

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

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DIRECTOR

ARTHUR D. CHALLACOMBE  
DEPUTY DIRECTOR  
2013/ED-7(ST)

February 7, 2014

Mr. Herman Tuiolosega  
Office of Environmental Quality Control  
State Office Tower  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813-2437

FILE COPY

FEB 23 2014

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

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Dear Mr. Tuiolosega:

**SUBJECT:** Chapter 343, Hawaii Revised Statutes  
Final Environmental Assessment  
Shoreline Setback Variance

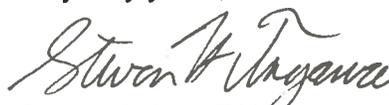
**Project:** Retaining Walls After-the-fact Retaining Wall  
**Applicant:** Howard Green  
**Agent:** 3E Advisory Services (John T. Harrison)  
**Location:** 44-005 Aumoana Way - Kaneohe  
**Tax Map Key:** 4-4-22: 13  
**Request:** After-the-Fact Shoreline Setback Variance  
**Proposal:** To retain two low concrete rubble masonry (CRM) retaining walls and landscaping within the 40-foot shoreline setback.

Attached and incorporated by reference is the Final EA prepared by the applicant for the above project pursuant to Chapter 343, Hawaii Revised Statutes. Based on the significance criteria outlined in Title 11, Chapter 200, Hawaii Administrative Rules, we have determined that the preparation of an Environmental Impact Statement is not required, and have issued a finding of no significant impact (FONSI). Please publish this FONSI determination in the next available issue of The Environmental Notice.

Enclosed are two hard copies of the Final EA and a copy in pdf format on a compact disk, and the completed OEQC Publication Form and project summary. Simultaneously, these documents were also sent via electronic mail to your office.

If you have any questions, please contact Steve Tagawa of our staff at 768-8024.

Very truly yours,

  
George I. Atta, FAICP  
Director

GIA:nw  
Attachments

APPLICANT ACTIONS  
SECTION 343-5(C), HRS  
PUBLICATION FORM (JANUARY 2013 REVISION)

**Project Name:** Howard Green low retaining walls (2) in the 40-foot shoreline setback  
**Island:** Oahu  
**District:** Kaneohe  
**TMK:** (1)4-4-22: 13  
**Permits:** After-the-fact Shoreline Setback Variance  
**Approving Agency:** Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813  
Steve Tagawa, (808) 768-8024  
**Applicant:** Howard Green, (808) 521-2731  
P.O. Box 3467  
Honolulu, Hawaii 96801  
**Consultant:** 3E Advisory Services  
3232 Kaohinani Drive  
Honolulu, Hawaii 96817  
John T. Harrison, (808) 780-1223

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**Status (check one only):**

- DEA-AFNSI** Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to [oeqc@hawaii.gov](mailto:oeqc@hawaii.gov); a 30-day comment period ensues upon publication in the periodic bulletin.
- FEA-FONSI** Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to [oeqc@hawaii.gov](mailto:oeqc@hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
- FEA-EISPN** Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to [oeqc@hawaii.gov](mailto:oeqc@hawaii.gov); a 30-day consultation period ensues upon publication in the periodic bulletin.
- Act 172-12 EISPN** Submit the approving agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to [oeqc@hawaii.gov](mailto:oeqc@hawaii.gov). NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.
- DEIS** The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to [oeqc@hawaii.gov](mailto:oeqc@hawaii.gov)); a 45-day comment period ensues upon publication in the periodic bulletin.
- FEIS** The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to [oeqc@hawaii.gov](mailto:oeqc@hawaii.gov)); no comment period ensues upon publication in the periodic bulletin.
- Section 11-200-23 Determination** The approving agency simultaneous transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the applicant. No comment period ensues upon publication in the periodic bulletin.
- Statutory hammer Acceptance** The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it failed to timely make a determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and that the applicant's FEIS is deemed accepted as a matter of law.
- Section 11-200-27 Determination** The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.
- Withdrawal (explain)**

**Summary:** The Applicant seeks an after-the-fact shoreline setback variance to retain two unauthorized concrete rubble masonry (CRM) retaining walls and backfill (landscaping) within the 40-foot shoreline setback area. The CRM retaining walls are under 5 feet in height and run along the south, west, and northwest boundaries of the property; about 31 linear feet along the left boundary; about 41 feet along the west boundary and about 24 feet along the northwest boundary. The walls retain about 4 to 4.5 feet of fill material and are built over an existing sewer easement which runs the length (south to north) of the shoreline setback area. The irregular shaped, 15,894-square-foot parcel is zoned R-10 Residential District, and is located at the end of cul-de-sac off Kaneohe Bay Drive. The parcel contains a single-family dwelling and slopes downward from the street, from an elevation of about 20 feet above mean sea level to the shoreline. The Kaneohe Yacht Club is immediately south of the site. The Department of Planning and Permitted issued the Applicant a Notice of Violation (No. 2011/NOV-10-161) on October 26, 2011, and a Notice of Order (No. 2011/NOO-291) on February 2, 2012, for the construction of the retaining walls without obtaining a building permit.



Landscaping and Construction Improvements Appurtenant  
To 44-005 Aumoana Way, Kaneohe, O‘ahu (TMK 4-4-022:013)

Final Environmental Assessment  
November 14, 2013

**Prepared on Behalf of**

Howard Green, Applicant

**Prepared by**

3E Advisory Services

John T. Harrison Ph.D., Principal



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## **PROJECT SUMMARY**

Project: Howard Green Low Retaining Walls (2) in the Shoreline Setback

Applicant: Howard Green  
P.O. Box 3467  
Honolulu, HI 96801

Owner: Howard Green  
P.O. Box 3467  
Honolulu, HI 96801

Accepting Agency: City and County of Honolulu Department of Planning and Permitting (Chapter 343, HRS)

Consultant: 3E Advisory Services  
3232 Kaohinani Drive  
Honolulu, HI 96817

Location: 44-005 Aumoana Way, Kaneohe, Oahu, Hawaii

Tax Map Key: (1)4-4-022: 13

Proposed Action: Landscaping and Construction Improvements in the Shoreline Setback

Land Area: 15,894 square feet

Present Use: Single family residential

State Land Use District: Urban

Zoning: R-10 Residential

Special Management Area: Site is within the SMA

Permits Required: State of Hawaii Shoreline Certification  
City and County of Honolulu Shoreline Setback Variance  
City and County of Honolulu Grading Permit  
City and County of Honolulu Building Permit  
City and County of Honolulu Build Over Easement Approval

Determination: Finding of No Significant Impact

## **1. Introduction**

The Applicant and fee simple owner of the subject parcel, Howard Green, seeks an after-the-fact Shoreline Setback Variance (SSV) from the City and County of Honolulu Department of Planning and Permitting (DPP) relating to construction of two concrete rubble masonry (CRM) retaining walls and grading that includes areas within the shoreline setback fronting the property. Notice of Certification of the Shoreline (File No. OA-1488) was most recently published in the OEQC Environmental Notice dated July 8, 2012.

On October 26, 2011 the Department of Planning and Permitting (DPP) issued the Applicant a citation (No. 2011/NOV-10-161) for construction activities performed without obtaining a building permit. Building Permit Application A2011-10-1873 was filed October 31, 2011. In February 2012, DPP issued a Notice of Order (No. 2011/NOO-291) imposing fines for failure to obtain a building permit. The fines were appealed, and the appeal remains pending. A separate permit application was filed for the portion of the construction mauka (landward) of the shoreline setback area, which constituted about 80% of the work that had been done. Building Permit No. AV2012-090684-714477 was issued January 16, 2013 for that work. The Applicant filed an application for a Minor Shoreline Structure (No. 2012/MSS-14) on July 23, 2012, which was returned by the DPP on July 27, 2012 as ineligible. The Applicant filed an appeal of the Director's determination that the Minor Shoreline Permit Application was ineligible, and this appeal also remains pending.

This report is prepared in compliance with provisions of Chapter 343, Hawai'i Revised Statutes (HRS), and Title 11, Chapter 200 Department of Health Administrative rules in support of the application for the after-the-fact Shoreline Setback Variance.

## **2. Identification of Applicant**

Howard Green  
P.O. Box 3467  
Honolulu, HI 96801

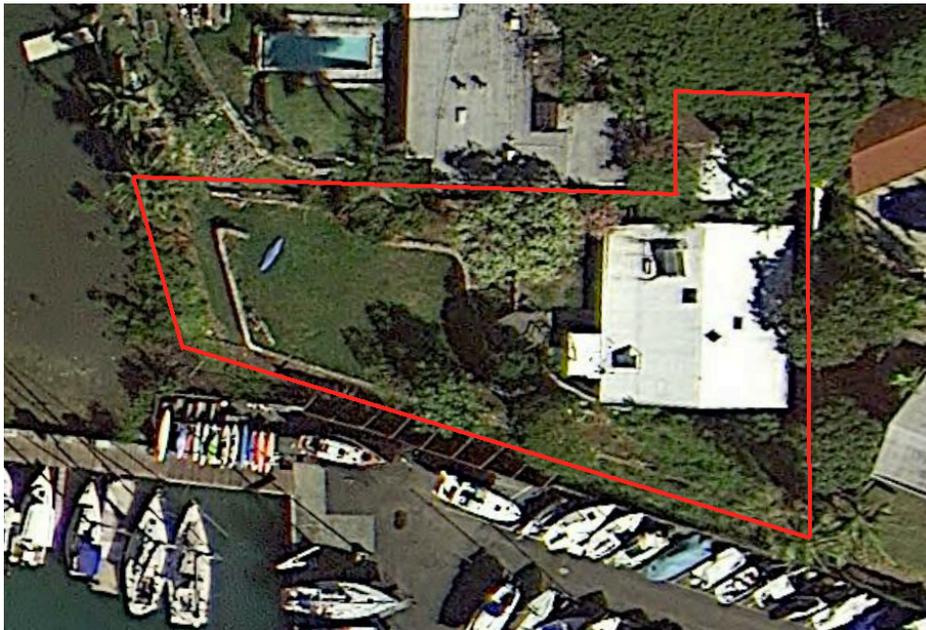
## **3. Identification of Approving Agency**

City and County of Honolulu  
Department of Planning and Permitting

#### **4. Identification of Consulted Agencies, Citizen Groups, and Individuals**

Prior to undertaking landscaping improvements, the Applicant consulted with the City and County of Honolulu Department of Design and Construction to verify the location of the existing sewer easement and to ensure that proposed actions met design requirements relative to the easement. In addition, the Applicant invited members of the Aumoana Community Association to visit the site and to comment on the project. Many neighbors have been supportive, and none has indicated opposition. The Applicant specifically consulted with the neighboring landowner to the east, who expressed approval that the project would result in removal of unwanted trees that blocked her view. The neighbor to the north also was consulted, and he approved of the added stability to the hillside conferred by the proposed retaining walls. Architectural and design specifications for the subject landscaping improvements were prepared by Licensed Professional Architect Reynaldo D. Rios AIA.

#### **5. General Description of the Subject Landscape Improvements**



*Figure 1. Subject property aerial view.*

Figure 1 shows a plan view of the subject property and its approximate boundaries. The western property boundary abuts the shoreline of Kaneohe Bay, and the southern property line runs along a City and County of Honolulu drainage easement. The property is adjoined to the north and east by other residential properties, and to the south by the marina facilities and grounds of the Kaneohe Yacht Club.



**Figure 2. View looking west from below the house.**

Major improvements to the parcel include the residential structure, a carport, and various masonry and landscaping features (Fig. 3). Two recently constructed rock retaining walls delineate a terrace lawn, providing both a visual open space leading towards the shoreline and positive stabilization of both foundational soils for the residential structures and for the lawn itself. The two new walls were constructed as described below.

The southwest wall has an aggregated length of 226.7 feet, a height above grade ranging from 1 to 4.4 feet, and varies in width from 1.3 to 2.3 feet at grade (see App. 3. Section Drawing, CRM Wall). The portion of this wall lying within the shoreline setback amounts to a length of 78.7 feet. This wall follows the southerly boundary of the property along the storm drain easement to approximately 8.5 feet from the shoreline. Segment 2 of this wall turns northward for 40.9 feet then turns back eastward for 7.7 feet along a sloped walkway. The elevation at the base of the wall ranges from 2 to 3 feet above sea level (Mean Higher High Water, MHHW). This wall serves the function of preventing erosion and soil drift of the highly plastic Kokokahi clay soil prevalent in the area downhill into the storm drain easement to the south and the ocean to the west. Although the makai (seaward) segment of this wall is straight, irregularities in the certified shoreline result in variable distance measurements between the wall and the shoreline (see Fig. 3 and App. 1. Shoreline Survey).

