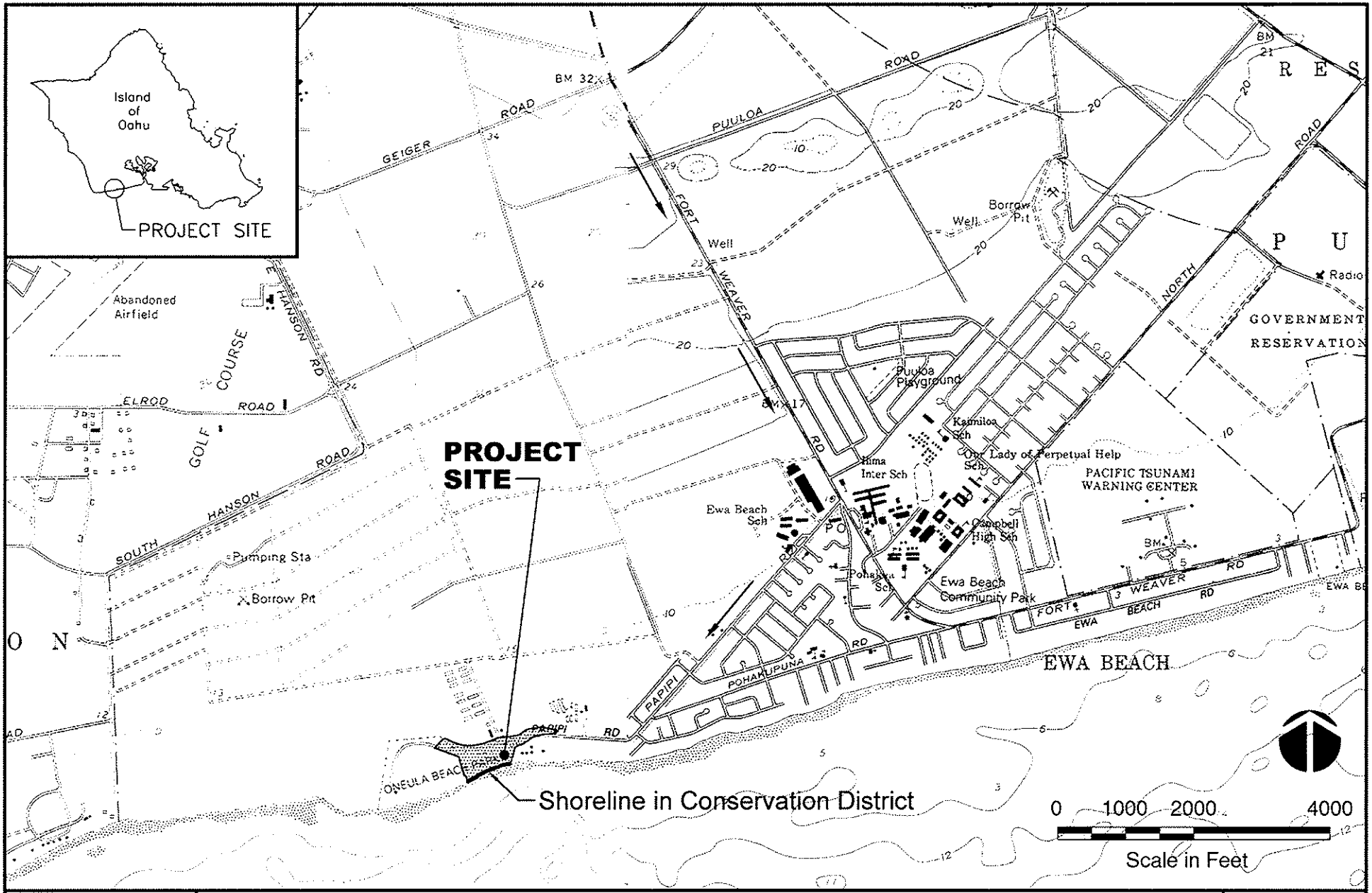
Kalo'i Gulch Drainageway Improvements at One 'ula Beach Park - CDUA

KALOI GULCH REGIONAL WATERSHED

FIGURE
1



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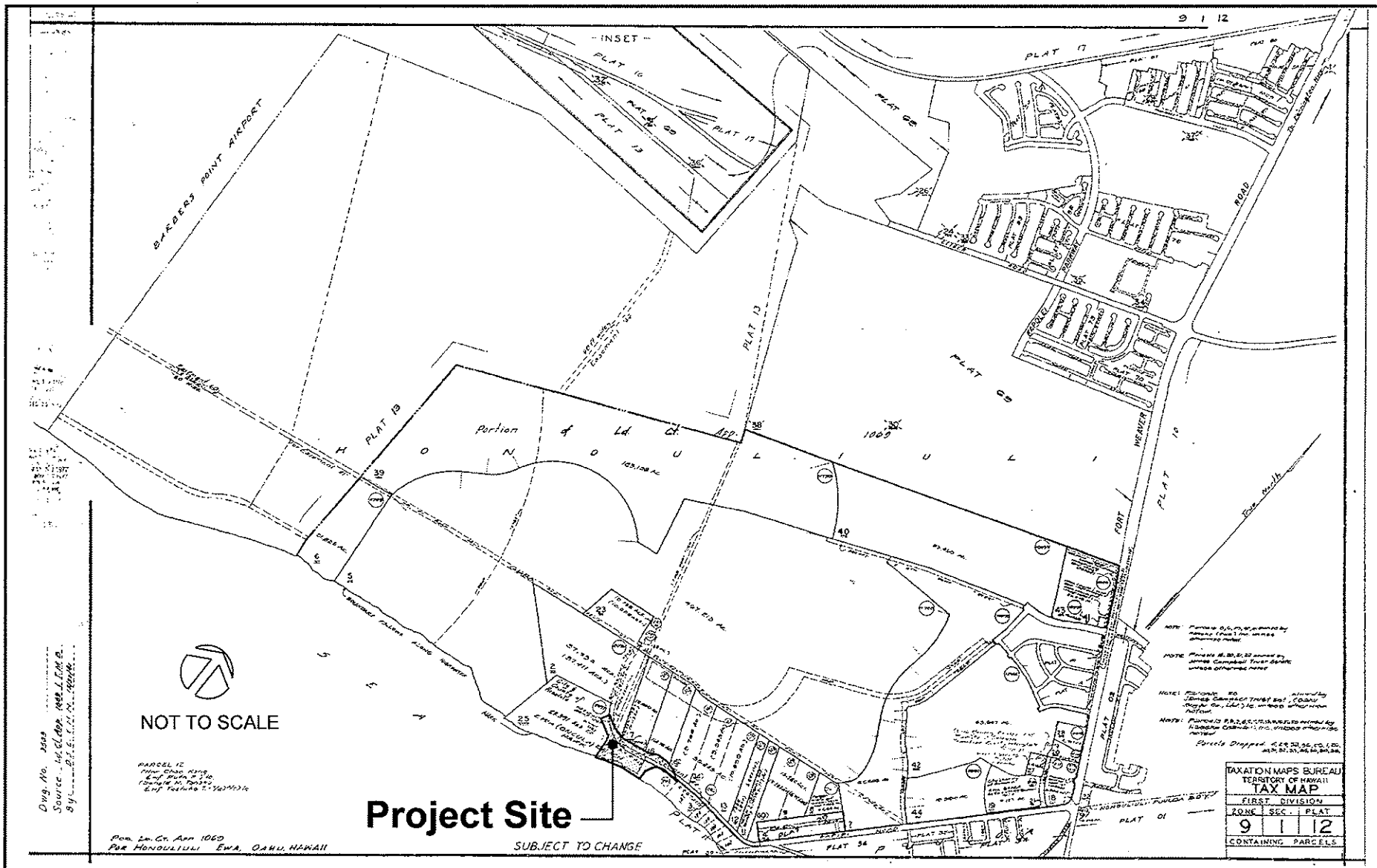
Kalo'i Gulch Drainage Improvements at One'ula Beach Park - CDUA

