Draft Environmental Assessment
Prepared in Accordance with Chapter 343, Hawai‘i Revised Statutes and
Title 11, Chapter 200, Hawai‘i Administrative Rules

Kēōkea *Beach Park Improvements*

Niuli‘i, North Kohala District, Island of Hawai‘i
Tax Map Key: (3) 5-2-001: 16

September 4, 2009

County of Hawai‘i
Department of Parks and Recreation

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September 4, 2009

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Section 1

Project Summary

Project:	Kēōkea Beach Park Improvements Niuli‘i, North Kohala District, Island of Hawai‘i
Proposed Action:	Repair, Renovate and Reconstruct the Upper (south) and Lower (north) Pavilions at Kēōkea Beach Park damaged during the 2006 earthquake. Upper Pavilion repair actions include: reconstruction of cracked concrete flooring and pillar footings; repair to structural columns; relocation of kitchen and restrooms to new south end extension; utility upgrades; addition of handicapped parking stalls at east side of pavilion; repaving and parking striping. Damaged south and west facing walls of upper pavilion will be removed and reconfigured to open bays.
Proposing Agency/ Applicant:	Department of Parks and Recreation County of Hawai‘i 101 Pauahi Street Hilo, Hawai‘i 96720 Robert A. Fitzgerald, Director
Accepting Authority:	Department of Parks and Recreation County of Hawai‘i 101 Pauahi Street Hilo, Hawai‘i 96720
TMK:	(3) 5-2-001: 16
Location:	Niuli‘i, North Kohala District, Island of Hawai‘i
Project Area:	Approximately 7.110 acres
County Zoning:	Preservation and Park
State Land Use:	Agricultural and Conservation
Existing Land Uses:	The proposed area currently serves as a beach park with a 3,176 square foot 8-bay open pavilion with kitchen facilities and restrooms and a 224 square foot pavilion at the north end of the property. Open picnic and barbeque areas are also provided.
Permits that May be Required:	Building Permits, SMA Permit, CDUP

Section 2
Introduction

2.1. Purpose and Need

The County of Hawai‘i, Department of Parks and Recreation, proposes to repair and renovate the existing pavilions at Kēōkea Beach Park damaged during the 2006 earthquake. The “upper” pavilion located at the southern end is a 3,176 square foot 8-bay pavilion with kitchen and restroom facilities, and has been closed to the public since the earthquake. The “lower” pavilion, also damaged in this earthquake, is located at the northern end of the property and comprises 224 square feet. The 2006 earthquake registered 6.7 on the Richter Scale and caused approximately $100 million dollars of damage, primarily to the northwest region of the Island of Hawai‘i.[1] Improvements to the upper pavilion include repairs identified by federal and county building inspectors to the concrete slab floor and support columns. Removal of the walls and structures of the south and west facing sides, and relocation of the kitchen, restrooms, and barbeque pit will be also undertaken. The lower pavilion will be removed and rebuilt, and the existing parking lot will be striped. Site renovations will also include bringing the site into compliance with standards defined in the Americans with Disabilities Act (ADA). These upgrades involve the addition of handicapped parking beside the entrance to the pavilion and construction of handicapped accessible kitchen and restroom facilities. The original build dates of these pavilions are unknown but the upper pavilion was last improved in 1971. The proposed improvements will bring these facilities into conformance with current Hawai‘i building codes.

2.2. Purpose of Environmental Assessment

The purpose of this Draft Environmental Assessment (DEA) is to inform interested parties of the proposed project and to seek public comment on subject areas that should be addressed prior to the preparation and acceptance of the Final Environmental Assessment (FEA). This DEA describes existing conditions at the site and addresses the potential for adverse environmental impacts as a result of the proposed action. This EA complies with the following sections of

[1] USGS Hawai‘i Volcano Observatory: http://hvo.wr.usgs.gov/earthquakes/destruct/

Chapter 343, Section 343-5 HRS, which states an environmental assessment shall be required for actions which:

1. *"propose the use of state or county lands or the use of state or county funds, other than funds to be used for feasibility or planning studies for possible future programs or projects which the agency has not approved, adopted, or funded, or funds to be used for the acquisition of unimproved real property; provided that the agency shall consider environmental factors and available alternatives in its feasibility or planning studies;"*
2. *"propose any use within any land classified as a conservation district by the state land use commission under chapter 205;"*
3. *"propose any use within a shoreline area as defined in section 205A-41."*

The proposed project involves the use of Federal Emergency Management Agency (FEMA) funds for the repair, reconstruction and renovation to existing facilities at Kēōkea Beach Park. The park is owned and maintained by the County of Hawai'i, Department of Parks and Recreation, and is situated on lands classified within the State Conservation and Agricultural Land Use Districts and is within the County of Hawai'i's Special Management Area (SMA). This project is subject to preparation of an environmental assessment (EA) in accordance with Chapter 200, Title 11, Hawai'i Administrative Rules (HAR) and Chapter 343, Hawai'i Revised Statutes (HRS).

2.3. Project Location

The project site is located in the North Kohala District, in the town of Niuli'i, near the northern point of the Island of Hawai'i, (**See Figure 1, Project Location**). Niuli'i, situated approximately five miles east of Hawi, is a small sparsely populated town often identified by Kēōkea Beach Park and Niuli'i Cemetery. Bounded to the south by South Kohala District, to the east by Hamakua District, and the Pacific Ocean to the north and west, North Kohala is a remote area accessed only by the Akoni Pule Highway (Route 270/ Hawi-Niuli'i Road) and the Kohala Mountain Road (Route 250). Kēōkea Beach Park occupies 7.11 acres of land adjacent to Kēōkea Bay, approximately 0.5 miles north from the end of Route 270. The pavilions comprise approximately 2,668 and 224square feet of TMK Parcel: (3) 5-2-001:016, (**See Figure 2 - TMK Map**).

Figure 1, Project Location

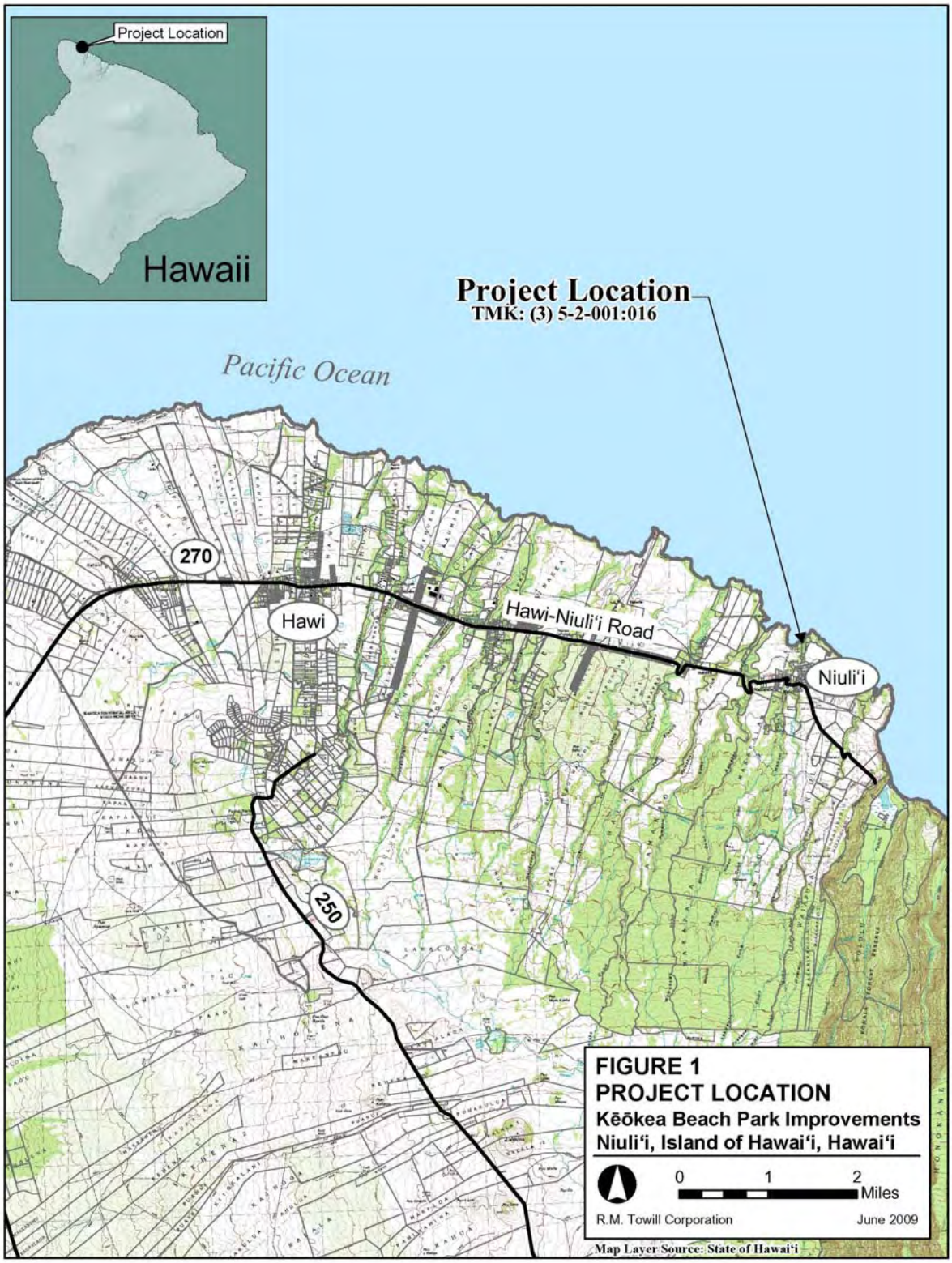


Figure 2, TMK Map

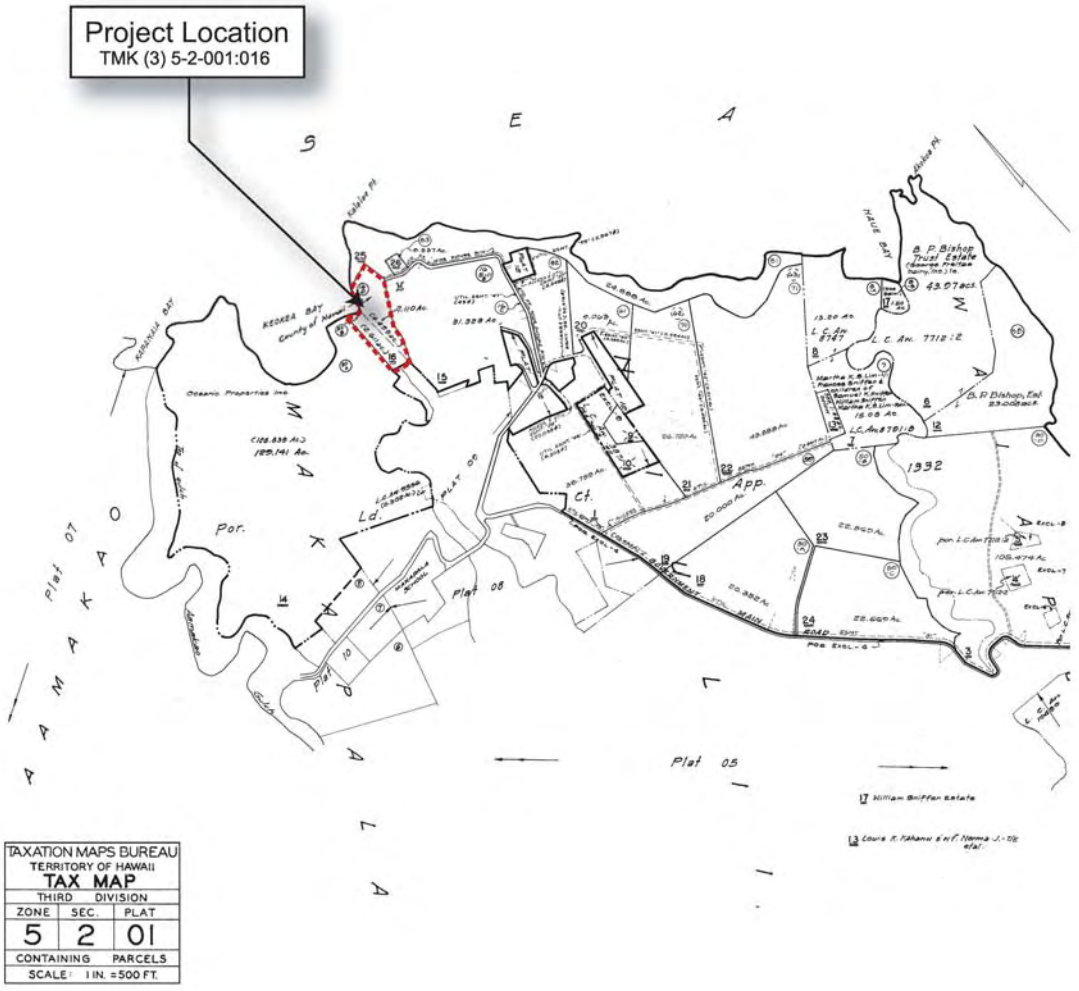


FIGURE 2
TMK MAP
Keokea Beach Park Improvements
Niuli'i, Island of Hawai'i, Hawai'i

Not to Scale

R.M. Towill Corporation June 2009

Section 3

Project Alternatives and Preferred Plan

3.1. Existing Conditions

Kēōkea Park is located at the end of Kēōkea Park Road on the windward side of the Kohala Mountains in the northwest corner of the Island of Hawai‘i. The project area currently serves as a beach park that offers access to the surf breaks of Kēōkea Bay and congregation opportunities to local residents and visitors. Park facilities include two pavilions, outdoor showers, and several barbeque pits. The lower pavilion is located on top of a rock outcropping at the northern end of the property and the existing parking lot is an unmarked paved area located between the two pavilions. (**See Figure 3, Site Plan**). A kitchen, storeroom, restrooms, and another barbeque pit are located inside the 3,176 square foot 8-bay pavilion at the south end of the property. (**See Figure 4, Upper Pavilion Floor Plan**).