The north wall, which lies to the right and front of the dwelling, is comprised of 5 segments with a total length of 150.9 feet, of which about 30 feet along the northern boundary of the property lies within the shoreline setback. The height above grade of the portion of this wall within the shoreline setback begins at about 2 feet and gradually increases to 4.5 feet. Within the shoreline setback, the elevation of the wall at grade begins at 3 feet above MHHW and increases to about six feet. At grade, the wall width ranges from 1.6 to 2.4 feet. This wall serves the function of stabilizing the soil along the north boundary of the property, which supports the residence on the neighboring property that is approximately 5 feet higher than

the residence on the subject property. Mauka of the shoreline setback area, the neighboring property to the north has a retaining wall which supports the residential pad of that home. The north wall on the subject property provides support for the residential pad of the subject property then turns westward about 15 feet from and along the boundary, to support the neighbor's retaining wall. Makai of the neighbor's retaining wall, the north wall curves northward to the property line starting slightly east of the 40 foot setback (see Fig. 3). Both walls are constructed from rock of igneous basaltic origin fitted and cemented in place.

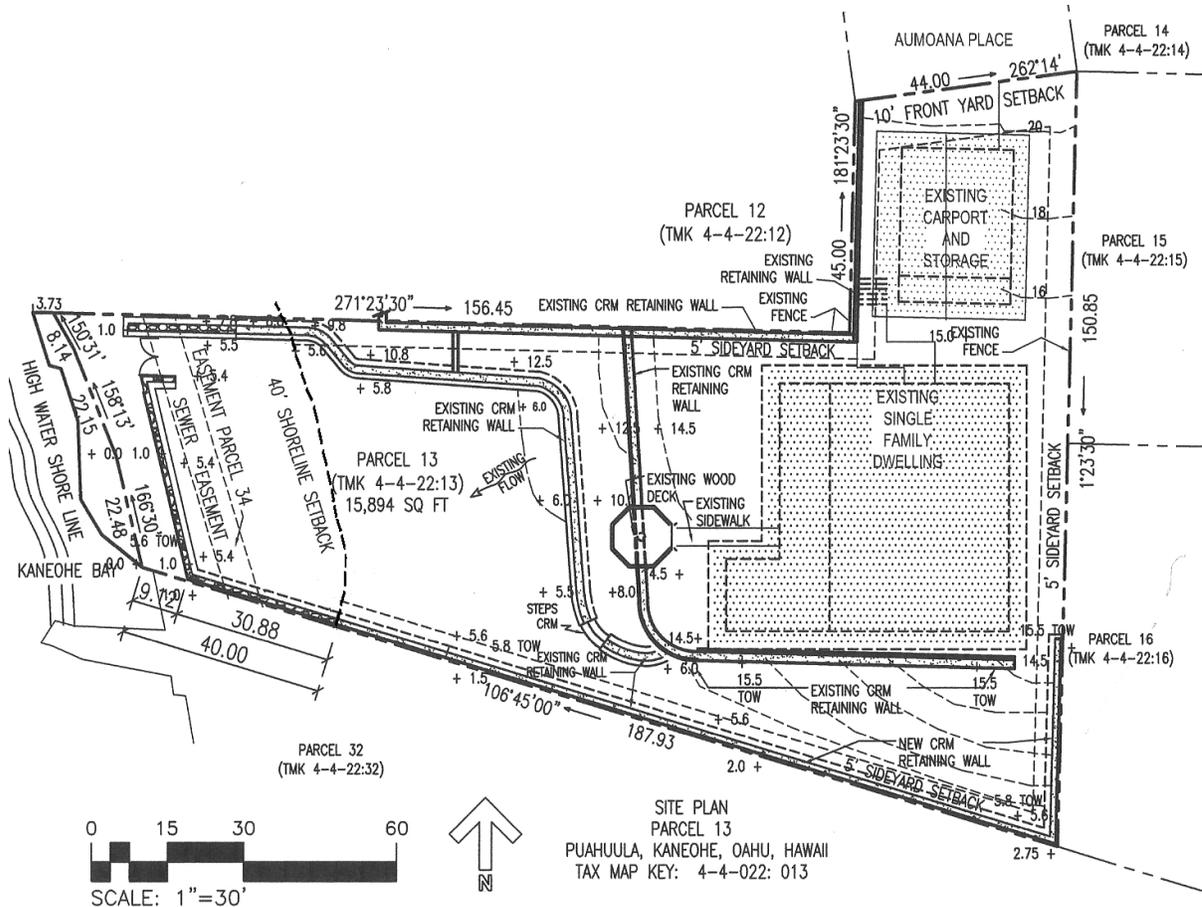


Figure 3. Site Plan.

Marina facilities of the Kaneohe Yacht Club to the south and west of the drainage easement include a graded and paved parking and boat storage and service area with a vertical seawall serving as the landward boundary of the dredged boat harbor. The western margin of the drainage easement at the shoreline abuts an artificial groin constructed from dredge spoils excavated at the time of the harbor construction that sits on top of the former fringing reef and serves as foundational material for a pier that extends seaward ~895 feet, terminating near the natural reef margin (see Fig. 2).

The shorelines of adjacent properties to the north of the subject parcel all are hardened with vertical seawalls, with dredged areas immediately seaward of the walls that provide access to the properties for small boats (see Fig. 4).



***Figure 4. View northwest from subject parcel corner, showing shoreline hardening and dock construction on neighboring parcel.***



***Figure 5. Unconfined makai slope of the parcel to the north of the subject property.***

Mauka of the shoreline of the neighboring parcels, the coastal terrace extends to a slope created by displaced fill from grading and leveling activities during construction of the Aumoana subdivision in the early 1950s (Fig. 5). A view of the shoreline setback area fronting the subject parcel appears in Figure 6. Locations and orientations of Figures 2, 4, 5, 6, 7, and 11-15 are identified for reference on the photographic key in Appendix 2.



*Figure 6. Retaining wall and shoreline setback fronting the subject parcel.*

## **6. Summary Description of the Affected Environment**

The subject parcel comprises an area of 15,894 square feet, and it is located in the State Urban District on land zoned by Honolulu County as Residential (R-10). The entirety of the parcel lies within the Special Management Area, and its Flood Zone designation is D, Undetermined Flood Hazard. As depicted in Figure 3, the 1,800 sq. ft. dwelling is located on the mauka portion of the parcel at an elevation of about 15 feet above sea level, and the 440 square foot garage is located on the northeastern corner of the property at an elevation of approximately 20 feet.

Figure 7 offers a view looking west from a location below the dwelling immediately prior to commencement of landscaping improvements. As shown in the image, there was a sharp (about 25%) slope starting at the base of the neighbor's retaining wall to the north and moderating toward the south boundary and towards the shoreline beyond the line of trees. It should be noted that in the area to the ocean side of the neighbor's retaining wall, the neighbor's property collapsed and slid down the hill west and then south onto the subject property. Where the new retaining wall supported the neighbor's property, the hill did not collapse.



**Figure 7. Makai view prior to work.**

After the deaths of the prior long time owners of the property, a dense, overgrown thicket of introduced vegetation, including coconut palm (*Cocos nucifera*), milo (*Thespesia populnea*), spider lily (*Crinum asiaticum*), and various additional introduced species grew up in the area seaward of the prior existing low CRM wall visible in Figure 7 that traversed the lower edge of the lawn within the shoreline setback area. This wall appears clearly in the aerial plan view taken in 2003 (Fig. 8), as does another masonry wall that defined an intermediate terrace makai of the retaining wall and leveled platform on which the dwelling rests.



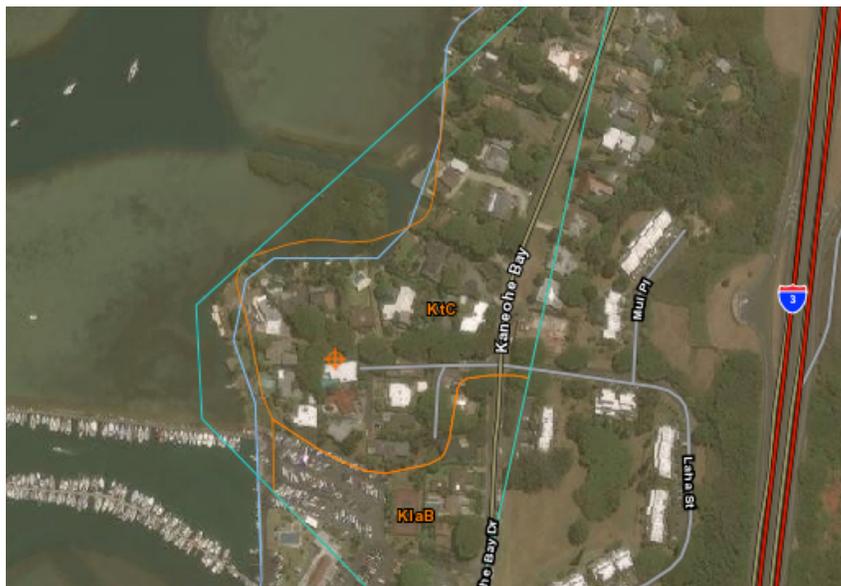
**Figure 8. Aerial view of property in 2003, prior to present project.**

After construction of the southwest wall, part of the intermediate terrace wall was removed, overgrown trees and landscape plants along the makai wall were cleared, and a substantial collection of debris and trash were cleaned out. The hillside was cut at the location of the new north retaining wall, and soil from cuts was daily moved to behind the new southwest retaining wall. All wall foundations within the shoreline setback were excavated to a depth of about a foot below the lower finished grade. After construction of the new retaining walls was complete, excavated soils were stockpiled mauka of the wall lines. As the north wall

was completed, soils were distributed behind the walls to form the leveled lawn surface, leaving a slight slope to the south and west, with soil levels approximately 3 to 6 inches below the top of the southwest wall. The wall heights and locations were designed so that no fill was either imported or removed from the property. The amount of soil moved during leveling of the property within the shoreline setback area is estimated at approximately 15 cubic yards. The work was undertaken quickly during the dry August-September season, to prevent runoff from entering State waters during construction. None of the pickleweed and other vegetation within 5 feet of the shoreline was disturbed, nor was the elevation profile makai of the walls altered.

Reconfiguration of the elevation profile mauka and northward from the southwest wall resulted in replacement of the steeper, more erosion prone portions of the lot with fixed barrier walls and flat terraces. The most makai area of the property and the sloped walkway between the two terraces was sodded to provide immediate grassy erosion prevention, and the more inland portions of the property were planted with grass. Because of the flattening of the property, surface drainage was significantly diminished, leading to greater potential infiltration. Constructed retaining walls were fitted with weep holes at least every 7 feet to allow infiltrated water to flow to the drainage easement along the south property boundary (see App. 3).

The U.S. Department of Agriculture Soil Conservation Service (USDA-SCS) 1972 Soil Survey identifies two prevalent soil types that occur in the project area: Kokokahi clay (KtC) and Kawaihapai stony clay loam (KlaB). As depicted in Figure 9, the boundary between the subject parcel and the property immediately to the south also generally defines the boundary between the two soil types.



**Figure 9. Soils map of the project area (from USDA Natural Resources Conservation Service Web Soil Survey)**

Grading during the course of development of the Aumoana Subdivision in the early 1950s leveled the area, transferring soils cut from higher inland elevations to the development

margins. Thus, Kokokahi clay is the soil type found throughout the subject parcel. This soil, originating from basaltic source deposits, occurs on talus slopes and alluvial fans. Generally, the surface layer is very dark gray clay about 14 inches thick. The next layer, about 12 inches thick, is dark grayish-brown clay that has subangular blocky structure. The substratum is grayish-brown and light brownish-gray clay, 14 to more than 20 inches thick. These soils are very sticky and very plastic, they can move downslope when wet, and they crack widely upon drying. The soil is slightly acid to neutral in the surface layer and slightly acid to alkaline below. Permeability is slow to moderately slow. Runoff is medium, and the erosion hazard is slight to moderate, depending on the history of disruption of the soil profile. The available water capacity is about 1.6 inches per foot of soil. Workability is difficult because of the sticky, plastic nature of the clay and the narrow range of moisture content within which the soil can be cultivated. The shrink-swell potential is very high, particularly in un-compacted soils at the margins of graded developments. Numerous dwellings in the Aumoana area, particularly those at the edges of the subdivision, have experienced substantial problems with settling, shifting, and erosion beneath foundations, with attendant structural damage.