LOCATION AND EXISTING ACCESS

FIGURE
2



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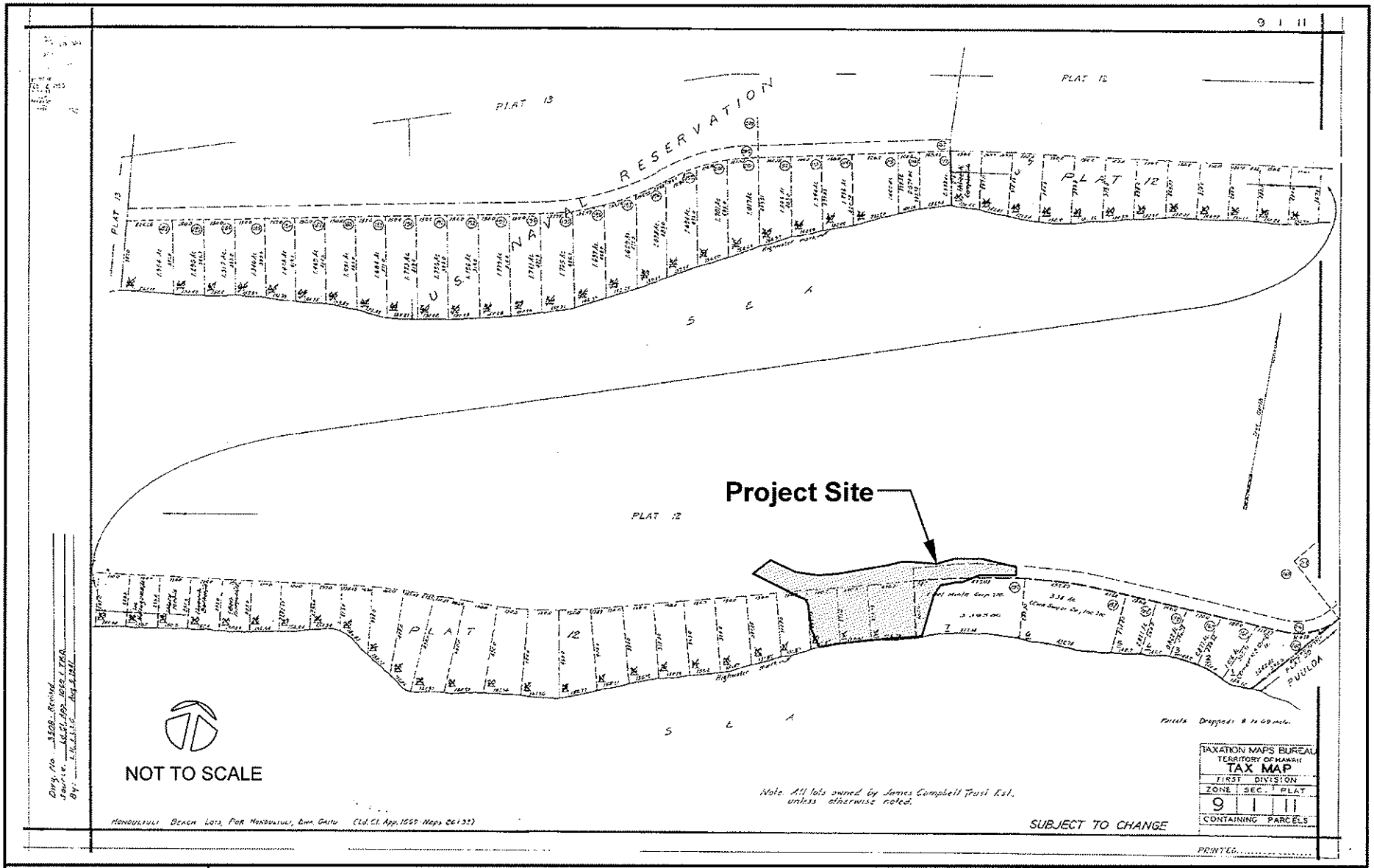
Kaloʻi Gulch Drainageway Improvements at Oneʻula Beach Park – CDUA

TAX MAP KEY 9-1-12: PORTION OF 25

FIGURE 3



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Kalo i Gulch Drainageway Improvements at One ula Beach Park - CDUA

TAX MAP KEY 9-1-11: PORTION of 7

FIGURE 4

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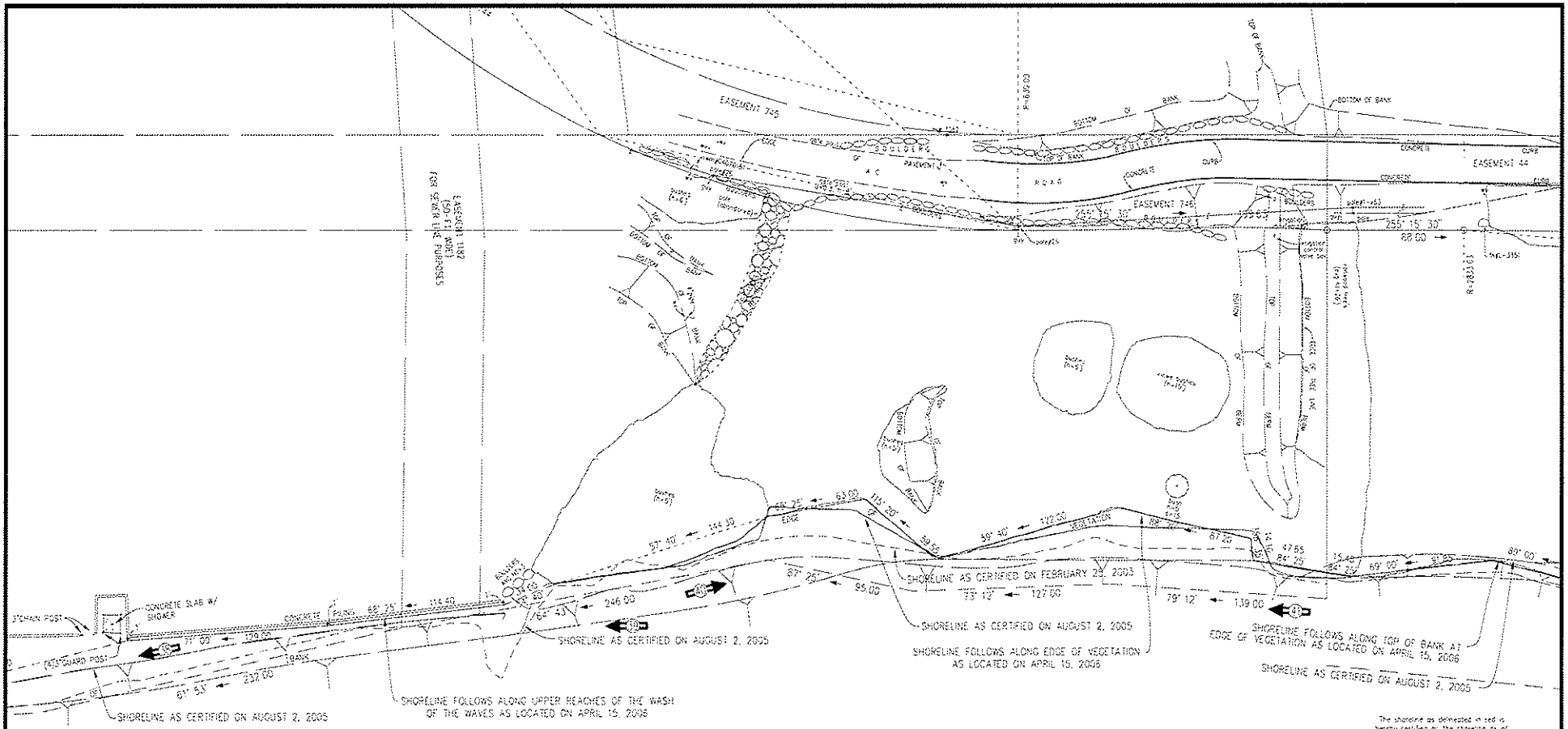
Kalo'i Gulch Drainage Improvements at One 'ula Beach Park - CDUA

