

**DRAFT ENVIRONMENTAL ASSESSMENT
MAIER SWIMMING POOL IN THE
SHORELINE SETBACK AREA**

**TMK (3rd) 7-5-005:092
Lanikai, North Kona District, Island of Hawai'i, State of Hawai'i**

January 2010

**Hawai'i County Planning Department
101 Pauahi Street, Suite 3
Hilo HI 96720**

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Lanikai, North Kona District, Island of Hawai'i, State of Hawai'i

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CLASS OF ACTION:

Action in Shoreline Setback Area

This document is prepared pursuant to:
the Hawai'i Environmental Protection Act,
Chapter 343, Hawai'i Revised Statutes (HRS), and
Title 11, Chapter 200, Hawai'i Department of Health Administrative Rules (HAR).

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

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**SUMMARY OF PROJECT, ENVIRONMENTAL IMPACTS
AND MITIGATION MEASURES**

Kim and Carol Maier propose to build a 10-foot by 40-foot saltwater swimming pool between their home and a wall that forms the makai boundary of their Kona Bay Estates property. The site is the only location where a swimming pool can be built on the 7,052-square-foot lot. The makai edge of the wall was certified as the shoreline on December 11, 2003, and the area 20 feet mauka of the wall is thus within the Shoreline Setback Area, requiring a variance for the project. This wall also forms the makai boundary of neighboring lots in the Kona Bay Estates. Prior shoreline surveys located the shoreline for these lots well makai of the wall. As a result, the area mauka of the wall on neighboring lots is not within the shoreline setback area. This has allowed many neighboring lots to utilize the area behind the wall for structures, including swimming pools, without any known adverse impact to environmental resources or access.

The swimming pool would use a cartridge filter system that does not require any back-washing. The pool would be drained about every three years into the municipal sewer system, in accordance with regulations. No water will be discharged into the ocean or into the groundwater. The improvements also include a concrete pool deck and a 4-foot high pool security fence.

No sensitive biological, hydrological, archaeological, cultural or other important resources are present, and no adverse long-term impacts are expected. There is currently lateral shoreline access for hikers and fishermen via a designated trail on top of the seawall that runs through the subdivision, which will remain unchanged. The subdivision also has two mauka-makai public access trails south of the property. Construction activities would produce short-term impacts to noise, air quality, access and scenery. Best Management Practices and archaeological monitoring during excavation are proposed as Shoreline Setback Variance conditions to ensure that construction-related damage is avoided or minimized.

PART 1: PROJECT DESCRIPTION

1.1 Project Description and Location

Kim and Carol Maier [“the applicants”] propose to build a 10-foot by 40-foot saltwater swimming pool between their home and a wall that forms the makai boundary of their Kona Bay Estates property. The property is owned by the Kim Artur Maier Trust and the Carol Lynn Metcalfe-Maier Trust. The site is the only location where a swimming pool can be built on the 7,052-square-foot lot.

When the Kona Bay Estates subdivision was developed in 1984, the developer was required to develop a public access plan as part of Special Management Area Use Permit conditions. This plan included two 10-foot-wide mauka-makai access points and a lateral shoreline access along the top of a two-foot-wide low rock wall that was built on the makai edge of all the oceanfront properties.

The shoreline fronting the subdivision was certified in 1984 when the subdivision was developed. At that time the shoreline was located between 22 feet and 42 feet below the makai property line of the subdivision parcels. This allowed neighboring lots to utilize the area behind the wall for structures, including swimming pools. There does not appear to have been any adverse impact on shoreline processes as a result of these land uses on the mauka side of the wall, and lateral shoreline access has been strictly maintained along the wall. Subsequently, on December 23, 2003, the State of Hawai‘i re-certified the shoreline and identified it to be the makai edge of the seawall. This is more than 20 feet mauka of the previous certified shoreline, which is still valid for the adjoining parcels that were already developed. On the Maier’s property the areas within 20 feet mauka of the wall is within the Shoreline Setback Area. Because of this re-certification, the Maiers must obtain a shoreline setback variance for any improvements within 20 feet of the seawall, including the proposed swimming pool.

The proposed improvements within the Shoreline Setback area include the 10 by 40-foot saltwater swimming pool, concrete pool deck and a four-foot high pool security fence. The pool would use a cartridge filter system that does not require any back-washing. The pool would be drained about every three years into the municipal sewer system, in accordance with regulations. No water would be discharged into the ocean or into the groundwater. The improvements are estimated to cost \$50,000 and all funding is private (no public funds are involved). Work would begin immediately after permits are obtained would take about three months to finish.

**Figure 3
Project Site Photographs**



Area Proposed for Swimming Pool ▲ ▼ Shoreline in Front of Property



Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

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1.2 Environmental Assessment Process

This Environmental Assessment (EA) process was conducted in accordance with Chapter 343 of the Hawai‘i Revised Statutes (HRS). This law, along with its implementing regulations, Title 11, Chapter 200, of the Hawai‘i Administrative Rules (HAR), is the basis for the environmental impact process in the State of Hawai‘i. *An EA is necessary because the site is within the Shoreline Setback Area and the County of Hawai‘i does not consider the project an exempt activity.*

According to Chapter 343, an EA is prepared to determine impacts associated with an action, to develop mitigation measures for adverse impacts, and to determine whether any of the impacts are significant according to thirteen specific criteria. If a study concludes that no significant impacts would occur from implementation of the proposed action, a Finding of No Significant Impact (FONSI) will be prepared and an action will be permitted to occur. If a study finds that significant impacts are expected to occur because of a proposed action, then an Environmental Impact Statement (EIS) is prepared in order to allow wider investigation of impacts and more extensive public involvement.

Section 2 considers alternatives to the proposed project, and Section 3 discusses the existing environment and impacts associated with this project. Section 4 issues the determination (anticipated determination in the Draft EA), and Section 5 lists the criteria and the findings made by the applicants in consultation with the County of Hawai‘i Planning Department for this project.

1.3 Public Involvement and Agency Coordination

The following agencies, organizations and individuals have been consulted during the Environmental Assessment Process:

County:

Planning Department
County Council
Parks and Recreation Department

State:

Department of Land and Natural Resources
Department of Health
Office of Hawaiian Affairs, Honolulu and West Hawai‘i

Private:

Kona Hawaiian Civic Club
Kona-Kohala Chamber of Commerce
Sierra Club

Copies of communications received during early consultation are contained in Appendix 1a.

PART 2: ALTERNATIVES

2.1 Proposed Project

The proposed project is described in Section 1.1 above and illustrated in Figures 1-4.

2.2 No Action and Alternative Sites

Under the No Action Alternative, the swimming pool, deck and fence would not be built. This EA considers the No Action Alternative as the baseline by which to compare environmental effects from the project. There is no other site on the lot with enough space to accommodate the swimming pool. No other alternative uses for this part of the Maiers' property are desired by the Maiers, and thus none are addressed in this EA.

PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION

The subject property is a relatively flat lot situated adjacent to the shoreline at an elevation of 10 and 20 feet above mean sea level. It is bounded on the northwest and southeast by other lots within the Kona Bay Estates subdivision; on the northeast by an access road and beyond that by Old Kona Airport Park; and on the southwest by the shoreline area and the Pacific Ocean (Figs. 1-3). The climate in this part of Kona is hot and dry, averaging between 20 and 30 inches of rain annually, with a mean annual temperature of approximately 76 degrees Fahrenheit (U.H. Hilo-Geography 1998:57).

3.1 Physical Environment

3.1.1 Geology, Soils and Geologic Hazards

Environmental Setting

The surface geology consists of lava flows from Hualālai volcano dated between 1,500 and 3,000 years ago (Wolfe and Morris 1996). Soil is minimal and the area is classified as Lava, Pahoehoe Flows (virtually no soil). The ground is highly permeable, and runoff and soil erosion hazard are minimal (U.S. Soil Conservation Service 1973).

