



3. **Alternative Site:** This option would require that the applicant find and develop another suitable single family residential parcel.

Positive Impacts: The short term and peripheral impacts associated with demolition and construction would be avoided.

Negative Impacts: The applicant does not own another suitable site and the land costs involved in acquiring a suitable site could be prohibitively high. The existing public safety hazard and water quality hazards would not be addressed. This alternative was deemed infeasible and dropped from consideration.

4. **Alternative Wall Designs:** Several alternative designs for the construction of the proposed wall were considered (See: Appendix D, "Conceptual Seawall Design").

- 4a. **Retaining Wall (Option 1):** This alternative would involve the excavation of a bench to sea level at the base of the cliff, construction of a conventional reinforced concrete cantilever wall 26 feet in height, and backfill behind the wall.

Positive Impacts: This alternative would effectively mitigate the existing public safety and environmental hazard, as well as the potential threat to the adjacent seawall, created by ongoing erosion. This option would tie in easily with the adjacent vertical walls, providing aesthetic consistency as well as seamless protection that will not leave the adjacent walls exposed to possible flank erosion and damage.

Negative Impacts: This option involves the excavation of approximately 3000 cubic feet of soil and rock, and the import of nearly the same amount for backfill. The haul-in and haul-out of such a large volume of material presents significant hazards for disruption and sedimentation of the beach and nearshore environment. In addition, this alternative would involve excavation to and below the water level, which presents additional environmental risks and would also trigger the requirement for a Conservation District Use Permit (CDUP). This alternative was deemed infeasible and dropped from consideration.

- 4b. **Retaining Wall (Option 2):** This alternative would involve the excavation of a bench to 14 feet above sea level (AMSL), and construction of a CRM wall from elevation 14' to the top of the bluff. A conventional retaining wall would be constructed from elevation 14' down to sea level.

Positive Impacts: Similar to Option 1 above, this alternative would effectively mitigate the existing public safety and environmental hazard, as well as the potential threat to the adjacent seawall, created by ongoing erosion. This option would tie in easily with the



adjacent vertical walls, providing aesthetic consistency as well as seamless protection that will not leave the adjacent walls exposed to possible flank erosion and damage.

Negative Impacts: This option involves the excavation of approximately 3000 cubic feet of soil and rock, and the import of nearly the same amount for backfill. The haul-in and haul-out of such a large volume of material presents significant hazards for disruption and sedimentation of the beach and nearshore environment. In addition, this alternative would involve excavation to and below the water level, which presents additional environmental risks and would also trigger the requirement for a Conservation District Use Permit (CDUP). This alternative was deemed infeasible and dropped from consideration.

F. DESCRIPTION OF PROPOSED ACTION (PREFERRED ALTERNATIVE)

The Applicant proposes to demolish the existing single-family home, which is currently sited within the Shoreline Setback Area, and construct a new single-family residence and garage on the *mauka* portion of the subject parcel (See: Figure No. 10.1-10.5, "Concept Architectural Plans"). In addition, the Applicant proposes to construct a structurally engineered shoreline armoring system in order to stabilize the shoreline bluff at the *makai* limit of the property. A detailed description of the planned improvements follows.

Seawall. Construction of the proposed seawall will involve the installation of a poured-in-place, micropile-supported grade beam across approximately 150 feet of the yard area at the top of the cliff. The grade beam would serve as an emergency equipment platform during construction, and would become part of the permanent structure. A second micropile-supported grade beam would be installed parallel and slightly seaward of the first grade beam, at the base of the exposed bank. A sprayed-on concrete facing would then be applied to the 26-foot face of the bank, and fastened to the bank with micropiles anchored into bedrock. This scheme requires a negligible amount of excavation and backfill, eliminating many of the hazards associated with wall design Options 1 and 2 as discussed above. Additionally, the proposed wall design is confined to the area above the beach and *mauka* of the shoreline, and the use of grout injection and micropiles to fasten the wall to the bank represents a much less intrusive technology than the other design alternatives (See: Appendix D, "Conceptual Seawall Design").

Residence. After demolition of an existing single-family home, a new residence will be constructed approximately 48 feet from the certified shoreline. The existing home was



constructed in 1976 and therefore will not require historic buildings documentation as part of the demolition permit process.

Planned improvements include a main two-story residence, lanai and plunge pool, a garage and driveway, landscape planting, adjustments to the existing property line walls, and site amenities.

The main rooms of the residence will be open to large covered lanais through sliding glass doors and walls with generous makai views from all levels of the structure. The residence steps back from west to east generally following the natural topography. The exterior materials were selected for their harmony with the site and will consist of local stone, cypress, stucco, and concrete siding and roof tiles. The color palette for these materials will consist of earth tones including tan, pale green, and light gray. Exterior lighting elements will be soft down-lighting and landscape-lighting.

The highest point of the proposed residence will not exceed the R-3 zoning allowance of thirty (30) feet above existing grade. Lot coverage of livable indoor space is projected at 2330 square feet, or 12%, and floor area ratio (FAR) is projected at 21%. The dimensions of the building will be roughly 79.5 feet by 73.25 feet. (See: Figure No. 10.1-10.5, "Concept Architectural Plans").

The project provides for more generous setbacks than required in the R-3 district. The front yard setback is 15 feet at the closest point for the garage, while the residence is set back an additional 30 feet. The north and the south sides of the proposed residence are set back 10 feet or more at both the lower and upper level. The topography of the site slopes downward at approximately 8% from the mauka to makai portions of the site, such that the base floor elevation of the proposed residence is 9 feet lower than the elevation at Lower Honoapiilani Road.

Landscape Planting. The proposed landscape vegetation will include drought tolerant Hawaii native trees, shrubs, and ground cover, such as the Milo tree, *Ilima* (trailing hibiscus), *Naupaka*, and *Pohuehue* (morning glory) (See: Figure No. 11, "Concept Landscape Master Plan"). Landscape plants will be watered using an automatic irrigation controller with "rain sensor" shut-off valve to prevent over watering. The project will use 80% drip irrigation to reduce water usage. Landscape water usage will be lowered further by adding crushed red cinder as soil top dressing, to prevent water evaporation from the soil. The existing *naupaka* hedge at the top of the bluff will be preserved and turf grass will be used within the shoreline setback area, to maintain an open view across the *makai* portion of the site (See: Figure No. 11, "Concept Landscape Master Plan").

G. SHORELINE SETBACK ASSESSMENT.



The shoreline fronting the parcel was certified on May 18, 2009. (See: Appendix B, "Certified Shoreline Survey Map").

Section §12-203-4 of the Shoreline Rules for the Maui Planning Commission, pertaining to the establishment of Shoreline Setback lines, states:

"(a). All lots shall have a shoreline setback line that is the greater of the distances from the shoreline as calculated under the methods listed below or the overlay of such distances:

(i). Twenty-five feet plus a distance of fifty times the annual erosion hazard rate from the shoreline;

(iii). For irregularly shaped lots, or where cliffs, bluffs, or other topographic features inhibit the safe measurement of boundaries and/or the shoreline, the shoreline setback line will be equivalent to twenty-five percent of the lot's depth as determined by the Director, to a maximum of one hundred fifty feet from the shoreline."