GRADING PLAN

FIGURE 5



MAP SHOWING SHORELINE

FRONTING LOT 2697 AS SHOWN ON MAP 274
OF LAND COURT APPLICATION 1069

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Parker, Inc.
dba PARK ENGINEERING

LICENSED PROFESSIONAL SURVEYOR
CERTIFICATE NUMBER 4330

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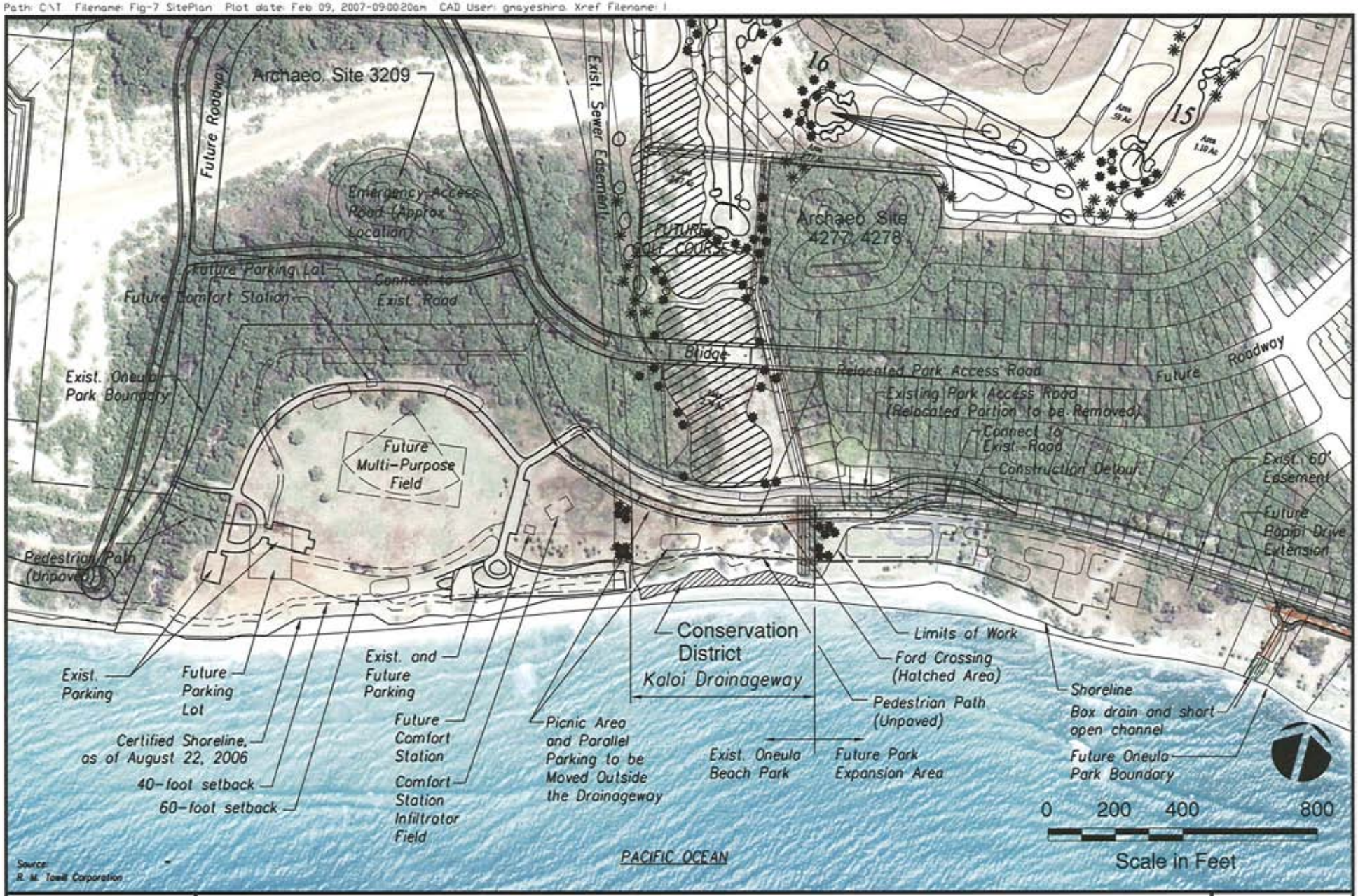
Kalo'i Gulch Drainage Improvements at One 'ula Beach Park - CDUA

CERTIFIED SHORELINE (Portion of Lot 2697)

August 22, 2006

FIGURE
6



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Kalo'i Gulch Drainage Improvements at One'ula Beach Park - CDUA

SITE PLAN

FIGURE 7

Several additional drainage improvements will also occur outside the conservation district. A portion of the existing park access road and utilities will be relocated about 60 to 75 feet further makai, in accordance with the One'ula Beach Park Master Plan (2001), and will be constructed as a concrete ford structure to allow the passage of storm flows. An emergency access road will also be constructed to provide access in the event the main road is blocked due to flooding, or during periods of repair and maintenance (see Site Plan, Figure 7, previous page).

CONSERVATION DISTRICT REQUIREMENTS

Demonstrate that the proposed use is consistent with the following criteria. Refer to HAR, Section 13-5-30, to review criteria. Attach additional sheets if necessary.

Is the proposed land use consistent with the purpose of the Conservation District?
The proposed land use involves grading a portion of conservation land seaward of the certified shoreline in order to modify and enlarge an existing drainage channel through One'ula Beach Park. The grading activity will relocate sand and soil from within the drainageway to form berms on either side of the channel, and the newly graded areas will be integrated into the landscape of the existing One'ula Beach Park. The park's recreation space, public access laterally along the shoreline, and the areal extent of the shoreline will all be preserved. At the same time, the proposed use will promote the public health, safety and welfare, in accordance with the purpose of the Conservation District, by protecting mauka developments from flooding.

Is the proposed use consistent with the objectives of the subzone of the land in which the use will occur?
The proposed use is in the Resource (R) Subzone which encompasses lands seaward of the upper reaches of the wash of the waves. Under Hawaii Administrative Rules (HAR) Chapter 13-5-24, Identified land uses in the resource subzone, the proposed grading to lower the shoreline berm is identified as R-6 Marine Construction.

The objective of the Resource subzone is to develop, with proper management, areas to ensure the sustained use of the natural resources of those areas. In this case, the natural resource consists of sand beach at the shoreline edge of a County beach park. The proposed use will lower the sand berm and landscape the channel mauka of the shoreline, but it will not affect shoreline access or the sustained use of the area as a County beach park. Implementation of the project will integrate the drainage channel with the park's open space. The landscaped grass field mauka of the shoreline will likely attract soccer and football use, which the County Department of Parks and Recreation supports.

Does the proposed land use comply with provisions and guidelines contained in Chapter 205A, Hawaii Revised Statutes (HRS), entitled "Coastal Zone Management," where applicable?
The Coastal Zone Management Act contains the general objectives and policies upon which all counties in the State have structured specific legislation to create Special Management Areas (SMA). The SMA boundary in the subject area includes all of the One'ula Beach Park. An SMA Use Permit (SMP) for the project has been filed with the City and County of Honolulu Department of Planning and Permitting. Issuance of the SMP is based on the consistency of the development with the objectives, policies, and review guidelines set forth in Chapter 205A.

The proposed land use complies with the following objectives and policies of the Coastal Zone Management program, as listed in HRS Chapter 205A.

(1). Recreational Resources

Objective:
Provide coastal recreational opportunities accessible to the public.

Policies:
(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value.

Comment: Use of the shoreline for a drainage facility will have little or no impact on recreational use. Public access to and along the shoreline will still be available, both during and after construction. The Beach Park will continue to operate as a public beach park facility during and after construction, and park facilities will be accessible. The project does not include any structures that will compromise public access to recreational areas or detract from the recreational value of the park.

(2). Historic Resources

Objective:
Protect, preserve, and where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:
(C) Support state goals for protection, restoration, interpretation, and display of historic resources.