The subject property is bounded to the west by Kaneohe Bay (Fig. 10), a well described estuarine and coral reef ecosystem on the windward coast of Oahu (Banner, 1974<sup>1</sup>; Cox, 1973<sup>2</sup>; Jokiel et al., 1991<sup>3</sup>, etc.). With the exception of shoreline areas closest to the open coastal ocean fronting the marginal areas at the northern and easternmost parts of the Bay,



**Figure 10. Kaneohe Bay, O‘ahu, Hawai‘i**

<sup>1</sup> Banner, A. H. 1974. Kaneohe Bay, Hawaii... urban pollution and a coral reef ecosystem. Proc. 2<sup>nd</sup> Intl. Coral Reef Symp., Brisbane 2: 685.

<sup>2</sup> Cox, D. C. 1973. The Kaneohe area. *In* Estuarine pollution in the State of Hawaii. Part II. Kaneohe Bay study. Univ. Hawaii Water Resources Research Center Tech. Rep. 31: 9-19.

<sup>3</sup> Jokiel, P. L., R. H. Titgen and Chun Smith. 1991. Guide to the marine environment of Kaneohe Bay, Oahu. Report to State of Hawaii Dept. Land Nat. Resources. 50 p.

the remaining shoreline areas of Kaneohe are well protected from ocean wave dynamic forces. Much of the Bay, and in particular, the margin adjacent to the heavily urbanized southeast sector, has been modified extensively by coastal and marine development. Shoreline alterations, including seawalls, harbors, groins, channels, and other structures characterize 88% of the South Kaneohe Bay coastal shoreline area (Hunter, 1993<sup>4</sup>).

Coral reefs of the Bay include three general reef structures. A barrier reef extending from Mokapu Peninsula to the Kualoa headlands separates the Bay from the surrounding open ocean. Within the inner Bay there are frequent patch reefs, or coral shallows surrounded on all sides by deeper water. Along the landward margin and surrounding Coconut Island are more or less continuous fringing reef flats, with outer edge slopes colonized by various hermatypic corals, and the inner portions largely comprised of sand and mud sedimentary depositional terraces (Banner, 1968<sup>5</sup>). Other than dredged channels, the seven major and the five minor stream systems that empty into the Bay cause the only major interruptions of the fringing reef flats. Deep lagoon areas comprise only about 50% of the inner bay area, and these areas hold most of the depositional sediments transported to the Bay in the course of geologic weathering in the Bay watershed (Bathen, 1968<sup>6</sup>).

The region between fringing reef flat margins and the adjacent land is a depositional environment of coral rubble, sand, and terrigenous soils in varying proportions. Isolated, small coral colonies may occur in shallow water with increasing frequency towards the makai portions of the fringing reef flat in the less urbanized central and north sectors of the Bay. However, periodic delivery of muddy sediments and fresh water to shallow coastal regions in the South Bay has virtually eliminated live coral in this region. Various burrowing annelids and arthropods (principally alpheid shrimps) may colonize the nearshore reef flats, but these faunal populations are subject to periodic extinction in the wake of major storm events that fully immerse the reef flats in fresh water from land runoff (Banner, 1968<sup>7</sup>). In recent history, severe storms in 1965 and 1987 led to significant mortality of these nearshore benthic organisms, and episodic fresh water “kills” such as these appear to play a substantial role in the community structure of Kaneohe Bay coral reef ecosystems (Hunter and Evans, 1995<sup>8</sup>).

Deposits of mud and debris from land runoff are greatest in the vicinity of stream mouths and other drainage outlets. The immediate shoreline of the subject parcel, which borders a drainage easement that carries runoff from mauka lands in the area, is typical of a reef flat margin adjacent to a drainage channel (Fig. 12). In addition to sedimentary materials, the area is interspersed with deposited flotsam, including pieces of wood planking, sticks, and

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<sup>4</sup> Hunter, C. L. 1993. Living Resources of Kaneohe Bay. Habitat evaluation. Final Report, Main Hawaiian Islands Resource Investigation. Hawaii Dept. Land Nat. Resources, Div. Aquatic Res. 62 p.

<sup>5</sup> Banner, A. H. 1968. A fresh-water “kill” on the coral reefs of Hawaii. Hawaii Inst. Mar. Biol. Tech. Rep. No. 15. 29 p.

<sup>6</sup> Bathen, K. H. 1968. A descriptive study of the physical oceanography of Kaneohe Bay, Oahu, Hawaii. Hawaii Inst. Mar. Biol. Tech. Rep. No. 14. 353 p.

<sup>7</sup> Banner, *op. cit.*

<sup>8</sup> Hunter, C. L. and C. W. Evans. 1995. Coral reefs in Kaneohe Bay, Hawaii: two centuries of western influence and two decades of data. Bull. Mar. Sci. 57(2): 501-515.

refuse from the land. Land vegetation in this shoreline area is almost entirely comprised of two highly aggressive and invasive species: pickleweed (*Batis maritima*) and red mangrove (*Rhizophora mangle*) (see Figs. 11 & 13). Both of these salt-tolerant species are common throughout Kaneohe Bay and other estuarine systems in Hawai‘i, and they have been targets of concerted removal efforts (Rauzon and Drigot, 2002<sup>9</sup>).



**Figure 11. Shoreline at the subject parcel at mid tide.**

## **7. Summary of Impacts and Alternatives Considered**

The upper and lower retaining rock walls evident in Figure 2 are part of recent landscape work completed by the parcel owner. Prior to this work, the fronting lawn area descended in a slope to the shoreline terrace, similar to the neighboring parcel frontage shown in Figure 4. The intent of these landscape modifications was twofold: to reduce runoff velocities by creating a level, open lawn that enhances infiltration, and to create a barrier to soil erosion and sliding, both into the drainage easement and towards the shoreline. The Applicant also sought to enhance access and improve view planes, both from the dwelling and along the shoreline.

Figure 12 illustrates the unimproved drainage easement immediately to the south of the subject property. This drainage channel receives runoff from a portion of Kaneohe Bay Drive, from the entire land area of the Yacht Club Terrace subdivision mauka of Kaneohe

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<sup>9</sup> Rauzon, M. J. and D. C. Drigot. 2002. Red mangrove eradication and pickleweed control in a Hawaiian wetland, waterbird responses, and lessons learned. Pages 240-248 in Veitch, C. R. and Clout, M. N. (eds.) Turning the tide: the eradication of invasive species, Proceedings of the International Conference on Eradication of Island Invasives. Occasional Paper of the IUCN Species Survival Commission No. 27.

Bay Drive, from the southern portion of the Aumoana subdivision, and from the paved parking and service area of the Kaneohe Yacht Club. In addition, during extended storm events, additional overland flow from further mauka areas in the immediate watershed bounded to the east by the Kalaheo hills ridgeline is delivered to the Bay through this channel.



***Figure 12. Drainage easement alongside subject property.***

Sediments and debris carried in runoff from the area have created a depositional fan in the shoreline where the channel meets the Bay, as shown in Figure 13. Mud and litter of this alluvial deposit field cover the rubble and marine benthos typical of the less disturbed reef flat that lies seaward of the fan. However, terrigenous sediments form a significant component of the reef flat material as well, due to the high volume transport of suspended soil particles in runoff and the resuspension and advection of these materials in turbulent



***Figure 13. Deposition at the mouth of the drainage easement.***

overlying waters during high tide and normal trade wind conditions. Ristvet (1977<sup>10</sup>) estimated the recent rate of sediment accumulation on the lagoon floor of the South Bay to be on the order of 343 cm/100 years, or roughly 1.35 inches per year during the interval between 1927 and the present. In contrast, very little infilling of the Bay occurred during the period between 1882 and 1927 (Roy, 1970<sup>11</sup>).

The increased rate of sediment delivery to the lagoon floor in recent times is partly due to extensive dredging conducted within the South Bay during World War 2, but much of the sediment loading results from greater rates of runoff and erosion due to the rapid urbanization of the Kaneohe Bay watershed during the last half of the 20<sup>th</sup> Century (Smith et al., 1973<sup>12</sup>). Storm-mediated transport of soils from urbanized watersheds has had a measurable effect on the Bay ecosystem. Coral ecosystems thrive where ocean waters are clean and clear. Measured declines in coral reef productivity resulting from human influences on Kaneohe Bay are correlated with increased nutrient loading, fresh water runoff, and turbidity-induced light limitation due to suspended terrigenous soils (Smith et al., 1981<sup>13</sup>).



**Figure 14. Hillside erosion damage on neighboring property.**

Loss of soil from unconfined property margins in the Aumoana subdivision was previously identified as having contributed to foundation destabilization and structural damage on

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<sup>10</sup> Ristvet, B. L. 1977 Reverse weathering reactions within recent nearshore marine sediments, Kaneohe Bay, Oahu. Ph.D. Dissertation, Northwestern University Department of Geology. 315 p.

<sup>11</sup> Roy, K. J. 1970. Change in the bathymetric configuration, Kaneohe Bay, Oahu, 1882-1969. Univ. Hawaii, Hawaii Inst. Geophysics Rep. 70-15. 226 p.

<sup>12</sup> Smith, S. V., K. E. Chave, D. T. O. Kam. 1973. Atlas of Kaneohe Bay – A reef ecosystem under stress. Univ. Hawaii, Sea Grant Tech. Rep. 73-01. 128 p.

<sup>13</sup> Smith, S. V., W. J. Kimmerer, E. A. Laws, R. E. Brock, and T. W. Walsh. 1981. Kaneohe Bay sewage diversion experiment: Perspectives on ecosystem responses to nutritional perturbation. Pac. Sci. 35: 279-395.

neighboring properties. Dwellings on the two parcels east of the Applicant's lot that have the City and County drainage ditch along their southern boundaries have each experienced foundation movement due to soil slippage where no retaining walls serve to stabilize fill deposited during the subdivision construction.

Figure 14 shows the shoreline hillside fronting the residence immediately north of the subject property. Heavy rains March 6-8, 2012 produced a significant landslide, and the landowner sought to prevent additional soil loss by covering the eroded area with a tarp and stretching a silt barrier below the erosion scarp. Soil lost from the hillside was carried down the slope



**Figure 15. Gullies and soil transport due to erosion.**

towards the shoreline, where suspended particles would be entrained into the Bay's surface waters and transported across the living face of the reef margin and ultimately deposited in the lagoon depths. Although the heavy rains resulted in significant soil loss from the neighbor's property, the leveled terrain and the barrier retaining wall at the makai side of the subject property lawn terrace effectively prevented any similar soil loss. Figure 15 clearly demonstrates the contrasting responses of the adjacent properties to the storm event. Loose soils deposited below the lawn terrace of the subject property originated from the neighbor's landslide, as evidenced by soil residues on lower rocks of the boundary wall.

In considering alternative approaches to achieve intended objectives of the landscape modifications and cognizant of the empirical (and visible) evidence of structural issues confronted by neighboring property owners, the Applicant sought design advice from a Licensed Professional Architect. Selection of CRM rock retaining walls was based on the architect's advice that implementing alternative methods of soil stabilization, including anchored mesh or geotextile fabric barriers, would be less effective, would create a greater risk of damage to the shoreline area during construction, and would be more costly, less attractive, and inconsistent with existing landscape features on the property.

In addition to the no action alternative, other construction alternatives considered included placement of the retaining wall directly at the shoreline, in effect creating a continuation of the rock wall shoreline interface seen in the abutting property to the north. While this could have accomplished the same erosion-related objective of stabilizing the terraced land to the west of the residence, it would not have created a separate grade on which other parties could pass comfortably along the shoreline, and it would have arguably violated underlying public shoreline policies by affecting shoreline processes and artificially establishing a shoreline. For these reasons, this alternative was rejected. Another considered alternative was to locate the makai wall further from the shoreline. However, to do so would have created an encroachment within the existing sewer easement, which would interfere with county access to the easement area.