Section §12-203-4 of the Shoreline Rules states,

"where the shoreline is fixed by (1). artificial structures that are nonconforming or that have been approved by appropriate government agencies and for which engineering drawings exist to locate the interface between the shoreline and the structure; or (2). exposed natural stabilized geographic features such as cliffs and rock formations, the Annual Erosion Hazard Rate shall cease at the interface."

The subject parcel is fronted by a high cliff, and the shoreline is to be fixed by an "artificial structure" which has "been approved by appropriate government agencies and for which engineering drawings exist to locate the interface between the shoreline and the structure." The Annual Erosion Hazard Rate (AEHR) method of calculating the Shoreline Setback therefore does not apply to the subject property.

Furthermore, the subject parcel is irregularly shaped. A narrow, unusable strip of land 5 to 15 feet wide protrudes approximately 108 feet seaward of the developable portion of the lot, along Haukoe Point.

The proposed Shoreline Setback is therefore equivalent to twenty-five percent of the lot's depth as estimated based on the developable portion of the lot (See: Appendix C, "Shoreline Setback Determination").


Using the Average Lot Depth (ALD) method, the proposed shoreline setback for the parcel is **44.3 feet**, calculated as follows:

$$\begin{aligned} \text{Average Lot Depth: } N + \text{Mid} + \text{South} &= 168.0 + 173.6 + 190.1 = 531.7 \\ 531.7 / 3 &= \sim 177.2 \end{aligned}$$



Shoreline Setback: $177.2 \times .25 = 44.3$ feet

The proposed residence is sited approximately 48 feet *mauka* of the shoreline. The proposed residence lies outside of the setback as determined by the ALD method above; however, the construction of the seawall to stabilize the shoreline bluff involves an action within the shoreline setback area. Chapter VII of this application addresses the justification for the Shoreline Setback Variance (SSV).



III. DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

A. PHYSICAL ENVIRONMENT

1. Land Use

Existing Conditions. The subject property is located in Napili, in an area known as Alaeloa, at TMK: (2) 4-3-015:003 (See: Figures No. 1.1 and 1.2, "Regional and Aerial Location Maps," and No. 2, "TMK Map"). The parcel is located along Keonenui Bay, situated on the northwest coast of West Maui, seven miles north of Lahaina Town and 1.5 miles south of Kapalua. The parcel and surrounding parcels are zoned for residential use.

The following is a description of zoning, community plan designations, and existing land uses adjacent and in close proximity to the subject property:

North:	<u>Zoning:</u> R-3 Residential <u>Community Plan:</u> Single Family <u>State Land Use:</u> Urban <u>Existing uses:</u> Single-Family Residence.
South:	<u>Zoning:</u> R-3 Residential <u>Community Plan:</u> Single Family <u>State Land Use:</u> Urban <u>Existing uses:</u> Single-Family Residence.
East:	<u>Zoning:</u> R-3 Residential <u>Community Plan:</u> Single Family <u>State Land Use:</u> Urban <u>Existing uses:</u> Lower Honoapiilani Rd.; Single-Family Residences; Vacant Land.
West:	<u>Zoning:</u> N/A <u>Community Plan:</u> N/A <u>State Land Use:</u> N/A <u>Existing uses:</u> Pacific Ocean.

Potential Impacts and Mitigation Measures. The site of the proposed project is located within an area that is zoned for residential use and community planned for single family and multi-family residential uses. The proposed long-term residential use of the



property is permitted within the zoning district. The construction of the proposed residence will not involve any unauthorized intrusion into the Shoreline Setback Area. Chapter VII of this report contains an application for Shoreline Setback Variance to support construction of a seawall within the shoreline setback area in order to protect a shoreline bluff from erosion. In the context of the West Maui Community Plan, which was adopted in order to guide future development in the area, the proposed residence is consistent with the proposed single family uses. The proposed seawall is consistent with the environmental goals of the West Maui Community Plan, as discussed in Section IV of this report.

2. Shoreline Conditions and Processes

Existing Conditions. The subject property is located along Keonenui Bay, between Alaeloa Point and Haukoe Point, approximately 3500 feet south of Napili Bay. The beach in the project vicinity is a pocket beach typical of this stretch of coastline, about 500 - 600 feet long and nestled between the two headlands, which protrude 400 to 500 feet seaward. The properties along the northern half of the bay are occupied by the Kahana Sunset resort and condominiums. Shoreline properties along the southern half of the bay are occupied by single-family residences. The subject property is the last property along the southern end of the bay. Vertical rock and concrete walls protect the properties along the entire bay, with the exception of the subject property.

North of the property, fronting the Kahana Sunset, the shoreline consists of a sandy beach extending approximately 50 feet from the rock walls protecting the properties to the shoreline. To the south, the beach narrows dramatically, transitioning to an irregular, rough, rocky shore in front of the subject property. The substrate at the base of the cliff is a volcanic conglomerate of variable hardness, with remnants of CRM facing in some areas (See: Appendix F, "Coastal Engineering Assessment").

Potential Impacts and Mitigation Measures. Construction of the proposed wall should have no significant negative impact on shoreline conditions and processes. The wall will harden approximately 150 feet of shoreline, whereas the remaining 500 to 600 feet of shoreline fronting Keonenui Bay is already armored with vertical walls. The proposed wall will tie in to the existing vertical wall directly to the north. There is little sand fronting the subject property, and the soil substrate on the subject property does not constitute a resource for replenishment of beach sand. The base of the wall will be built landward of the vertical cliff face at the waterline. This vertical cliff face currently acts as a natural wall to reflect wave impact in the absence of a sand beach; therefore, the hardening of the bluff face is not anticipated to significantly impact existing coastal



processes, and should not aggravate or contribute to further erosion (See: Appendix F, "Coastal Engineering Assessment").

3. Marine Resources

Existing Conditions. The nearshore seafloor in Keonenui Bay consists primarily of sand in the central part of the bay, and coral, limestone and rock along the perimeter and beyond about 400 feet offshore. There is a narrow patch of rocky, cobble bottom close to shore in front of the subject property. Turbidity is higher in the southern end of the bay, with waters clearing in the central and northern portions (See: Appendix F, "Coastal Engineering Assessment").

Nearshore waters adjacent to the project site are classified as open coastal "A," according to the Water Quality Standards map prepared by the State Office of Environmental Planning and Hawaii Department of Health (See: Figure No. 12, "Water Quality Standards Map").

Potential Impacts and Mitigation Measures. The construction of the proposed single-family residence at the subject property will take place at approximately 29 feet AMSL and 48 feet from the shoreline, and as such is expected to have no impact on marine resources. The immediate project area for the wall construction is inland of the waterline, and Best Management Practices (BMPs) will be implemented to mitigate construction-phase impacts on the nearshore environment. In the long term, construction of the wall may serve to improve turbidity conditions in the southern end of the bay, given that hardening of the cliff face will mitigate further erosion of the silty clay substrate.

4. Topography and Soils

Existing Conditions. The elevation on the project site ranges from 38 feet above mean sea level (AMSL) along Lower Honoapiilani Road to 25 feet AMSL at the edge of the bluff. The ground is generally sloping downward in a westerly direction toward the ocean at a grade of approximately 8%.

According to the "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii (August 1972)," prepared by the United States Department of Agriculture Soil Conservation Service, the soils within the project site are classified as Kahana Silty Clay, 7 to 15 percent slopes, (KbC) and Rough Broken and Stony Land (rRS). KbC is characterized by slow runoff, slight to moderate erosion hazard, and



moderately rapid permeability. The rRS series consists of very steep, stony areas where runoff is rapid (See: Figure No. 13, "Soils Map").