Comment: The One'ula Beach Park lies within the One'ula Archaeological District (Site No. 80-13-2873), which has been the subject of thorough archaeological inventory and data recovery work. The State Historic Preservation Division (SHPD) has reviewed and accepted the final plan for data recovery, site preservation, and mitigation at this site. SHPD also determined that implementation of the One'ula Beach Park Master Plan would have "no effect" on significant historic sites.

A supplemental survey of the proposed drainage channel was also conducted in 2004 to determine the potential to find human skeletal and cultural remains buried in the sand deposits (See Appendix E of the Final EIS). Twenty-seven backhoe trenches were placed in the Kalo'i Gulch Drainage Channel, but no human skeletal remains or prehistoric cultural materials were identified. By all indication, the subsurface of the site has been greatly disturbed, as evidenced by large amounts of modern trash present in the excavations. Nevertheless, it is possible that subsurface remains or artifacts may be encountered during construction. Work crews will be instructed to stop work in the event of a find and to notify SHPD immediately.

(3) Scenic and Open Space Resources

Objective:
Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:
(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline.
(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources.

Comment: Use of the project site for a flood control channel will maintain the site in open space. To minimize the impact on park topography, the channel will be wide and shallow with gently sloping banks. Bank slopes will be approximately 0.2 percent. The gentle slope will minimize the alteration of views along the shoreline, where the channel will appear as a slight depression along the lengthy stretch of coast from the community of Ewa Beach to Keku Point, near the mouth of the new marina. The lowering of the natural berm fronting the beach will slightly enhance ocean views from the park access road and elsewhere within the middle of the drainage channel. East-west views of the Ewa shoreline from within the site will be slightly more obscured from the raised channel banks on both edges of the channel.

The site is currently primarily grass and weedy plants with a few low, scattered thickets of kiawe, sourbush, and Indian pluchea. Any vegetation that could trap debris during a flood event will be removed, and grass and groundcover will be re-established in graded areas up to the certified shoreline.

(4) Coastal Ecosystems

Objective:
Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:
(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use and development of marine and coastal resources.
(B) Improve the technical basis for natural resource management.
(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance.
(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs.
(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and non-point source water pollution control measures.

Comment: The marine waters offshore of the project site are classified as Class "A" by the State DOH. The marine environment in the vicinity of the proposed drainage channel is

characterized by a smooth limestone bottom, relatively low coral cover, and relatively high algal biomass. Organisms common to the area include various species of encrusting sponges, sea cucumber, and sea urchin. Fish species are generally limited to those that inhabit barren areas, isolated coral colonies, or small reef crevices. Triggerfish, hawkfish, surgeon fish, wrasses, goatfish, and butterfly fish are present in small numbers. Desirable fish species sought by fishermen are generally scarce. Green sea turtles may often be seen in the area, though they are more common in an area offshore of the former Barbers Point Naval Air Station. Neither the Hawaiian Monk Seal nor the Humpback Whale is known to frequent the coastal waters near the project site.

There is the potential for storm water discharge to impact this marine environment both during and after construction. For the construction period, Best Management Practice (BMP) measures will be prepared and followed in accordance with the NPDES Construction Stormwater Permit application. BMP measures will include such practices as phased grading, soil stabilization using sheets or fabric, vegetative controls, and proper vehicle maintenance.

When the drainage improvements are complete, potential impact to corals and other macroinvertebrates, algae, and reef fish is possible during large storm events if the storm water runoff reduces salinity levels or contributes large concentrations of sediment that cannot be quickly dispersed. In order to calculate the behavior of storm water discharge during a range of possible runoff events, a study was conducted using three-dimensional hydrodynamic modeling. The model was used to predict conditions that included storm discharge and suspended sediment load from 20-year and 10-year rain events; strong, moderate, and weak tides; no waves, Kona waves and south swell; and calm winds and Kona winds (refer to Appendix B-1 of the Final EIS).

The 10 and 20-year flow events were selected for analysis because they represent significant events that have a reasonable probability of occurrence in any given year, and thus would likely be responsible for evident environmental impacts due to the outlet. Larger events such as the 50 and 100-year flows are catastrophic and would result in widespread discharge all around the island, and a continual discharge plume from multiple sources. Assessment of impact from such catastrophic events would require analysis of the entire regional discharge system composed of multiple outlets.

The study simulated 1996 hydrological (flood) conditions and applied them to year 2025 watershed buildout conditions. Future watershed conditions were calculated by using drainage master plans for all existing and planned developments below the freeway. Land above the freeway was assumed to be developed, but without any retention basins. Under developed conditions, total watershed storage was estimated at 300 acre-feet for retention, and 800 acre-feet for detention. The Ocean Pointe golf course included 75 acre-feet of retention to serve as the final settling basin.

Since the Ocean Pointe storm discharge retention capacity is quite large at full buildout, it was calculated that runoff from any rainfall event less than the 8-inch (10-year) rainfall would be retained on land. Discharge of runoff from a 10-year event would last three hours and would generate a plume of suspended sediment that would hug the shoreline, moving either east or west depending on tidal flows (currents flowing to the west and southwest are stronger and last longer). Under calm conditions and moderate tides, the plume would meet the State DOH salinity standard of 31.5 parts per thousand (ppt) within 6 hours after the discharge ends. The extent of the plume is estimated at 2,300 meters along the coast, and 500 meters offshore.

Under this scenario, the deposition of suspended sediment concentrations (TSS) would be relatively low. At the point closest to the drainage channel outlet, the model calculated that the 10-year event would deposit 0.12 mm (0.005 inches) of sediment, with levels diminishing rapidly with distance from the channel. TSS concentrations would approach ambient levels of about 10 mg/liter about 1 day after the storm discharge ends.

Worst-case conditions at the site would involve a 20-year discharge event occurring when there are no waves or wind to promote mixing and dispersion. (Note: Perfectly calm conditions are rare at the project site.) Model results show that the time required to meet the State DOH salinity standard is a maximum 12 hours after the peak discharge flow. Under these conditions, the plume would stay near shore and be largely confined to the surface water layer. Outflows during ebb tide would extend up to 2,400 meters to the east. Suspended sediment deposition would be 1.9 mm (0.07 inches) immediately offshore of the discharge point, with levels diminishing rapidly with distance from the channel.

In conclusion, runoff is not expected to enter the drainageway through the park except under 10-year storm conditions. When potential discharges do occur, the distribution of fresh water and sediment plume is expected to be limited and of short duration with salinity returning to ambient conditions in approximately 12 hours, and dissipation of the sediment plume within approximately one day.

Of all the marine communities, only macroinvertebrates are most likely to be impacted by a temporary introduction of sediment. However, few macroinvertebrates are present within the nearshore environment, with coral cover averaging about 4 percent in depths of 6 to 20 feet, and less than 1 percent in shallower depths. This is likely due in part to higher nutrient values in the nearshore zone. Historically, the Ewa and One'ula Beach shorelines have been known for their abundance of edible limu which thrive in nutrient rich waters. In this environment, coral lose their advantage and dense algal mats begin to form, as is the case in the waters fronting the drainage channel. The smooth limestone bottom also provides little shelter for corals and other reef organisms, constant abrasion from shifting sand, and the concussive force of breaking waves.

Three separate studies which pertain to the coastal resource were conducted for the EIS document: The Kalo'i Gulch Watershed Hydrologic and Sediment Study, prepared by R.M. Towill Corporation, The Numerical Modeling of Storm Drain Discharge Plume Transport, prepared by Sea Engineering, Inc., and Ocean Pointe Marine Environmental Monitoring Program Water Chemistry, prepared by Marine Research Consultants. These three studies will improve the technical basis for management of the coastal resource.

(5) Economic Uses

Objective:
Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policy:
Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(iii) The development is important to the State's economy.

Comment: The proposed action is located at the discharge terminus of the 7,000-acre Kalo'i Gulch Drainage Basin, where an existing emergency drainage channel already exists. The project is not itself an economic asset but is a necessary public facility designed to protect public and private property from inundation. The proposed project will become increasingly necessary as more land within the basin is urbanized. It is therefore indirectly important to the State's economy. In this respect, the proposed drainage improvement project is consistent with Policy C.