The parcel on which the project is proposed includes both Agricultural and Conservation State Land Use Districts (SLUD) as defined by the Hawai‘i State Land Use Commission (**See Figure 5, SLUD Map**). Construction activities will take place within the Conservation District. County zoning for the parcel is Agricultural (A-20a) (**See Figure 6, Zoning Map**). The entirety of the beach park is located within the Special Management Area (SMA), (**See Figure 7, SMA Map**).

Figure 3, Site Plan

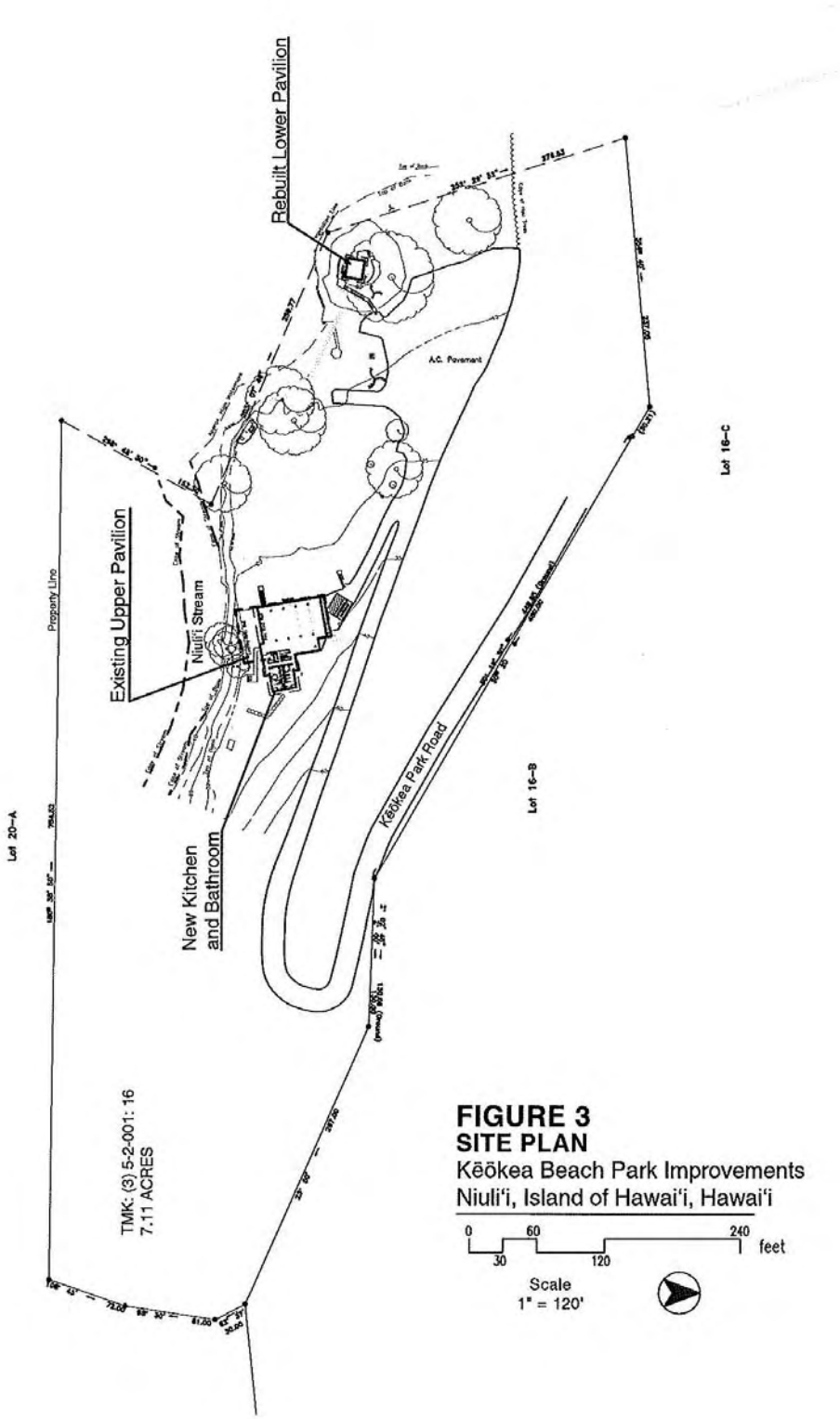


Figure 4, Upper Pavilion Floor Plan (existing)

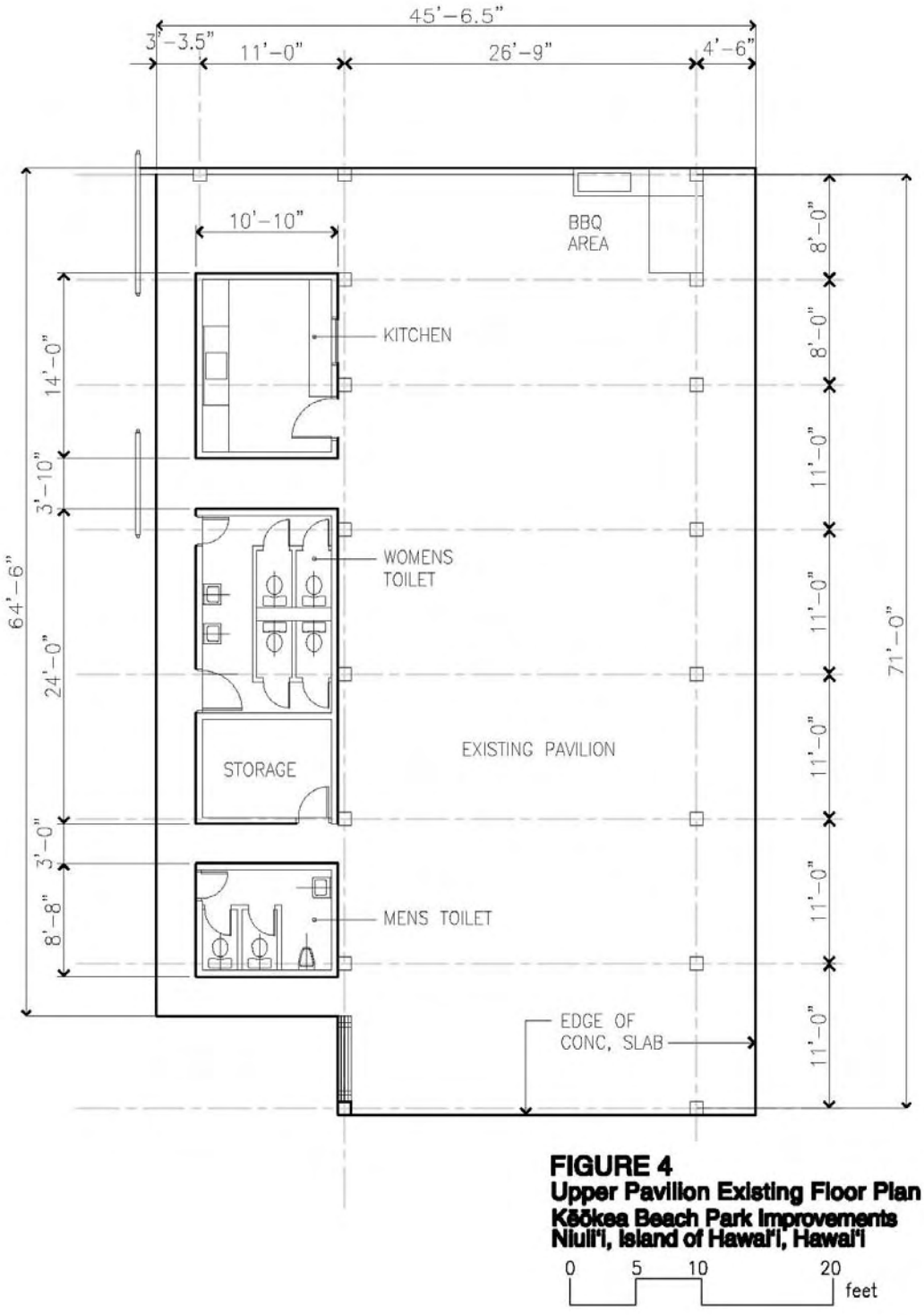


FIGURE 4
Upper Pavilion Existing Floor Plan
Kēōkea Beach Park Improvements
Niuli'i, Island of Hawai'i, Hawai'i