Potential Impacts and Mitigation Measures. The site is suitable for the proposed action. The proposed residence is designed in sympathy with the natural topography of the site to minimize extensive grading.

5. Flood and Tsunami Zone

According to Panel No. 15003-0138B of the Flood Insurance Rate Map, June 1, 1981, prepared by the United States Federal Emergency Management Agency (FEMA), the project site is situated in flood zones V24, A4, and C. The site of the proposed residence is located in Flood Zone C, which represents areas of minimal flooding (See: Figure No. 6, "Flood Insurance Rate Map").

Potential Impacts and Mitigation Measures. The proposed residence is not located in a flood hazard or tsunami inundation zone, and is not anticipated to have any adverse effects with respect to flooding. The proposed seawall will be engineered to withstand the design forces calculated in the Coastal Engineering Assessment, thus reducing the likelihood that an extreme event would damage the structure. The proposed project should not be affected by or have adverse impacts upon its neighbors with regards to flood hazard potential. See Section III.D.3 for a discussion on drainage.

6. Terrestrial Biota (Flora and Fauna)

Existing Conditions. No wetlands are present on or around the subject property. Existing vegetation on the property is primarily grasses and native and non-native trees and shrubs, largely consisting of landscape planting such as plumeria, ti, croton, mulberry, naupaka, and ornamental palms. Avifauna typically found in the area includes the common mynah, several species of dove, cardinal, house finch, and house sparrow. Mammals common to this area include cats, dogs, rats, mice, and mongoose. No known rare, endangered, or threatened species of flora or fauna were discovered on the subject property.

Potential Impacts and Mitigation Measures. There are no known significant habitats of rare, endangered or threatened species of flora and fauna located on the subject property. Thus, rare, endangered, or threatened species of flora and fauna will not be impacted by the proposed project.



7. Air Quality

Existing Conditions. Air quality refers to the presence or absence of pollutants in the atmosphere. It is the combined result of the natural background and emissions from many pollution sources. The impact of land development activities on air quality in a proposed development's locale differs by project phase (site preparation, construction, occupancy) and project type. In general, air quality in West Maui is considered relatively good. Non-point source emissions (automobile) are not significant to generate a high concentration of pollutants. The relatively high quality of air can also be attributed to the region's exposure to wind, which quickly disperses concentrations of emissions. West Maui is currently in attainment of all pollutant criteria established by the Clean Air Act, as well as the State of Hawaii Air Quality Standards.

Potential Impacts and Mitigation Measures. Air quality impacts attributed to the proposed project could include dust generated by the short-term construction related activities. Site work such as grading and building construction, for example, could generate airborne particulate. Adequate dust control measures that comply with the provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust, will be implemented during all phases of construction. Some of these measures will include:

- Providing an adequate water source on site prior to start-up of construction activities.
- Landscape planting and rapid covering of bare areas, including slopes, beginning with the initial grading phase.
- Controlling of dust from shoulders, project entrances, and access roads.
- Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities.
- Controlling of dust from debris hauled away from project site.

In the long term, the proposed project is not expected to significantly increase the volume of traffic in the region, which would increase vehicular emissions such as carbon monoxide. Thus, the proposed project is not anticipated to be detrimental to local air quality.

8. Noise Characteristics

Existing Conditions. The noise level is an important indicator of environmental quality. In an urban environment, noise is due primarily to vehicular traffic, air traffic, heavy machinery, and heating, ventilation, and air-conditioning equipment. Ramifications of



various sound levels and types may impact health conditions and an area's aesthetic appeal. Noise levels in the vicinity of the project area are generally low. Traffic noise from Lower Honoapiilani Road and noise associated with the residential uses nearby are the predominant sources of background noise in the vicinity of the subject property.

Potential Impacts and Mitigation Measures. In the short-term, the proposed project could generate some adverse impacts during construction. Noise from heavy construction equipment, such as material-carrying trucks and trailers, would be the dominant source of noise during the construction period. To minimize construction related impacts to the surrounding neighbors, the developer will limit construction activities to normal daylight hours, and adhere to the Department of Health's Administrative Rules, Chapter 11-46, Community Noise Control." In the longer-term, the proposed project should not significantly impact existing noise conditions in the area due to the relatively small increase in traffic generated by the project.

9. Archaeological/Historical/Cultural Resources

Existing Conditions. An Archaeological Field Assessment was conducted on the site in April, 2009 by Scientific Consultant Services, Inc. (See: Appendix G, "Archaeological Site Assessment"). There were no significant material cultural remains or sites identified by the archaeological assessment. The project Archaeologist has recommended that no future work is necessary for the subject parcel.

A Cultural Impact Assessment Report for the proposed project was prepared by Jill Engledow, based upon archival research as well as consultation with individuals knowledgeable about historical and cultural practices associated with the area surrounding the project site (See: Appendix H, "Cultural Impact Assessment"). The CIA concluded that because the subject property has long been developed for residential use, and because the cliff-top lot does not provide shoreline access, construction of a new house is unlikely to have an impact on use of the shoreline and/or associate cultural concerns. The CIA also concluded that there appear to be few, if any, other cultural resources that might be impacted by construction of the new home and the armoring of the cliff below the property.

Potential Impacts and Mitigation Measures. No surface or subsurface cultural remains were identified during the archaeological assessment. The project Archaeologist has recommended that no future work is necessary for the subject parcel.

The CIA concluded that the proposed action does not interfere with any known Hawaiian or non-Hawaiian gathering, practices, protocols or access. It is instead an



environmental issue, and decisions about the impact of that action are more properly addressed by experts on the health of the shoreline.

The proposed project is therefore not anticipated to have any impact on significant cultural and historic properties.

10. Visual Resources

Existing Conditions. The subject property is situated along the makai side of Lower Honoapiilani Road within a residential area of Napili. The parcel maintains a total of approximately 66 feet of frontage along Lower Honoapiilani Road and has an average lot depth of approximately 177 feet, excluding the narrow strip of land protruding seaward along Haukoe Point. The approximately 197 foot *makai* boundary of the property abuts the certified shoreline.

Napili offers sweeping views of the Pacific Ocean, Lanai, and Molokai. Public views of these resources exist in various locations from Lower Honoapiilani Road and Honoapiilani Highway. Numerous scenic resources have been identified in the Napili area, which are identified and discussed in the Maui Scenic Coastal Resources Study, August 1990 (See: Figure No. 14, "Coastal Scenic Resources Map"). The resource/inventory map in this report identifies the views of the Pacific Ocean as a distinctive scenic resource in the area of the proposed project. The ocean is currently partially visible from Lower Honoapiilani Road fronting the subject property (See: Figures No. 8 "Site Photographs," and No. 14, "Coastal Scenic Resources Map").

Potential Impacts and Mitigation Measures. After development of the proposed project, the view through the subject property will be relatively unchanged. The topography of the site in relation to Lower Honoapiilani Road offers limited *makai* views through the site from the road, which will be preserved (See: Figure No. 8, "Site Photographs"). As such, the proposed project is not anticipated to significantly impact public view corridors, or the visual character of the site and its immediate environs.