(6) Coastal Hazards

Objective:
Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

Policies:
(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards.
(D) Prevent coastal flooding from inland projects.

Comment: The entire drainage channel will be free of structures, in accordance with Policy B. In order to prevent flooding of residences in Ewa Beach east of the proposed drainage channel, channel banks will be raised to 10 feet above msl to direct storm runoff to the ocean. This will prevent coastal flooding in the project vicinity, in accordance with Policy D.

(7) Managing Development

Objective:
Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Policy:
(C) Communicate the potential short and long-term impacts of proposed significant coastal development early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

Comment: In December 2005, the Kalo'i Gulch Drainage Improvements at One'ula Beach Park Final EIS was circulated to agencies and the public for review and comment, as required by Chapter 343, Hawaii Revised Statutes, as amended, and Hawaii Administrative Rules Title 11, State of Hawaii Department of Health, Chapter 200, Environmental Impact Statement Rules.

(8) Public Participation

Objective:
Stimulate public awareness, education, and participation in coastal management.

Policy:

(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities.

Comment: The Final EIS for the proposed project has been circulated to the Ewa Neighborhood Board, Ewa Beach Community Association, and Ewa Puuloa Hawaiian Civic Club, among others. Individuals consulted included all appropriate government representatives and individuals. The public participation objective will also be addressed during the processing of the SMP and this CDUP, which will include public notifications and hearings.

(9) Beach Protection

Objective: Protect beaches for public use and recreation.

Comment: The lowering of the shoreline berm will require the removal and relocation of some sand within the approximately 500 foot wide channel. However, the grading will not reduce the square footage of shoreline or create a condition that would induce beach erosion. It is anticipated that periodic removal and relocation of sand will be needed to maintain the channel mouth at 4 feet msl.

(10) Marine Resources

Objective:
Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Policies:
(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial.
(D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources.

Comment: Use of the Kaloʻi Gulch Drainageway for an ocean outlet will benefit upland landowners economically and is a prudent use of the coastal resource. Over time, the drainage channel will become part of a larger system of retention and settling basins as a golf course is developed on mauka lands. Dedication and maintenance of the channel will also help to retain the public park as a valuable open space and recreational resource.

The water quality, sediment, and plume transport modeling studies that were conducted as part of the EIS process will help to further an understanding of this shoreline. They represent an important information base with which to evaluate future coastal development activities.

Describe how the proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.
A very limited amount of vegetation within the Conservation District will be removed. As disclosed in the botanical resources assessment of the area, almost all of the vegetation on the project site is composed of introduced or alien species (see Botanical Resources Assessment in Appendix C of the Final EIS). In the area immediately above the sandy beach, there are mats

of native 'aki'aki or beach dropseed grass (*Sporobolus virginicus*) and pohuehue or beach morning glory (*Ipomoea pes-caprae*). These two species are indigenous (native to the Hawaiian Islands and elsewhere). No vegetation is found on the gently sloping beach where it is subject to wave wash during storms and shifting sand. None of the plants observed on the project site is a threatened or endangered species or species of concern, as set forth by the US Department of the Interior Fish and Wildlife Service (USFWS).

As discussed in the previous section under (4) Coastal Ecosystems, during a discharge event the distribution of fresh water and sediment plume is expected to be limited and of short duration with salinity returning to ambient conditions in approximately 12 hours, and dissipation of the sediment plume within approximately one day. Of all the marine communities that could potentially be affected, only macroinvertebrate communities are most likely to be impacted. However, few macroinvertebrates are present within the nearshore environment. Instead, the nearshore environment is dominated by algal species that are better adapted to the nutrient rich and normally turbulent conditions in front of the drainage channel. The impact of the sediment discharge plume on marine algae (limu) is discussed below in the Additional Information section regarding customary Native Hawaiian rights.

Describe how the proposed land use, including buildings, structures and facilities, will be compatible with the locality and surrounding areas, and to the physical conditions and capabilities of the specific parcel or parcels.
The existing drainage channel is part of the One'ula Beach Park but is not currently used by park visitors due to the exposed soil and clumps of overgrown vegetation that make it unattractive for most forms of outdoor recreation. Construction of the project will grade the channel, landscape the gentle slopes with grass, and integrate the channel with the rest of the park's open space. The open grass field will likely attract soccer and football use, which the County Department of Parks and Recreation supports. The proposed drainage channel will also be integrated with the water features of the mauka golf course that will function during storm events as settling basins before runoff flows into the channel and discharges to the ocean.

Describe how the existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon.
Mauka of the certified shoreline, the drainage channel currently contains a mix of overgrown vegetation and areas of bare soil and rock. Implementation of the proposed drainage improvements will convert the channel into landscaped, open park space and playing field for park users. Makai of the certified shoreline, the beach will be lowered but otherwise retained for shoreline access.

If applicable, describe how subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.
No subdivision of land is proposed.

Describe how the proposed land use will not be materially detrimental to the public health, safety and welfare.
The proposed drainage improvements project will promote the public health, safety and welfare by providing an ocean outlet for the discharge of storm water runoff from upland areas during peak periods. The runoff will be in the form of a gradual filling of the area behind the seaward berm until the berm is overtopped. It will not result in unexpected or flash flooding that could otherwise pose a threat to public safety.

ADDITIONAL INFORMATION

Articles IX and XII of the State Constitution, other state laws, and the courts of the State require government agencies to promote and preserve cultural beliefs, practices, and resources of native Hawaiians and other ethnic groups. The Department of Health (DOH), Chapter 343, also requires an Environmental Assessment (EA) of cultural resources in determining the significance of a proposed project.

If applicable, please provide the identity and scope of "valued cultural, historical and natural resources" in which traditional and customary native Hawaiian rights are exercised in the area.

Native Hawaiians and others use the Ewa shoreline and nearshore areas for gathering marine resources, especially limu (seaweed). Limu is culturally important to Native Hawaiians, both as a food source and as a medicinal/healing agent. Other marine resources gathered from the offshore marine environment include fish, lobster, and other shellfish. This traditional gathering has been continuous from pre-contact times up to the present.

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

Grading to enlarge the channel will occur entirely on shore and will not physically disturb the areas where marine resources are found. Beach access will be unaffected, although the wash of the waves may be higher during periods of high tide and heavy surf. However, this will have no bearing on the normal accumulation of limu.

Following project construction, there will be the potential for indirect impacts during infrequent storm water discharge events. Potential impact to corals and other macroinvertebrates, algae, and reef fish is possible if the storm water runoff reduces salinity levels or contributes large concentrations of sediment that cannot be quickly dispersed. These potential impacts are discussed in the Coastal Zone Management section under (4) Coastal Ecosystems.

With regard to the impact of fresh water influx on limu species composition and abundance, a recent study was conducted to determine the potential effects from construction of the Papipi Road Drainageway Improvements on seaweed (limu) assemblages. The proposed Papipi Road drainage improvements are located at the shoreline about 1,300 feet east of the proposed Kaloʻi Drainage Improvements. The report, entitiled *The Effects of Ocean Discharge from Storm Water Drains on Intertidal Seaweeds (Limu) in the Ewa Beach Area*, sampled seaweeds in the intertidal zone in front of three existing large drains along the shore at Ewa Beach and at five additional sites without such drains.

The three large storm drains within the Ewa Beach community have been discharging storm water runoff into the intertidal zone for over 30 years. A fourth ocean outlet is currently under consideration to relieve flooding in low lying areas adjacent to Papipi Road and within the planned park expansion area east of Oneʻula Beach Park. It has been suggested that the proposed discharge will have a substantial impact on the nearshore environment, particularly on seaweeds (limu). In order to determine the potential effects of runoff on seaweed assemblages, a survey of limu at Drain and No Drain locations was conducted in April and May of 2006 (Foster and Cox, 2006). A total of eleven sites were sampled, including a site in front of the proposed Kaloʻi Gulch drainage improvements channel (Site 2).

The survey sampling was done during -0.4 foot low tides using point quadrats to estimate seaweed species composition and abundance as percent cover. The survey found no statistically significant differences in the number of seaweed species, the abundance of common species, or assemblage composition between sites with and without large drains. Edible and useful limu were found at both types of sites. In addition, the largest number of useful limu species was sampled around the discharge from the largest area drained. Non-native species were not favored over native species.