Figure 5, State Land Use District Map

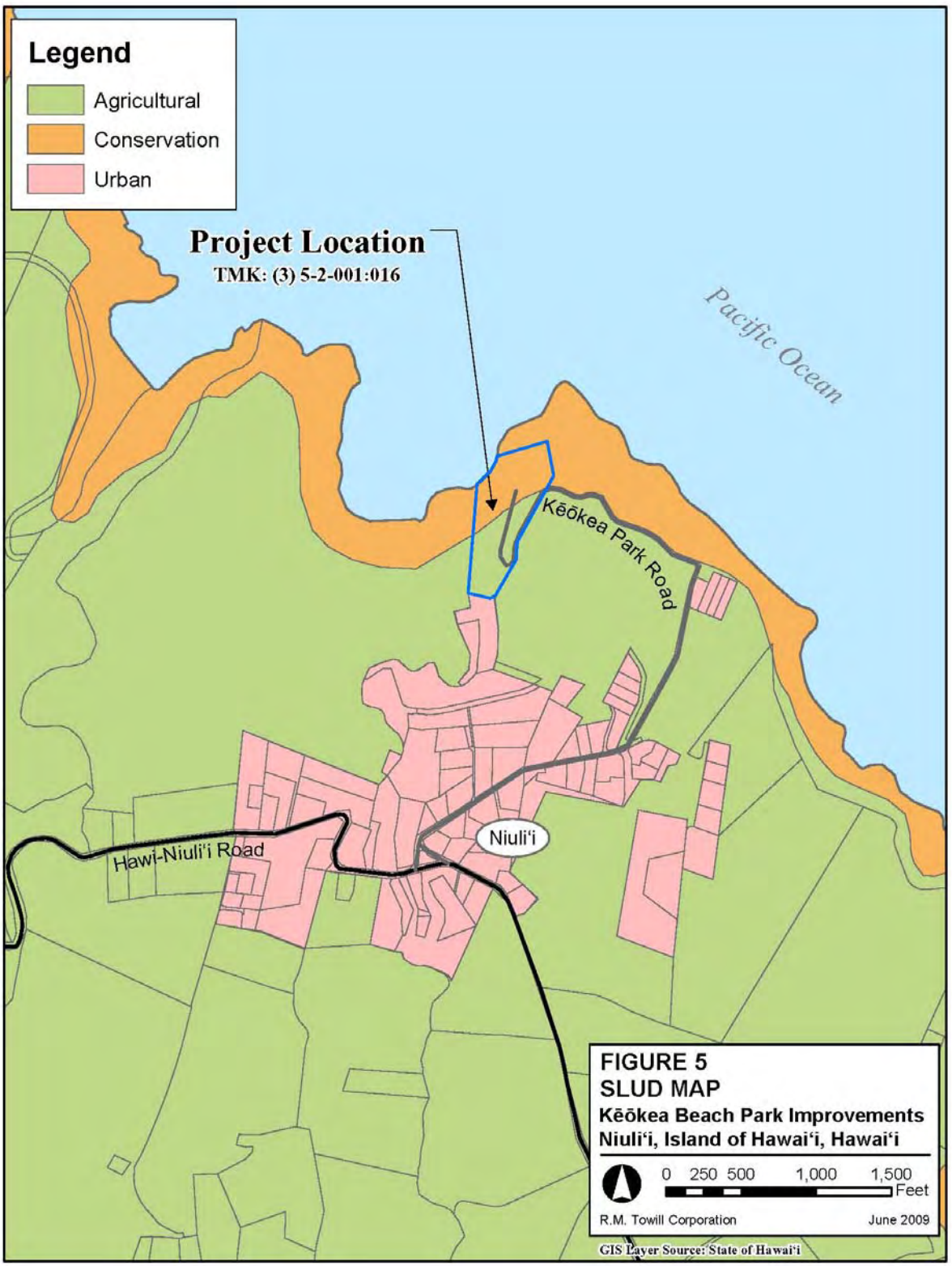


Figure 6, Zoning Map

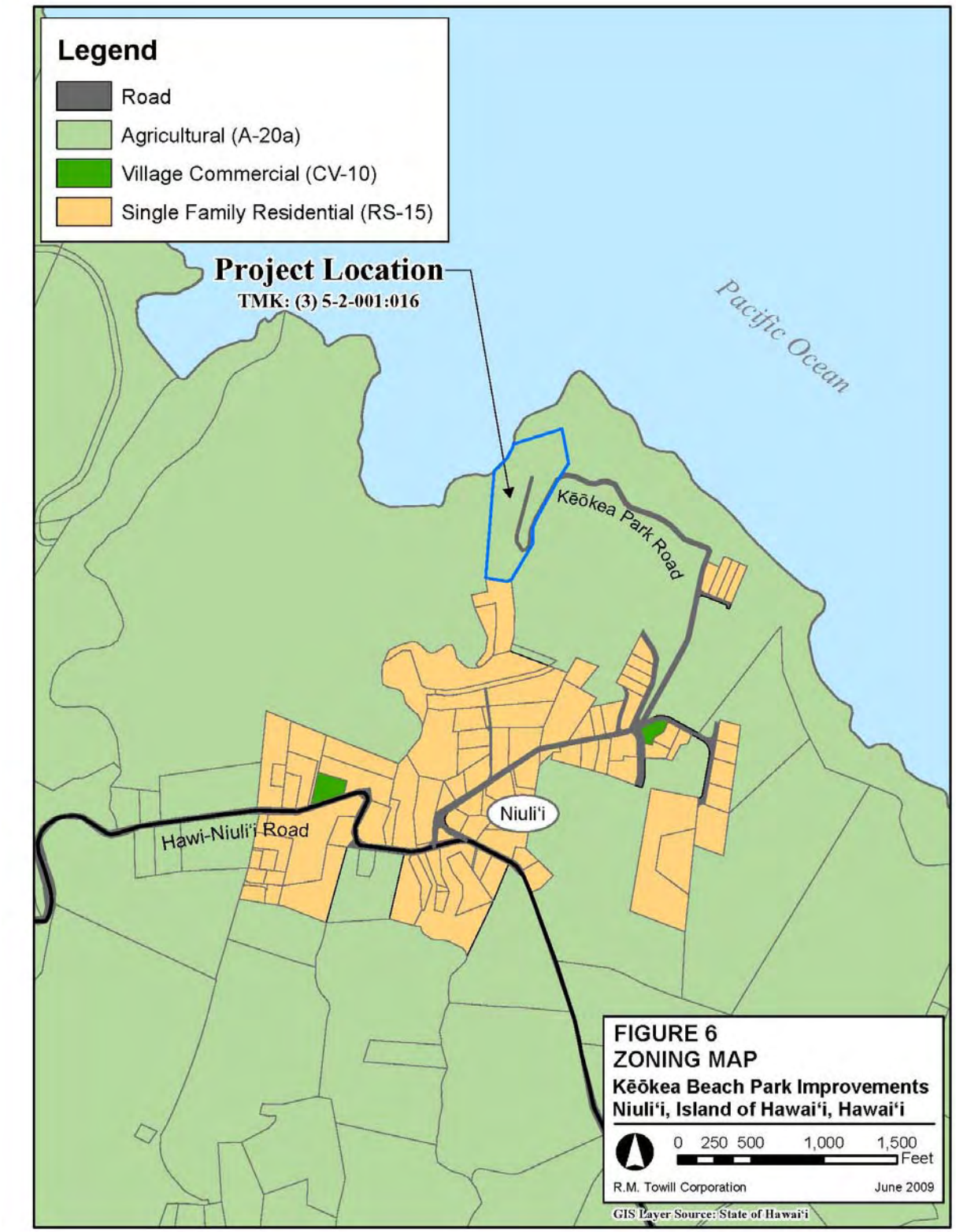
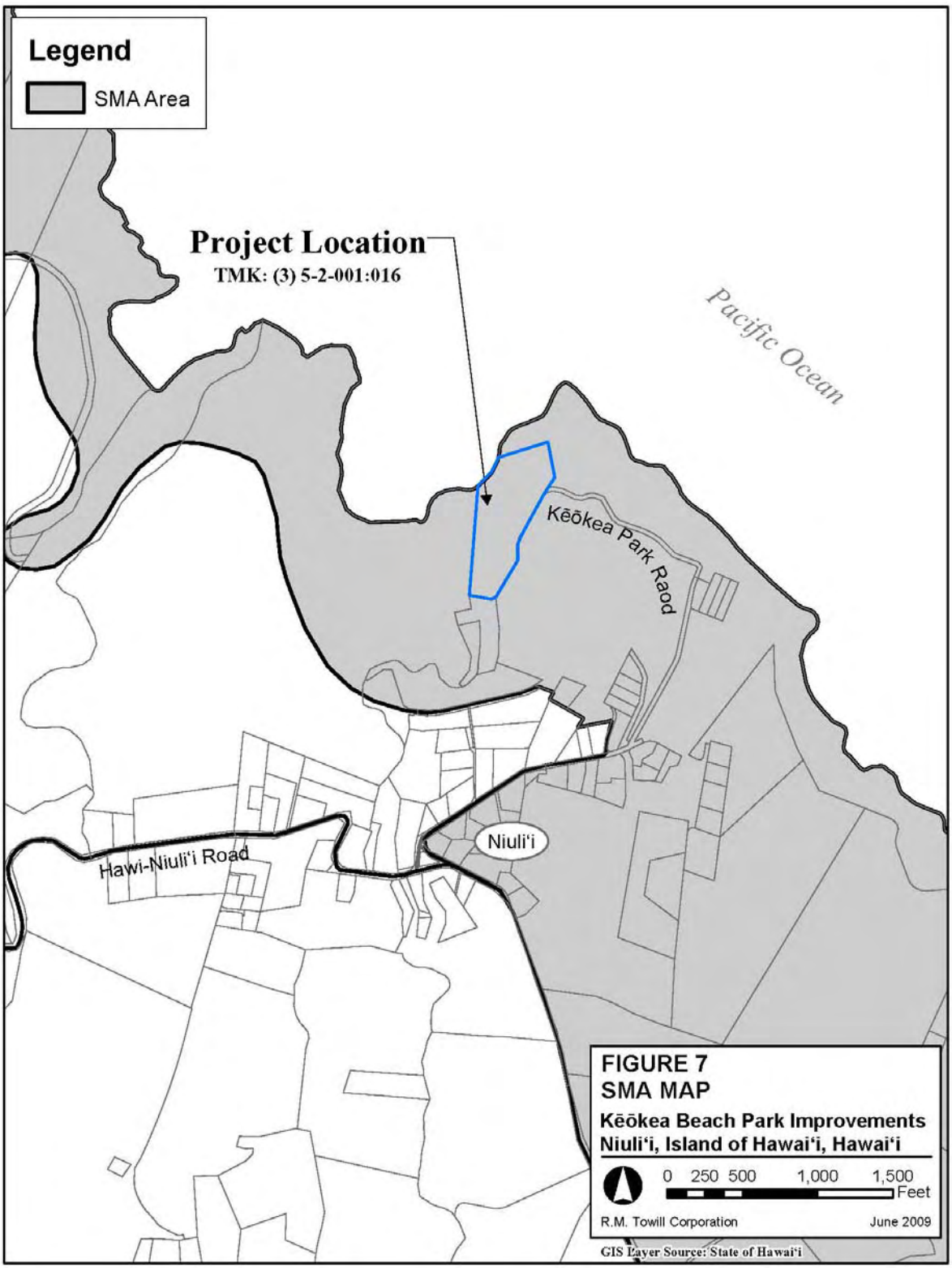


Figure 7, SMA Map



3.2. Alternatives Considered

3.2.1. No Action or Delayed Action Alternative

The no action alternative would involve taking no further action to improve the damaged condition of the existing facilities. This alternative would keep the upper pavilion closed to public use and continue to limit the availability of recreational facilities in the area. If the upper pavilion is left in its current condition, natural erosion of the stream bank beside the pavilion could result in damage to the west end of the upper pavilion[2] and possible adverse environmental effects to the stream. If this were allowed to occur, the expenditure of public funds, energy, and labor, required to remove or repair the damaged structure and retain the eroding slope is believed to exceed the financial and environmental costs associated with the proposed project (**See Figure 8, Site Photos**).

The delayed action alternative would involve taking no further action for an indeterminate amount of time and is likely to have the same result as the no action alternative.

The subject DEA evaluates the potential for adverse environmental effects and where applicable, proposed mitigation measures to avert, minimize, or otherwise avoid the potential for such impacts. The no action or delayed action alternatives were rejected because they fail to meet the objectives of bringing the facilities up to current building standards, returning the facilities of the upper pavilion to public use and preventing adverse environmental impacts.

3.2.2. Preferred Alternative

The preferred alternative is to initiate the beach park facility improvements as proposed and is intended to bring the subject structures into conformance with current building codes, returning the upper pavilion facilities to public use, and averting potential environmental impacts to the adjacent stream. Expenses for the pavilion repairs and improvements are eligible for reimbursement through FEMA funding.

[2] FEMA 1664 – DR-HI, (2007), Slope stability at the Kēōkea Park Pavilion.

Figure 8, Existing Site Photos

Southwest view of upper pavilion

View into the front of upper pavilion

Damage to restroom wall – south wall

Damage to west wall – to be removed

Existing barbeque pit – to be removed

North view of lower pavilion

3.3. Description of Proposed Action

3.3.1. Upper Pavilion

The improvements to the upper pavilion include the repair and reconstruction of the damaged concrete flooring and eight column footings, the removal of south and west facing walls, and the relocation of the kitchen, restrooms, and storage room. The building length will be reduced by approximately 16 linear feet from the west end. The loss of approximately 728 square feet of open floor space will be replaced by the floor area now occupied by the storage room, kitchen and restroom facilities. An approximately 696 square foot addition will be constructed on the mauka (south) side of the building to accommodate the restrooms, kitchen and storage room. The new kitchen and restroom facilities will be ADA compliant and handicapped parking stalls will be added at the east end of the pavilion. Additionally, eight support columns will be replaced and the damaged concrete will be repaired and the entire structure will be repainted, (**See Figure 9, Pavilion Floor Plan and Figure 11, Building Elevations**).

3.3.2. Lower Pavilion

The lower pavilion, located atop a rock outcropping at the northern end of the property, will be removed and rebuilt to current State and County building standards and will occupy the same floor area as the existing building. (**See Figure 10, Lower Pavilion Floor Plan**). Building elevations will not be altered.

3.3.3. Parking Lot

The existing parking lot, currently unmarked, will be resurfaced in damaged areas and striped.