The entire Big Island is subject to geologic hazards, especially lava flows and earthquakes. The U.S. Geological Survey classifies all of Kailua-Kona, which is on the slopes of the dormant volcano Hualālai, within Lava Flow Hazard Zone 4, on a scale of ascending risk 9 to 1 (Heliker 1990). The hazard risk is based on the fact that Hualālai has steep slopes and is the third most historically active volcano on the island. Volcanic hazard Zone 4 areas have had about 5 percent of the area covered with lava since 1800 and less than 15 percent of the area covered in the past 750 years.

In terms of seismic risk, the entire Island of Hawai'i is rated Zone 4 Seismic Hazard (Uniform Building Code, Appendix Chapter 25, Section 2518). Zone 4 areas are at risk from major earthquake damage, especially to structures that are poorly designed or built.

Impacts and Mitigation Measures

Geologic conditions impose no substantial constraints on the project. The pool and associated structures will conform to seismic standards of the Uniform Building Code. Although the general area is exposed to a certain amount of hazard from lava flows, earthquake, and high waves, the project presents no additional hazard to the public. Landowners and residents of high-hazard lava inundation parts of the island and high wave action properties have been made aware of the potential and accept the risk when they purchase and/or inhabit such areas.

3.1.2 Flood Zone and Shoreline Setting

Existing Environment

Floodplain status for many areas of the island of Hawai‘i has been determined by the Federal Emergency Management Agency (FEMA), which produces the National Flood Insurance Program’s Flood Insurance Rate Maps (FIRM). The map for the project site is 1551660694C. The area of the subject property where the swimming pool is to be located is designated Zone AE on the FIRM maps, with a base flood elevation of 11 feet (Figure 5). Construction of the proposed improvements is permitted within the AE zone. The area from the makai wall towards the sea is designated as Zone VE (Coastal High Hazard Area). The subject property lies adjacent to a basalt shoreline shelf with white sand pocket beaches (see Figure 3). Although exceptionally high waves do overtop the wall in this area (the area experienced high water during Hurricane Iniki in 1992), the land behind the rock wall on this and adjoining properties does not appear to have suffered any noticeable damage from wave activity in the recent past.

The project does not involve any shoreline hardening or use of areas subject to beach processes. Of increasing importance to land use approvals in coastal regions throughout the world is the issue of sea level rise. There Earth is warming because of increases in human-produced greenhouse gases such as carbon dioxide and methane, which in turn has led to a rise in global sea level (<http://www.ncdc.noaa.gov/oa/climate/globalwarming.html>). According to the National Climate Data Center of the National Oceanic and Atmospheric Administration (NOAA), global mean sea level has been rising at an average rate of 1.7 mm/year (plus or minus 0.5mm) over the past century, a rate which has increased over the last 10 years to 3.1 mm/year (Bindoff et al 2007). NOAA forecasts an expected range of sea level rise over the next century of between 0.18 and 0.59 m, due mainly to thermal expansion and contributions from melting alpine glaciers. However, potential contributions from melting ice sheets in Greenland or Antarctica may yield much larger increases. Dr. Charles Fletcher of the University of Hawai‘i, Manoa, estimates that sea level may rise up to 1.0 m by the end of the next century.

In Hawai‘i, beach erosion, reef overtopping and consequent higher wave run-up, more devastating tsunamis, and full-time submergence of critical coastal areas are likely to occur (<http://www.soest.hawaii.edu/coasts/sealevel/>). It is particularly important to evaluate the location of new infrastructure, and the State and counties must consider how to adjust zoning and setbacks so that large, expensive public buildings are not put in the path of inevitable damage and private structures do not pose undue hazards. On the Big Island, eustatic (global) sea level rise is coupled with local effects of subsidence. Since 1946, sea level at Hilo on the Big Island has risen an average of 1.8 ± 0.4 mm/yr faster than at Honolulu on the island of O‘ahu, a figure that has recently decreased. The degree to which this reflects subsidence versus variations in upper ocean temperature is currently not known (Caccamise et al 2005).

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

Impacts and Mitigation Measures

A scenario of modest sea level rise would not likely substantially affect the integrity or use of the proposed swimming pool. If sea level rises dramatically, although the pool may be affected, it would present no additional hazard to the public based on its siting and characteristics. However, this residence and its structures would be among thousands, or perhaps tens of thousands, to be affected by what would be the largest disaster in the Hawaiian Islands since human settlement.

3.1.3 Water Quality

As discussed in the preceding section, the subject property is adjacent to the shoreline. No water features such as streams, springs, or anchialine ponds are found on or near the subject property. Construction of the swimming pool, deck and fence, which would be separated from the shoreline area by a wall, will include practices to minimize the potential for sedimentation, erosion and pollution of coastal waters. The applicants will ensure that their contractor performs all earthwork in conformance with:

- (a) “Storm Drainage Standards,” County of Hawai‘i, October, 1970, and as revised.
- (b) Applicable standards and regulations of Chapter 27, “Flood Control,” of the Hawai‘i County Code.
- (c) Applicable standards and regulations of the Federal Emergency Management Agency (FEMA).
- (d) Applicable standards and regulations of Chapter 10, “Erosion and Sedimentation Control,” of the Hawai‘i County Code.

Runoff on the lot is already required to be contained onsite, in conformance with Chapter 27 of the Hawai‘i County Code. As part of the plan approval process, the Hawai‘i County Department of Public Works will examine the application and determine if there is a need for the applicants to construct drainage improvements.

3.1.4 Flora and Fauna

Environmental Setting

The yard area proposed for the pool is covered by sand and contains no vegetation (see Figure 3). Vegetation in other parts of the yard, on adjacent lots, and in the shoreline area is typical of urban coastal Kona. No threatened or endangered animal or plant species were found or would be expected in the area. Plants observed in adjacent areas included the natives naupaka (*Scaevola sericea*), akiaki grass (*Sporobolus virginicus*) and akulikuli (*Sesuvium portulacastrum*), as well as the introduced species coconut (*Cocos nucifera*), laua‘e fern (*Phymatosorus grossus*) and hibiscus (*Hibiscus rosa-sinensis*). Animals likely to be on the site are the alien mammal mongoose (*Herpestes auropunctatus*) and alien birds such as Japanese White-eye (*Zosterops japonicus*) and Mynah (*Acridotheres tristis*). Common native waterbirds such as ulili

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

(*Heteroscelus incanus*) and kolea (*Pluvialis fulva*) utilize the rocky shelf and tidepools makai of the wall. In terms of conservation value, however, no botanical or zoological resources requiring special protection are present on the subject property itself.

No streams, wetlands or special aquatic sites (e.g., anchialine ponds) are present on the subject property. However, North Kona coastal waters have excellent marine biota, including healthy coral-based ecosystems. The waters off Kailua Beach are used by boaters, swimmers, divers, and fishermen, and maintenance of water quality is essential for preservation of natural ecosystems that they utilize.

Impacts and Mitigation Measures

Because of the relative minor nature of the project and the lack of native terrestrial ecosystems and threatened or endangered plant species, construction and use of the swimming pool is not likely to cause adverse biological impacts. No planted landscaping is planned. The precautions for preventing any effects to water quality during construction listed above in Section 3.1.3 should prevent any adverse impact on aquatic biological resources in coastal waters. All drain water from the swimming pool would be disposed of in the municipal sewer system in conformance with regulations, and there would be no effects on coastal waters.