An additional finding of the study was the difference between seaweed assemblages at Sites 1-3 versus Sites 4-11. Sites 1-3 were sampled on low carbonate benches influenced by sand, as is the case with Site 2 which fronts the Kalo'i Gulch drainageway. To the east, Sites 4-11 were sampled below more elevated carbonate rock benches that front the residences of Ewa Beach. Aerial and ground observations indicate that wave action is more variable at Sites 1-3 and accounts for the associated differences in seaweed, specifically, a higher abundance of *Padina santae-crucis* and *Dictyota spp.*

A total of 19 seaweed taxa were recorded at the Site 2 quadrat. The most common recorded species, from highest to lowest abundance, included *Laurencia spp.*, *Dictyota acutiloba*, *Dictyota sandvicencis*, and *Padina sanctae-crucis*. The most abundant useful seaweeds recorded at Site 2 included *Asparagopsis taxiformis* (Limu kohu) at 4.6 percent cover, and *Sargassum echinocarpum* (Limu kala) at 3.5 percent cover.

Persons familiar with limu in the Ewa Beach area commonly state that there has been an overall decline in the abundance of useful limu in the area over the past 30-40 years. The survey attempted to define the extent and timing of this apparent decline of useful limu, but were frustrated by the lack of historical information. Instead, the study authors offer several possible causes for the apparent decline. Possible causes include a decrease in nutrients from ground water discharge along the shore due to the cessation of sugar cane production in 1994, and/or the switch from septic to sewers in the Ewa Beach area in 1983. It was also suggested that the decline of edible limu deposited as drift along the shore of Ewa Beach Park may be related to construction of the Honolulu Airport reef runway in 1973-1977, and/or perhaps dredging to deepen Pearl Harbor. It is conjectured that the former may have altered long shore currents, while the latter could have inhibited drift transport across the harbor entrance and into the beach park. Over-harvesting and perhaps harvesting that removes holdfasts and basal fronds was also suggested.

In order to address the overall decline in useful limu, starting January 1, 2007, a moratorium on harvesting went into effect making it unlawful for any person to take limu from the Ewa Limu Management Area. The limu management area is located along the shoreline of Ewa Beach extending 150 feet seaward from the gunnery range to the boat ramp on Mu'umu'u Street, which is about 1 mile east of the Kalo'i Gulch drainage channel.

What feasible action, if any, could be taken by the Board of Land and Natural Resources in regards to your application to reasonably protect native Hawaiian rights?
Shoreline and ocean access will be preserved during and after construction. The small and temporary changes in water quality from the periodic discharges will not jeopardize the continued existence of limu or other marine resources gathered by native Hawaiians. No further action is necessary to protect native Hawaiian rights.

Does the proposed land use have an effect (positive/negative) on public access to and along the shoreline or along any public trail?
As development in the Kalo'i watershed reaches full buildout (2025), public access along the shoreline may be restricted on rare occasions during a 10-year or greater storm event when the drainage channel fills with storm runoff. In this instance, park personnel would control access to the park as runoff discharges to the ocean. Otherwise, public access along the shoreline will not be affected, either during or after construction.

Does the proposed use have an effect (positive/negative) on beach processes?
The lowering of the shoreline berm to 4 feet msl will necessarily involve the removal and relocation of some sand. However, this will not affect beach processes. It is anticipated that sand accretion will elevate the shoreline berm over time and will need to be graded on a routine basis to maintain the required depth at the channel mouth.

Will the proposed use cause increased runoff or sedimentation?
Grading of the site in itself will not increase runoff or sedimentation onto adjacent lands or the ocean. At the seaward edge of the drainage channel, the area will receive runoff from upland areas, estimated at once every ten years at full buildout of the mauka communities.

Will the proposed use cause any visual impact on any individual or community?
Park users will experience a visual alteration in the park landscape from the removal of existing vegetation overgrowth and the subsequent grading and landscaping of the shoreline berm. From a distance along the shoreline, the channel will appear as a slight dip or depression in the otherwise continuous horizontal line of beach. From within the channel, views of the ocean will be increased due to the lower shoreline berm elevation, but views to the east and west will be slightly obstructed by the raised berms on either side of the channel.

Existing Site Information

Are there existing structures on the parcel? ___Yes _X_ No
If yes, please describe below and include/illustrate on a map entitled *existing structures.*
None within the conservation district. Within the mauka portion, there is a park access road through the site, and electric utility poles that follow the road.

Will any existing structures be demolished or removed? ___Yes _X_ No
If yes, describe how below. Please indicate/illustrate demolished structure on a map entitled *structures to be demolished/removed.*
None within the conservation district. Within the mauka portion, the existing park access road and utility lines will be relocated between 60 and 75 feet further makai, in accordance with the One'ula Beach Park Master Plan.

Has the parcel been graded or landscaped? ___Yes _X_ No
If yes, describe below. Please describe cubic yards affected and/or area of landscaping on a map entitled *areas previously graded or landscaped.*
None within the conservation district. Within the mauka portion, grading has occurred for construction of the existing park access road and for construction of the temporary emergency channel in 2000 and for expansion in 2003.

Describe existing utilities. Include electricity, water, telephone, drainage, and sewerage. Please illustrate on a map entitled *existing utilities.*

None within the conservation district. Within the mauka portion there are existing overhead electrical and communication lines and an underground water line within the existing park access road. These will be relocated during construction of the new park access road

Describe existing access. Illustrate and include roadways and public trails on a map entitled *existing access*. Give major street names if available.
Access to the One'ula Beach Park is via Fort Weaver Road to Papipi Road and then via the paved park access road (see Figure 2, page 5). The shoreline is accessible by foot from the unpaved parking area within the beach park, at the western edge of the channel. Alternatively, the site may also be reached by walking from the Ewa Beach end of the shoreline.

Describe Flora and Fauna. Illustrate general location and types of flora and fauna on a map entitled *resources*. Indicate if rare or endangered native plants and/or animals are present.
For the most part, there is no vegetation found on the gently sloping beach front where it is subject to wave wash during storms and shifting sand. On the seaward side of the low thicket above the sandy beach, there are mats of native 'aki'aki or beach dropseed grass (*Sporobolus virginicus*) and pohuehue or beach morning glory (*Ipomoea pes-caprae*).

Mauka of the certified shoreline, the vegetation is patchy with large, open, barren areas. On the mauka half closer to the park access road, the substrate is thin, brownish-red soil. On the makai half, it is sandy. Pickleweed (*Batis maritima*) forms scattered patches, one to two feet tall, especially along the margins of the drainageway where there is soil. Smaller patches of swollen fingergrass (*Chloris barbata*) saltbush (*Atriplex subrecta*), Bermuda grass or manienie (*Cyndon dactylon*), kipukai (*Heliotropium curassavicum*), golden crown-beard (*Verbesina encelioides*), and *Sporobolus pyramidatus* are found here and there.

Woody components form low thickets, three to eight feet tall. Indian pluchea shrubs (*Pluchea indica*) are abundant along the edge of the drainageway on the berms. A row of tall tamarisk trees (*Tamarix aphylla*) is found along the east berm. A low thicket of sourbush (*Pluchea carolinensis*), Indian pluchea shrubs, and windswept kiawe trees (*Prosopis pallida*) is found just back of the sandy beach. A few trees of the long-spined kiawe (*Prosopis juliflora*) also occur within the drainageway, but had been cut down and/or treated with herbicide at the time of the survey in 2004.

Almost all of the vegetation on the project site is composed of introduced or alien species. Three plants are originally of Polynesian introduction, namely, coconut, milo and 'ape. Three species are indigenous (native to the Hawaiian Islands and elsewhere) and include kipukai, pohuehue, and 'aki'aki. None of the plants observed on the project site is a threatened or endangered species or species of concern, as set forth by the US Department of the Interior Fish and Wildlife Service (USFWS).