Figure 9, Upper Pavilion Floor Plan

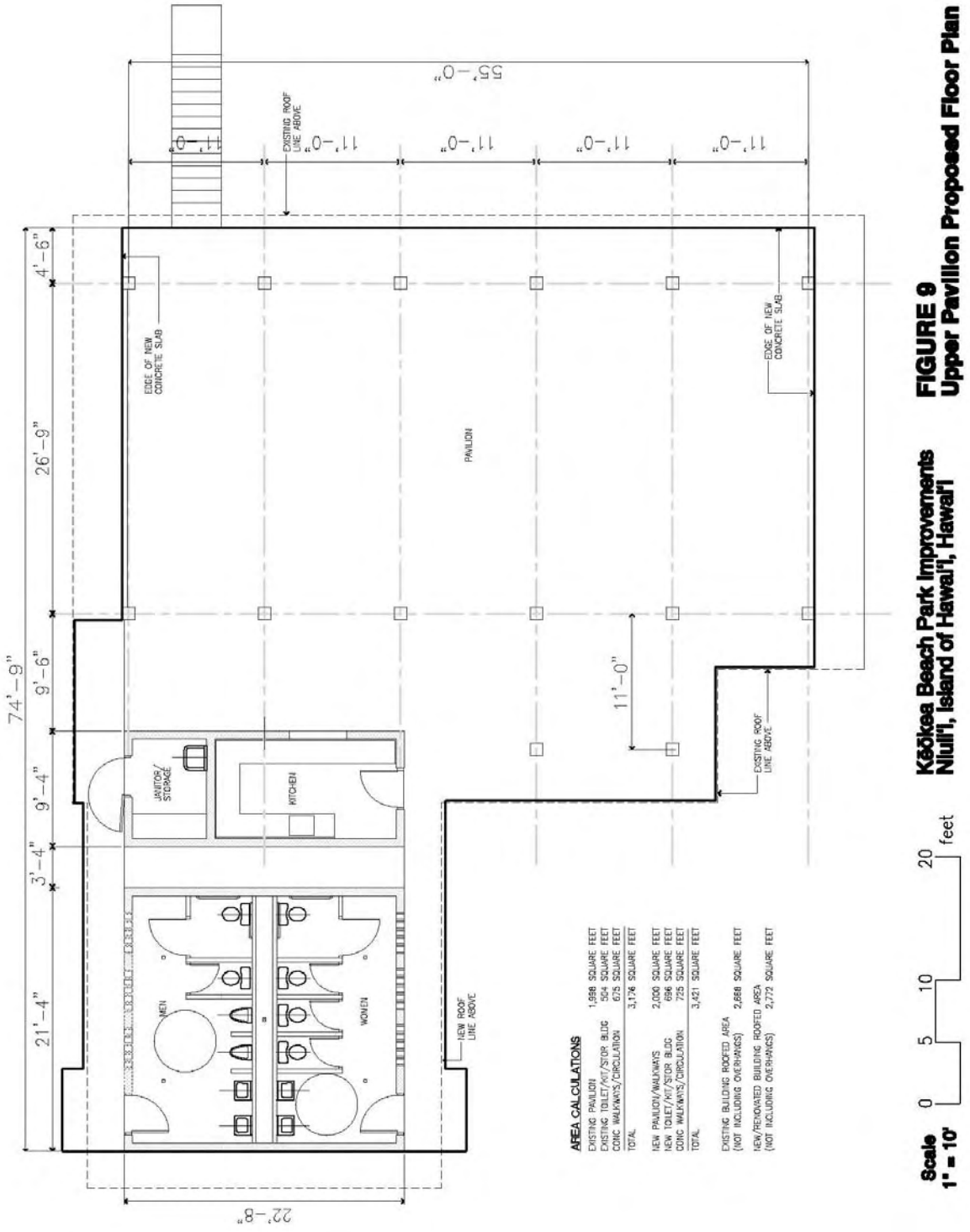


Figure 10, Lower Pavilion Floor Plan

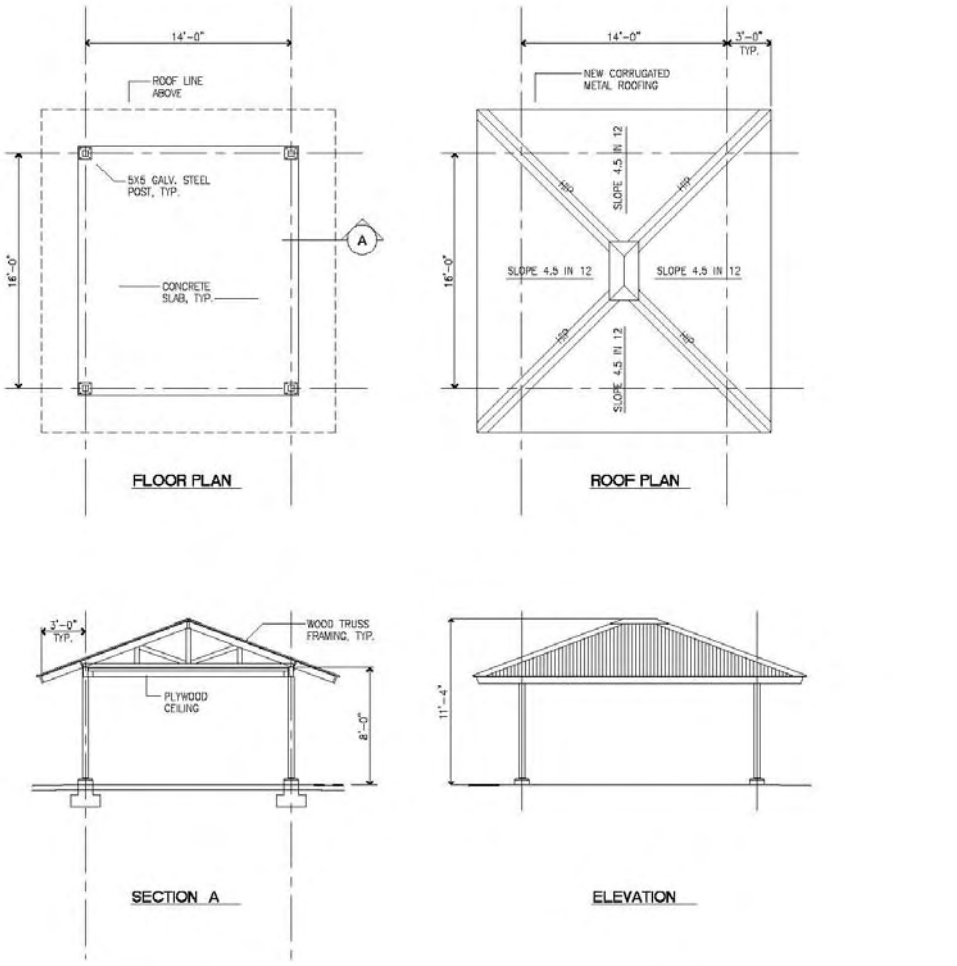


FIGURE 10
Lower Pavilion Floor Plan and Elevations
Kēōkea Beach Park Improvements
Niuli'i, Island of Hawai'i, Hawai'i

0 5 10 20 feet

Scale
1" = 10'

Figure 11-a, Upper Pavilion Building Elevations

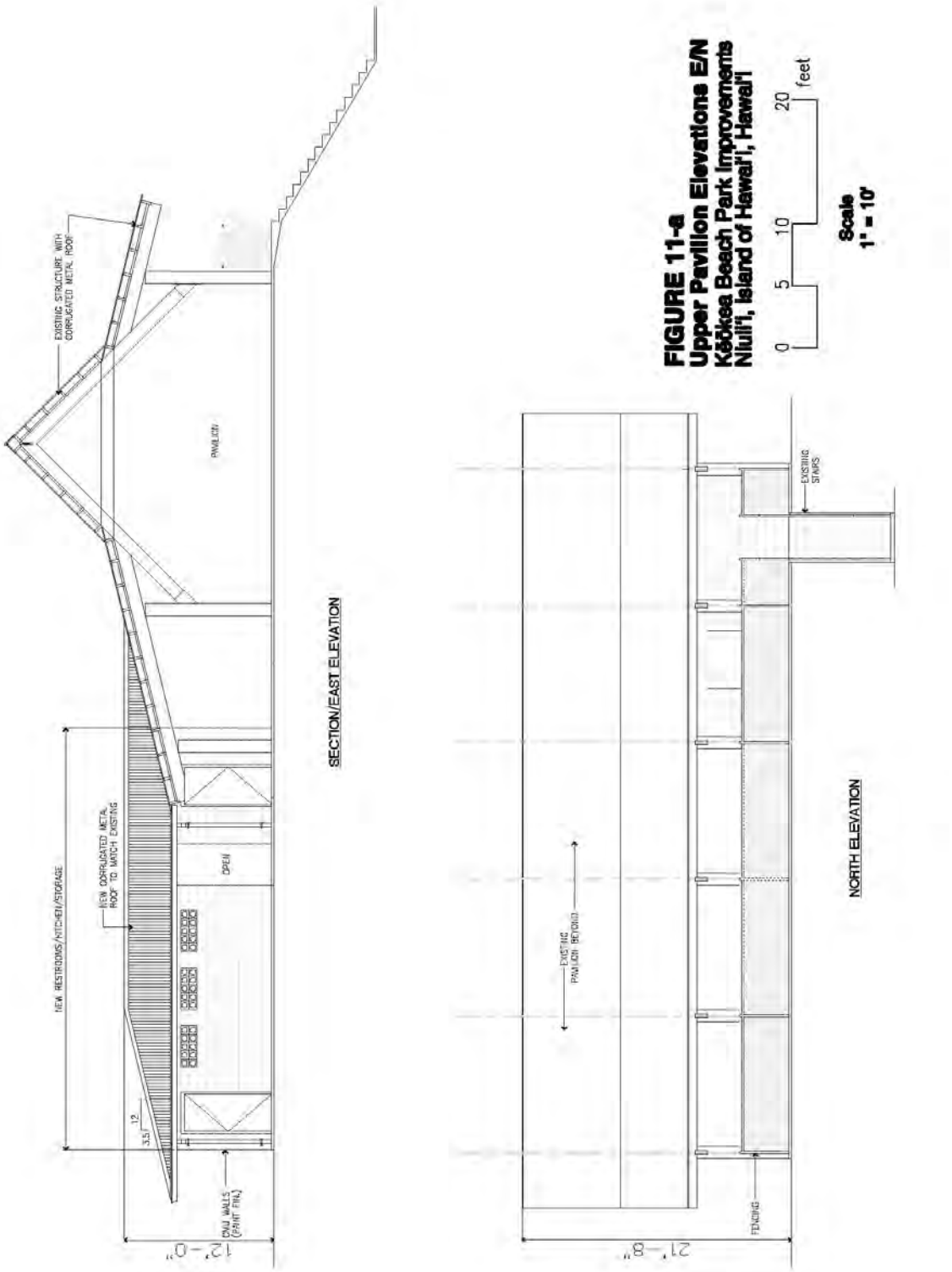
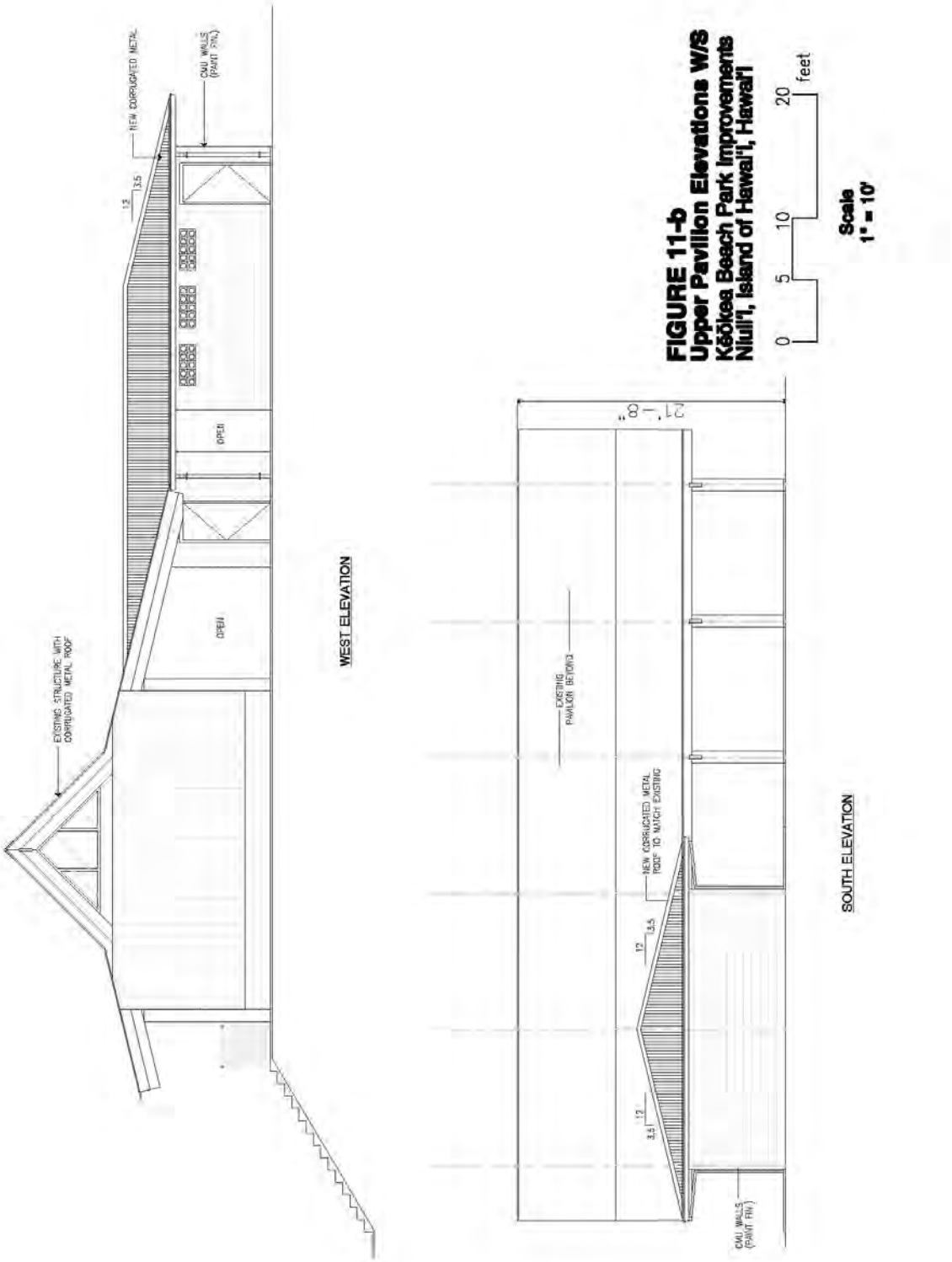


Figure 11-b, Upper Pavilion Building Elevations



3.4. Overview and Project Phasing

The project is anticipated to be completed in one phase and will require no more than three to four construction workers on-site throughout most of the project duration. During construction of the new foundation the number of workers required may increase to six or seven and the number of construction vehicles present on-site will increase. Construction related vehicles will be limited to those required to transport workers and materials. Major project elements include the removal and reconstruction of the lower pavilion, repair and reconstruction of the upper pavilion floor slab, footings and columns, and construction of the south end addition.