This analysis and the accompanying photographs illustrate major effects of the recently accomplished landscape amendments:

1. Soils from the property that would otherwise have been in danger of being washed into the drainage channel and subsequently into the Bay are both stabilized by terracing and physically prevented from transport to the ocean by the retaining wall.
2. Maintenance of substantial open space along the shoreline facilitates lateral public access and benefits coastal views.
3. Constructing the retaining wall at a distance of 8 to 10 feet from the shoreline ensures that the structure does not affect dynamic processes associated with land-sea interfaces. As noted in Section 3.3.2 of the Ko‘olaupoko Sustainable Communities Plan, the Kaneohe Bay shoreline from He‘eia Fishpond to Nu‘upia Pond is a protected coastline where wave and tidal influences are minimal and where “there are no chronic or significant patterns of erosion or accretion”, and the distance between the structure and the water is such that the highest wash of waves will not come into contact with the wall. Other guidelines for shoreline areas suggested in the Ko‘olaupoko Sustainable Communities Plan bear discussion in relation to the subject parcel. Given that 88% of the shoreline of South Kaneohe Bay has been altered by hardening, artificial groins, docks and other structures, the call in the Plan for “establishment of buffer zones for protection of rare coastal resources” is aligned with the intent of this project to protect a small segment of un-hardened coastal interface within the South Bay. The Applicant also notes that no exterior lighting is included in the landscaping plans, consistent with the suggested Plan guideline’s intent to avoid “disorientation, injury or death of seabirds”. Finally, the Plan discourages the use of shore armoring structures, and as previously noted, the intentional placement of the makai portion of the CRM retaining wall at an elevation above MHHW ensures that it has no shoreline armoring effect.

In summary, the newly installed retaining walls have demonstrably positive impacts on the Kaneohe Bay shoreline fronting the subject property. They in no way establish an artificial shoreline, but rather serve to protect the natural shoreline processes by reducing the entry of additional terrigenous soils. Finally, the overall landscape design offers tangible public benefits in creating an accessible, open coastal space with no visual obstructions.

## **8. Proposed Mitigation Measures**

In view of the overall beneficial effects of the accomplished landscape improvements on the stability and protection from erosion runoff to the bay waters fronting the project, there are no detrimental effects of the recent construction that require focused mitigation. Silt barriers and other best management practices observed during construction of the landscaping improvements effectively prevented loose soil or debris from entering waters of Kaneohe Bay. The Applicant has expressed an interest in cooperating with ongoing efforts to control and eradicate invasive shoreline plants as noted in referenced studies. However, any such mitigation activity will require assurance that replacement of invasive shoreline vegetation with endemic plants will have no effect on shoreline processes.

## **9. Legal and Regulatory Conformance**

Chapter 205A, HRS, Part I codifies policies and objectives of the State with regards to the coastal zone and delegates authorities to pursue and enforce coastal management policies. Part II of the chapter delineates development controls applicable to the coastal Special Management Area for avoiding permanent losses of valuable resources and ensuring adequate public access to coastal areas. Authority for establishment and management of shoreline setbacks rests in Part III of the Coastal Zone law, and in particular, §205A-43 HRS conveys responsibility for setback delineation to various county agencies. On O‘ahu, powers and duties relating to shoreline setback establishment and enforcement are vested in the Director of the Department of Planning and Permitting (DPP) of the City and County of Honolulu, as articulated in Chapter 23, Revised Ordinances of Honolulu (ROH).

### **9.1. Conformance with Chapter 205A HRS**

In Part I, HRS Section 205A-2 establishes objectives and policies that apply to all parts of the law. Examining objectives that are relevant to the subject project demonstrates a strong affirmation of concordance between the law and the Applicant’s actions. Consider, for instance, §205A-2(b), Objective (3): ***Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.*** As previously noted, restoration and maintenance of shoreline open space is a central feature of the completed landscape improvement. Similarly, Objective (4) seeks to ***[p]rotect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems,*** and the accomplished effect of the constructed CRM walls has been to stabilize soils to prevent the erosion and transport of silted runoff into protected coastal waters. Comparable consistency is evident between the project’s effects and Objectives (6) and (10),

which directly address the need to reduce property hazards involving erosion, subsidence, and pollution in order to promote a more sustainable environmental quality of marine and coastal resources.

The policy framework articulated in HRS §205A-2(c) is further subdivided into 10 resource groups, 5 of which demonstrate intersecting interests with demonstrated effects of the subject project. Beneficial effects of the landscape improvements include more coastal open space, reduced soil erosion, reduced pollution of protected coastal waters, and conservation and protection of the natural shoreline environment. These accomplishments conform closely with policy statements in the following subparagraphs of the CZM Law:

***HRS §205A-2(c) Policies.***

***(1) Recreational resources;***

***(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;***

***(vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;***

***(3) Scenic and open space resources;***

***(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;***

***(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 nonpoint source water pollution control measures.***

***(6) Coastal hazards;***

***(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;***

***(10) Marine resources;***

***(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;***

***(4) Coastal ecosystems;***

***(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;***

Although the subject landscaping improvements involve land located within the Special Management Area (SMA) as established pursuant to Part II of HRS Chapter 205A, they are associated with the development of a single-family dwelling. As specified in Part II, Section 205A-22:

***"Development" does not include the following:***

***(1) Construction of a single-family residence that is not part of a larger development;***  
***(14) Structural and nonstructural improvements to existing single-family residences, where otherwise permissible;***

***"Structure" includes but is not limited to any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line.***

Pursuant to these provisions, the subject project improvements are excluded from SMA requirements. However, the Applicant notes that SMA guidelines explicitly call for ***minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, ...landslides, erosion, siltation...*** [ref. HRS §205A-26(1)(D)]. Once again, these are intrinsic features of the accomplished work at the subject parcel.

As previously noted, Part III of HRS Chapter 205A provides for establishment and management of shoreline setbacks. HRS Section 205A-46 creates the legal authority for shoreline setback variances to allow uses within the setback that the law otherwise prohibits, provided that: 1) a proposed use falls into certain prescribed categories; 2) hardship to the applicant will result if the use is denied, and; 3) specified conditions of use are met. The following paragraphs assess the subject project in the context of these three provisions.

The subject project falls under 4 of the 10 categories established in HRS §205A-46(a) as eligible for a shoreline setback variance. Subparagraph (a)(3) denotes landscaping as allowable, as long as ***the proposed structure or activity will not adversely affect beach processes and will not artificially fix the shoreline.*** Work performed on behalf of the Applicant has left the shoreline untouched, and is designed specifically to prevent adverse impacts to protected coastal waters. The prevented insult to the shoreline is the transport of eroded soils, and the method of prevention involves a reconfiguration of drainage, which comprises a second allowable category under Subparagraph (a)(4). Another category under which a variance may be granted involves ***proposed structures that are ancillary to private facilities or improvements that are clearly in the public interest*** [ref. HRS §205A-46(a)(7)]. The landscape improvements undertaken by the Applicant have created both lateral public access along the shoreline and coastal open space, both of which are recognized public interest characteristics cited in policies and objectives of the Coastal Zone Management law.

The fourth category of eligibility for a shoreline setback variance for which the subject project qualifies is established in Subparagraph (a)(8): ***[p]rivate facilities or improvements which will neither adversely affect beach processes nor artificially fix the shoreline; provided that the authority also finds that hardship will result to the applicant if the facilities or improvements are not allowed within the shoreline area.*** As noted in Subparagraph (b), hardship is defined by the county authority, in this case, the Honolulu DPP. Hardship resulting to the Applicant attendant on prohibition of the landscape

improvements is discussed at length in the following section (Section 9.2) of this Assessment.

HRS §205A-46(c) specifies four conditions that must be met in order for a shoreline setback variance to be granted: 1) maintenance of safe lateral access to and along the shoreline; 2) minimization of the risk of adverse impacts on beach processes; 3) minimization of the risk of structures failing and becoming loose rocks and rubble on public property, and; 4) minimization of adverse impacts on public views to, from, and along the shoreline. All of these conditions are satisfied by the subject project.

Based on the preceding analysis, the Applicant submits that the landscape improvement work as implemented fully conforms to objectives, policies, guidelines, and provisions of eligibility for a shoreline setback variance as established pursuant to Chapter 205A, HRS.

## **9.2. Conformance with Chapter 23 ROH**

Pursuant to §23-1.5(b)(1) of Chapter 23, ROH, certain structures are defined as exceptions to the general prohibition of §23-1.5(b), specifically, *Minor structures...permitted under rules adopted by the department which do not affect beach processes or artificially fix the shoreline and do not interfere with public access, public views, or open space along the shoreline.*

CRM walls are not among listed minor structures prohibited under the DPP Part 2 Rules Relating to Shoreline Setback, §15-1(c). Nevertheless, DPP personnel take the view that under internal unpublished policies, such walls do not qualify for the Minor Shoreline Permit, even if they are not in violation of any of the three standards set in Section 15-1(a) of the regulation.

Thus, DPP requires that for any rock wall within the shoreline setback area, a shoreline setback variance is required under §23-1.8(a) ROH, and the director is empowered to grant a variance for certain proposed structures. Such a variance is permitted under subparagraph (3) *Landscaping; provided that the proposed structure or activity will not adversely affect beach processes and will not artificially fix the shoreline.* These provisions explicitly reflect the purpose of Chapter 23 ROH, as stated in §23-1.2(a): *It is a primary policy of the city to protect and preserve the natural shoreline, especially sandy beaches; to protect and preserve public pedestrian access laterally along the shoreline and to the sea; and to protect and preserve open space along the shoreline.* Authority is established under §23-1.2(b) to adopt rules: *which generally prohibit within the shoreline area any construction or activity which may adversely affect beach processes, public access along the shoreline, or shoreline open space.*

All of the stated purposes under §23-1.2 ROH underscore the fact that protection and preservation of the natural shoreline, lateral public access, and shoreline open space are collectively valued expressions of the public interest. Notably, §23-1.8(b)(2) ROH establishes the Public Interest Standard for granting a variance for a structure *necessary for*

*or ancillary to private facilities or improvements that are clearly in the public interest.* The CRM walls constructed by the Applicant, and particularly those sections of the walls that lie within the shoreline setback, were shown in the preceding analysis to prevent the delivery of eroded soils to the coastal waters of Kaneohe Bay, while preserving both lateral access and open space along the shoreline. Furthermore, the improvements as constructed open shoreline views and make lateral shoreline access easier, thus actually promoting specific shoreline policies as expressed in the ordinance. These attributes of the landscape improvements are “clearly in the public interest” and thus qualify this project under Section 23-1.8(a) subsection 3.

In addition to the Public Interest Standard, Honolulu Ordinances Section 23-1.8(b)(3) establishes another standard under which a Shoreline Setback Variance can be granted based on hardship to the Applicant. A variance may be granted under subsection 23-1.8(b)(3)(A)(i) if the improvements will not adversely affect beach processes nor artificially fix the shoreline, as long as the requirements in subparagraphs (B) and (C) also are met.

Subparagraph (B) requires that the applicant would be deprived of a reasonable use of the land; that the applicant's proposal is due to unique circumstances; and that the proposal is the best practicable alternative to achieve the purpose of the chapter and the shoreline setback rules. Subparagraph (C) requires that the Director of DPP must incorporate considerations of shoreline conditions, erosion, surf and flood conditions, and lot geography into the assessment of the reasonableness of the proposed land use.

The Applicant submits that the project as completed clearly meets these criteria. As has been previously discussed, the walls as constructed neither affect shoreline processes nor artificially fix the shoreline.

Many unique circumstances are characteristic of this property as described below. The portion of the property mauka of the shoreline was subject to many of the same concerns prevalent within the setback area. Due to the steep slope of 25% or more from the north to south sides of the property, erosion and slippage of the highly plastic soil has undermined both support walls for the residence as well as support walls for the neighbor's retaining walls to the north. Moreover, the steepness of the slope from the north and east to the south and west was so great that more than half of the lot that had not been previously stabilized by terracing was too steep to use or even walk upon. Indeed, as prior configured, the difficulties of access and utilization of the shoreline area had resulted in the prior owners of the property leaving it grown up in weeds and collecting trash.