B. SOCIO-ECONOMIC ENVIRONMENT

The proposed residence will not cause a significant increase in the population of Napili. On a short-term basis, the project will support construction and construction-related employment.

Potential Impacts and Mitigation Measures. Because of the limited scope of this project, impacts on the socio-economic environment will be minimal.



C. PUBLIC SERVICES

Potential Impacts and Mitigation Measures. Due to its location within an existing residential area, connection to existing infrastructure, and limited scope, the proposed project will not extend the limits of existing public services (recreational facilities, police and fire protection, schools, medical facilities and solid waste); therefore, the impact on public services will be minimal.

D. INFRASTRUCTURE

1. Water

The Maui Department of Water Supply (DWS) provides public water service for the West Maui region. In addition to the County, private water utilities such as the Kapalua Water Company and the Hawaii Water Service Company provide domestic water service for the Kapalua Resort and Kaanapali Resort, respectively. Domestic water and fire flow for the proposed project will be provided by the County water system.

The project area is served by 8-inch and 12-inch County waterlines on Lower Honoapiilani Road. The subject property is presently serviced by a 5/8" water meter with a capacity of 20 gpm. Fire protection is provided by two (2) existing fire hydrants on Lower Honoapiilani Road.

Potential Impacts and Mitigation Measures. Low flow fixtures, drought tolerant plants, and efficient irrigation, such as drip, will be implemented in order to conserve water. As part of the building permit process, domestic water calculations will be provided to determine the adequacy of the existing water system, in accordance with the rules of the Department of Water Supply.

2. Sewer

There exists a 21-inch gravity sewerline on Lower Honoapiilani Road, which is part of the County's Napili-Honokowai wastewater transmission system. The lot has an existing sewer lateral which connects to the sewer line. Wastewater collected from the area is transported to the Lahaina Wastewater Reclamation facility located approximately 2¾ miles south of the project site.

Potential Impacts and Mitigation Measures. Based upon wastewater flow standards, the existing residence is capable of generating up to approximately 350 gallons of wastewater daily. This flow is expected to remain the same after construction of the



new residence. The new residence will connect to the existing lateral. At the present time, the existing collection and transmission systems, pumping facilities and treatment plant have the capacity to handle the anticipated wastewater generated by the project. According to the Wastewater Reclamation Division, County of Maui, the County is not charging assessment fees for any collection system upgrades or treatment plant facility expansion at this time.

3. Drainage

The site is generally located within Flood Zone "C" as delineated by Panel No. 15003-0138B of the Flood Insurance Rate Map, June 1, 1981, prepared by the United States Federal Emergency Management Agency (FEMA). At present, surface runoff from the site generally sheet flows in a northeasterly direction to discharge into the shoreline area. There are currently no man-made drainage facilities at the site.

Based upon the preliminary drainage calculations, the proposed project is anticipated to increase the existing runoff rate for a 10-year storm from 1.0 cfs to 1.1 cfs, and the existing 50-year storm runoff volume from 951 cf to 1,041 cf. The increases in runoff are approximately 0.1 cfs and 90 cf, respectively, and are due mainly to the addition of impervious surfaces (See: Appendix E, "Preliminary Engineering and Drainage Report").

Potential Impacts and Mitigation Measures. The conceptual drainage plan will primarily consist of subsurface perforated pipe with crushed rock envelopes. The proposed retention basin will consist of 20 linear feet of 30" perforated pipe with a storage capacity of approximately 144 cubic feet (cf), which is greater than the anticipated 50-year storm runoff volume increase of 90 cf. The proposed drainage system also includes a grated drain inlet to collect lawn runoff. Roof drains should be discharged to the proposed retention basin via roof gutters and underground pipes (See: Appendix E, "Preliminary Engineering and Drainage Report").

4. Roadway

Lower Honoapiilani Road, which provides access to the project site, is a two-lane, paved county roadway providing access for local traffic to properties in Napili and Kahana. It begins at its intersection with Honoapiilani Highway near Honokowai Stream in Kaanapali, and continues to its terminus in the Resort Community of Kapalua.

Potential Impacts and Mitigation Measures. Access for the residence will be from the existing driveway on Lower Honoapiilani Road. Since the proposed project includes



one single family dwelling, the project is exempt from Section 16.26.3304 "Improvements to Public Streets", Maui County Code (MCC). No other roadway improvements will be required for the construction of the proposed project. It is anticipated that there will be no significant impacts on traffic on Lower Honoapiilani Road because of the limited scope of the project.

5. Electrical, Telephone, Cable and Data Systems

The new residence will connect to existing electrical, telephone, CATV and data systems already serving the project vicinity. Because of the limited scope of the project, no significant increase in demand on these systems is expected, and therefore no significant impact is anticipated



IV. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE LAW

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes four major land use districts into which all lands in the State are placed. These districts are designated Urban, Rural, Agricultural, and Conservation. The subject property is within the Urban District. The development of the proposed single-family residence is permitted within the Urban District.

B. STATE AND COUNTY SHORELINE RULES

Chapter 205A, Hawaii Revised Statutes (HRS), and Title MC-12, Subtitle 02, Chapter 203, Shoreline Rules for the Maui Planning Commission, set forth the requirements for structures and activities taking place within the shoreline setback area.

As discussed in Sections II.F and II.G above, construction of the proposed new residence will take place outside of the Shoreline Setback Area. Chapter VII of this application addresses the justification for the Shoreline Setback Variance (SSV) concerning the construction of the proposed seawall within the Shoreline Setback Area. The proposed demolition of the existing residence qualifies as a permitted activity within the Shoreline Setback Area as follows:

The Shoreline Rules for the Maui Planning Commission, Section 12-203-12, "Permitted Structures and Activities Within the Shoreline Setback Area," states that,

"(a) The following structures and activities are permitted in the shoreline setback area:

(7) Qualified demolition"

"Qualified demolition" within the shoreline setback area is defined in §12-203-12 as the demolition of a structure or structures, where such demolition:

- (1) Will not adversely affect beach processes;
- (2) Will not artificially fix the shoreline;



- (3) Will not interfere with public access, except for public safety reasons during demolition operations;
- (4) Will not interfere with public views to and along the shoreline, except during demolition operations;
- (5) Will be consistent with:
 - (A) Section 12-203-2(5), which states that the quality of scenic and open space resources should be protected, preserved and, where desirable, restored; and
 - (B) Section 205A-2(c)(3)(C), HRS, which states that an objective and policy of the coastal zone management program is to preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and
- (6) Will comply with:
 - (A) Chapter 19.62, Maui County Code, relating to flood hazard areas;
 - (B) Chapter 20.08, Maui County Code, relating to soil erosion and sedimentation control; and
 - (C) Chapter 6E, HRS, relating to historic preservation.

As detailed in Section III above, and Sections V and VI below, the proposed demolition of the existing single-family residence meets the criteria of a "qualified demolition," and as such, qualifies as a permitted activity within the Shoreline Setback Area.

C. MAUI COUNTY ZONING

The subject property is situated within the County of Maui's R-3 Residential District (See: Figure No. 5, "County Zoning Map"). The proposed residence is an outright permitted use within the R-3 district.

The maximum building height in the R-3 district is 30 feet. The proposed residence will have a maximum height of no more than 30 feet above the existing grade.