3.1.5 Air Quality, Noise, and Scenic Resources

Environmental Setting

Air pollution in the Kona area is mainly derived from volcanic emissions of sulfur dioxide, which convert into particulate sulfate and produce a volcanic haze (vog) that persistently blankets the district. Drier areas experience blowing dust, especially during construction in high wind episodes.

Noise on the site is moderate, and is derived from natural sources (such as surf and wind) as well as nearby residences, roads, recreational facilities, and the Kona International Airport, approximately 10 miles to the north.

The area shares the quality of scenic beauty along with most of the Kona coastline. The Hawai'i County General Plan contains Goals, Policies and Standards intended to preserve areas of natural beauty and scenic vistas from encroachment.

Several views in the Kailua Bay area are specifically cited in the 2005 Hawai'i County General Plan as examples of natural beauty to be preserved for future generations, as shown in Table 1.

Table 1
Scenic Sites in Hawai‘i County General Plan

View	TMK	Ahupua‘a
White Sand Beach	7-5-05:07	Keahuolu
Mauka and makai viewplane along Queen Ka‘ahumanu Highway	Various	Various

None of these properties or views is affected by the proposed action in the subject property.

Impacts and Mitigation Measures

The project would not affect air quality or noise levels, except for very minor and brief effects during construction. The construction of a pool, deck and fence would not have any substantial impact to scenery, because such development is in keeping with neighboring lots and is visually unobtrusive. No impacts would occur to views of or from the areas discussed in the General Plan. For construction noise mitigation, construction would be limited to daytime hours.

3.1.6 Hazardous Substances, Toxic Waste and Hazardous Conditions

Based on onsite inspection, it appears that the site contains no hazardous or toxic substances and exhibits no other hazardous conditions.

3.2 Socioeconomic and Cultural

3.2.1 Land Use, Designations and Controls

Existing Environment

The subject property is bordered by coastal land (State property) on the makai side, by a private road and State land utilized for a County park on the mauka side, and by private parcels on the east and west.

The State Land Use District is Urban and County zoning is RS-15 (Residential, Minimum lot size 15,000 square feet). The Land Use Pattern Allocation Guide Maps identify the area as Open. The site is within the Special Management Area (SMA), and the portion of the subject property under consideration is within the Shoreline Setback Area (see Figs. 1-4).

Impacts and Mitigation

Given the setting, construction of the pool, deck and fence will require a Shoreline Setback Variance and a Special Management Area Permit or exemption, which are discussed in Section 3.6, Consistency with Government Plans and Policies.

3.2.2 Socioeconomic Characteristics and Recreation

Existing Environment

The project site is within the ahupua‘a of Lanihau in the North Kona District of the island of Hawai‘i. Many parts of Kona have experienced high rates of growth associated with the booming visitor industry in West Hawai‘i. Since 1970, population has grown rapidly in all of West Hawai‘i and particularly in North Kona, where the number of inhabitants increased from 4,832 in 1970 to 28,543 in 2000 (U.S. Census of Population 2000).

The Kona Bay subdivision is isolated from other neighborhoods, but industrial, commercial and recreational uses are present nearby. The shoreline fronting the lava wall consists of a lava shelf with sand pockets that are formed and reworked during large wave episodes (see Figure 3). This area is frequently traversed and used by residents of and visitors to Kailua for fishing, gathering, hiking and sunbathing. Public access to and along the shoreline is provided by a trail in an easement along the top of the wall that is makai of each subdivision lot (see Figure 3) and at various mauka-makai locations in or near the subdivision. Many people walk on the lava flats in the shoreline area as well.

Impacts and Mitigation Measures

No adverse socioeconomic impacts are expected to result from the project. Residential-zoned property and residential uses surround the subject property, and the proposed use is consistent with these neighboring properties. The swimming pool, deck and fence, along with the single-family residence to which they pertain, would not adversely affect neighbors, who also have single-family residences, many with swimming pools. The subject property would remain residential in use and zoning.

Mauka-makai access, access along the wall, and access in the shoreline in front of the wall are clearly important. The proposed swimming pool and related improvements would not affect access to or use of these areas in any way.

3.2.3 Cultural and Historic Resources

The cultural value of the project site was assessed as part of this EA. The purpose of this investigation was to determine whether the subject property supported any traditional gathering uses, was vital for access to traditional cultural sites, or had other important symbolic associations for native Hawaiians. It should be emphasized that the project is restricted to several hundred square feet on an already graded lot on which a single-family home is already present, and is surrounded by development, including homes and a modern wall, on three sides. As such, sources for the information included examination of maps and published literature for the Lanihau ahupua‘a and observations of the site.

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Historical and Cultural Background

Kona became a residence of many of the ali'i (chiefs) of the Island of Hawai'i beginning with Umi-a-liloa, who unified the island circa 1525. By this time, the island was divided into six districts or moku-o-loko (Fornander 1973 – Vol. II: 100-102). On Hawai'i Island, the district of Kona is one of six major moku-o-loko within the island. Kona, like other large districts on Hawai'i, was further divided into 'okana or kalana (regions of land smaller than the moku-o-loko, yet comprising a number of smaller units of land), including that of Kona 'akau (North Kona), which extended from Lanihau to Pu'uohau.

Like Umi-a-liloa centuries before upon unification of Hawai'i, Kamehameha I also moved his court to Kona after unification of all the islands to Kamakahonu in the ahupua'a of Lanihau (present-day Kailua-Kona). Here Kamehameha spent the last years of his life and died in 1819 (Menton 1994: pp. xv-xvii).

Soon after the death of Kamehameha I, Kamakahonu was yet again the site of historic events, when Kamehameha II (Liholiho) ended the kapu forbidding women and men to eat together, thereby precipitating the end of the ancient religion with its kapu system. Later on in the year 1820, Kamehameha II and his entourage, including a number of American Protestant missionaries, departed for O'ahu, where the Kingdom's government was relocated. John Adams Kuakini created a fort out of the Ahu'ena Heiau at Kamakahonu, where governance of the island continued under his charge.

Major changes in the area were brought about by the introduction of new forms of agriculture, which were of limited success, and by the Great Mahele in 1848, whereby Kamehameha III and his chiefs redistributed land ownership (Kelly 1983: pp. 22, 35-36). Over 800 kuleana property awards to native Hawaiians were made in Kona at this time and many other thousands of acres of Kingdom lands were sold to both Hawaiians and foreigners. The ahupua'a of Lanihau 1, including the entire area of the old Kona airport, was awarded to William C. Lunalilo at this time, while eight other native Hawaiian claimants were awarded a total of 15.86 acres in this land division. The area directly around Kamakahonu and the former Ahu'ena Heiau were designated as being part of the Lanihau 2 land division with the Kingdom retaining ownership. Lunalilo, a grandson of the half-brother of Kamehameha I and a recipient of Lanihau 1 ahupua'a, later became the first popularly elected King of Hawai'i.

The next significant change for Kona was the beginning of tourism in the district, marked by the construction of Kona's first major hotel, the Kona Inn, in 1928 (Menton 1994). The old Kona airport was constructed in 1945, abandoned in 1970, and made a State park in 1975. The Lanihau area formerly contained a number of brackish water ponds that contained 'opae, or shrimp, that were often used for bait. The construction of the airport almost totally destroyed these environments. The Lanihau ahupua'a has had a number of archaeological sites documented, including petroglyphs near the subject property in parcels TMK 7-5-07:46-47 (Neller 1980), and numerous other sites in the vicinity of the old Kona airport (Estioko-Griffin and Lovelace 1980).

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As the project site is within a developed residential lot surrounded on three sides by modern development, and no archaeological sites are present (see *Existing Archaeological Resources* below), the rich cultural associations of Lanihau are no longer particularly evident. The portion of the subject property for which a swimming pool is planned is a several hundred square foot walled-in front yard that is not being used currently for ceremonial, gathering, or any other cultural purposes by native Hawaiians.