Terrestrial mammal species that may be found at the site probably include mice, rats, mongoose, and feral cats. Avifauna recorded at the project site and vicinity included 11 species of birds during a field survey conducted by Rana Productions in June 2004. All of the species detected are considered to be alien to the Hawaiian Islands. Two other species, the Wandering Tattler (Heteroscelus incanus) and Ruddy Turnstone (Arenaria interpres) were seen foraging on the low carbonate bench at the shoreline. These two species are migratory shorebirds that are commonly seen in Hawaii between July and May each year. No species listed as threatened,

endangered or proposed for listing under either the federal or State of Hawaii endangered species programs were detected.

Describe topography and submit a map entitled *topography*. If ocean area, give depths. Submit detailed contour maps for ocean area and areas where slopes are 20% or more. Contour maps will also be required for uses involving tall structures, gravity flow and other special cases.
The existing berm to the east that was constructed recently to form the temporary emergency channel is at elevation 8 feet mean sea level (msl). Elsewhere throughout the site, elevations range from 8 feet msl along the shoreline (southwest corner) down to 2 feet msl in the middle of the site, where runoff tends to pond. The highest elevation is a point along the existing park access road, at 10 feet msl. The lowest elevation point of the park access road through the site is 4 feet msl. Existing topography is shown on Figure 5, Grading Plan.

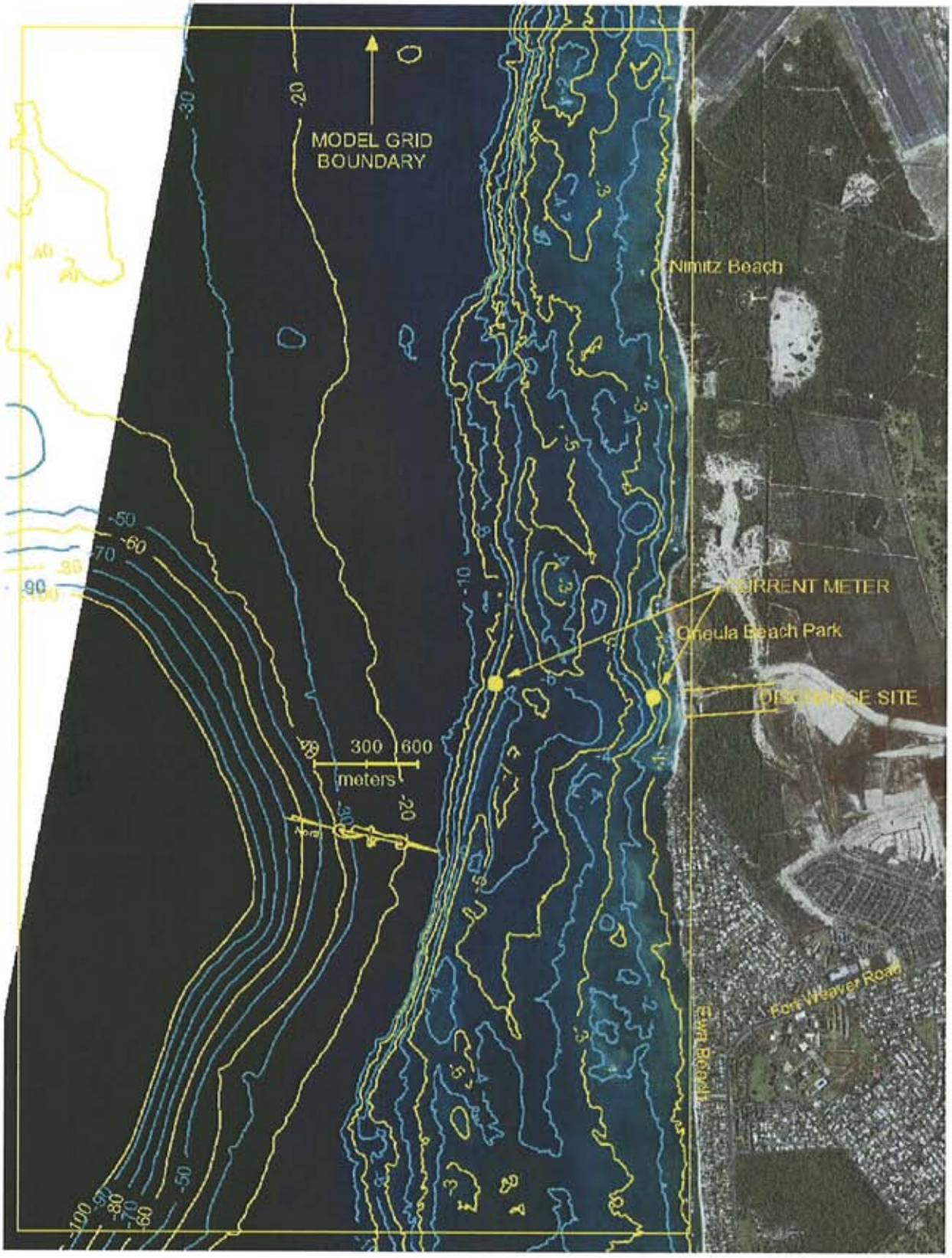
In the offshore environment, bathymetry is characterized by a broad fringing reef with water depths less than 7 meters. Offshore of the storm drainage outlet the reef is about 1,000 meters wide. To the east the reef broadens to about 2,000 meters wide. Immediately offshore of the drainage outlet (inshore of the –7 meter contour), a broad, shallow channel is present in the reef. Ocean depth contours (in meters) are shown on Figure 8, Offshore Bathymetry.

If shoreline area, describe shoreline and surrounding area. Indicate and illustrate if shoreline is sandy, muddy, rocky, cliffs, reefs, or other features (such as access to shoreline) on a map entitled *coastal resources.* A current shoreline certification is required for uses that may affect shoreline resources.
Most of the shoreline within the proposed drainage channel has a continuous length of coral outcropping along the water's edge (see Site Photographs, Figure 9). The beach is steeper immediately behind this low carbonate bench, and is more level closer to the vegetation line. Within the drainageway, about 100 feet of shoreline on the west end of the drainage channel does not have this outcropping. The offshore bottom is comprised primarily of sand pockets and smooth limestone covered with algal mats.

If shoreline area, describe and illustrate any coastal hazards such as erosion, flooding, tsunami, etc. Attach any relevant maps delineating the hazard zone (FEMA, FIRM maps).
The proposed drainage improvements project site is within Flood Zones A and AE on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (15003C0320F), revised September 30, 2004. (See Flood Zone Map, Figure 10). These zones are associated with rising seas during tsunami rather than with storm-water runoff. Base flood elevations in Zone AE are 8 feet at the shoreline and 6 feet at a distance 150 feet inland from the shoreline. Flood Zone A ends at a point about 450 feet inland from shore. There are no structures at the site that would be threatened in the event of a tsunami.

Describe existing covenants, easements, and restrictions. If State owned land, indicate present encumbrances.
The west side of the drainage channel is bordered by Easement 1182 (50-feet wide) for sewer line purposes. This is the sewer outfall from the Honouliuli Wastewater Treatment Plant.