The minimum setbacks in residential districts are fifteen (15) feet at the front, six (6) feet at the sides and rear, provided that the upper floors have ten (10) foot side yards. Since the property abuts the shoreline, Chapter 203, Shoreline Rules for the Maui Planning Commission apply and the shoreline setback is determined by either the average lot depth or annual erosion rates, whichever is greater. As detailed above in sections II.F and II.G, the proposed residence will be situated approximately 48 feet from the shoreline, outside of the proposed shoreline setback of 44.3 feet.

The front yard setback is 15 feet at the closest point for the garage, while the residence is set back an additional 30 feet. The north and the south sides of the proposed residence are set back 10 feet or more at both the lower and upper level. The topography of the site slopes downward at approximately 8% from the *mauka* to *makai* portions of the site, such that the base floor elevation of the proposed residence is 9 feet lower than the elevation at Lower Honoapiilani Road.

D. GENERAL PLAN OF THE COUNTY

The General Plan of the County of Maui (1990 update) provides long-term goals, objectives, and policies directed toward improving living conditions in the County. The following General Plan Themes, Objectives and Policies are applicable to the proposed project:

Theme No. 5: Provide for Needed Resident Housing

Amendments to the General Plan address the development of resident housing as a major social need in our community.

I.A. Population

Objective No. 2: *To use the land within the County for the social and economic benefit of all the County's residents.*

Policies:

- (c). *Encourage land use methods that will provide a continuous balanced inventory of housing types in all price ranges.*

Analysis. Maui County zoning designation for the property is R-3 Residential. The property is being developed as a residential project for owner occupancy.



III. Housing and Urban Design

A. HOUSING

Objective No. 1: To provide a choice of attractive, sanitary and affordable homes for all our residents.

Policies:

(b). *Encourage the construction of housing in a variety of price ranges and geographic locations.*

Analysis. The design and scale of the project is in line with other properties in the vicinity.

Goal: Environment

Objective No. 2: To use the County's land based physical and ocean-related coastal resources in a manner consistent with sound environmental planning practice.

Policies: Evaluate all land based development relative to its impact on the County's land and ocean ecological resources.

Analysis: The proposed action was evaluated to be the most practical and effective solution for long-term protection of the nearshore coastal resource. The proposed action is being implemented in consideration of environmental analysis of the shoreline area and processes, and the potential environmental impacts to the ocean resources.

E. WEST MAUI COMMUNITY PLAN

Nine community plan regions have been established in Maui County. Each region's growth and development is guided by a community plan, which contains objectives and policies in accordance with the Maui County General Plan. The purpose of the community plan is to outline a relatively detailed agenda for carrying out these objectives.

The subject property is located within the West Maui Community Plan area and has a SF Single Family designation (See: Figure No. 4, "Community Plan Map"). The West Maui Community Plan was adopted by ordinance No. 2476 on February 27, 1996.



The following West Maui Community Plan goals, objectives, and policies are applicable to the proposed action:

Goal: Land Use. *An attractive, well-planned community with a mixture of compatible land uses in appropriate areas to accommodate the future needs of residents and visitors in a manner that provides for the stable social and economic well-being of residents and the preservation and enhancement of the region's open space.*

Analysis. The project site is community planned for single family residential use. The proposed single family residence is consistent with the scale of surrounding properties. Infrastructure in the area is adequate and the existing use is consistent with land use objectives.

Goal: Environment. *A clean and attractive physical, natural and marine environment in which man-made developments on or alterations to the natural and marine environment are based on sound environmental and ecological practices, and important scenic and open space resources are preserved and protected for public use and enjoyment.*

Objectives and Policies:

1. *Protect the quality of nearshore and offshore waters. Monitor outfall systems, streams and drainage ways and maintain water quality standards. Continue to investigate, and implement appropriate measures to mitigate, excessive growth and proliferation of algae in nearshore and offshore waters.*

11. *Prohibit the construction of vertical seawalls and revetments except as may be permitted by rules adopted by the Maui Planning Commission governing the issuance of Shoreline Area Management (SMA) emergency permits, and encourage beach nourishment by building dunes and adding sand as a sustainable alternative.*

Planning Standards:

6. Environmental Aspects
 - c. *Prohibit the construction of vertical seawalls, except as approved by the Planning Commission of the County of Maui*



Analysis: In consideration of the alternatives, the proposed action (constructing approximately 75 feet of sea wall) was judged to be the most practical alternative.

Within the context of the objectives and policies of the West Maui Community Plan discussed above, consideration of a vertical seawall may be allowed if the project meets the criteria set forth in the SMA Emergency Permit process. The purpose of the SMA Emergency Permit is provided in section §205A-22 of the Hawaii Revised Statutes and section §12-202 of the *Special Management Area Rules for the Maui Planning Commission*. The definition provided in HRS §205A-22 states that an emergency permit may allow development in either of two conditions: *"to prevent substantial physical harm to persons or property or to allow the reconstruction of structures damaged by natural hazards."*

As described in Section II and III of this report, the proposed wall is a long-term solution to address an impending public safety hazard as well as a physical hazard to structures on the subject property and adjacent properties. The project will also help protect the quality of nearshore waters as recommended by the West Maui Community Plan. The proposed wall will aid in the prevention of earthen soils from being eroded and transported to the coastal waters via wave action and runoff from *mauka* portions of the site.



V. SPECIAL MANAGEMENT AREA OBJECTIVES AND POLICIES

The subject project is located within the Special Management Area (SMA). As such, the proposed improvements require an SMA Use Permit. Pursuant to Chapter 205A, Hawaii Revised Statutes, and the Rules and Regulations of the Planning Commission of the County of Maui, projects located within the SMA are evaluated with respect to SMA objectives, policies, and guidelines. This section addresses the project's relationship to applicable coastal zone management considerations, as set forth in Chapter 205A and the Rules and Regulations of the Planning Commission.

A. RECREATIONAL RESOURCES

Objective: Provide coastal recreational resources accessible to the public.

Policies:

- (A) *Improve coordination and funding of coastal recreation planning and management; and*
- (B) *Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:*
 - (i) *Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
 - (ii) *Requiring placement of coastal resources having significant recreational value, including but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or require reasonable monetary compensation to the state for recreation when replacement is not feasible or desirable;*
 - (iii) *Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
 - (iv) *Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
 - (v) *Ensuring public recreational use of county, state, and federally owned or controlled shoreline lands and waters having standards and conservation of natural resources;*
 - (vi) *Adopting water quality standards and regulating point and non-point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*
 - (vii) *Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing;*



- (viii) *Encourage reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, county planning commissions; and crediting such dedication against the requirements of Section 46-6, HRS.*

Analysis. The project site abuts the shoreline; however, the proposed project will not have a direct impact on the public's use or access to the shoreline area. Public beach access exists at Hui Road E, approximately 600 feet to the south of the project site.

The subject parcel abuts Keonenui Bay, a small bay located between two rocky headlands. The entire length of the shoreline along the bay is armored with vertical seawalls. The project will enhance safety in the shoreline area immediately beneath the subject property and aid in protection of nearshore waters from erosion-borne sediment. The proposed structure is located along the unstable bank *mauka* of the shoreline and will not protrude further seaward than the adjacent seawall to the north. Therefore, the improvement will not narrow the usable section of the beach and will not inhibit lateral access along the shoreline.