The lava shoreline and tidepools makai of the subdivision are used extensively for fishing and gathering, including traditional uses. These practices would not be constrained or prevented by the construction of the swimming pool and associated improvements on this lot; most of the lots in the subdivision have similar amenities that do not restrict such uses.

In summary, no significant sites or practices appear to present in the area, and no effect on nearby sites or practices is expected.

Existing Archaeological Resources

No sites are listed on the National and State Register of Historic Places on or directly adjacent to the subject property, according to published lists of Register sites maintained by the State Historic Preservation Division. Historic sites, including house sites, burials and *papamu* (game boards), are present on parts of TMK 7-5-05:07 at the Old Kona Airport Park, well to the west of the subject property. According to planner Greg Mooers, when the subdivision was developed over 20 years ago an archaeological inventory survey of the subject property was conducted by PHRI Inc. This work was reviewed and approved by Department of Land and Natural Resources, State Historic Preservation Division and all necessary data recovery was completed prior to grading the subdivision lots. All sand present on the lot has been extensively moved around and turned over as part of house construction.

Impacts and Mitigation for Archaeological Resources

It would appear that no historic sites would be affected by the proposed action, which takes place on a several hundred square foot portion of a lot that has already been graded for a house lot and exhibits no surface features. Despite the extremely low potential for any cultural deposits, it is recommended that the shoreline setback variance conditions include provision of an archaeological monitor during excavation. In the unlikely event that any previously unidentified sites, or remains such as artifacts, shell, bone or charcoal deposits, human burials, rock or coral alignments, pavings, or walls are encountered during excavation, work will stop immediately, and the monitor will contact SHPD to determine the appropriate mitigation. This Draft EA will be reviewed by the Hawai'i State Historic Preservation Division (SHPD) to determine whether there is sufficient information to determine that no effect to significant historic sites would occur as a result of this action.

3.3 Public Facilities and Utilities

Environmental Setting, Impacts and Mitigation Measures

A privately owned paved access road runs along the mauka or northern edge of the subject property, providing vehicular access to the subject parcel. The site is serviced by overhead power and telephone lines from HELCO and Hawaiian Telcom. Water service would be via the County of Hawai'i Department of Water Supply. Wastewater disposal is through a municipal sewage system. No other public facilities are present.

No adverse impact to public facilities or utilities would occur. Water for the pool and electric power for the pool's pump is already available at the site. The swimming pool would be periodically drained, using the municipal wastewater system, in compliance with State Department of Health regulations, which are meant to ensure water quality protection.

3.4 Secondary and Cumulative Impacts

The small scale of the proposed project would not produce any secondary impacts, such as population changes or effects on public facilities.

Cumulative impacts result when implementation of several projects that individually have limited impacts combine to produce more severe impacts or conflicts in mitigation measures. Various single-family homes with swimming pools are already present in this area, or in planning or construction. The adverse effects of building and using the swimming pool and related improvements on the subject property are very minor and temporary disturbance to air quality, noise, and visual quality during construction. Other than the precautions for preventing any effects to water quality during construction listed above in Section 3.1.3, no special mitigation measures should be required to counteract the small adverse cumulative effect. It is particularly important to note that the project is expected to generate negligible scenic impact, no impact to public use and enjoyment of trails and shoreline areas, and no effect to historic or cultural properties. There would thus be no risk of cumulative impact to these resources.

3.5 Required Permits and Approvals

County of Hawai'i:

Shoreline Setback Variance
Plan Approval

3.6 Consistency With Government Plans and Policies

3.6.1 County of Hawai'i General Plan

The *General Plan* for the County of Hawai'i is the document expressing the broad goals and policies for the long-range development of the Island of Hawai'i. The plan was adopted by ordinance in 2005. The *General Plan* is organized into thirteen elements, with policies, objectives, standards, and principles for each. There are also discussions of the specific applicability of each element to the nine judicial districts comprising the County of Hawai'i. Below are pertinent sections followed by a discussion of conformance.

ECONOMIC GOALS

- (a) Provide residents with opportunities to improve their quality of life through economic development that enhances the County's natural and social environments.
- (b) Economic development and improvement shall be in balance with the physical, social, and cultural environments of the island of Hawaii.
- (d) Provide an economic environment that allows new, expanded, or improved economic opportunities that are compatible with the County's cultural, natural and social environment.

Discussion: The construction and use of the swimming pool would not be out of balance with the natural, cultural and social environment of the County, would create temporary construction jobs for local residents, and would indirectly boost the economy through construction industry purchases from local suppliers. A multiplier effect takes place when these employees spend their income for food, housing, and other living expenses in the retail sector of the economy. Such activities are in keeping with the overall economic development of the island.

ENVIRONMENTAL QUALITY GOALS

- (a) Define the most desirable use of land within the County that achieves an ecological balance providing residents and visitors the quality of life and an environment in which the natural resources of the island are viable and sustainable.
- (b) Maintain and, if feasible, improve the existing environmental quality of the island.
- (c) Control pollution.

ENVIRONMENTAL QUALITY POLICIES

- (a) Take positive action to further maintain the quality of the environment.

ENVIRONMENTAL QUALITY STANDARDS

- (a) Pollution shall be prevented, abated, and controlled at levels that will protect and preserve the public health and well being, through the enforcement of appropriate Federal, State and County standards.

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

- (b) Incorporate environmental quality controls either as standards in appropriate ordinances or as conditions of approval.
- (c) Federal and State environmental regulations shall be adhered to.

Discussion: The proposed project would not have a substantial adverse effect on the environment and would not diminish the valuable natural resources of the region. The swimming pool and associated improvements would be compatible with the existing single-family homes and recreational uses in the area.

HISTORIC SITES GOALS

- (a) Protect, restore, and enhance the sites, buildings, and objects of significant historical and cultural importance to Hawaii.
- (b) Appropriate access to significant historic sites, buildings, and objects of public interest should be made available.

HISTORIC SITES POLICIES

- (a) Agencies and organizations, either public or private, pursuing knowledge about historic sites should keep the public apprised of projects.
- (b) Amend appropriate ordinances to incorporate the stewardship and protection of historic sites, buildings and objects.
- (c) Require both public and private developers of land to provide historical and archaeological surveys and cultural assessments, where appropriate, prior to the clearing or development of land when there are indications that the land under consideration has historical significance.
- (d) Public access to significant historic sites and objects shall be acquired, where appropriate.

Discussion: No archaeological or cultural sites appear to be present on the small, disturbed project site. Archaeological monitoring is proposed to be required during excavation.

FLOOD CONTROL AND DRAINAGE GOALS

- (a) Protect human life.
- (b) Prevent damage to man-made improvements.
- (c) Control pollution.
- (d) Prevent damage from inundation.
- (e) Reduce surface water and sediment runoff.
- (f) Maximize soil and water conservation.

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

FLOOD CONTROL AND DRAINAGE POLICIES

- (a) Enact restrictive land use and building structure regulations in areas vulnerable to severe damage due to the impact of wave action. Only uses that cannot be located elsewhere due to public necessity and character, such as maritime activities and the necessary public facilities and utilities, shall be allowed in these areas.
- (g) Development-generated runoff shall be disposed of in a manner acceptable to the Department of Public Works and in compliance with all State and Federal laws.

FLOOD CONTROL AND DRAINAGE STANDARDS

- (a) “Storm Drainage Standards,” County of Hawaii, October, 1970, and as revised.
- (b) Applicable standards and regulations of Chapter 27, “Flood Control,” of the Hawaii County Code.
- (c) Applicable standards and regulations of the Federal Emergency Management Agency (FEMA).
- (d) Applicable standards and regulations of Chapter 10, “Erosion and Sedimentation Control,” of the Hawaii County Code.
- (e) Applicable standards and regulations of the Natural Resources Conservation Service and the Soil and Water Conservation Districts.