As previously reported, the situation originated many years ago, when the Aumoana subdivision was first developed. At that time, leveling activities pushed high ground cuts towards the development margins, creating perimeter lots comprised mainly of redistributed fill. This created issues for all oceanfront and southern perimeter lots in the Aumoana subdivision, and as a matter of fact, every other ocean front perimeter lot within the subdivision has previously constructed sea walls, (which do affect shoreline processes and artificially fix the shoreline) to resolve these issues.

As noted, a 25 foot wide unimproved storm drainage easement was created to receive runoff from Kaneohe Bay Drive. This easement also receives floodwaters from 8 acres of the Yacht Club Terrace Development east of the Aumoana Subdivision and from constructed above grade parking for the Kaneohe Yacht Club on the southern most 15 feet of the easement. The combined flows of runoff water against the subject property all have converged to exacerbate already bad soil erosion and slippage, providing unique circumstances justifying the leveling and stabilizing of this property to protect it from long-term effects of heavy runoff waters.

As designed, the improvements clearly constitute the alternative best conforming to the purposes of the shoreline ordinance and regulations, as well as being an ideal use of the land involved.

The actual height of the retaining walls was calculated to yield a natural lot leveling without the need to either remove or import soil. This was important to manage the project scope by keeping soil moving to a minimum. In the portion of the property mauka of the shoreline setback, the 4.5 foot retaining wall on the south dramatically reduces the steep down slope of the property from the existing retaining walls supporting the residence to the south boundary, which will arrest further movement of those walls. Along the north side of the property, replacing the unstable hillside with retaining walls that will better support the base of the neighbor's retaining walls will also help prevent future movement of his property.

The project design addressed two additional, complementary objectives. One was to create a single flat open area on the ocean side of the lot useable for such low-key activities as volleyball and other yard games. The second objective was to create open space along the shoreline amenable to routine maintenance and suitable for lateral public access, while leaving the existing natural shoreline undisturbed. These goals enhance the use of the property for the owners and for the public alike. They facilitate public access and keep the property open to enhance public views and thus constitute a reasonable, indeed, an ideal use of this residential property.

The location of the sewer easement along the shoreline defined the necessary location of the seaward portion of the wall. The Applicant had been informed that whereas the City routinely permits walls that cross easements perpendicular to the direction of the easement, walls that encroach on an easement in a parallel orientation are discouraged because of the potential expense of their removal and/or replacement in the event of a breakage in the sewer line. Thus, the wall follows the westerly (makai) boundary of the sewer easement, leaving as wide an ocean front lane as possible. The actual oceanfront walking area ranges from 8 to 13 feet wide. Placing the seaward wall makai of the sewer line instead of mauka allowed a larger flat area to be retained and also provided more space for the soil being moved, so that the walls could be kept at the lowest possible height.

The Applicant also intentionally scheduled the work during the driest two months of the year, August and September, to minimize the potential for runoff due to rain. In fact, none occurred. In addition, completing construction of the southwest wall before any earth moving was important to further contain any potential dust or runoff.

Thus, it is evident that as conceived and executed, the project addressed slope, erosion, and soil sliding problems that seriously threatened the residence, that left large portions of the property unusable, and that resulted in the ocean front itself being overgrown with weed plants and littered with trash that blocked not only viewplanes but also safe access to the shoreline. Moreover, these hardships were overcome in a manner that enhanced the appropriate use of the property, opened ocean views and access, and did not affect ocean processes or fix the shoreline.

Applicability to the subject improvements of the three criteria that comprise determinants of a valid hardship pursuant to §23-1.8(b)(3)(B) ROH is summarized as follows:

***Project Elements:***

- A. Steep slope and un-compacted, plastic soils resulted in erosion and transport of soils to Kaneohe Bay and created hazards to dwelling structures and to the neighboring property to the north.
- B. Interaction between the Subdivision landform and chronic effects of the watershed drainage easement runoff exacerbated soil instability.
- C. Slope and soil instability rendered access for shoreline maintenance problematic.
- D. Location of the sewer easement constrained placement of the makai wall.
- E. The Applicant did not alter or fix shoreline.
- F. The Applicant chose to create new open public access along the shoreline.
- G. The Applicant did not import new fill, but instead used only soil derived from leveling cuts applied north to south.
- H. The Applicant's selected remedy reflected the advice of the Licensed Professional Architect as to the choice of the best alternative to effectively achieve the project objectives while posing the least risk of damage to the shoreline area during construction.

***Hardship Standards summary:***

***1: Deprivation of a reasonable use of the land:***

Elements A, B, and C comprise pre-construction characteristics of the parcel that posed a hazard to existing dwellings, that impeded routine shoreline management, and that contributed to erosive runoff from the property that entered protected waters of Kaneohe Bay. Implemented landscape improvements addressed these hazards and mitigated likely future damage to his property. Prohibition of the implemented work would deprive the Applicant of continued reasonable use of his property.

**2: *Unique circumstances:***

Elements A, B, C, and D define problematic attributes of this specific parcel, and the Applicant has effected a solution that is fully consonant with the purpose of Chapter 23 ROH to *protect and preserve the natural shoreline,... preserve public pedestrian access laterally along the shoreline..., and preserve open space along the shoreline [ref. §23-1.2(a) ROH].*

**3: *Best practical alternative to achieve setback purposes:***

Elements E, F, G, and H reflect aspects of the implemented alternative that make it the solution that best conforms to the purpose of Chapter 23 ROH.

Pursuant to the cited provisions of Chapter 23 ROH, these findings offer ample grounds for granting a Shoreline Setback Variance.

## **10. Anticipated Agency Determination**

The Applicant anticipates that the City and County of Honolulu Department of Planning and Permitting will issue a Finding of No Significant Impact (FONSI) after consideration of the foregoing analysis.

## **11. Findings and Reasons Supporting the Anticipated Agency Determination**

Pursuant to § 11-200-12 Hawai‘i Administrative Rules, an action is considered to have a significant effect on the environment if it:

**Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;**

Improvements to the subject parcel constitute no present or future threat of loss or destruction of the natural or cultural integrity of the existing shoreline.

**Curtails the range of beneficial uses of the environment;**

Improvements to the subject parcel enhance the range of beneficial uses of the environment by improving public access to the site.

**Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders;**

Improvements to the subject parcel are not in conflict with HRS Chapter 344, nor do they conflict with relevant court decisions or executive orders.

**Substantially affects the economic welfare, social welfare, and cultural practices of the community or State;**

Improvements to the subject parcel have no effect on economic or social welfare, nor do they affect cultural practices of the community or the State.

**Substantially affects public health;**

Improvements to the subject parcel have no effect on public health.

**Involves substantial secondary impacts, such as population changes or effects on public facilities;**

Improvements to the subject parcel will have no secondary or cumulative impacts on Kaneohe Bay and its surrounding communities.

**Involves a substantial degradation of environmental quality;**

By preventing erosion of soil from the subject property, landscape improvements will contribute to an enhancement of the environmental quality of the adjacent bay ecosystem.

**Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;**

Improvements to the subject parcel constitute a discrete management action pertinent to protection of coastal waters immediately adjacent to the parcel, and they have no extended, cumulative effect, nor do they necessitate any action on a larger scale.

**Substantially affects a rare, threatened, or endangered species, or its habitat;**

No rare, threatened, or endangered species inhabit the subject parcel.

**Detrimentially affects air or water quality or ambient noise levels;**

By preventing erosion runoff, the improvements to the subject parcel improve water quality of the adjacent bay. Neither air quality nor ambient noise levels are altered in any way by the action.

**Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;**

Improvements to the subject parcel are located in an environmentally sensitive coastal area, but they act to stabilize erosion-prone lands in order to mitigate soil loss experienced on adjacent properties.

**Substantially affects scenic vistas and viewplanes identified in county or state plans or studies;**

Improvements to the subject parcel have no effect on scenic viewplanes identified in county or State plans.

**Requires substantial energy consumption.**

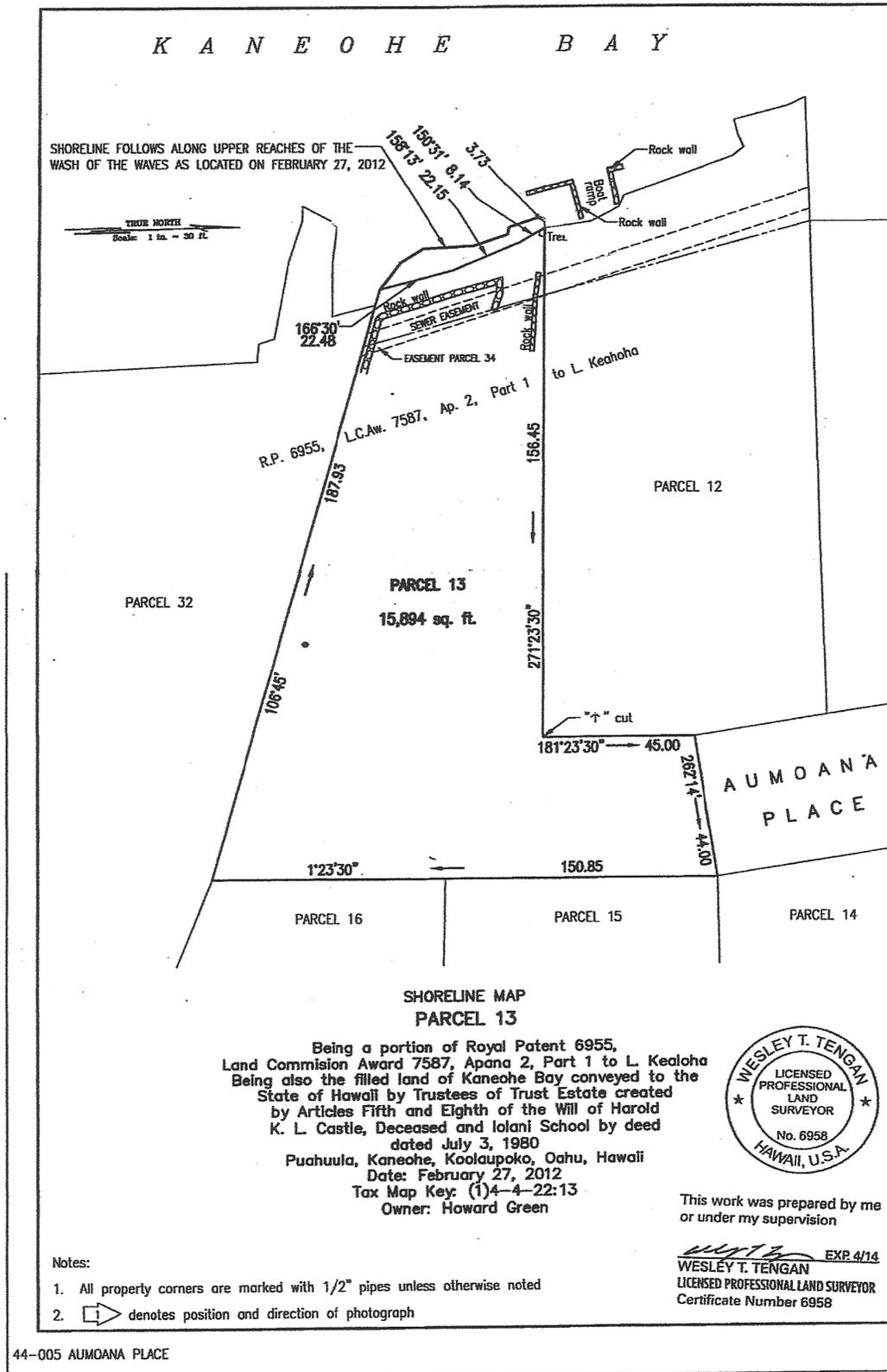
Improvements to the subject parcel are entirely energy-neutral.