B. HISTORICAL/CULTURAL RESOURCES

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

Policies:

- (a) Identify and analyze significant archeological resources;*
- (b) Maximize information retention through preservation of remains and artifacts or salvage operations; and*
- (c) Support state goals for protection, restoration, interpretation, and display of historic structures.*

Analysis. As discussed in Section III.A.9 above, an Archaeological Assessment identified no significant material cultural remains or sites on the property, and a Cultural Impact Assessment identified no potential impacts to native Hawaiian cultural resources or practices as a result of the proposed project. Based on these findings, it is unlikely that the improvements will have a significant impact on historical or cultural resources.



C. SCENIC AND OPEN SPACE RESOURCES

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

Policies:

- (a) Identify valued scenic resources in the coastal zone management area;*
- (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; and*
- (c) Encourage those developments that are not coastal dependent to locate in inland areas.*

Analysis. As discussed in Section III of this report, numerous scenic resources have been identified in the Napili area, which are identified and discussed in the Maui Coastal Scenic Resources Study, August 1990 (See: Figure No. 14, "Coastal Scenic Resources Map"). The resource/inventory map in this report identifies makai views of the Pacific Ocean, Lana'i and Moloka'i as the significant scenic resources in the immediate vicinity of the project site.

The proposed action will not interfere with views toward the ocean (See: Figures No. 8, "Site Photographs," and No. 14, "Coastal Scenic Resources Map"). The architecture of the proposed residence will preserve existing makai views from Lower Honoapiilani Road. The proposed seawall will utilize a similar rock/masonry facing to be consistent with the existing seawalls to the north. The growth of the overhanging naupaka hedge at the top of the bluff may provide visual mitigation, de-emphasizing the height of the wall.

The wall is to be constructed against a vertical bluff face and will not protrude above the existing *mauka* grade of the property, thus by topographic nature it will not block scenic views of the ocean or mountains.

D. COASTAL ECOSYSTEMS

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

Policies:

- (a) Improve the technical basis for natural resource management;*



- (b) *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*
- (c) *Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*
- (d) *Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.*

Analysis. The proposed project will protect the quality of the nearshore marine environment by preventing siltation from erosion of the sea cliff. Based upon existing development within the project area, it is unlikely that the proposed improvements will have a significant impact on coastal ecosystems.


E. ECONOMIC USES

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

Policies:

- (a) *Concentrate coastal dependent development in appropriate areas;*
- (b) *Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area;*
- (c) *Direct the location and expansion of coastal dependent developments to areas presently designated and used for such development and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:*
 - (i) *Use of presently designated locations is not feasible;*
 - (ii) *Adverse environmental impacts are minimized; and*
 - (iii) *The development is important to the State's economy.*

Analysis. The proposed single-family residential use of the property is consistent with the State's urban land use designation, as well as the Maui County Zoning and West Maui Community Plan designations. As such, the proposed project is within an area that has been planned for growth and development and provides the supporting infrastructure and services required to service this growth.



The proposed wall will stabilize the erodible sea cliff at the subject property, leading to both public benefits and private benefits to the applicant and neighboring landowners. Public benefits will include the removal of a safety hazard, and prevention of soils entering coastal waters. Private benefits include greater site safety and the prevention of loss of property and structures.

F. COASTAL HAZARDS

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

Policies:

- (a) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and non-point source pollution hazards;*
- (b) Control development in areas subject to storm wave, tsunami, flood, erosion, subsidence, and point and non-point pollution hazards;*
- (c) Ensure that developments comply with requirements of the Federal Flood Insurance Program;*
- (d) Prevent coastal flooding from inland projects; and*
- (e) Develop a coastal point and nonpoint source pollution control program.*

Analysis. The proposed action will protect the upland portion of the property and associated structures from erosion due to storm waves. Stabilization of the shoreline will provide greater site safety to other residents living along the shoreline. Shoreline stabilization will also protect the beach and nearshore waters from impacts related to eroded soils transported by wave action or inland runoff.

Since the subject area is prone to storm wave action, the project's impact on a potential evacuation of the area should be considered. Considering that the existing site conditions consist of an undermined earthen bank, which cannot be traversed, the proposed action will not obstruct a tsunami evacuation route.

G. MANAGING DEVELOPMENT

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

Policies:

- (a) *Use, implement, and enforce existing laws effectively to the maximum extent possible in managing present and future coastal zone development;*
- (b) *Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements; and*
- (c) *Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the public to facilitate public participation in the planning process and review process.*

Analysis. The development of the subject property is being conducted in accordance with applicable State and County requirements. Opportunity for review of the proposed action is provided through the County's Special Management Area (SMA) permitting process and the State's Environmental Assessment (EA) review process.

H. PUBLIC PARTICIPATION

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

Policies:

- (a) *Maintain a public advisory body to identify coastal management problems and to provide policy advise and assistance to the coastal zone management program.*
- (b) *Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal-related issues, developments, and government activities; and*
- (c) *Organize workshops, policy dialogues, and site-specific medications to respond to coastal issues and conflicts.*

Analysis. Early Consultation was conducted with applicable government agencies, as well as with neighbors within 500 feet of the subject property, as part of the preparation of this Draft EA. (See: Appendix A "Summary of Public and Agency Consultation").

In conjunction with the submittal of the Special Management Area application, a notice of application will be mailed to property owners within 500 feet. The mail-out describes the proposed project and solicits any issues or concerns that need to be addressed through the permitting process. A number of governmental agencies have also been consulted and copies of this application will be circulated to various agencies by the Department of Planning. During the scheduled public hearings, the public will have an opportunity to review and comment on the proposed project. Landowners located within 500 feet of the project will be notified of the scheduled public hearing dates.

Public hearing dates and location maps will also be published in the Maui News on two separate occasions. The public will be allowed to participate in the public hearing portion of the Maui Planning Commission's review process. The Environmental Assessment process also provides an opportunity for public comment.

I. BEACH PROTECTION

Objective: Protect beaches for public use and recreation.

Policies:

- (a) Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;*
- (b) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and*
- (c) Minimize the construction of public erosion-protection structures seaward of the shoreline.*

Analysis. The project will involve construction of a seawall within the shoreline setback area and therefore requires a Shoreline Setback Variance, which is the subject of Section VII of this report. As the shoreline beneath the project site is fronted by a vertical wall composed of volcanic conglomerate, and the silty clay substrate underlying the project site does not represent a resource for beach replenishment, no impacts on beach protection are anticipated.

Construction of the proposed residence will take place outside of the shoreline setback, calculated at 44.3 feet from the certified shoreline which follows along the base of the cliff. The construction of the proposed project on the subject property is not anticipated to have a direct physical impact upon any public beaches.

J. MARINE RESOURCES

Objective: Implement the State's ocean resources management plan.

Policies:

- (a) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*
- (b) Assure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*
- (c) Coordinate the management of marine and coastal resources and activities management to improve effectiveness and efficiency;*



- (d) *Assert and articulate the interest of the state as a partner with federal agencies in the sound management of the ocean resources within the United States exclusive economic zone;*
- (e) *Promote research, study, and understanding of ocean processes, marine life, and other ocean development activities relate to and impact upon the ocean and coastal resources; and*
- (f) *Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.*

Analysis. The proposed project does not involve the direct use or development of marine resources. In addition, with the incorporation of erosion and drainage control measures during construction and after construction as identified in this report, there should not be significant adverse impacts to nearshore waters from point and non-point sources of pollution. Therefore, the subject project will not produce any significant impacts on any coastal or marine resources.