Discussion: The subject property is within the AE Zone, or areas within the 100-year Floodplain as determined by detailed methods in the community flood insurance study, according to the Flood Insurance Rate Maps (FIRM). The improvements are subject to review by the Hawai‘i County Department of Public Works to ensure that all relevant standards of Chapter 27 and Chapter 10 are addressed.

NATURAL BEAUTY GOALS

- (a) Protect, preserve and enhance the quality of areas endowed with natural beauty, including the quality of coastal scenic resources.
- (b) Protect scenic vistas and view planes from becoming obstructed.
- (c) Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.

NATURAL BEAUTY POLICIES

- (a) Increase public pedestrian access opportunities to scenic places and vistas.
- (b) Develop and establish view plane regulations to preserve and enhance views of scenic or prominent landscapes from specific locations, and coastal aesthetic values.

Discussion: The swimming pool, deck and fencing would be built within an identified subdivision lot and would conform to CC&Rs that help limit scenic impact. The improvements are minor and would not cause scenic impacts or impede access.

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

NATURAL RESOURCES AND SHORELINES GOALS

- (a) Protect and conserve the natural resources from undue exploitation, encroachment and damage.
- (b) Provide opportunities for recreational, economic, and educational needs without despoiling or endangering natural resources.
- (c) Protect and promote the prudent use of Hawaii's unique, fragile, and significant environmental and natural resources.
- (d) Protect rare or endangered species and habitats native to Hawaii.
- (e) Protect and effectively manage Hawaii's open space, watersheds, shoreline, and natural areas.
- (f) Ensure that alterations to existing land forms, vegetation, and construction of structures cause minimum adverse effect to water resources, and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation, or failure in the event of an earthquake.

NATURAL RESOURCES AND SHORELINES POLICIES

- (a) Require users of natural resources to conduct their activities in a manner that avoids or minimizes adverse effects on the environment.
- (c) Maintain the shoreline for recreational, cultural, educational, and/or scientific uses in a manner that is protective of resources and is of the maximum benefit to the general public.
- (d) Protect the shoreline from the encroachment of man-made improvements and structures.
- (h) Encourage public and private agencies to manage the natural resources in a manner that avoids or minimizes adverse effects on the environment and depletion of energy and natural resources to the fullest extent.
- (p) Encourage the use of native plants for screening and landscaping.
- (r) Ensure public access is provided to the shoreline, public trails and hunting areas, including free public parking where appropriate.
- (u) Ensure that activities authorized or funded by the County do not damage important natural resources.

Discussion: The proposed project avoids impact on shoreline resources by remaining located behind an existing wall, in an area where many landowners have also built pools and decks.

LAND USE GOALS

- (a) Designate and allocate land uses in appropriate proportions and mix and in keeping with the social, cultural, and physical environments of the County.

LAND USE POLICIES

- (c) Allocate appropriate requested zoning in accordance with the existing or projected needs of neighborhood, community, region and County.

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

LAND USE, OPEN SPACE GOALS

- (a) Provide and protect open space for the social, environmental, and economic well-being of the County of Hawai‘i and its residents.
- (b) Protect designated natural areas.

LAND USE, OPEN SPACE POLICIES

- (a) Open space [in the County of Hawai‘i] shall reflect and be in keeping with the goals, policies, and standards set forth in the other elements of the General Plan.

Discussion: The proposed construction of a swimming pool and associated improvements does not detract from the open space in the area. Lateral coastal access would be preserved.

3.6.2 Special Management Area

The subject property is located within the Special Management Area (SMA). Planner Greg Mooers requested the Planning Director by letter of November 16, 2009, to confirm the proposed accessory use (swimming pool) to the existing single-family dwelling is exempt from further SMA review under Planning Commission Rule No. 9-4(10)(B)(xv). The Final EA will report on the reply.

In any case, the proposed land use complies with provisions and guidelines contained in Chapter 205A, Hawai‘i Revised Statutes (HRS), entitled *Coastal Zone Management*. The proposed use would be consistent with Chapter 205A because it would not affect historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, or public access to recreational areas, as discussed below.

Recreational Resources: The subject property is a coastal parcel situated between 10 and 20 feet above mean sea level. The site is a residence that is not used as a recreational resource. There is lateral public access on top of and in front of the existing seawall. Hikers, sunbathers, or fisherman who utilize the shoreline makai of the site will be able to continue their use of this area, as the pool, deck and fence would be set back behind the seawall. These improvements would not in any manner affect the recreational resources of the subject property or the area.

Historic Resources: An archaeological inventory survey of the subject property was completed prior to subdivision and grading, and no sites are present on the subject property. The proposed swimming pool would have no impact on historic resources on the site or the surrounding properties. The front yard is not used for gathering, worshipping or other cultural purposes by native Hawaiians, and therefore there appears to be no potential for cultural impact. Cultural practices in the area include fishing and gathering of marine resources in the shoreline area makai of the subject property. These practices would not be constrained or prevented by the construction of this swimming pool.

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

Scenic and Open Space Resources: The guidelines contained in Rule 9 of the Hawai‘i County Planning Commission Rules (which governs the SMA) express the intent to minimize development that would “substantially interfere with or detract from the line of site toward the sea from the State Highway nearest the coast or from other scenic areas identified in the General Plan.” The swimming pool, deck and fence are between an existing residence and a wall and would not impact scenic or opens space resources. The swimming pool use is consistent with all other homes along this section of shoreline.

Coastal Ecosystems: The subject property abuts the shoreline. The design of the pool and the conditions of construction permits would minimize impacts to coastal resources. All mandated setbacks and government regulations related to runoff and nearshore waters will be adhered to. No threatened or endangered animal or plant species are present. No adverse impact to flora, fauna or ecosystems would be expected to result from the proposed swimming pool or any activities associated with it.

Economic Uses: The swimming pool would have very little impact on the greater socioeconomic environment. The proposed action would be an amenity for one household on the subject property which is zoned RS-15 by the County. This economic impact would be minor, given the context of this area of North Kona.

Coastal Hazards: The subject property is designated Zone AE-11 on the Flood Insurance Rate maps (FIRM). All habitable structures have been constructed above this elevation.

3.6.3 Shoreline Setback Rules

When the subdivision was created in 1984, the developer was required to formulate a public access plan as part of the Special Management Area Use Permit conditions. This plan included two 10-foot wide mauka-makai access points and a lateral shoreline access along the top of a two-foot wide low rock wall that was constructed on the makai edge of all of the ocean-front properties. The shoreline fronting the subject property was certified in 1984 by the State of Hawai‘i when the subdivision was developed. It was located between 22 feet and 42 feet below the makai property line of the subdivision parcels.

On December 11, 2003, the State of Hawai‘i re-certified the shoreline at the makai edge of the seawall, over 20 feet more mauka than the previous certified shoreline, which is still valid for the adjoining parcels. Because of this most recent certification, the applicants must obtain a shoreline setback variance for any improvements within 20 feet of the seawall, including the proposed swimming pool, deck and fence.

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

Rule 11 (Shoreline Setback) of the Hawai‘i County Planning Department Rules of Practice and Procedure governs uses with the Shoreline Setback Area. Pursuant to Rule 11-6(b), all structures and activities that do not qualify under section 11-7(a) through (c) are prohibited in the shoreline setback area, unless the applicant obtains a Shoreline Setback Variance or the Planning Director determines that it is a “minor activity” “that does not adversely affect the shoreline” in the context of the rules and is thus exempt. The swimming pool and related improvements are not considered a minor activity and thus require a variance.