## **12. Required Approvals**

The project requires the following:

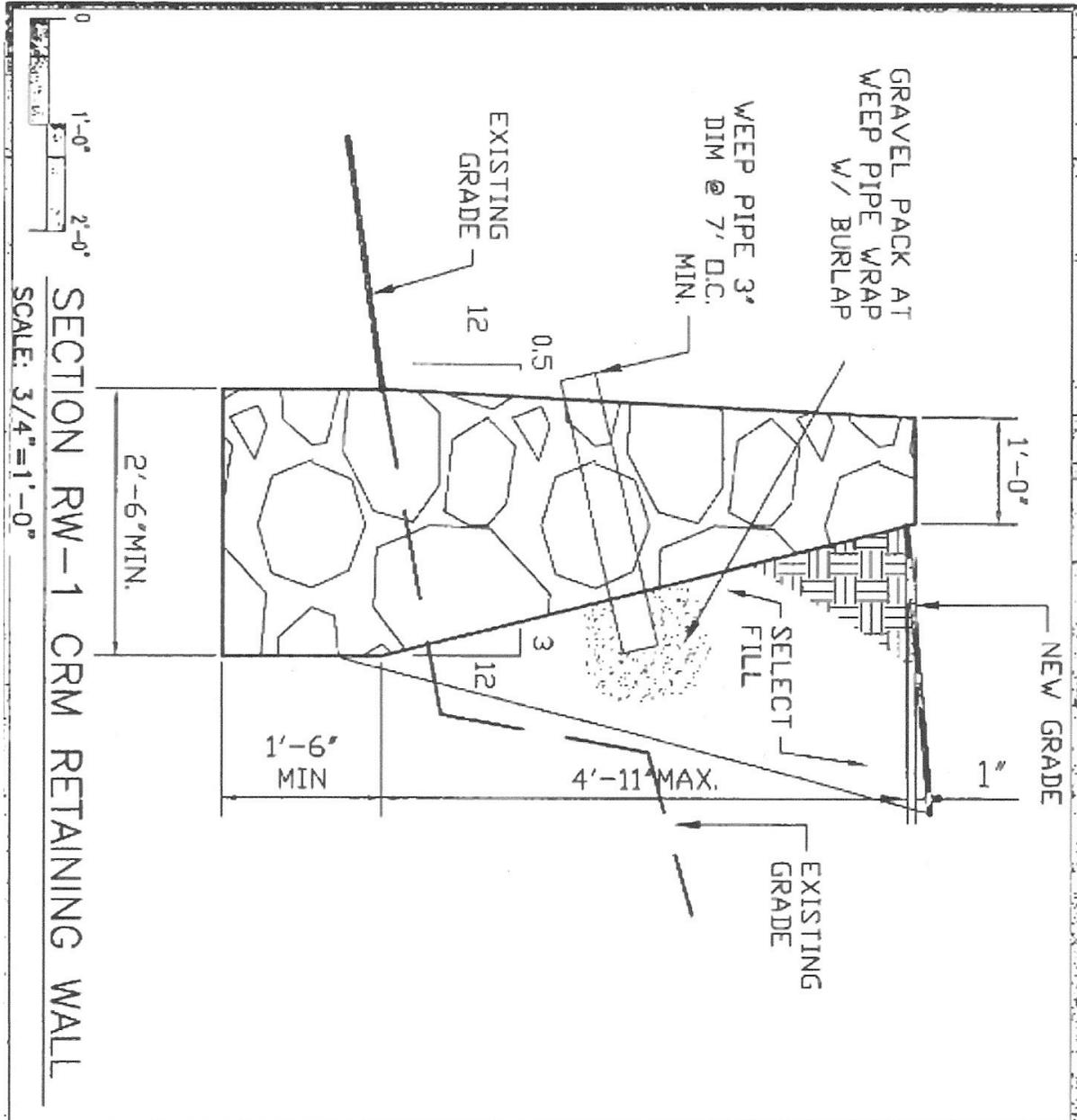
- State of Hawai‘i Shoreline Certification
- City and County of Honolulu Shoreline Setback Variance
- City and County of Honolulu Grading Permit
- City and County of Honolulu Building Permit
- City and County of Honolulu Build Over Easement Approval

APPENDIX 1. Shoreline Survey, February 27, 2012





APPENDIX 3. Section Drawing, CRM Wall.



This work was prepared by me or under my supervision. Construction of this project will be under my observation.

*Reynaldo D. Riggs*  
 Signature  
 Expiration Date: April 30, 2014

REF:  
 PROJECT NO: 1100  
 DATE:  
 CAD DWG FILE: 1100-1-210-1100-1.dwg  
 DRAWN BY: RDR  
 CHK'D BY: RDR



SHEET TITLE  
 SECTION CRM RETAINING WALL

PROJECT  
 MINOR SHORELINE STRUCTURES PERMIT

DRAWING  
 MSS-2



**APPENDIX 4**

**Agency Comments and Response Letters**

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 7<sup>TH</sup> FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 768-8000 • FAX: (808) 768-8041  
DEPT. WEB SITE: [www.honolulu.gov](http://www.honolulu.gov) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)

KIRK CALDWELL  
MAYOR



October 8, 2013

GEORGE I. ATTA, FAICP  
DIRECTOR

ARTHUR D. CHALLACOMBE  
DEPUTY DIRECTOR

2013/ED-7(ST)

Mr. John T. Harrison, Ph.D.  
3E Advisory Services  
3232 Kaohinani Drive  
Honolulu, Hawaii 96817

Dear Mr. Harrison:

SUBJECT: Draft Environmental Assessment  
Shoreline Setback Variance  
Howard Green  
44-005 Aumoana Way - Kaneohe  
Tax Map Key 4-4-22: 13

Our comments on the Draft Environmental Assessment (EA) for the above project are as follows:

Section 1 - Introduction: The Final EA should clearly state that the Applicant seeks an *after-the-fact* Shoreline Setback Variance for the construction two concrete rubble masonry (CRM) retaining walls and grading (fill) within the 40-foot shoreline setback.

The background for the request should disclose that the Applicant was cited for the unauthorized construction of the improvements by the Department of Planning and Permitting (DPP) on October 26, 2011, via Notice of Violation No. 2011/NOV-10-161, and that fines were imposed on February 12, 2012, via Notice of Order No. 2011/NOO-291.

This introduction should also disclose that the Applicant filed an application for a Minor Shoreline Structure (No. 2012/MSS-14) on July 23, 2012, which was returned by DPP as ineligible on July 27, 2012. We note that the MSS application was submitted by the Applicant despite having received three (3) written responses and a face-to-face meeting that CRM retaining walls were not minor shoreline structures pursuant to Section 15-1(b) of the DPP Part 2 Rules Relating to Shoreline Setback and the Special Management Area.

A general summary of the site should also be provided, including the parcel size, its State Land Use District, County Zoning, Special Management Area (SMA) and Flood Zone designations.

A list of all permit required for the proposal should be provided, as specified by Section 11-200-10 (11), Hawaii Administrative Rules (HAR), including grading, building permits and a build over easement approval.

Mr. John T. Harrison  
October 8, 2013  
Page 2

Section 5 - General Description of Subject Landscape Improvements: A more complete description of the subject improvements must be provided, including the length, height, width, and composition of the two CRM retaining walls. The certified shoreline survey, site plan, and section drawings should be referenced and included in this section of the Final EA. We note that the 40-foot shoreline setback line shown on the Site Plan by Reynaldo D. Rios is not accurately shown. The 40-foot radius off the left (southwest) corner of the certified shoreline of the site extends further mauka (toward the center of the property) than is represented.

Although the presence of a dwelling, carport, and various masonry and landscaping features are indicated, their respective size, location, and orientation are important details which are relevant to the approval being sought, and should be provided (i.e., the 2,240 sq. ft. dwelling is located on mauka portion of the 15,894 sq. ft. parcel, etc.). A photo key reference would be helpful to better orient the reader to Figures 2 to 10 (Note, there are two Figure 7s).

Section 5 Summary Description of the Affected Environment: This section (which should be No. 6) should be expanded to describe the original site characteristics, including elevation, slope (e.g., site profile), soil type, vegetation, and improvements which existed prior to project. The Final EA should provide technical information regarding the completion of construction activity, including estimates of amount of grading, fill, and type fill that was utilized, depth of foundations excavated, and the structures removed, etc. This section should *describe* existing drainage patterns and improvements (e.g., two-foot swale, six-inch pipeline, etc.) on and near the site. The Final EA should discuss *how* the proposal has affected the existing drainage conditions.

Alternative Considered: A meaningful exploration of alternative considered should be discussed. The Final EA should clarify whether the selection of the CRM retaining walls was based on a geotechnical evaluation of the soil and site conditions and an assessment of actual (verse anecdotal) analysis of slope hazards which lead to the elimination of other engineering alternatives, including non-hardening methods, such as anchored mesh systems, revised runoff, and infiltration controls combined with synthetic geotextile fabric and bioengineered cover systems.

Section 7 Proposed Mitigation Measures: The Final EA should describe what actual short-term construction mitigation measures, if any, were employed to prevent the possible drainage of loose soil or construction debris from making its way into nearshore waters of Kaneohe Bay.

Ko'olaupoko Sustainable Communities Plan: The Final EA should include a discussion of how the proposed project is consistent with Section 3.1.3.2 of the Ko'olaupoko Sustainable Communities Plan relating to shoreline areas.

Shoreline Setback Regulations, Chapter 23, ROH: A new section must be added that describes how the proposal conforms with the shoreline setback regulations of Chapter 205A-46, Hawaii Revised Statutes and Chapter 23, Revised Ordinances of Honolulu (ROH). We strongly suggest that this section includes a comprehensive discussion of how the proposal meets the three tests of "hardship" necessary to obtain a shoreline setback variance; how the existing

Mr. John T. Harrison  
October 8, 2013  
Page 3

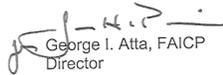
improvements represents the alternative best that meets the objectives and criteria set forth by the shoreline setback regulations; and why other alternatives, which may be practicable, were deemed to have greater adverse impacts to the shoreline and coastal resources. Please note that in the absence of a meaningful exploration of alternatives, the "third test" of hardship cannot be established (Section 23-1.8(b)(3)(B)(iii), ROH).

Relative to the Coastal Zone Management Program, HRS Chapter 205A, the Final EA can state that the proposed improvements are associated with the development of a single-family dwelling, and therefore is "excluded" from Special Management Area (SMA) requirements.

We are also forwarding copies of the comment letters received so far for the proposed project.

If you have any questions, please contact Steve Tagawa of our staff at 768-8024.

Very truly yours,

  
George I. Atta, FAICP  
Director

GIA:nw

Enclosures

cc: DLNR-OCCL  
OEQC



*3E Advisory Services*  
*Energy Ecology Environment*

November 10, 2013

Mr. George I. Atta, FAICP, Director  
Department of Planning and Permitting  
City and County of Honolulu  
600 South King Street, 7<sup>th</sup> Floor  
Honolulu, HI 96813

Dear Mr. Atta:

Re: Draft Environmental Assessment  
Shoreline Setback Variance (after-the-fact)  
Howard Green  
44-005 ~~Aumoa~~ Way – Kaneohe  
TMK: 4-4-22: 13

Thank you for your letter dated October 8, 2013 offering comments on the subject draft Environmental Assessment (EA). Responses to comments are provided in the same sequence as they appear in your letter.

1. *The final EA should clearly state that the Applicant seeks an after-the-fact Shoreline Setback Variance for the construction [of] two concrete rubble masonry (CRM) retaining walls and grading (fill) within the 40-foot shoreline setback:*

The initial sentence of Section 1 in the Final EA has been modified to incorporate most of this statement.

2. *Disclosures of DPP's citation, imposed fine, and the Applicant's subsequent Minor Shoreline Structure application:*

Disclosures of the noted citation, fine, and filing for a Minor Shoreline Structure have been added to Section 1. However, the Applicant notes that the imposed fine was appealed, and that resolution of that appeal remains pending.

3. *A general summary of the site should also be provided, including parcel size, its State Land Use District, County Zoning, Special Management Area (SMA) and Flood Zone designations:*

The overall lot size of the subject parcel is 15,894 square feet. It is located in the Urban District on land zoned by Honolulu County as R-10, and is in the Special Management

3232 Kaohi'oni Drive, Honolulu, Hawaii'i 96817  
(808) 780-1223; fax: (808) 595-5143  
jth3@hawaii.rr.com

Area. The Flood Zone designation is D, Undetermined Flood Hazard. These descriptors have been added to Section 6 and included in the Project Summary.

4. *A list of all permit[s] required for the proposal should be provided:*

The Final EA includes a new section (Section 12) listing all required permits, including grading and building permits and a build over easement approval.