In the upper pavilion, eight columns will be replaced, and surface repairs to other pillars will occur once the repairs to the existing slab and footings are complete and have cured. Upon completion of the structural improvements the remaining interior renovations, painting, asphalt resurfacing at the entrance of the pavilion, and lot striping will take place.

3.5. Additional Construction Details

Pouring the concrete slab for the new addition may require more workers than are needed for the other site improvements and personnel may increase to six or seven persons. Construction debris (unused material), rocks and aggregate will be disposed of at Pu‘uanahulu Landfill, in accordance with HAR 11-58.1, Solid Waste Management Control. Construction vehicles present at the project site will be limited to those required to deliver materials and workers and will include a concrete mixer truck during slab construction. A backhoe and dump truck may be utilized to remove the construction debris based on the volume of waste that is generated.

3.6. Project Schedule and Cost

Construction and installation of the proposed upgrades are scheduled to begin in fall 2009, with construction expected to occur over an approximately 5-8 month period. The estimated cost of construction is approximately $1.5 million. Project funding will be provided by the County of Hawai‘i and the FEMA.

Section 4

Environmental Setting, Potential Impacts and Mitigation Measures

4.1. Physical Environment

4.1.1. Climate and Rainfall

The proposed project area is situated on the windward side of the northern end of the Kohala Mountains, on the Island of Hawai‘i. While the leeward side of this range in South Kohala is characterized as the “sunniest place in Hawai‘i” (with ~360 sunny days a year[3]), the windward side of North Kohala is typified by lush tropical vegetation. The area surrounding the project vicinity receives an average of 58[4] inches of rain throughout the year with average maximum temperatures ranging from 76.5° Fahrenheit (F) in the winter to 82.2° F in the summer[5].

Potential Impacts and Mitigation Measures

The proposed project is not anticipated to affect or be significantly affected by the existing climatic conditions of the area and region. No mitigation is proposed.

4.1.2. Topography and Soils

The project site is located along the northern slope of the Kohala Mountain Range. Kohala Mountain is the oldest, smallest and northernmost mountain still above sea level on Hawai‘i island. The windward side of this shield volcano is characterized by gentle slopes and deep, well-eroded valleys. The elongated northwest to southeast orientation of this range was formed by basaltic lava flows originating from two main rift zones.[6] According to the Soil Survey of Hawai‘i, State of Hawai‘i, as prepared by the U.S. Department of Agriculture, 1972, the soil classification of the project site is “rough broken land” (RB), and the surrounding areas

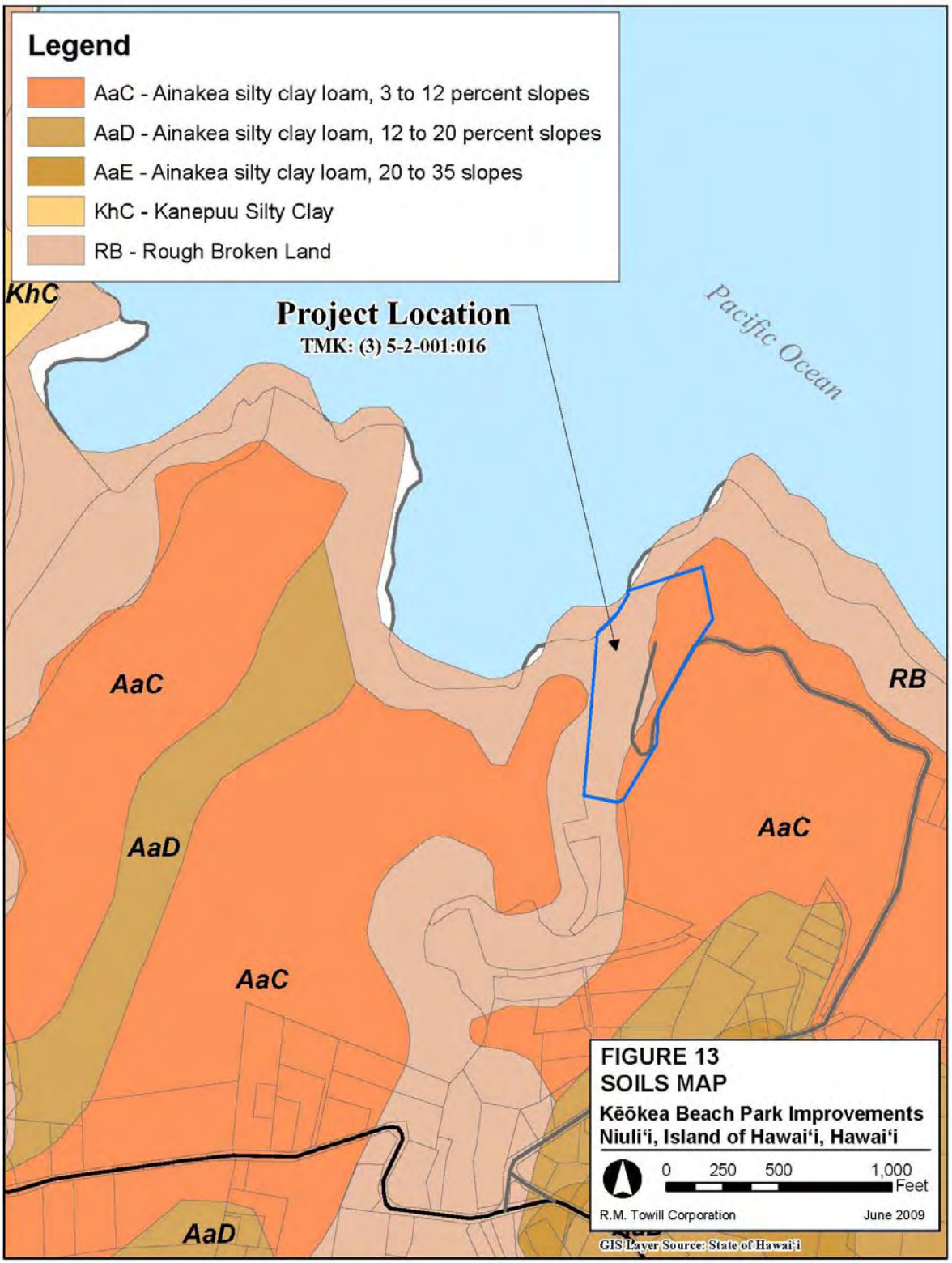
[3] Hawai‘i Island Adventure: http://www.bigisland.org/maps-regions/201/Hawai‘i-map-kohala

[4] World Climate, Average Rainfall for weather station Niuli‘i 179, Hawai‘i (20.23°N 155.75°W; Height about 24m / 78 feet above sea level): http://www.worldclimate.com/cgi-bin/data.pl?ref=N20W155+2200+516806C

[5] World Climate, Average Maximum Temperature for weather station Kohala Mission 175.1, Hawaii (20.23°N 155.80°W; Height about 163m / 534 feet above sea level): http://www.worldclimate.com/cgi-bin/data.pl?ref=N20W155+1300+514680C

[6] USGS, *Kohala, Hawai‘i’s Oldest Volcano”:* http://hvo.wr.usgs.gov/volcanoes/kohala/

Figure 12, Soils Map



include "ainakea silty loam" (AaC) (**See Figure 12, Soils Map**).

The RB soil type is a nondescript land type consisting of precipitous land interwoven by many intermittent drainage channels. This land type occurs primarily in gulches, and the slope is typically 35 to 70 percent. The soil materials can be shallow or deep and stony outcroppings are common. RB is found at elevations ranging from near sea level to 3,000 feet where rainfall averages 50 inches to over 160 inches[7]. This soil type is identified as "well drained" and capacity of the limiting layer to transmit water is low to moderate.[8]

The Ainakea series consists of well-drained silty clay loams that formed in volcanic ash and are underlain by basic igneous rock. These soils are gently sloping to steep and are found at elevations ranging from near sea level to 1,800 feet. These soils are in the same general area as Kohala and Niuli'i soils and are considered favorable to the cultivation of sugarcane and macadamia nuts. AaC soils occupy slopes of 3 to 12% and common to the lower slopes of the Kohala Mountains where narrow gulches carve through the landscape. This soil type is identified as "well drained" and capacity of the limiting layer to transmit water is low to moderately low.[9]

Potential Impacts and Mitigation Measures

No alteration to the topography or soil composition is proposed for this project and potential for adverse effects to the existing topography and soils of the site are not anticipated based on the limited scope and scale of the project.

[7] Kohala Watershed Partnership, FEA Kohala Mountain Watershed Management Project, Districts of Hāmākua, North Kohala, and South Kohala, Island of Hawai'i, October 15, 2008.

[8] U.S. Department of Agriculture, NRCS; "Soil Taxonomy, A Basic System of Soil Classification for Making and Interpreting Soil Surveys", Second Edition, 1999:

ftp://ftp-fc.sc.egov.usda.gov/NSSC/Soil_Taxonomy/tax.pdf

[9] U.S. Department of Agriculture, NRCS; "Soil Taxonomy, A Basic System of Soil Classification for Making and Interpreting Soil Surveys", Second Edition, 1999:

ftp://ftp-fc.sc.egov.usda.gov/NSSC/Soil_Taxonomy/tax.pdf

4.1.3. Hydrology

Average annual rainfall throughout the Kohala Mountain Range varies from about 30 inches along the leeward section of the Kohala Mountain Road to over 160 inches in the higher windward elevations of the range, and is noted for its abundant provision of fresh water.[10] Water resources in this region consist of perennial streams and groundwater originating from the abundant rain and fog drip that result from the lingering low lying clouds atop the range. The porous and permeable mountain geology facilitates the storage and transmission of water from the watershed area of higher elevations to its discharge points at the coast.[11]

One perennial stream borders the western edge of the project site. This stream is outside of the affected area and is not anticipated to be impacted by the proposed project.

Potential Impacts and Mitigation Measures

The potential for impacts to hydrologic resources in the area and region are not anticipated due the limited scope and scale of the project. Earth altering activity will be minor and limited to that required to build the new 677 square foot concrete slab for the south end addition. During construction activity silt-fencing will be used around the pavilion to minimize the effects of storm water runoff. No earth altering activities are needed for reconstruction of the lower pavilion or parking lots improvements. The limited scope of earth altering activity and the appropriate selection of staging areas, in combination with covering and elevating any materials stored on site, are anticipated to prevent particulate transmission resulting from stormwater runoff. BMPs, as determined necessary and appropriate by the contractor, will be employed throughout the project duration. No further mitigation is proposed.

[10] Kohala Watershed Partnership, 2008. "FEA Kohala Mountain Watershed Management Project, Districts of Hāmākua", North Kohala and South Kohala, Island of Hawai'i, page 13.

[11] Chalon International of Hawai'i, Incorporated, 1994. "Final Environmental Assessment for the Kohala Coastal Trail", North Kohala District, Island of Hawai'i, Hawai'i; page 9.

4.1.4. Natural Hazards

Earthquakes

Destructive natural hazards in the West Hawai‘i region are often associated with earthquakes. Small earthquakes occur frequently and usually go unnoticed. The earthquake of 2006 was the largest in the recent past and originated approximately 6 miles southwest of the island measuring 6.7 on the Richter scale. This event caused property damage to the Kona and Kohala Districts and generated a small tsunami measured 4 inches according to the Pacific Tsunami Warning Center. According to United States Geologic Surveys (*USGS Bulletin 2006)*, earthquakes of similar magnitude to the 2006 quake have occurred seven times in the last 100 years.