Shoreline Setback Variances are governed by Rule 8 of the Hawai‘i County Planning Commission Rules Of Practice And Procedure, which provides for the variance process in section 8-8 and defines the criteria for approving a variance in Section 8-10. Section 8-10 (b) (3) states:

(b) A variance may also be granted upon a finding that, based upon the record, the proposed structure or activity meets one of the following standards of this subsection: ...

(3) Hardship Standard.

(A) A structure or activity may be granted a variance upon the grounds of hardship only if:

(i) The applicant would be deprived of reasonable use of the land if required to comply fully with this rule; and

(ii) The request is due to unique circumstances and does not draw into question the reasonableness of this rule; and

(iii) The request is the practicable alternative which best conforms to the purpose of this rule.

Project planner Greg Mooers has provided the following interpretation of how the request for variance meets these criteria in the application for a Shoreline Setback Variance:

- (i) Should the applicants be denied this variance they would be denied a reasonable use of the subject property enjoyed by other ocean-front lots within this subdivision. There are 32 ocean-front lots in the subject subdivision, 26 of which are developed. Of these 26 developed lots 19 have pools immediately mauka of the public access/seawall. Of the seven which do not have a pool, five are located on the white sand bay near the south end of the subdivision known as “Keiki Beach”. All lots have pools, decks and/or landscape improvements immediately mauka of the seawall. The applicants’ request to have a pool within the setback area is a reasonable and accepted use of the subject property. In 1994 the adjoining property (TMK: 7-5-5:42) was granted a Shoreline Setback Variance (SSV 94-2) for the construction of their pool.
- (ii) This request for a variance is due to unique circumstances created when the shoreline was re-certified. Had the construction begun before December 11, 2003, prior to which the shoreline was determined to be more than 20 feet makai of the wall, no shoreline setback variance would have been required. This new certification is substantially different than the previous certification and different than the certified

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

shoreline on both sides of the subject property. Adjoining properties were allowed to construct pools, one with a variance and one without, as the shoreline was demarcated further makai. Since the lateral public access is identified as the top of the seawall, the proposed improvements within the setback area would not encroach into the public shoreline area, nor would it impact any coastal processes. The lot is only 7,052 sf and there is no space to set the pool any further back given the existing single-family dwelling.

- (iii) The request for permission to build the proposed improvements is the practicable alternative that best conforms to the purpose of Rule 8, Section 8-2. The existing seawall prevents any encroachment onto the shoreline area, the proposed structure is below grade and would not be perceived as “massing of concrete.” The proposed action would not cause the loss of sand, coral or rocks from the shoreline. The proposed improvement would not endanger any residential dwellings.

Section 8-10 (b) (3) continues:

(B) Before granting a hardship variance, the Commission must determine that the request is a reasonable use of the land. The determination of the reasonableness of the use of land shall consider factors such as shoreline conditions, erosion, surf and flood condition, and the geography of the lot as it relates to health and safety.

The applicant’s response to this criterion is that the proposed use is reasonable and common for the present subdivision. The seawall prevents erosion of the shoreline caused by any activity behind the seawall. The pool is not a habitable structure and there would be no jeopardy to health or safety by the proposed construction of this improvement.

(C) If a structure is proposed to artificially fix the shoreline, the Commission must also determine that shoreline erosion is likely to cause hardship if the structure is not allowed within the shoreline area.

The applicant’s response to this criterion is that the proposed pool, deck and fence would not artificially fix the shoreline, which has been determined to be located on an existing artificial rock wall.

(D) Hardship shall not be determined as a result of a rezoning amendments, planned unit development (PUD) permits, cluster plan development (CDP) permits, or subdivision approvals after June 16, 1989.

The applicant’s response to this criterion is that the subject lot was created by Subdivision 5059-C, approved on January 20, 1984.

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

Section 8-10 continues:

*(c) No variance shall be granted unless appropriate conditions are imposed as applicable:
To comply with Chapters 10 and 27 of the Hawai'i County Code relating to Erosion and
Sedimentation Control and Flood Control respectively;
To maintain safe lateral access along the shoreline or adequately substitute for its loss;
To minimize risk of adverse impacts on beach processes;
To minimize risk of structures failing and becoming loose rocks or rubble on public property;
and
To minimize adverse impacts on public views to, from and along the shoreline.*

The applicant's response to these criteria is that:

- (1.) The applicants will comply with all provisions of Chapters 10 and 27.
- (2.) The proposed pool would not impact the lateral access which is located on top of and in front of the existing seawall.
- (3.) The proposed action would not negatively impact beach processes as the subject property is separated from the beach by a seawall that has existed for over twenty years.
- (4.) The seawall protects the subject property. The proposed pool is below grade and would not become rubble on public property.
- (5.) The proposed pool is below grade and would not affect viewplanes to, from, or along the shoreline.

3.6.4 Kona Community Development Plan

The Kona Community Development Plan (CDP) encompasses the judicial district of North and South Kona, and was developed under the framework of the February 2005 County of Hawai'i General Plan. Community Development Plans are intended to translate broad General Plan Goals, Policies, and Standards into implementation actions as they apply to specific geographical regions around the County. CDPs are also intended to serve as a forum for community input into land use, delivery of government services and any other matters relating to the planning area.

The General Plan now requires that a Community Development Plan shall be adopted by the County Council as an "ordinance," giving the CDP the force of law. This is in contrast to plans created over past years, adopted by "resolution" that served only as guidelines or reference documents to decision-makers. The Kona CDP was adopted in September 2008 by the County Council. The version referenced in this Environmental Assessment is at:

http://www.hcrc.info/community-planning/community-development-plans/kona/cdp-final-drafts/Final%20KCDP_Sept%202008_text.pdf.

The Plan has many elements and wide-ranging implications, but there are several major strategies that embody the guiding principles related to the economy, energy, environmental quality, flooding and other natural hazards, historic sites, natural beauty, natural resources and shoreline, housing, public facilities, public utilities, recreation, transportation and land use.

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

The swimming pool, deck and fence are generally consistent with, or not inconsistent with, all aspects of the Kona CDP. By designing the pool with a cartridge filter system that does not require any back-washing, and by maintaining it by draining it into the municipal sewer system, the project is in keeping with Section 4.3.2, Environmental Resources, which calls for managing the impacts of development on natural resources. This is detailed in Objective ENV-1: Managing Impacts:

In order to minimize impacts on the land, make use of best management planning practices for any land-based endeavor by balancing public and private rights, and taking advantage of an ever-improving knowledge of resource sensitivity and natural processes.

The home and pool are located in the Kona Urban Area and are consistent with this land use designation.

PART 4: DETERMINATION, FINDINGS AND REASONS

4.1 Determination

The applicants expect that the County of Hawai‘i Planning Department will determine that the proposed action would not significantly alter the environment, as impacts would be minimal, and that this agency will accordingly issue a Finding of No Significant Impact (FONSI). This determination will be reviewed based on comments to the Draft EA, and the Final EA will present the final determination.

4.2 Findings and Supporting Reasons

1. *The proposed project will not involve an irrevocable commitment or loss or destruction of any natural or cultural resources.* No valuable natural or cultural resource would be involved, committed or lost. No native ecosystems or historic sites are present. No valuable cultural resources or practices such as coastal access, fishing, gathering, hunting, or access to ceremonial activities would be affected in any way.

2. *The proposed project will not curtail the range of beneficial uses of the environment.* No restriction of beneficial uses would occur.

3. *The proposed project will not conflict with the State's long-term environmental policies.* The State’s long-term environmental policies are set forth in Chapter 344, HRS. The broad goals of this policy are to conserve natural resources and enhance the quality of life. The project is minor and basically environmentally benign, and it is thus consistent with all elements of the State’s long-term environmental policies.