Source: Sea Engineering, Inc. (2004)



WILSON OKAMOTO CORPORATION ENGINEERS • PLANNERS	Kalo'i Gulch Drainageway Improvements at One 'ula Beach Park - CDUA	FIGURE 8
	OFFSHORE BATHYMETRY	

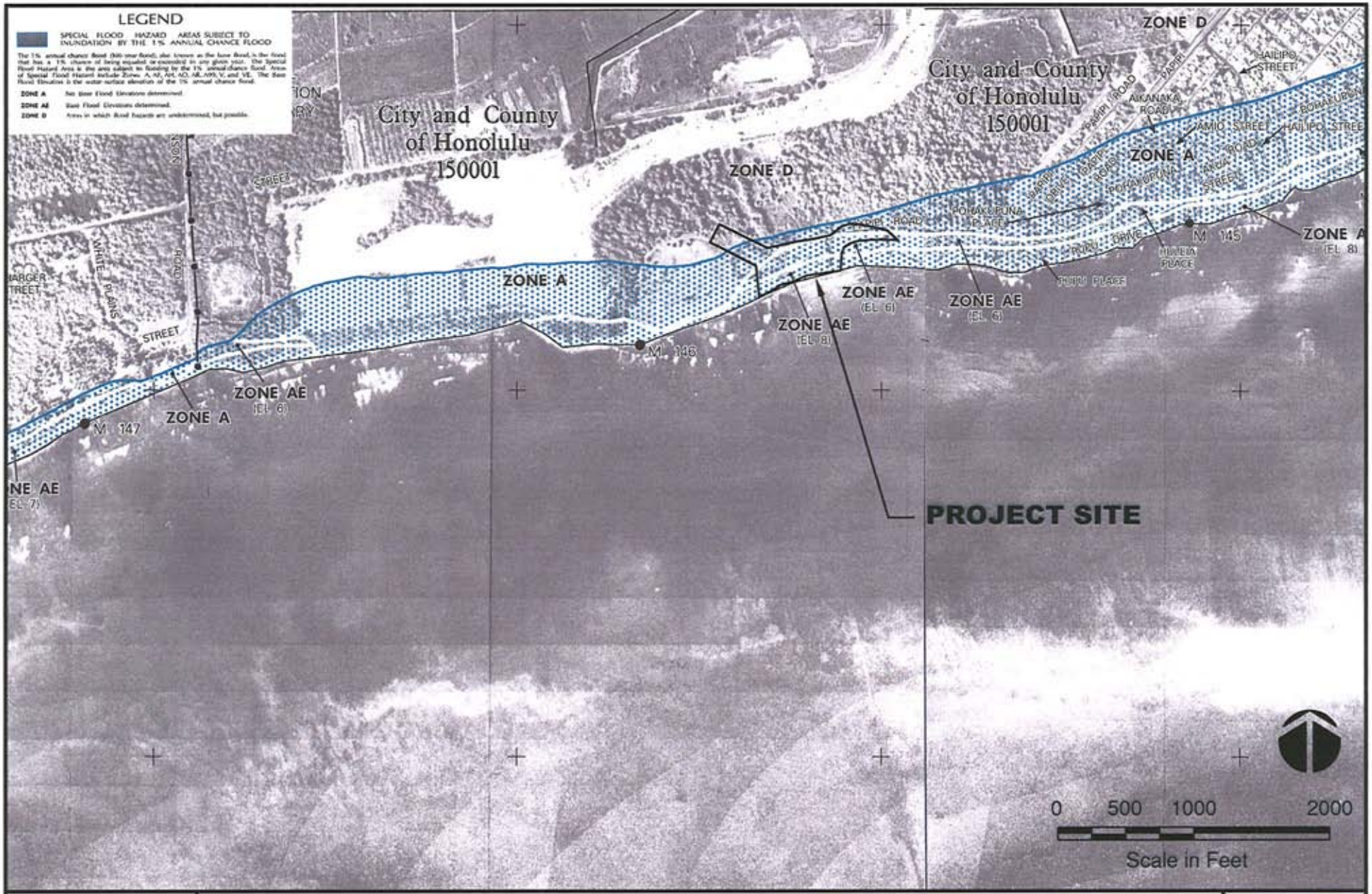
East-facing view from the approximate west boundary of the drainage channel. Note the low rock shelf which fronts almost the entire drainageway.

View looking west from the approximate eastern boundary of the drainage channel.

Shoreline vegetation includes low-lying aki aki and pohuehue, pluchea shrubs, and wind-swept kiawe.

Mauka of the shoreline vegetation, the site is barren soil. The park access road is visible at right.

Figure 9 Site Photographs



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Kaloʻi Gulch Drainage Improvements at Oneʻula Beach Park - CDUA

FLOOD ZONE MAP

FIGURE 10

Identify any historic, archeological or cultural sites within or near the parcel. Please submit or include any current management plan. If applicable, indicate location(s) on a map entitled *historical, archaeological, and cultural resources* and describe below.
The proposed project site lies within the One'ula Archaeological District (Site No. 80-13-2873), which has been the subject of thorough archaeological inventory and data recovery work. The State Historic Preservation Division (SHPD) has reviewed and accepted the final plan for data recovery, site preservation, and mitigation at this site. SHPD also determined that implementation of the One'ula Beach Park Master Plan would have "no effect" on significant historic sites.

Three sites in the vicinity of the drainage channel have been identified for preservation. Site 3209 is a complex of six features—a platform, a C-shape wall, and four rubble concentrations—located 1,000 feet northwest of the drainage channel shoreline (for exact locations, see Site Plan, Figure 7, on page 10). Site 4277 and 4278 are located on the east side of the drainage channel, about 900 feet north of the shoreline. Site 4277 is a complex of five features including an enclosure, a wall with two enclosures forming two C-shapes, a modified sinkhole, and a rubble pile. Site 4278 is a complex of four features that appear to have served temporary habitation functions. All three of these sites will be preserved as stabilized ruins (Maly, 1999).

A supplemental survey of the project site was also conducted in 2004 to determine the potential to find human skeletal and cultural remains buried in the sand deposits. Twenty-seven backhoe trenches were placed in the Kalo'i Gulch Drainage Channel, but no human skeletal remains or prehistoric cultural materials were identified. By all indication, the subsurface of the site has been greatly disturbed, as evidenced by large amounts of modern trash present in the excavations.

Adjacent Property Owners

Please list all adjacent property owners. If no address is available indicate north, south, east and west or mauka, makai or other common county directionals.

TMK: 9-1-012:025
Legal Name: City and County of Honolulu Department of Parks and Recreation
Street Address: 1000 Uluohia Street, Suite 309
City, State and Zip code: Kapolei, Hawaii 96707
Mailing Address: same
City, State and Zip: _____ Phone No.: 692-5585
Location to TMK: North (mauka) and west

TMK: 9-1-11:007
Legal Name: Haseko (Ewa) Inc.
Street Address: 91-1001 Kaimalie Street, Suite 205
City, State and Zip code: Ewa Beach, Hawaii 96707
Mailing Address: same
City, State and Zip: _____ Phone No: 689-7772
Location to TMK: East

TMK: _____
Legal Name: _____
Street Address: _____
City, State and Zip code: _____
Mailing Address: _____
City, State and Zip: _____ Phone No.: _____
Location to TMK: _____

TMK: _____
Legal Name: _____
Street Address: _____
City, State and Zip code: _____
Mailing Address: _____
City, State and Zip: _____ Phone No.: _____
Location to TMK: _____

CERTIFICATION

I HEREBY CERTIFY THAT I HAVE READ THIS COMPLETED APPLICATION AND THAT, TO THE BEST OF MY KNOWLEDGE, THE INFORMATION IN THIS APPLICATION AND ALL ATTACHMENTS AND EXHIBITS IS COMPLETE AND CORRECT. I UNDERSTAND THAT THE FAILURE TO PROVIDE ANY REQUESTED INFORMATION OR MISSTATEMENTS SUBMITTED IN SUPPORT OF THE APPLICATION SHALL BE GROUNDS FOR EITHER REFUSING TO ACCEPT THIS APPLICATION, FOR DENYING THE PERMIT, FOR SUSPENDING OR REVOKING A PERMIT ISSUED ON THE BASIS OF SUCH MISREPRESENTATIONS, OR FOR SEEKING OF SUCH FURTHER RELIEF AS MAY SEEM PROPER TO THE LAND BOARD.

I HEREBY AUTHORIZE REPRESENTATIVES OF THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO CONDUCT SITE INSPECTIONS ON MY OR MY CLIENT'S PROPERTY. UNLESS ARRANGED OTHERWISE, THESE SITE INSPECTIONS SHALL TAKE PLACE BETWEEN THE HOURS OF 8:00 A.M. AND 4:30 P.M.

_____

_____

Signature of Authorized Agent(s) or if no agent, signature of ***Applicant***

AUTHORIZATION OF AGENT

I HEREBY AUTHORIZE _____TO ACT AS MY REPRESENTATIVE AND TO BIND ME IN ALL MATTERS CONCERNING THIS APPLICATION.

_____

_____

Signature of Applicant(s)