Volcanoes

USGS Hawai‘i Volcano Observatory note that most of Hawai‘i's earthquakes are directly related to volcanic activity and are caused by magma moving beneath the earth's surface. These earthquakes tend to be concentrated beneath Kilauea and Mauna Loa, the island’s active volcanoes, particularly their south flanks and in the region between them. The northern part of the Big Island is made up of two volcanoes, Mauna Kea and Kohala. Mauna Kea has erupted several times in the last 10,000 years, most recently about 4,500 years ago. This volcano is considered dormant but not extinct. Kohala volcano is extinct and comprises the oldest lava flows still above water on the Island of Hawai‘i, dating to approximately 460,000 years old.[12] The U.S. Geological Survey (USGS) has prepared volcanic hazard maps that divide the island into zones that are ranked from 1, greatest hazard, through 9, least hazard, based on the probability of coverage by lava flows. The project site is located in Lava Hazard Zone 9.[13] The most recent lava flow in this region occurred approximately 120,000 years ago.[14] Kilauea, located on the southeast side of the island has been active since the early 1980s and has since caused destruction to homes and the displacement of people in the District of Puna. Due to its

[12] USGS Hawai‘i Volcano Observatory, “Volcanoes of the Big Island”, 1995: http://209.85.173.132/search?q=cache:9L6rO82Sb9IJ:hvo.wr.usgs.gov/volcanowatch/1995/95_09_15.html+kohala+dormant+two+rift+zones&cd=4&hl=en&ct=clnk&gl=us

[13] USGS Hawai‘i Volcano Observatory, “Island of Hawai’i Lava-flow Hazard Zones”, 2006: http://hvo.wr.usgs.gov/hazards/lavazones/main.html

[14] USGS Hawai‘i Volcano Observatory, Kohala, Hawai‘i’s Oldest Volcano”, 1998: http://hvo.wr.usgs.gov/volcanoes/kohala/

physical location there is no threat of lava flow within the project area. Potential impacts from Kilauea are primarily due to air quality caused by volcanic gases.

Tsunami

The 2006 tsunami generated by the aforementioned earthquake generated a wave measured at 4 inches. Hilo experienced destructive tsunami in 1960 and 1946. Tsunamis are a threat in the Pacific Basin, including the Hawaiian Islands. Large earthquakes, strong enough to cause difficulty standing, are a natural warning and indicate that oceanfront areas identified as evacuation zones should be evacuated once the shaking stops. The Hawaiian Islands are equipped with emergency sirens and radio broadcasts will describe the emergency. If a tsunami approach is confirmed, civil defense will sound the alarms and issue the evacuation order. The National Oceanic and Atmospheric Administration **(**NOAA**)** indicate that Kēōkea Beach Park pavilion is located in an evacuation zone[15] (**See Figure 13, Tsunami Evacuation Map**).

Hurricane

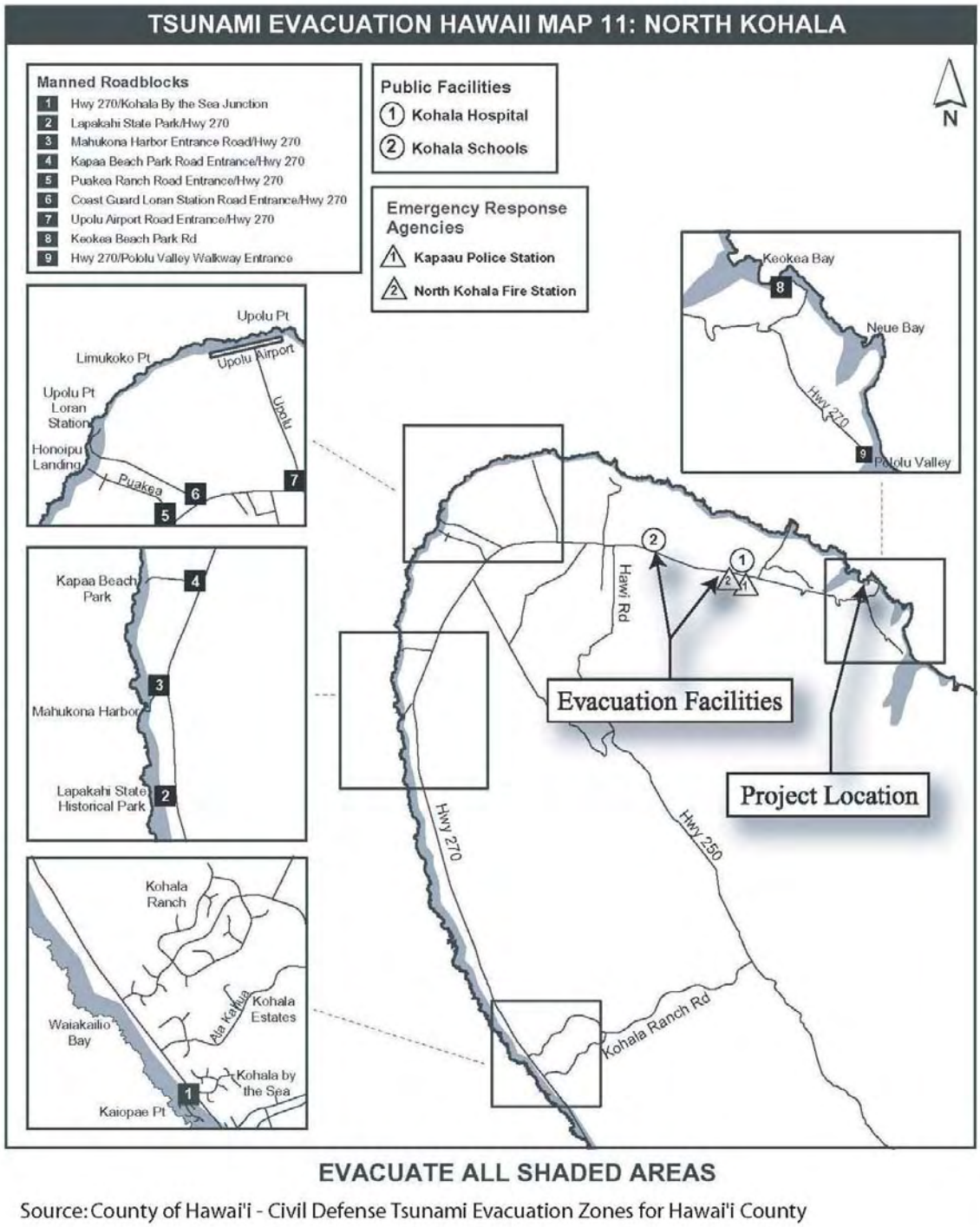
Heavy rains and strong winds associated with tropical storms occasionally impact the Hawaiian Islands and can cause flooding and major erosion. Hurricanes occasionally approach the Hawaiian Islands, but rarely reach the islands with hurricane force wind speeds. The most recent hurricane event was Iniki in 1992 and mainly affected the Island of Kauaʻi. During this event the Island of Hawaiʻi experienced winds and rains to the level of a severe tropical storm.

Potential Impacts and Mitigation Measures

Earthquakes, tsunami, hurricanes, and other natural disasters are recognized as having the potential to cause damage to park facilities. Reconstruction of these facilities to current State and County building standards is anticipated to improve resiliency to seismic and heavy storm events. Tsunami Evacuation Facilities in the project vicinity are located at Kohala Hospital and Kohala Schools and are identified on Figure 13, Tsunami

[15] National Oceanic and Atmospheric Administration - http://www.prh.noaa.gov/hnl/pages/tsunami_safety.php

Figure 13, Tsunami Evacuation Map



Source: County of Hawai'i - Civil Defense Tsunami Evacuation Zones for Hawai'i County

Evacuation Map. If natural warnings occur, or sirens followed by broadcasts tell of an oncoming tsunami the area should evacuated. No further mitigation measures are proposed.

4.1.5. Flood Hazard

Kēōkea Beach Park facilities requiring repairs are located within an area identified on the State of Hawai'i GIS Layer, derived from the Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM), as Flood Hazard Zone VE, (**See Figure 14, FEMA FIRM Flood Map**). Zone VE corresponds to the 10-year coastal floodplains and have the additional hazard of storm waves. Base flood elevations in the project area are determined to be 26 to 27 feet.[16] The lower pavilion is located approximately 20 above mean sea level (msl), and has the potential to be impacted by storm wave activity. The upper pavilion is located approximately 30 feet above msl and is not anticipated to be affected by coastal flooding. Land surrounding the project site and areas mauka of the pavilion are identified as occupying Flood Hazard Zone X. The potential for inundation by runoff from a 100-year storm in Zone X is estimated to reach an average runoff depth of 0-1 feet.

Potential Impacts and Mitigation Measures

The lower pavilion has the potential to be impacted by coastal flooding and storm waves. Because this pavilion is comprised of posts and a roof, and does not have walls, it is anticipated that this structure could withstand the storm waves associated with 10-year storm surges. Due to the elevation of the upper pavilion, over 30 feet above msl, and its location on a steep embankment, it is not expected to be adversely affected by flooding and no adverse impacts to this structure are expected. Silt fencing will be installed, as necessary, to prevent erosion of exposed soils during rainfall events. No further mitigation measures are anticipated to be required and none are proposed.

[16] Hawai'i – National Flood Insurance Program, Flood Hazard Assessment Tool: http://gis.hawaiinfip.org/fhat/#

Figure 14, FEMA FIRM Flood Map

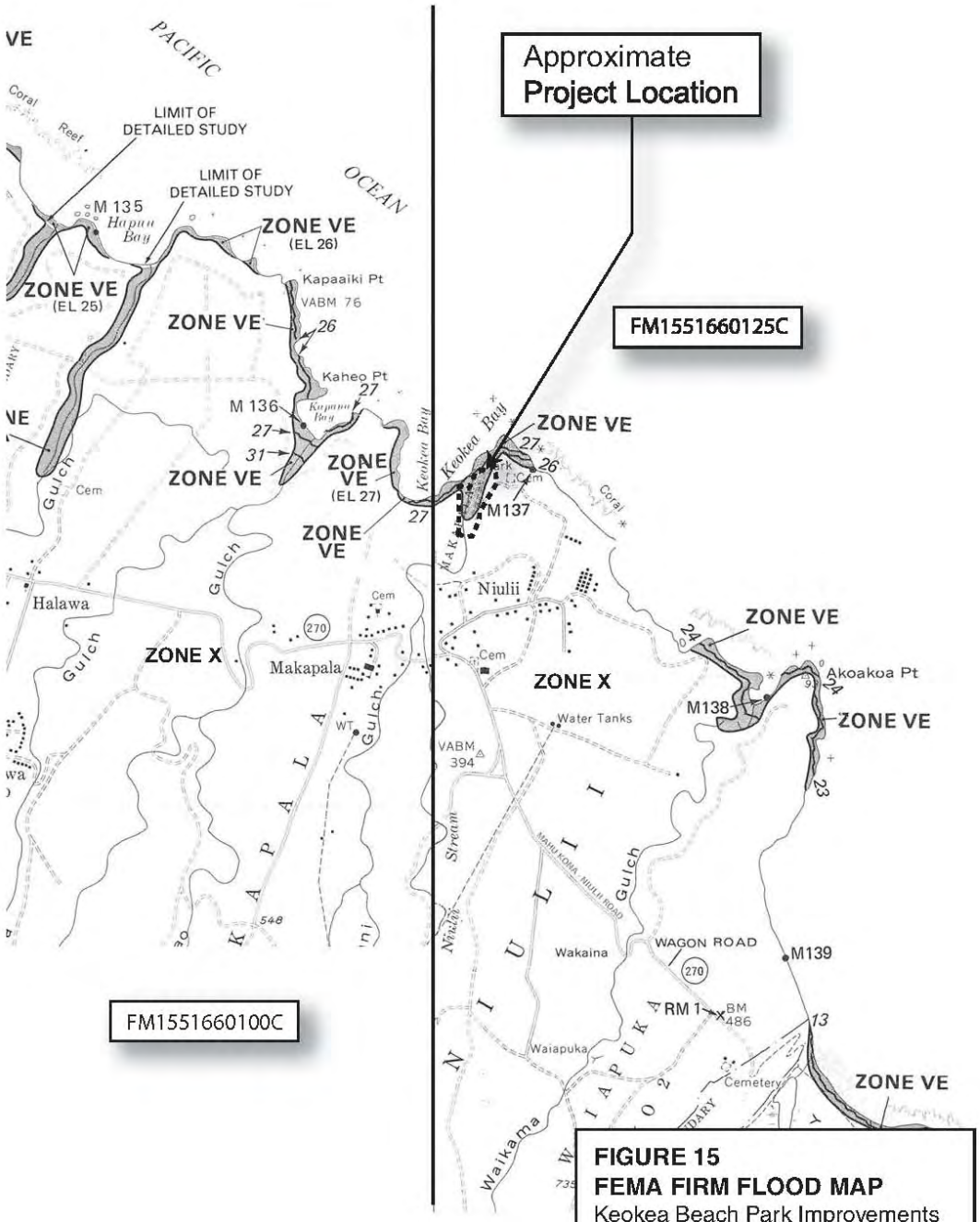


FIGURE 15
FEMA FIRM FLOOD MAP
Keokea Beach Park Improvements
Niuli'i, Island of Hawai'i, Hawai'i

Not to Scale

R.M. Towill Corporation June, 2009
Source: Federal Emergency Management Agency

4.1.6. Air Quality

The project is located in an isolated and sparsely populated medium density urban area and is surrounded by agricultural land and the ocean. Air quality monitoring stations located in Captain Cook (Kona) and Hilo are nearly the same distance from the project site and offer updates online throughout the day. The stations measures air quality levels in the region for $PM_{2.5}$ (particulate matter, 2.5 microns or smaller), and SO_2 (sulfur dioxide). Sulfur dioxide is the chemical present in vog, or volcanic smog emitted from Kīlauea Volcano, which may adversely affect both plants and animals. People with pre-existing respiratory conditions may be more readily effected. Present levels of these pollutants are shown for the Hilo station and measure -1 ug/m3 (micrograms per cubic meter) of $PM_{2.5}$ and 1 ppb (parts per billion) of SO_2. These low levels are attributed to the presence of the northeasterly winds (346 degrees) bringing clean ocean breezes.