4. *The proposed project will not substantially affect the economic or social welfare of the community or State.* The project would not have any substantial effect on the economic or social welfare of the Kona community or State.

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

5. *The proposed project does not substantially affect public health in any detrimental way.* The project would not affect public health and safety in any way.
6. *The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities.* As the project involves the construction of a swimming pool and associated improvements within an existing subdivision lot that already contains a residence, no secondary effects are expected.
7. *The proposed project will not involve a substantial degradation of environmental quality.* The project is minor and environmentally benign, and it would thus not contribute to environmental degradation.
8. *The proposed project will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat.* The site was already disturbed as part of subdivision and home construction and supports the typical shoreline vegetation found in disturbed sites, including mostly aliens with some common natives. No rare, threatened or endangered species of flora or fauna are known to exist on the project site, and none would be affected by any project activities.
9. *The proposed project is not one which is individually limited but cumulatively may have considerable effect upon the environment or involves a commitment for larger actions.* The adverse effects of constructing a swimming pool and related improvements are very minor and involve temporary disturbance to air quality, noise and scenery during construction. The project is not related to other activities in the region in such a way as to produce adverse cumulative effects or involve a commitment for larger actions. Other than the precautions for preventing any effects to water quality during construction listed above, no special mitigation measures should be required to counteract the small adverse cumulative effect.
10. *The proposed project will not detrimentally affect air or water quality or ambient noise levels.* No substantial effects to air, water, or ambient noise would occur. Brief, temporary effects could occur during construction and will be mitigated.
11. *The project does not affect nor would it likely to be damaged as a result of being located in environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal area.* The project is inside the flood zone, according to FIRM maps, but all improvements will conform to appropriate regulations guiding development within such zones. Although the proposed swimming pool would be located in a zone exposed to earthquake and volcanic hazard, there are no reasonable alternatives that would avoid such exposure, and construction and use of the pool present no additional hazard to the public and are not imprudent for the landowner.

Maier Swimming Pool in the Shoreline Setback Area Environmental Assessment

12. *The project will not substantially affect scenic vistas and viewplanes identified in county or state plans or studies.* The project is low-profile and does not impact the views listed in any plan, particularly those of the Hawai'i County General Plan. Furthermore, the project would not impair views of or along the coastline from any public viewpoint.

13. *The project will not require substantial energy consumption.* Small amounts of energy input would be required for construction and operation.

For the reasons above, the proposed project is not expected to have any significant effect in the context of Chapter 343, Hawai'i Revised Statutes and section 11-200-12 of the State Administrative Rule.

REFERENCES

- Bindoff, N.L. et al. 2007. "Observations: Oceanic Climate Change and Sea Level". *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press.
- Caccamise, D. J., II, M. A. Merrifield, M. Bevis, J. Foster, Y. L. Firing, M. S. Schenewerk, F. W. Taylor, and D. A. Thomas. 2005. "Sea level rise at Honolulu and Hilo, Hawaii: GPS estimates of differential land motion". *Geophys. Res. Lett.* 32.
- Estioko-Griffin, A., and G.W. Lovelace. 1980. "Archaeological Reconnaissance of Old Kona Airport State Park." Rept. prepared for the Hawai'i State Dept. of Land and Natural Resources. Honolulu.
- Gagne, W., and L. Cuddihy. 1990. "Vegetation," pp. 45-114 in W.L. Wagner, D.R. Herbst, and S.H. Sohmer, eds., *Manual of the Flowering Plants of Hawai'i*. 2 vols. Honolulu: University of Hawai'i Press.
- Hawai'i State Department of Business Economic Development and Tourism (DBEDT). 1997. *State of Hawai'i Data Book*. Honolulu: DBEDT.
- Heliker, C. 1990. *Volcanic and Seismic Hazards on the Island of Hawai'i*. Washington: U.S. GPO.
- Kelly, Marion. 1983. *Gardens of Kona*. Honolulu: State of Hawai'i Department of Transportation in cooperation with the Federal Highway Administration.
- Menton, Linda K., editor. 1994. *Kona in History, A Guide to Resources*. Honolulu: The History and Humanities Program of the State Foundation on Culture and the Arts in cooperation with the Kona Historical Society.
- Neller, Earl. 1980. *An Archaeological Reconnaissance at the Old Kona Airport Beach Park, Keahuolu and Lanihau, Kona, Hawaii*. Historic Sites Section, Division of State Parks, Department of Land & Natural Resources, Hawai'i.
- U.S. Department of Commerce, Bureau of the Census. 2000 *U.S. Census of Population*. <http://factfinder.census.gov/servlet/>.
- U.S. Soil Conservation Service. 1973. *Soil Survey of Island of Hawai'i, State of Hawai'i*. Washington: U.S.D.A. Soil Conservation Service.
- University of Hawai'i at Hilo, Dept. of Geography. 1998. *Atlas of Hawai'i*. 3rd ed. Honolulu: University of Hawai'i Press.
- Wolfe, E.W., and J. Morris. 1996. *Geologic Map of the Island of Hawai'i*. USGS Misc Investigations Series Map i-2524-A. Washington, D.C.: U.S. Geological Survey.

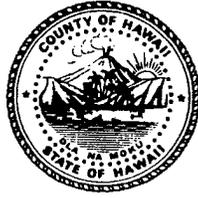
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**DRAFT ENVIRONMENTAL ASSESSMENT
MAIER SWIMMING POOL IN THE
SHORELINE SETBACK AREA**

**TMK (3rd) 7-5-005:092
Lanikai, North Kona District, Island of Hawai'i, State of Hawai'i**

**Appendix 1a
Responses to Early Consultation**

William P. Kenoi
Mayor



Harry S. Kubojiri
Police Chief

Paul K. Ferreira
Deputy Police Chief

County of Hawaii

POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-8865

October 13, 2009

Mr. Ron Terry
Principal
Geometrician Associates, LLC
P.O. Box 396
Hilo, Hawaii 96721

Dear Mr. Terry:

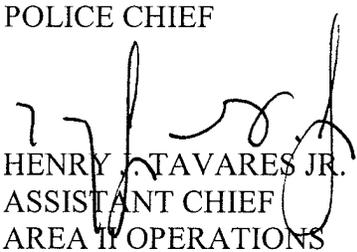
SUBJECT: Early Consultation and Environmental Assessment for Shoreline Setback
Variance to Construct Swimming Pool and Related Improvements
North Kona, Island of Hawaii
TMK: (3rd) 7-5-005:092

Staff has reviewed the above-referenced documents and has no comments to offer at this time.

Should you have any questions, please contact Captain Chad Basque, Commander of Kona Patrol, at 326-4646, extension 249.

Mahalo,

HARRY S. KUBOJIRI
POLICE CHIEF

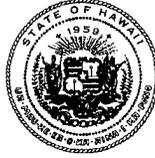


HENRY J. TAVARES JR.
ASSISTANT CHIEF
AREA II OPERATIONS

CB
RS0900871

PHONE (808) 594-1888

FAX (808) 594-1865



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

HRD09/4703

October 14, 2009

Ron Terry
Geometrician Associates
PO Box 396 Hilo, Hawai'i 96721

RE: Request for early consultation on the proposed swimming pool within the shoreline setback, Kona, Hawai'i, TMK: 7-5-005:092.

Aloha e Ron Terry,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-mentioned letter dated October 7, 2009. OHA has reviewed the project and offers the following comments.

OHA generally does express concern over expansion of uses or new uses within the shoreline setback due to the highly sensitive nature of this area. We do look forward to seeing how this project will be treated in terms of a *Project Need* section of the forthcoming environmental assessment.