VI. ENVIRONMENTAL ASSESSMENT SIGNIFICANCE CRITERIA

Since the proposed project involves an action within the Shoreline Setback Area, an Environmental Assessment is required by Chapter 343, Hawaii Revised Statutes (HRS). A finding of no significant impact (FONSI) is anticipated and therefore an Environmental Impact Statement (EIS) will not be required for the proposed action. In accordance with Title 11, Department of Health, Chapter 200 and Subchapter 6, Section §11-200-12, Environmental Impact Statement Rules, and based on the detailed analysis contained within this document, the following conclusions are supported.

1. **The proposed action will *not* result in an irrevocable commitment to loss or destruction of natural or cultural resources.**

Analysis. As documented in this report, the proposed project will not involve the loss or destruction of any natural or cultural resource (See: Section III).

2. **The proposed action will *not* curtail the range of beneficial uses of the environment.**

Analysis. The subject property is within the State's Urban District and is zoned and community planned to allow for single-family residential development. There are no unique or important environmental or natural resources on the property, the use of which would be impacted by the construction of the proposed residence.

The proposed wall will enhance safety in the shoreline area immediately beneath the subject property, and will also aid in protection of nearshore waters from erosion-borne sediment. The location of the proposed structure is not within a section of the beach that is traversed or utilized, but rather is positioned upon a rocky ledge against the face of the sea cliff, and therefore will not narrow the area available for lateral access. Based upon existing development on neighboring properties, it is unlikely the improvements will result in a significant change to the coastal area. Thus, the proposed action will not curtail the range of beneficial uses of the environment.

3. **The proposed action will *not* conflict with State or County long-term environmental policies and goals as expressed in Chapter 344, HRS, and those which are more specifically outlined in the Conservation District Rules.**

Analysis. The project is being developed in compliance with the State's long-term environmental goals. As documented in this report, appropriate mitigation measures will be implemented to minimize the potential for negative impacts to the environment,



including near and off-shore coastal waters. The project will not have any impact on flora and fauna, and is not expected to have a negative impact on archaeological or cultural resources.

4. The proposed action will *not* substantially affect the economic or social welfare and activities of the community, county or state.

Analysis. The proposed project will improve public safety in the immediate area. Short-term economic impacts will result from the increase in activity associated with the construction of the project. Because of the limited scope of this project, impacts on the socio-economic environment will be minimal (See: Section III.B).

5. The proposed action will *not* substantially affect public health.

Analysis. There are no special or unique aspects of the project that will have a direct impact on public health.

6. The proposed action will *not* result in substantial secondary impacts.

Analysis. The proposed project is not a population generator nor does it trigger any Maui County residential workforce housing requirements. Increased activity at the site during the construction phase may result in a marginal increase in traffic and associated noise and air pollution at the project driveway. However, as analyzed in Section III of this report, the increase in the level of these impacts is minimal and with the incorporation of mitigation measures will not substantially impact the environment.

Based on existing development in the project vicinity, the wall construction is not expected to cause any secondary effects that would significantly impact the coastal area.

7. The proposed action will *not* involve substantial degradation of environmental quality.

Analysis. Mitigation measures will be implemented during the construction phase in order to minimize negative impacts on the environment, especially with regards to construction runoff. The design of the proposed residence has incorporated mitigation measures to minimize impacts to nearshore water quality that could arise from an increase in runoff generated on the site as a result of the project (See Section III for a discussion of drainage). The proposed wall will prevent the erosion of earthen, silty soils and associated degradation of coastal waters. Other environmental resources such



as endangered species of flora and fauna, air and water quality, and archeological resources will not be significantly impacted by the subject project.

8. **The proposed project will not produce cumulative impacts and does *not* have considerable effect upon the environment or involve a commitment for larger actions.**

Analysis. The proposed project does not involve a commitment for larger action on behalf of the applicant or any public agency. The subject property is State and County zoned and community planned for urban development, and as such, is part of the planned future growth of the region. As described in this report, the project will not significantly impact public infrastructure and services including roadways, drainage facilities, water systems, sewers and educational facilities. In addition, the project is not anticipated to induce an overall significant increase in population growth and will therefore not produce considerable effect on the environment nor require a commitment for larger actions by governmental agencies.

Armoring of a shoreline area is known to lead to successive armoring of adjacent shoreline areas, which creates a larger (cumulative) structure that can have greater impacts. As discussed above, the subject property is the last remaining property along the 500 - 600 feet of shoreline between two rocky headlands that is not armored with a vertical seawall. Therefore, the erosive effects of wave action and other coastal hazards are magnified at the subject property. Given that near total shoreline armoring exists, construction of the proposed wall will not encourage additional development or require a commitment for larger actions.

9. **The proposed project will *not* affect a rare, threatened, or endangered species, or its habitat.**

Analysis. As described in Section III of this report, there are no rare, threatened, or endangered species of flora and fauna at the project site.

10. **The proposed action will *not* substantially or adversely affect air and water quality or ambient noise levels.**

Analysis. As described in Section III of this report, there is a potential for negative impacts to air or water quality and ambient noise levels related to short-term construction activities. Air, noise and dust impacts will be mitigated through implementation of standard mitigation measures as identified previously in this report. It is not anticipated that there will be significant long-term impacts to air or water quality and ambient noise levels due to the operation phase of the development.



11. The proposed action will *not* substantially affect or be subject to damage by being located in an environmentally sensitive area, such as flood plain, shoreline, tsunami zone, erosion-prone areas, estuary, fresh waters, geologically hazardous land or coastal waters.

Analysis. According to Panel No. 15003-0138B of the Flood Insurance Rate Map, June, 1981, prepared by the United States Federal Emergency Management Agency (FEMA), the project site is situated primarily in flood zone C, with portions of the subject property along the shoreline lying within Zones A4 and V24. Zone A4 represents areas of 100-year flood, with base flood elevations and flood hazard factors determined; Zone V24 represents areas of 100-year coastal flood with velocity (wave action), with base flood elevations and flood hazard factors determined. The proposed residence will be sited in Flood Zone C, which represents areas of minimal flooding (See: Figure No. 6, "Flood Insurance Rate Map"). The proposed seawall will be engineered to withstand the design forces calculated in the Coastal Engineering Assessment, thus reducing the likelihood that an extreme event would damage the structure. The proposed project therefore should not be affected by flood hazard, or have adverse impacts upon its neighbors with regards to flood hazard potential.

12. The proposed action will *not* substantially affect scenic vistas or view planes identified in county or state plans or studies.

Analysis. As described in Section III.A.8 of this report, existing zoning limits developments to a maximum height of 30 feet above existing grade, and the site steps down in elevation eight (8) to ten (10) feet from Lower Honoapiilani Road to the finished floor elevation of the proposed residence. Building setbacks are 10 feet through the side yards of the proposed structure. There will be no significant change in the project's overall effect on *mauka* or *makai* views from what exists currently, therefore the proposed project is not expected to have any significant adverse effects on visual resources. Figures No. 8, "Site Photographs," and No. 10.1-10.5, "Concept Architectural Plans" document the project's potential impacts on visual resources.