Hawai‘i Administrative Rules (HAR), Chapter 11-59-4 established ambient air quality standards that require concentration of particulate matter to not exceed 50 ug/m^3 during the calendar year and not more than 150 ug/m3 in any 24 hour period; concentrations of sulfur dioxide may not exceed an average of 80 ug/m3 in a calendar year, 365 ug/m3 in any 24 hour period, and 1,300 ug/m3 in any 3 hour period. The numbers reported at the Kona and Hilo air quality station are representative of yearly averages and well below the maximum allowable limits.

Air quality levels at the project site receive minimal impacts by automobile emissions and *vog*. The presence of vog in the project vicinity is dependent on the sulfur dioxide levels being emitted by Kīlauea Volcano, variable winds, and weather patterns.[17] The Hawai‘i Department of Health (DOH) and the Hawai‘i County Civil Defense monitor vog levels and release updates and advisories from the County of Hawaii Civil Defense local radio broadcasts and at their website. The Department of Health offers updates via recorded messages accessed through the “Helpline” (866) 767-5044.[18] These pollutants in the project vicinity, however, are transient and are readily cleared away by wind circulating through the region.

[17] http://hawaii.gov/gov/vog

[18] http://hawaii.gov/gov/news/files/2008/august/Volcano%20Helpline%20NR%207-25-08.pdf

Potential Impacts and Mitigation Measures

Vog levels are not anticipated to cause adverse effects to construction workers or park visitors. The principal source of air quality impacts will be construction-related. Air pollutant emissions will be generated by vehicular movement, replacement of the pavilion concrete slab, and the mixing of concrete for repair to walls and the barbeque grill. Increases in automotive pollutant concentrations along adjoining streets and on the project site, associated with construction vehicle activity is not anticipated to be significant enough to constitute a nuisance.

Given the area's lush and humid climate, and the movement of vehicles primarily on paved surfaces, the potential for the generation of fugitive dust is not anticipated. During the minor grading required for the construction of the new concrete slab at the south end of the pavilion, and all other construction activity, dust control measures will be employed as needed, in compliance with provisions of HRS, Chapter 43-10 and HAR, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33 on "Fugitive Dust." No further mitigation is proposed.

4.1.7. Acoustic Characteristics

Existing sources of noise in the project area are primarily associated with the crashing surf, wind moving through the surrounding terrain, the activities of park patrons, and the calls of birds visiting the area. These sources of noise however, are limited and do not ordinarily constitute an acoustic nuisance.

Potential Impacts and Mitigation Measures

The use of construction vehicles, equipment, and machinery will generate noise. Only one residence is located with ¼ mile to the project site. This residence is approximately 700 feet away and is buffered by the adjacent stream gulch and surrounding forest. Noise generated by construction is not anticipated to impact surrounding residences or agricultural operations. The increase in noise levels will be temporary and will last only for the duration of construction.

Mitigation measures to keep construction noise at acceptable levels include the use of mufflers, using well maintained machinery, and operating machinery only during approved construction hours in accordance with State and County rules and regulations. Equipment in poor operating condition (e.g., with damaged mufflers or leaking exhausts resulting in louder than normal generation of noise will be repaired or replaced. The use of construction related equipment will also be scheduled only during daylight construction hours. All construction activities will comply with the applicable maximum permissible sound levels as indicated in HAR, Chapter 11-46, Community Noise Control. The contractor will also obtain a noise permit if construction activities are expected to exceed allowable noise levels. Ambient noise levels are expected to return to preconstruction levels upon project completion.

4.1.8. Biological Resources

Flora

The proposed project is contained within an area previously developed for public use. A review of site photographs and the landscaping details shown on the Site Plan, (Figure 3), indicate that the site is landscaped with coconut, tropical almond, hau, milo, palm, African tulip, ti plants, peanut grass, hibiscus shrubs, bougainvillea, lauʻe fern, oyster plant, wedelia, naupaka and Bermuda grass. Ironwood trees are also identified to exist at the perimeter of the project site.

Fauna

No federally listed rare, threatened or endangered species are known to inhabit the site. Literature review and field observations in conjunction with the Kohala Watershed Partnership Rare Species Protection Fencing Project noted that native forest birds primarily reside in closed canopy forests, are often absent from degraded forests and are not common to the area.[19] Animals expected to occur in this area may include domestic cats and dogs, and wild mongoose. The developed nature of this site and its active use by park goers make onsite habitation for such species unlikely due to the lack of favorable habitat.

[19] Kohala Watershed Partnership, 2007. "FEA Rare Species Protection Fencing Project", North Kohala District, Island of Hawaiʻi, page 19-30.

Potential Impacts and Mitigation Measures

The potential for adverse impacts to flora and fauna resources at the project site are not anticipated. All work activities will be limited to the areas immediately encompassing the existing park facilities or within otherwise developed land that has been subject to extensive prior disturbance, e.g., park driveway, parking lot and adjacent roadway. Regular maintenance of this landscaped area would also involve the use of weed or string trimmers, and periodic application of herbicides to control the growth of weedy species around these facilities. This activity further reduces the likelihood of rare, threatened or endangered plants from occurring on the site.

The park has been developed and frequented by park patrons for decades which would likely prevent the establishment of habitat favorable to rare, threatened or endangered plant or animal species. It is possible though that the project vicinity may provide foraging or flyover areas for birds of prey or rare, threatened, or endangered avifauna. Although construction activities may temporarily disrupt the normal habits of such species any potential impact is expected to be short term in duration and limited to only the facilities identified in this report. Activities that may disrupt or endanger avifaunal activity, such as spotlighting the project site, will not be allowed. Night work is not anticipated, but if required night work will be limited to that which can take place within the pavilion, and is not expected to impact these species. No significant long-term negative impacts are anticipated and no further mitigation measures are proposed.

4.2. Socioeconomic Environment

4.2.1. Population and Economy

The population of North Kohala stood at 6,622 persons in 2005 and is estimated to be approximately 11,273 persons in 2020, an increase of approximately 70% from the 2005 population.[20] The North Kohala Development Plan notes that district population doubled from 1980 to 2000 and this growth is attributed to the continuing development of resorts in South

[20] 2006 County of Hawai‘i Data Book, http://www.co.Hawai‘i.hi.us/ - Table 1.6a

Kohala, and the rezoning and development of agricultural land in North Kohala. While population is expected to rise, the rapid growth rate recently experienced is not expected to continue in North Kohala.

A survey of Hawai‘i County income conducted in the year 2000 shows that the median annual household income in the North Kohala district was approximately $47,733 which is the second highest of all Hawai‘i Island districts after North Kohala. Family household median income mirrors this level, but per capita and non-family median incomes are lower at third and fourth respectively island-wide.[21] The districts economy has declined since the closure of the Kohala Sugar Company in 1975, and presently much of the local workforce commute to resort and hotel jobs in South Kohala. Agriculture is seen as an economic opportunity that should be pursued further, and exploration into other economic opportunities is desired. The economic situation in the area is further challenged by the remarkably high value of property. In 2006, the median sales price for residential homes was nearly 73% higher than the overall county median.[22]

Potential Impacts and Mitigation Measures

The Kēōkea Beach Park improvements are not anticipated to result in major or significant changes to the population or island economy. However, the proposed project will benefit the local population and economy by reviving a valuable and much frequented recreational amenity. No mitigation measures are recommended.

4.2.2. Land Use and Ownership

The project area, identified as TMK 5-2-001:016, is owned and maintained by the County of Hawai‘i. This beach park is actively used for recreational purposes including the use of the pavilion for social gatherings and for access to the surf breaks of Kēōkea Bay. Access to the site is gained via Kēōkea Beach Road which is also owned and maintained by the County of Hawai‘i. The subject property and surrounding lands are zoned for Agricultural (A-20a) uses by the County, and abuts Residential (RS-15) lots to the south. The agricultural land to the east (TMK

[21] 2006 County of Hawai‘i Data Book, http://www.co.Hawai‘i.hi.us/ - Table 12.5

[22] North Kohala Community Development Plan; Townscape, Inc. et. al; Pg. 12-13

5-2-001:015) and west (TMK 5-2-001:014) are privately owned. The residential land to the south (TMK 5-2-009:006) and one agricultural property to the north of the project site (TMK 5-2-001:025) are also privately owned.

Potential Impacts and Mitigation Measures

The proposed improvements will be limited to the areas immediately surrounding the aforementioned park facilities. The improvements are not anticipated to affect adjacent property owners and will not involve use of other property. No mitigation measures are proposed or recommended.

4.2.3. Scenic and Aesthetic Environment

The scenery in the vicinity of the project area consists of a combination of coastal views scattered with volcanic cinders and boulders and lush tropical vegetation overlying varied terrain. The land encircling the beach park is higher in elevation around much of the perimeter, offering an isolated setting. Construction activity will not be easily observable from adjacent properties.

Potential Impacts and Mitigation Measures

No adverse impacts are anticipated based on the isolated location of the beach park. During construction there may be temporary impacts to views of scenic resources by beach park visitors with the presence of construction vehicles, machinery, and personnel. However, upon project completion the site will be restored to its original condition to the extent practicable. The only anticipated change to the scenic environment will be the newly improved beach park facilities. These improvements are not anticipated to cause negative impacts to the scenic and aesthetic environment and no mitigation measures are proposed or recommended.

4.2.4. Historic and Archaeological Resources

No archaeological sites are known to exist in the vicinity of the pavilions. The pavilions were built prior to 1971 and no historical or archaeologically significant features have been identified

within the project vicinity. The proposed improvements are not expected to cause any alterations to the terrain and earth moving activity is limited to the minor grading required for the south end addition.

The upper pavilion has served the community as an important recreation area and gathering place for family parties, weddings, and funerals for several decades. Telephone consultation with a long time resident revealed that the 1971 upgrades to the upper pavilion were much needed and celebrated by community members.

Potential Impacts and Mitigation Measures

Although no archaeological sites or features are known to exist at the pavilions, it is always possible that historic and cultural remains or human remains may be inadvertently discovered. In the event of such a discovery all work associated with the find will be temporarily halted and the State Historic Preservation Division (SHPD), Hawai‘i Island Office, will be immediately notified at (808) 981-2979 for further instructions and appropriate treatment. The alternate phone number to the Honolulu Office is (808) 692-8015. Work will only resume upon appropriate notification and instruction to do so from the SHPD. No adverse impacts to historic sites or resources are anticipated and no further mitigation is proposed.

4.2.5. Traditional Cultural Practices

The use of the project site for traditional or cultural practices is not anticipated to be adversely affected based on limited project duration and scope.

Potential Impacts and Mitigation Measures

Although it is possible that there remains *wahi pana* (storied places) or other site attributes associated with the history of the site, including the gathering of important native species including tī, flowing plants, or other fruit-bearing species, the proposed project will not affect these existing resources in the long-term.

Short-term impacts associated with the proposed improvements, including repairs, reconstruction and renovation of the facilities and utilities, may limit access to the site however, this short-term activity will be terminated upon the successful completion of the improvement and the site will be restored to its existing pre-construction and pre-disaster conditions as much as much as practicable.

4.3. Public Facilities and Services

4.3.1. Traffic and Roadways

Akoni Pule Highway (Route 270) offers the primary service through the towns of this area, and the project site is accessed by Kēōkea Beach Road. Kēōkea Beach Road is a two lane local access road and forms the northern fork off of Route 270 at Niuli‘i. Passing through Hawi the roadway width of Route 270 remains the same from west to east, and consists of one travel lane in each direction typical of a rural arterial. Traffic flow from west to east diminishes past Hawi, primarily because the visitor sightseeing route changes course to the south onto Hawi Road (Route 250/ Kohala Mountain Road) offering a scenic drive along the top of the Kohala Range. East of Hawi, Route 270 provides access to Kēōkea Beach Park and Pololū Valley Lookout.