Additionally, we note that the lot size is quite small and located next to the coast. OHA sees that federal, state and county agencies are preparing for the advent of sea level rise in Hawai'i and we ask how the project will accommodate for the adverse effects of sea level rise.

Thank you for the opportunity to comment. If you have further questions, please contact Grant Arnold by phone at (808) 594-0263 or e-mail him at granta@oha.org.

'O wau iho nō me ka 'oia'i'o,

Clyde W. Nāmu'o
Administrator

C: OHA Kona CRC

LINDA LINGLE
GOVERNOR OF HAWAII



LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 29, 2009

Geometrician Associates, LLC
Box 396
Hilo, Hawaii 96721

Attention: Mr. Ron Terry

Ladies and Gentlemen:

Subject: Early Consultation on Environmental Assessment for Shoreline Setback
Variance to Construct Swimming Pool and Related Improvements

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 comment.

Other than the comments from Land Division-Hawaii District, Engineering Division, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read "Morris M. Atta".

for Morris M. Atta
Administrator

LINDA LINGLE
GOVERNOR OF HAWAII

*HA 10-79
Set Back?*



LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
DEPT. OF CONSERVATION
STATE OF HAWAII

2009 OCT -9 A 10: 44



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

October 9, 2009

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 - Hawaii District
 - Historic Preservation

RECEIVED
LAND DIVISION
2009 NOV -5 A 10: 16
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

FROM: *for* Morris M. Atta *Thielen*

SUBJECT: Early Consultation on Environmental Assessment for Shoreline Setback Variance to Construct Swimming Pool and Related Improvements

LOCATION: Island of Hawaii

APPLICANT: Geometrician Associates, LLC on behalf of Kim and Carol Maier

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 28, 2009.

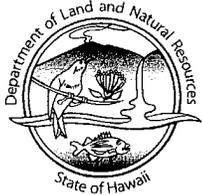
If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

- We have no objections.
- We have no comments. *Lot is not in Conservation*
- Comments are attached.

Signed: *M. Atta* District

Date: *3 Nov 09*



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 9, 2009

MEMORANDUM

TO: **DLNR Agencies:**
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 Div. of State Parks
 Commission on Water Resource Management
 Office of Conservation & Coastal Lands
 Land Division – Hawaii District
 Historic Preservation

RECEIVED
LAND DIVISION
2009 OCT 16 A 10:51

FROM: *for* Morris M. Atta *Maalene*
SUBJECT: Early Consultation on Environmental Assessment for Shoreline Setback Variance to Construct Swimming Pool and Related Improvements
LOCATION: Island of Hawaii
APPLICANT: Geometrician Associates, LLC on behalf of Kim and Carol Maier

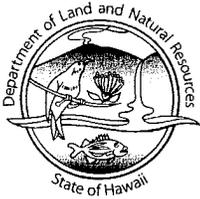
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If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

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

Signed: *[Signature]*
Date: 10.15.09



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 9, 2009

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 – Hawaii District
 Historic Preservation

RECEIVED
LAND DIVISION
2009 OCT 21 A 12:51

09 OCT 09 PM 04:23 ENGINEERING

FROM: *for* Morris M. Atta *Thielen*
SUBJECT: Early Consultation on Environmental Assessment for Shoreline Setback Variance to Construct Swimming Pool and Related Improvements
LOCATION: Island of Hawaii
APPLICANT: Geometrician Associates, LLC on behalf of Kim and Carol Maier

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 28, 2009.

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 my office at 587-0433. Thank you.

Attachments

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

Signed: *[Signature]*
Date: 10/20/09

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/MorrisAtta
Ref: EAShorelineSetbackVariance
Hawaii.453

COMMENTS

- () We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ____.
 - (X) **Please take note that according to the Flood Insurance Rate Map (FIRM), the project site is located in Zone AE. The National Flood Insurance Program regulates developments within ZoneAE as indicated in bold letters below.**
 - () Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ____.
 - (X) **Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.**
- Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:**
- () Mr. Robert Sumitomo at (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
 - (X) **Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.**
 - () Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
 - () Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.
- () The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
 - () The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.
 - () Additional Comments: _____

 - () Other: _____

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: 
CARTY CHANG, ACTING CHIEF ENGINEER
Date: 10/20/09

LINDA LINGLE
GOVERNOR OF HAWAII



LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

November 10, 2009

Geometrician Associates, LLC
Box 396
Hilo, Hawaii 96721

Attention: Mr. Ron Terry

Ladies and Gentlemen:

Subject: Early Consultation on Environmental Assessment for Shoreline Setback
Variance to Construct Swimming Pool and Related Improvements

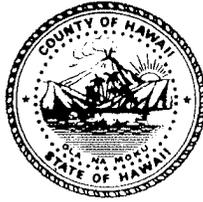
Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR), Land Division distributed or made available a copy of your report pertaining to the subject matter to Office of Conservation & Coastal Lands for their review and comment.

The Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,


Morris M. Atta
Administrator

William P. Kenoi
Mayor



BJ Leithead Todd
Director

Margaret K. Masunaga
Deputy

County of Hawai'i

PLANNING DEPARTMENT

Aupuni Center • 101 Pauahi Street, Suite 3 • Hilo, Hawai'i 96720
Phone (808) 961-8288 • Fax (808) 961-8742

November 20, 2009

Mr. Ron Terry
Geometrician Associates, LLC
PO Box 396
Hilo, Hawaii 96721

Dear Mr. Terry:

SUBJECT: Early Consultation for Environmental Assessment
Landowner: Artur Kim Maier Tr
and Carol Lynn Metcalfe-Maier Tr
Project: Shoreline Setback Variance to Construct Swimming
Pool and Related Improvements
TMK: (3) 7-5-005:092; Lanihau- Auhaueae, North Kona,
Hawai'i

Thank you for your letter received October 8, 2009, requesting comments from this office regarding the preparation of an Environmental Assessment. This letter is to replace our previous letter dated October 29, 2009. We apologize for any misunderstanding this may have caused.

The subject parcel consists of 7,052 sq ft and is zoned RS-15 (Single Family Residential-15,000 sq ft minimum lot size). The parcel is situated within the State Land Use Urban District. The subject parcel is located within the Special Management Area (SMA).

According to Hawai'i Administrative Rules, Chapter 200, Environmental Impact Statement Rules, Subchapter 5, 11-200-8 A 3.d., the construction of a swimming pool and related improvements as an accessory structure to a single-family dwelling is exempt from the preparation of an Environmental Assessment. However, Chapter 343-5 (a)(3) of Hawai'i Revised Statutes, states that an Environmental Assessment shall be required for actions that "propose any use within a shoreline area as defined in section 205A-41." To clarify, swimming pools accessory to a single-family dwelling would normally be exempt

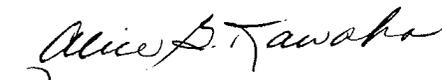
Mr. Ron Terry
Geometrician Associates, LLC
Page 2
November 20, 2009

from the preparation of an Environmental Assessment unless proposed with the shoreline area.

We have no further comments to offer at this time. Please provide our office with a copy of the EA/notification of availability of EA when it is completed.

If you have any questions or if you need further assistance, please feel free to contact Bethany Morrison of this office at 961-8138.

Sincerely,


BJ LEITHEAD TODD
Planning Director

BJM:cs
P:\wpwin60\Bethany\EA-EIS Review\preconsulteaMaierrevised.doc

cc: Kim Artur Maier Tr
Carol Lynn Metacalfe- Maier Tr
PO Box 621
Kailua Kona, HI 96745

Mr. Norman Hayashi, Planning Commission

Planning Department- Kona

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