13. The proposed action will not require substantial energy consumption

Analysis. It is not anticipated that any increase in energy consumption resulting from build-out of the project will be significant within the context of existing levels of power consumption or vehicular energy usage in the region, and on Maui.



VII. APPLICATION FOR SHORELINE SETBACK VARIANCE

Evidence that the applicant is the owner or lessee of record of the real property.

See: Section 2 at the beginning of this document

A notarized letter of authorization from the legal owner if the applicant is not the owner.

See: Section 3 at the beginning of this document

Original and two (2) copies of the shoreline survey certified by the Department of Land and Natural Resources within the preceding twelve (12) months.

See: Appendix "B". The shoreline was certified on May 18, 2009. The map indicates that the shoreline follows the base of a rocky cliff that runs along the *makai* boundary of the subject property and adjoining properties.

Original and 1 set of a site plan showing the location of the shoreline drawn to a minimum scale of 1"=20'. The shoreline and existing conditions along properties immediately adjacent shall also be shown on the site plans. It shall also include contours at a minimum interval of 2 feet, together with all natural and man-made features in the subject area unless otherwise required by the Director.

See: Appendix B, "Certified Shoreline Survey Map."

A written justification for the requested variance.

As set forth in the Shoreline Rules for the Maui Planning Commission, §12-203-2, "Purpose,"

"Due to competing demands for utilization and preservation of the beach and ocean resources, it is imperative:

(1) That use and enjoyment of the shoreline area be ensured for the public to the fullest extent possible;

The proposed project will **not** prevent the public from full use and enjoyment of the shoreline area to which it is already entitled.

(2) That the natural shoreline environment be preserved;

The shoreline area fronting the subject property is composed of rock and cobble, with a ledge composed of volcanic conglomerate extending to approximately 4-6 feet AMSL, transitioning thereafter to a vertical bluff composed of clay and earthen soils. No structures are proposed for construction on the shoreline itself, and no dune or beach resource is present



on the site, therefore the proposed project does not alter the natural shoreline environment.

- (3) *That man-made features in the shoreline area be limited to features compatible with the shoreline area;*

The proposed action involves the construction of a wall to armor the shoreline, which will connect to an adjacent shoreline armoring structure of similar design to the north (See: Figures No. 8, "Site Photographs" and No. 11, "Concept Seawall Design"). The adjacent shoreline armoring structure in turn adjoins a series of similar structures armoring the remaining area of shoreline extending northward to Alaeloa Point. The proposed action therefore does not include any new actions or features that are incompatible with the shoreline as it currently appears.

- (4) *That the natural movement of the shoreline be protected from development;*

The proposed action involves the construction of a vertical wall within the shoreline setback area as determined by the Average Lot Depth (ALD) method. However, the steep sea cliffs that front much of the shoreline along Keonenui Bay, and that are especially pronounced in front of the Hester property, act as natural walls to reflect wave impact in the absence of a sand beach. The proposed project is therefore not expected to effect natural movement of the shoreline or other coastal processes in a manner different from existing conditions (See: Appendix F, "Coastal Engineering Assessment").

- (5) *That the quality of scenic and open space resources be protected, preserved, and where desirable, restored; and*

As discussed in Section III.A.8, the proposed project will not have a significant effect on the quality of scenic and open space resources. Since the site slopes from the *mauka* boundary at approximately 38 feet above mean sea level (AMSL) to approximately 25 feet AMSL at the *makai* boundary, and the design of the proposed residence will preserve existing *makai* views through the project site, the project will not interfere with public views to and along the shoreline. The proposed wall will be constructed in such a way as to blend in with the shoreline area and transition into neighboring walls, in such a way as to minimize visual impacts when viewed from the *makai* side. Retention of an overhanging *naupaka* hedge is intended to further soften the visual effect of the wall.

- (6) *That adequate public access to and along the shoreline be provided.*

Public access to the shoreline exists approximately 600 feet to the south of the site. The proposed project does not restrict public lateral access along the shoreline.

The variance request meets §12-203-15 "Criteria for approval of a variance" under paragraph (a)(8): *Private facilities or improvements which will neither adversely affect beach processes nor artificially fix the shoreline; provided that, the commission also*



finds that hardship will result to the applicant if the facilities or improvements are not allowed within the shoreline area;

- (b) A structure or activity may be granted a variance upon grounds of hardship if:*
(1) The applicant would be deprived of reasonable use of the land if required to fully comply with the shoreline setback rules;

The existing condition of the bluff, along with prior documentation of erosion at the site, indicates that if left unchecked, erosion will continue, eventually threatening structures on the property as well as on the neighboring property to the north.

- (2) The applicant's proposal is due to unique circumstances and does not draw into question the reasonableness of the shoreline setback rules; and*

The proposed project does not draw into question the reasonableness of the shoreline setback rules. The purpose of the proposed wall is to prevent future erosion of the property and potential undermining of the neighboring shoreline protection structures; to prevent earthen soils from eroding and entering the coastal waters; and remove the public hazard associated with the unstable bluff.

- (3) The proposal is the practicable alternative which best conforms to the purpose of the shoreline setback rules.*

As discussed in the above written justification for the requested variance, and in Section II.E of this document, the preferred alternative is the practicable option which best conforms to the purpose of the Shoreline Setback Rules.

Original and 1 copy of a preliminary drainage and erosion control report, and a grading plan.

As discussed in Section III.A.2, "Topography and Soils", the lot slopes east to west toward the shoreline. Grading on the site will be minimal. Drainage is discussed in Section III.D.3 "Drainage" along with proposed erosion control mitigation measures (See: Appendix E, "Preliminary Engineering and Drainage Report").

Original and 1 copy of an environmental assessment may be required.

This application is part of the Draft Environmental Assessment prepared for the proposed project.

Photographs of the shoreline area.

See: Figure No. 8, "Site Photographs" and Appendix B.



VIII. FINDINGS AND CONCLUSIONS

This Draft Environmental Assessment examines the environmental and socio-economic impacts associated with the applicant's proposal to construct a new single family dwelling along with the construction of a seawall to stabilize an eroding bluff. The project site is 0.44 acres located in Napili, Maui, Hawaii.

The proposed development is not anticipated to result in significant environmental impacts to surrounding properties, nearshore waters, natural resources, and/or archaeological and historic resources on the site or in the immediate area. Except for the construction of a vertical seawall, which is the subject of Section VII of this report, "Shoreline Setback Variance," the proposed action will not encroach on the shoreline setback area. Public infrastructure and services, including roadways, sewer and water systems, medical facilities, police and fire protection, parks, and schools are adequate to serve the project and are not anticipated to be significantly impacted by the project. The proposed project is not anticipated to negatively impact public view corridors and is not anticipated to produce significant adverse impacts upon the visual character of the site and its immediate environs.

The subject property is situated within the State's Urban District and is County R-3 Residential and community planned for single-family residential. Therefore, the proposed project is in conformance with State and County land use plans and policies including Chapter 205A, HRS, as well as the West Maui Community Plan Land Use Map.

Based on the foregoing analysis and conclusion, the proposed project will not result in significant impacts to the environment, is consistent with the requirements of HRS Chapter 343, and a Finding of No Significant Impact (FONSI) is anticipated.



IX. REFERENCES

- County of Maui, Department of Planning. 1991. *The General Plan of the County of Maui, 1990 Update*. Wailuku, Hawaii.
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