5. *A more complete description of the subject improvements must be provided, including the length, height, width, and composition of the two CRM retaining walls:*

Additional language has been added to Section 5 of the Final EA describing the dimensions of two CRM walls: the rear wall is comprised of three segments with an aggregated length of 226.7 feet, a maximum height above grade of 4.4 feet, and varying widths proportional to height at different stations; the wall to the right and front of the dwelling is comprised of 5 segments with a total length of 150.9 feet, a maximum height above grade of 6.5 feet, and similarly varying widths at grade. Both walls are constructed from rock of igneous basaltic origin fitted and cemented in place.

6. *The certified shoreline survey, site plan, and section drawings should be referenced and included...Although the presence of a dwelling, carport, and various masonry and landscaping features are indicated, their respective size, location, and orientation are important details...and should be provided:*

The Shoreline Map prepared by Wesley Tongan, attendant on his survey performed on February 27, 2012, has been included in the EA as Appendix 1, and is referenced in Section 5. The Site Plan prepared by Reynaldo D. Rios to accompany the Applicant's Minor Shoreline Structure application has been updated with a corrected 40-foot shoreline setback line and added as a new figure in Section 5. The Site Plan details the presence, size, location, and orientation of all existing structures on the subject parcel, including masonry and landscaping features. A section drawing of the constructed CRM walls is referenced in Section 5 and appears in the Final EA as Appendix 3.

7. *A photo key reference would be helpful to better orient the reader to Figures:*

A photo key has been compiled using a plot map, and the location and orientation of views for all elevation photos of the subject parcel is included in the FEA as Appendix 2.

8. *[Section 6] should be expanded to describe the original site characteristics, including elevation, slope, soil type, vegetation, and improvements which existed prior to the project. The Final EA should provide technical information regarding the completion of*

*construction activity, including estimates of amount of grading, fill, and type fill that was utilized, depth of foundations excavated, and the structures removed, etc.:*

As previously noted, Section 6 in the Final EA now includes basic information about the subject parcel, including lot size, zoning, and Flood Insurance Rate Map (FIRM) designation. In addition, a new figure has been included showing an elevation view of the parcel in its pre-construction state. Also included are discussions of existing vegetation, landscaping improvements, construction activities, and the effects of new landscape improvements on drainage. A detailed description of soil type and its relationship to both drainage and structural concerns is included in Section 6 as well.

9. *The Final EA should clarify whether the selection of the CRM retaining walls was based on a geotechnical evaluation of the soil and site conditions and an assessment of actual (versus anecdotal) analysis of slope hazards.*

Section 7 of the Final EA has been expanded to include a more detailed discussion of effects of the landscape modifications on drainage flow from the subject property and the recommendations of the licensed professional architect regarding the selection of design alternatives to address drainage and landscape objectives. Also included is a discussion of the conclusions reached by the Kō'olaupoko Sustainable Communities Plan relating to shoreline areas in the project region.

10. *The Final EA should describe what actual short-term construction mitigation measures, if any, were employed to prevent the possible drainage of loose soil or construction debris...into nearshore waters of Kaneohe Bay:*

Section 8 of the Final EA notes that silt barriers and best management practices effectively prevented transport of loose soils to the Bay waters during construction.

11. *A new section must be added that describes how the proposal conforms with the shoreline setback regulations of Chapter 205A-46, Hawaii Revised Statutes and Chapter 23, Revised Ordinances of Honolulu (ROH):*

The Final EA contains a new section (Section 9. Legal and Regulatory Conformance), including subsections that discuss project compliance with HRS 205A and with Chapter 23 ROH. This section examines the regulatory framework for establishment and management of shoreline setbacks and provides a detailed analysis of the project's compliance with these regulations.

12. *Relative to the Coastal Zone Management Program, HRS Chapter 205A, the Final EA can state that the proposed improvements are associated with the development of a*

Mr. George I. Atta, FAICP, Director  
Department of Planning and Permitting  
City and County of Honolulu

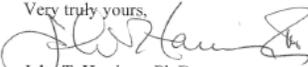
November 10, 2013

*single-family dwelling, and therefore is "excluded" from Special Management Area (SMA) requirements:*

This statement has been included in Section 9 of the Final EA.

Thank you for your comprehensive and thoughtful review of the subject draft EA, and please don't hesitate to contact me regarding the substance of my response to your letter. Your letter and my response will be included with other comments and responses in the Final EA.

Very truly yours,



John T. Harrison, Ph.D.

NEIL ABERCROMBIE  
DIRECTOR OF HEALTH



RECEIVED

LORETTA J. FUDDY, A.C.S.W., M.P.H.  
DIRECTOR OF HEALTH

'13 OCT -3 P1:19

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 3378  
HONOLULU, HI 96801-3378

DEPT OF PLANNING  
AND PERMITTING  
CITY & COUNTY OF HONOLULU, HI

In reply please refer to  
EMD:WB

10007PST.13  
October 1, 2013

Mr. George I. Atta, FAICP  
Director  
City and County of Honolulu  
Department of Planning and Permitting  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, Hawaii 96813

Dear Mr. Atta:

**SUBJECT: Comments on the Draft Environmental Assessment for the Howard Green After-the-fact Shoreline Setback Variance Kaneohe, Island of Oahu, Hawaii**

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated September 17, 2013, requesting comments on the subject project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. Applicant may be responsible for fulfilling additional requirements related to our program. We recommend that the applicant also read our standard comments on our website at:  
<http://health.hawaii.gov/epo/files/2013/05/CWB-standardcomment.pdf>.

1. Any project and its potential impacts to State waters must meet the following criteria:
  - a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
  - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
  - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
2. Applicant may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, applicant

The Department of Health has reviewed the subject document and offers these comments.

Mr. George I. Atta, FAICP  
October 1, 2013  
Page 2

10007PST.13



*3E Advisory Services*  
*Energy Ecology Environment*

November 10, 2013

must submit the CWB Individual NPDES Form through the e-Permitting Portal and the hard copy certification statement with \$1,000 filing fee. Applicant needs to access the e-Permitting Portal website at: <https://eha-cloud.doh.hawaii.gov/epermit/View/home.aspx>. Applicant will be asked to do a one-time registration to obtain their login and password. After applicant registers, they need to click on the Application Finder tool and locate the "CWB Individual NPDES Form." Then follow the instructions to complete and submit this form.

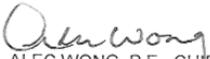
3. If project involves work in, over, or under waters of the United States, it is highly recommend that the applicant contact the Army Corp of Engineers, Regulatory Branch (Tel: 438-9258) regarding their permitting requirements.

Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and Hawaii Administrative Rules (HAR), Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.

If you have any questions, please visit our website at:  
<http://health.hawaii.gov/cwb>, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

  
ALEC WONG, P.E., CHIEF  
Clean Water Branch

ST:jst

c: DOH-EPO [via email only]

State of Hawai'i, Department of Health  
P.O. Box 3378  
Honolulu, HI 96801

Attn: Mr. Alec Wong, PE, Chief  
Clean Water Branch

Dear Mr. Wong:

Re: Draft Environmental Assessment  
After-the-Fact Shoreline Setback Variance  
Howard Green  
44-005 Aumoaana Way - Kaneohe  
Tax Map Key 4-4-22: 13  
Response to Comments dated October 1, 2013

Dear Mr. Wong:

Thank you for your review and comments on the referenced draft Environmental Assessment (EA), and we are pleased to provide the following responses.

1. The Final EA notes in a number of locations that landscape improvements undertaken have the effect of reducing introduction of eroded soils in runoff from the subject property into Class AA waters of Kaneohe Bay. Thus the existing uses of the receiving State water necessarily are maintained and protected to a greater degree than prior to implementation of the improvements. Similarly, there is no change in designated uses, nor will the project result in discharges into State waters that affect existing water quality criteria.
2. The Applicant has not and will not undertake hydrotesting of water, dewatering of soil, or grading and construction activity that includes disturbance of greater than 1 acre of land area, and therefore no NPDES permit will be required.
3. No work has been or will be performed in, over, or under waters of the United States, and a Section 401 Water Quality Certification (WQC) pursuant to Paragraph 4-1(a)(1) of the Federal Water Pollution Control Act is not required.

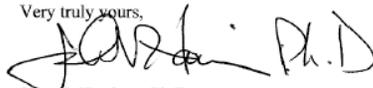
3232 Koaeha Drive, Honolulu, Hawai'i 96817  
tel: (808) 780-1223; fax: (808) 595-5143  
jth3@hawaii.rr.com

Mr. Alec Wong, PE, Chief  
Clean Water Branch

4. As noted in the Final EA, all construction activities were conducted using best management practices, and no discharges related to construction occurred. At no time during the project did the Applicant fail to comply fully with the State's Water Quality Standards.

I the event that you have any additional questions or concerns, please do not hesitate to contact me.

Very truly yours,



John T. Harrison, Ph.D.  
Principal  
3E Advisory Services

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



WILLIAM J. AHLA, JR.  
GOVERNOR  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
COMMISSIONER OF WATER RESOURCES MANAGEMENT

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

October 7, 2013

City and County of Honolulu  
Department of Planning and Permitting  
Attention: Mr. Steve Tagawa  
650 South King Street, 7th Floor  
Honolulu, Hawaii 96813

via email: [steve.tagawa@hawaii.gov](mailto:steve.tagawa@hawaii.gov)

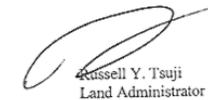
Dear Mr. Tagawa,

SUBJECT: Chapter 343, Hawaii Revised Statutes, Draft Environmental Assessment (DEA),  
Applicant Howard Green, After-the-fact Shoreline Setback Variance

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from (1) Land Division Oahu District; (2) Ian Hirokawa; and (3) Office of Conservation and Coastal Lands. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,



Russell Y. Tsuji  
Land Administrator

Enclosure(s)



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

September 23, 2013

MEMORANDUM

TO: DLNR Agencies:  
 Div. of Aquatic Resources  
 Div. of Boating & Ocean Recreation  
 Engineering Division  
 Div. of Forestry & Wildlife  
 Div. of State Parks  
 Commission on Water Resource Management  
 Office of Conservation & Coastal Lands  
 Land Division - Maui District  
 Historic Preservation  
 Ian Hirokawa

FROM: Russell Y. Tsuji, Land Administrator  
SUBJECT: Draft Environmental Assessment (DEA) After-the-fact Shoreline Setback Variance  
LOCATION: Kaneohe, Island of Oahu; TMK: (1)4-4-022:013  
APPLICANT: Howard Green

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 4, 2013.

Only one (1) copy of the CD is available for your review in Land Division office, Room 220.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent, Steve Molmen at 587-0439. Thank you.

Attachments

- We have no objections.
- We have no comments.
- Comments are attached.

Signed: [Signature]  
Print Name: Ian Hirokawa  
Date: 10/2/13

cc: Central Files



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

September 23, 2013

MEMORANDUM

TO: DLNR Agencies:  
 Div. of Aquatic Resources  
 Div. of Boating & Ocean Recreation  
 Engineering Division  
 Div. of Forestry & Wildlife  
 Div. of State Parks  
 Commission on Water Resource Management  
 Office of Conservation & Coastal Lands  
 Land Division - Maui District  
 Historic Preservation  
 Ian Hirokawa

FROM: Russell Y. Tsuji, Land Administrator  
SUBJECT: Draft Environmental Assessment (DEA) After-the-fact Shoreline Setback Variance  
LOCATION: Kaneohe, Island of Oahu; TMK: (1)4-4-022:013  
APPLICANT: Howard Green

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 4, 2013.

Only one (1) copy of the CD is available for your review in Land Division office, Room 220.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent, Steve Molmen at 587-0439. Thank you.

Attachments

- We have no objections.
- We have no comments.
- Comments are attached.

Signed: [Signature]  
Print Name: Ian Hirokawa  
Date: 10/2/13

cc: Central Files

141-11, ANTI-CORRUPTION  
LAWS OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

September 23, 2013

MEMORANDUM

OA 14-54

WILLIAM J. ABLE, JR.  
LAND DIVISION  
MANAGEMENT & LAND ACQUISITION SERVICES  
MANAGEMENT & LAND ACQUISITION SERVICES

RECEIVED  
LAND DIVISION  
SEP 25 10 40 AM '13  
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TO: FROM:

- DLNR Agencies:
- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division - Maui District
- Historic Preservation
- Ian Hirokawa

TO:

FROM: Russell Y. Tsuji, Land Administrator

SUBJECT: Draft Environmental Assessment (DEA) After-the-Fact Shoreline Setback Variance

LOCATION: Kaneohe, Island of Oahu; TMK: (1)4-4-022:013

APPLICANT: Howard Green

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 4, 2013.

Only one (1) copy of the CD is available for your review in Land Division office, Room 220.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent, Steve Molmen at 587-0439. Thank you.

Attachments

- We have no objections.
- We have no comments.
- Comments are attached.

Signed:

Print Name: \_\_\_\_\_

Date: 9-30-13

cc: Central Files



3E Advisory Services  
Energy Ecology Environment

November 10, 2013

State of Hawai'i, Department of Land and Natural Resources  
Land Division  
P.O. Box 621  
Honolulu, HI 968019

Attn: Mr. Russell Y. Tsuji  
Land Administrator

Dear Mr. Tsuji:

Re: Draft Environmental Assessment  
After-the-Fact Shoreline Setback Variance  
Howard Green  
44-005 Aumoana Way - Kaneohe  
Tax Map Key 4-4-22: 13  
Response to Comments dated October 7, 2013

Thank you for your review and comments on the referenced draft Environmental Assessment (EA), and we are pleased to provide the following response.

I understand that you have circulated the referenced draft EA among Divisions and Offices of the Department, and that you have received and transmitted responses from the Land Division - Oahu District; Mr. Ian Hirokawa; and the Office of Conservation and Coastal Lands. The record indicates that there were no comments provided by the Divisions and Offices that responded.

In the event that you have any additional questions or concern, please do not hesitate to contact me.

Very truly yours,

John T. Harrison, Ph.D.  
Principal  
3E Advisory Services

3232 Kaohinani Drive, Honolulu, Hawai'i 96817  
tel: (808) 780-1223; fax: (808) 595-5143  
jth3@hawaii.rr.com



RECEIVED  
United States Department of the Interior



13 SEP 26 11:24 AM  
PACIFIC ISLANDS WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office  
DEPT OF THE INTERIOR  
AND PERMITTING  
500 Ala Moana Boulevard, Room 3-122, Box 50088  
CITY & COUNTY OF HONOLULU, Honolulu, Hawaii 96850

In Reply Refer To:  
2013-SL-0462

Mr. George I. Atta, FAICP  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street, 7<sup>th</sup> Floor  
Honolulu, HI 96813

SEP 25 2013

Subject: Draft Environmental Assessment After-the-fact Shoreline Setback Variance  
Kaneohe, Oahu TMK: 4-4-022-013

Dear Mr. Atta:

Thank you for your letter dated September 17, 2013, received on September 18, 2013, requesting information on listed species and critical habitat in the vicinity of 44-005 Aumoana Way, Kaneohe on the island of Oahu. The purpose of the proposed project is to retain two low concrete rubble masonry retaining walls and landscaping (backfill) with the 40-foot shoreline setback. The principle function of the wall is to retain soils comprising the lawn terrace from erosion into either the drainage easement or the shoreline areas while preserving open space for access along the shoreline itself.

We have reviewed the information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Program as it pertains to listed species and designated critical habitat. No federally designated or proposed critical habitat occurs within the proposed project footprint.

If you have questions regarding this letter, please contact Jason Chow, Fish and Wildlife Intern (phone: 808-792-9400, fax: 808-792-9580).

Sincerely,

Daniel Clark  
Team Manager  
O'ahu, Kaua'i, Northwestern Hawaiian  
Islands and American Samoa



3E Advisory Services  
Energy Ecology Environment

November 10, 2013

United States Department of the Interior  
Fish and Wildlife Service  
Pacific Islands Fish and Wildlife Office  
500 Ala Moana Boulevard, Room 3-122, Box 50088  
Honolulu, Hawaii 96850

Attn: Mr. Daniel Clark  
Team Manager

Dear Mr. Clark:

Re: Draft Environmental Assessment  
After-the-Fact Shoreline Setback Variance  
Howard Green  
44-005 Aumoana Way – Kaneohe  
Tax Map Key 4-4-22: 13  
Response to Comments dated September 25, 2013

Thank you for your review and comments on the referenced draft Environmental Assessment (EA), and we are pleased to provide the following response.

I understand that you have reviewed information provided in the draft EA and pertinent information in your files, including data compiled by the Hawaii Biodiversity and Mapping Program. Your conclusion is that no federally listed or proposed critical habitat occurs within the project area.

In the event that you have any additional questions or concern, please do not hesitate to contact me.

Very truly yours,

John T. Harrison, Ph.D.  
Principal  
3E Advisory Services

3232 Kaohinani Drive, Honolulu, Hawai'i 96817  
tel: (808) 780-1223; fax: (808) 595-5143  
jth3@hawaii.rr.com



**OFFICE OF PLANNING  
STATE OF HAWAII**

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone (808) 587-2846  
Fax (808) 587-2824  
Web http://planning.hawaii.gov/

NEIL ABERCROMBIE  
GOVERNOR

JESSE K. SOUKI  
DIRECTOR  
OFFICE OF PLANNING

Mr. George I. Atta  
Page 2  
September 30, 2013

Ref. No. P-14123

September 30, 2013

Mr. George I. Atta, Director  
Department of Planning and Permitting  
City and County of Honolulu  
650 S. King Street, 7th Floor  
Honolulu, Hawaii 96813

RECEIVED  
13 OCT -2 P 1:08  
DEPT OF PLANNING  
AND PERMITTING  
CITY & COUNTY OF HONOLULU, HI

Dear Mr. Atta:

Subject: Hawaii Revised Statutes Chapter 343, Draft Environmental Assessment,  
Request for After-the-Fact Shoreline Setback Variance, 44-005 Aumoana Way,  
Kaneohe, Oahu, Tax Map Key (TMK): (1)4-4-022: 013

Thank you for the opportunity to provide comments on the draft Environmental Assessment (EA) for the subject project at Kaneohe, Oahu.

According to the draft EA, the purpose of the subject project is to retain two low concrete rubble masonry (CRM) retaining walls and landscaping (backfill) within the 40-foot shoreline setback.

The Office of Planning has reviewed the draft EA and has the following comments.

1. The EA should provide a list of all required permits and approvals, pursuant to Hawaii Administrative Rules §11-200-10. Although the subject project is for after-the-fact improvements to the parcel, the final EA should add the list of all required permits and approvals.
2. The final EA should include an assessment as to how the subject project conforms to Hawaii Revised Statutes (HRS) Chapter 205A, coastal zone management objectives and policies, and provide justifications for shoreline setback variance, pursuant to HRS §205A-46.
3. The final EA should provide the length, height, and width of the two low CRM retaining walls. The dimensional information with the existing photographs will be the recorded references for potential future alterations on the retaining walls.
4. The final EA should indicate the recorded owner of the parcel TMK: (1)4-4-022: 013. The draft EA, on page 8, states that, "The upper and lower retaining rock walls

evident in Figure 2 are part of recent landscape work completed by the parcel owner." However, the draft EA did not identify who is the owner of the parcel where the subject project is located.

If you have any questions regarding this comment letter, please contact Leo Asuncion, Coastal Zone Management Program Manager, at 587-2846.

Sincerely,

Jesse K. Souki  
Director



*3E Advisory Services*  
Energy Ecology Environment

November 10, 2013

State of Hawaii Office of Planning  
235 South Beretania Street, 6<sup>th</sup> Floor  
Honolulu, HI 96804  
Attn: Mr. Jesse Souki, Director

Dear Mr. Souki:

Re: Draft Environmental Assessment  
After-the-Fact Shoreline Setback Variance  
Howard Green  
44-005 Aumoana Way – Kaneohe  
Tax Map Key 4-4-22: 13  
Response to Comments dated September 30, 2013

Thank you for your review and comments on the referenced draft Environmental Assessment (EA), and we are pleased to provide the following responses.

1. A list of all required permits and approvals is provided in Section 12 of the Final Environmental Assessment (EA).
2. The Final EA includes a new section (Section 9) that addresses conformance of the subject project with Chapter 205A and provides justifications for shoreline setback variance.
3. Section 5 of the Final EA has been augmented to include dimensional information relating to the subject landscape improvements.
4. Section 1 identifies the Applicant as the recorded Fee Owner of the subject parcel.

In the event that you have any additional questions or concern, please do not hesitate to contact me.

Very truly yours,

John T. Harrison, Ph.D.  
Principal  
3E Advisory Services

3232 Kaohinani Drive, Honolulu, Hawai'i 96817  
tel: (808) 780-1223; fax: (808) 595-5143  
jth3@hawaii.rr.com

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



**HISTORIC PRESERVATION DIVISION**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

601 Kamehila Boulevard, Suite 555  
Kapolei, HI 96806

WILLIAM J. AILA, JR.  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
ESTHER KJA'AINA  
STATE DEPUTY  
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DEPARTMENT  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAPOLA'ANI ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

October 31, 2013

Mr. Steve Tagawa  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813  
[stagawa@honolulu.gov](mailto:stagawa@honolulu.gov)

LOG NO: 2013.5624  
DOC NO: 1310GC15  
Archaeology

Dear Mr. Tagawa:

SUBJECT: **Chapter 6E-8 Historic Preservation Review – After-the-Fact  
Draft Environmental Assessment, Reference No. 2013/ED-7(ST)  
44-005 Aumoana Way – Construction of a Structure within 40' Shoreline Setback  
Kaneohe Ahupua'a, Ko'olaupoko District, Island of O'ahu  
TMK: (1) 4-4-022:013**

Thank you for the opportunity to review the Draft Environmental Assessment (DEA) prepared for the After-the-Fact Landscaping and Construction Improvement Appurtenant to 44-005 Aumoana Way. The applicant Howard Green is requesting a Shoreline Setback Variance to retain his two low concrete rubble masonry (CRM) retaining walls and landscaping (backfill) within the 40-foot shoreline setback on his 15,894 square foot property. Our office received this submittal on September 26, 2013.

The DEA prepared by 3E Advisory Services (July 31, 2013) indicates the residential property consists of 15,984 square feet or approximately 0.37 acres. The property is bounded in the west by Kaneohe Bay, the southern property line runs along a City and County of Honolulu drainage easement and the Kaneohe Yacht Club property. The two existing retaining walls were built without appropriate permits by the resident, to create a barrier to soil erosion both into the drainage easement and into Kaneohe Bay.

Our records indicate that no archaeological inventory survey has been conducted and no historic properties have been identified on the subject parcel. Our Geographical Information System (GIS) records show that the land has been altered by residential usage and marina activities. The soil within this parcel is identified as Kokokahi clay, which is sticky and very plastic, and cracks upon drying. The parcel slopes into and abuts Kaneohe Bay shoreline, Kaneohe Marina and Honolulu County drainage easement. We believe **no historic properties were affected** by the construction of the two CRM retaining walls due to the unlikely presence of historic properties within an already altered landscape by (1) construction of the Kaneohe Marina and Yacht Club, and (2) by the excavation and construction of the adjacent drainage easement. In addition, we believe removal of the unauthorized walls will contribute to terrestrial runoff into a protected coastline.

Please contact Susan Lebo at (808) 692-8019 or at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) if you have any questions or concerns regarding this letter.

Aloha,

Theresa K. Donham  
Archaeology Branch Chief



*3E Advisory Services*  
*Energy Ecology Environment*

November 10, 2013

State of Hawaii Department of Land and Natural Resources  
Historic Preservation Division  
601 Kamikila Boulevard, Suite 555  
Kapolei, HI 96806  
Attn: Ms. Theresa K. Donham  
Archaeology Branch Chief

Dear Ms. Donham:

*Re:* Draft Environmental Assessment  
After-the-Fact Shoreline Setback Variance  
Howard Green  
44-005 Aumoana Way – Kaneohe  
Tax Map Key 4-4-22: 13  
Response to Comments dated October 31, 2013

Thank you for your review and comments on the referenced draft Environmental Assessment (EA). We understand that it is your belief that no historic properties were affected by the subject project, due to the unlikely presence of historic artifacts within an already altered landscape. We also are in complete agreement with your belief that removal of the constructed CRM walls will contribute to terrestrial runoff into a protected coastline.

In the event that you have any additional questions or concern, please do not hesitate to contact me.

Very truly yours,

John T. Harrison, Ph.D.  
Principal  
3E Advisory Services

3232 Kaohinani Drive, Honolulu, Hawai'i 96817  
tel: (808) 780-1223; fax: (808) 595-5143  
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