Potential Impacts and Mitigation Measures

No disruptions to traffic or roadways are anticipated. Care will be taken when transporting materials or construction vehicles to and from the project site. No other mitigation is proposed.

4.3.2. Wastewater and Solidwaste

In the Niuli‘i area sewerage systems consist mainly of domestic sewage disposal via individual wastewater systems and cesspools. An effort to upgrade cesspools to individual wastewater systems is presently underway by the DOH. Wastewater mains are not located in the proposed project vicinity. The park’s wastewater needs are currently met with the provision of portable toilets.

The County landfill for West Hawai‘i is located in Pu‘uanahulu. In addition, there are twenty-one solid waste transfer sites throughout the island. The North Kohala Community Development Plan (CDP) notes that the local transfer station was damaged in the 2006 earthquake, is insufficient to meet current and expected future demand, is in need of improvements and would benefit from the addition of an enhanced recycling program. Construction waste and demolition debris generated in the Kohala region is accepted at the Pu‘uanahulu Landfill. This landfill has more than 12 million cubic yards of permitted air space, which is expected to be more than sufficient to support the proposed project.

Potential Impacts and Mitigation Measures

Portable toilets are located on site and will be available for use by construction workers and project-related personnel. The portable toilets are maintained by a private contractor in accordance with State DOH and County of Hawai‘i health regulations. No significant adverse impacts to wastewater facilities are anticipated since the new restrooms will utilize the existing waste water system.

Solid waste transfer stations are available in Hawi, Waimea and in Puako and any solid waste removed during project construction will be transferred to the appropriate disposal facility. Construction debris will be transferred to Pu‘uanahulu Landfill. Significant adverse impacts to solid waste facilities are not anticipated. No mitigation measures are recommended.

4.3.3. Power and Communication

Electricity for the County of Hawai‘i is provided by the Hawai‘i Electric Light Company, Inc. (HELCO). Peak electrical demand for the island in 1999 was 170.2 megawatts (MW). HELCO's power generation system presently has a total firm capacity of 260.4 megawatts. HELCO purchases a total of 112 megawatts of firm power from three privately-owned companies: Hilo Coast Power Company (22 MW), Hamakua Energy Partners (60 MW) and Puna Geothermal Venture (30 MW). The balance of 148.4 megawatts is produced by HELCO-owned steam units,

diesel units, and gas turbines. These power plants are located in Keāhole, North Kona; Waimea, South Kohala; Waiakea Peninsula and Kanoelehua, South Hilo; and Kea‘au, Puna.

Currently, every region on the island has access to phone service. In 1998, the last rural areas were upgraded with additional telephone cables allowing single line services island-wide. Advances in fiber optic technology provide the backbone for the island's high-capacity broadband requirements and the necessary services for specialized users.

Telecommunication and power lines are carried on overhead utility lines along Hawi-Niuli‘i Road and continue to the park along Kēōkea Beach Road. The existing HELCO service for the building originates from a HELCO transformer located on a wood utility pole on Keokea Beach Road at the entrance of the park and continues overhead to the upper pavilion terminating at a meter socket through a weatherhead located on the mauka side of the building.

The two County-owned street light poles in the parking lot area are fed by overhead conductors from the building's electrical system.

Potential Impacts and Mitigation Measures

The proposed improvements are not anticipated to significantly impact power or communications services in the region. HELCO service for the new building will continue to be provided via overhead utility lines from the existing HELCO transformer to a meter socket through a weatherhead located on the mauka side of the building. The two existing County owned street light poles located in the parking lot area will be newly fed by overhead conductors from the new building's electrical system. Final design is yet to be determined. Two additional light poles may be required, in which case wiring will be feed underground to all four poles. Power requirements needed to support the project are anticipated to be minimal and will not impact regional energy production. No mitigation measures are anticipated to be required and none are recommended.

4.3.4. Police, Fire Protection, and Emergency Services

The Waimea District provides a fire and emergency medical service (EMS) facility 24 hours a day. Fire/EMS/Hazardous Materials and Aero Medical operations are provided full-time in South Kohala, and Waikoloa has a full-time fire/EMS facility.

Police services operate out of the North Kohala District Kapaau Station located on Hawi-Niuli‘i Road.

Potential Impacts and Mitigation Measures

Potential for negative adverse impacts to the provision of existing police, fire, and EMS services are not anticipated. While the proposed project will be covered by the provision of such services the limited scope and scale of the project is not anticipated to require services beyond the level that are presently provided. No mitigative measures are anticipated to be required and therefore are not recommended.

4.3.5. Hospitals and Health Care

The Island of Hawai‘i is presently serviced by licensed hospitals that comprise the Hawai‘i County Network. These hospitals are located in Hilo, Kona, Honoka‘a, North and South Kohala, and Ka’u. The Kohala Hospital, in operation since 1917, provides health services for the districts of North Kohala is a private, full service, acute care facility. The project site is readily accessible to emergency vehicles and is located within 3.5 miles of the Kohala Hospital.

Potential Impacts and Mitigation Measures

The implementation of the proposed project is not anticipated to impact the demand for or ability of existing Hawai‘i County hospitals to maintain the level of health care presently provided.

4.3.6. Parks and Recreational Facilities

The State of Hawai‘i park system is made up of 687 public parks, and includes seven national parks, 55 state parks, and 625 county parks. The parks in the County of Hawai‘i vary greatly in terrain and are comprised of vastly different ecosystems. Offering beach access, tropical forests, and barren rocky lava flows, these parks are highly valued by natural and social scientists as well as local residents and tourists.[23]

Kēōkea Beach Park is the only recognized park on the eastern end of North Kohala and is situated near the access road to the Awini Trail, and the black sand beach of Pololū Valley. Other parks in North Kohala include: Kamehameha Park, Kapa‘a Beach Park, Mahukona Beach Park and Lapakahi Historical State Park.

Potential Impacts and Mitigation Measures

The proposed improvements will bring Kēōkea Beach Park facilities into conformance with current County building codes and State and County safety regulations, provide ADA compliant access and facilities, and bring these facilities back into public use. No further mitigation measures are recommended.

[23] About.com: Hawaii/ South Pacific Travel - http://goHawai‘i.about.com/library/weekly/aa071299.htm

Section 5
Relationship to State and City & County Land Use Plans and Policies

5.1. Hawai‘i State Plan

The Hawai‘i State Plan, Section 226, HRS, serves as a written guide for the future development of the State. The Plan identifies goals, objectives, policies, and priorities to serve as guidelines for the growth and development of the State. The proposed project is consistent with the following provisions of the Plan:

Section 226-8: Economy - Visitor Industry

The proposed project serves to assist in the State's objective of supporting visitor attractions and facilities and improving the quality of visitor destination areas. The project will improve, and bring back to use, the beach park facilities identified above.

Section 226-11: Environment – Shoreline Resources

The proposed project supports the State's goals to ensure the compatibility between land-based and water-based activities, particularly in accommodating the people that enjoy the surf breaks of Kēōkea Bay.

Section 226-14: Facility Systems – General

The proposed project will bring the beach park pavilion into conformance with current State and County building codes, provide ADA compliant access and facilities, and bring these facilities back into use by residents and visitors to the area.

Section 226-23: Socio-cultural Advancement – Leisure

The proposed project supports the State's objective of adequately providing resources to accommodate the recreational needs of present and future generations.

The proposed project involves the repair, reconstruction and renovation of existing beach park facilities. These improvements will bring the facilities up to current building codes and revive the use of this beach park, providing enhanced service to Hawai‘i County residents and visitors.

5.2. State Functional Plans

The State Functional Plans are designed to implement the broader goals, objectives, and policies of the Hawai‘i State Plan through specific actions identified as Implementing Actions (IA). While the purpose of the proposed project is not specifically identified as an IA, the project maintains consistency with the following objectives of the State Functional Plans:

Recreation Implementing Action II B(2)b:

The proposed project will upgrade park facilities to meet the Uniform Federal Accessibility Standards for handicapped access.

Objective V-A, and Policy V-A-(1):

The project supports directives to maintain existing parks and recreation areas.

5.3. State Land Use Law

The project site is principally located within the State Conservation Land Use District. According to Section 205-2, HRS, Districting and classification of lands:

> *(e) Conservation districts shall include areas necessary for protecting watersheds and water sources; preserving scenic and historic areas; providing park lands, wilderness, and beach reserves; conserving indigenous or endemic plants, fish, and wildlife, including those which are threatened or endangered; preventing floods and soil erosion; forestry; open space areas whose existing openness, natural condition, or present state of use, if retained, would enhance the present or potential value of abutting or surrounding communities, or would maintain or enhance the conservation of natural or scenic resources; areas of value for recreational*

purposes; other related activities; and other permitted uses not detrimental to a multiple use conservation concept.

The existing land use and uses associated with the proposed project is consistent with intended use of the Conservation District in the provisions of park land, the preservation of scenic areas, and to maintain and enhance areas of value for recreational purposes.

5.4. Coastal Zone Management Program

The State of Hawai'i administers the objectives of the Coastal Zone Management Program (CZMP) through the State's Office of Planning. Implementing authority is prescribed in Chapter 205(A)-2 (HRS), as amended. The entire State is designated as being within the Coastal Zone and includes all land and seaward to the State's jurisdictional limits. Chapter 205A provides for the following policies and objectives for the CZMP:

1. Recreational resources;

Objective: Provide coastal recreational opportunities accessible to the public.

(A) Improve coordination and funding of coastal recreational 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 replacement 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 requiring 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 uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;

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

(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and

(viii) Encouraging 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, and county authorities; and crediting such dedication against the requirements of section 46-6.

Discussion:

Recreational and shoreline facilities will be improved by the project. Public access to the shoreline may be reduced during the construction phases, but when complete, public access to shoreline and other recreational resources will continue to be provided.

2. Historic resources;

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

(A) Identify and analyze significant archaeological 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 resources.

Discussion:

No adverse impacts to archaeological or historic resources associated with construction or operation of the proposed project are expected. As appropriate, mitigative measures will be implemented as noted above in **Sections 4.2.4.** Historic and Archaeological Resources; and **4.2.5.** Traditional Cultural Practices.

3. Scenic and open space resources;

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

(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

(D) Encourage those developments that are not coastal dependent to locate in inland areas.

Discussion:

No adverse impacts are anticipated. During the construction period there is potential for impacts to coastal views from the project area of construction. However, the interruption of views will be temporary and following the improvements the facilities will be restored or better than pre-quake conditions and otherwise will cause no visible alterations. These additions are not anticipated to constitute nor result in an adverse negative impact to the scenic and aesthetic environment of the area and region.

4. Coastal ecosystems;

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

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

(B) Improve the technical basis for natural resource management;

(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.

Discussion:

The proposed project is expected to have no adverse effect on coastal ecosystems or resources. While the project is located in a coastal ecosystem, construction activities will be undertaken in a manner that will minimize or otherwise avert the potential for environmental impacts. BMP's will be used throughout the project as deemed appropriate by the contractor as noted above in **Sections 4.1.3.**

5. Economic uses;

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

(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 industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit

reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Use of presently designated locations is not feasible;

(ii) Adverse environmental effects are minimized; and

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

Discussion:

The proposed project will not effect economic activity or cause effects to the economic viability of surrounding land uses.

6. Coastal hazards;

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

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

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

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

(D) Prevent coastal flooding from inland projects.

Discussion:

The proposed project is intended to reduce the hazard of the existing facilities and bring the structures up to current building standards. It is anticipated that this project will make the facilities more resilient to natural hazards and safer to the public and surrounding environs. According to the FEMA Flood Insurance Rate Map (FIRM) for the project area the site is in Flood Hazard Zone VE. Zone VE corresponds to the 10-year coastal floodplains and have the additional hazard of storm waves. Base flood elevations in the project area are determined to be 26 to 27 feet.[24] See **Section 4.1.5.** Flood Hazard. The lower pavilion is located approximately

[24] Hawai'i – National Flood Insurance Program, Flood Hazard Assessment Tool: http://gis.hawaiinfip.org/fhat/#

20 above mean sea level (msl), and has the potential to be impacted by storm wave activity. Because this pavilion is comprised of posts and a roof, and does not have walls, it is anticipated that this structure could withstand the storm waves associated with 10-year storm surges. The upper pavilion is located approximately 30 feet above msl and is not anticipated to be affected by coastal flooding. The proposed project is not expected to cause an increase in stormwater runoff and mitigation measures detailed above will be used to avert the potential for point and nonpoint pollution. No further mitigation is proposed.

7. Managing development;

(A) Use, implement, and enforce existing law 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 or 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 and review process.

Discussion:

All construction activities will be completed in compliance with the appropriate federal, state and County of Hawai‘i environmental rules and regulations. This EA document is prepared to identify and, wherever necessary, propose mitigation measures to address the potential for impacts anticipated from the construction and operation of the project. This document will be published for public review in compliance with procedures set forth by the Office of Environmental Quality Control (OEQC), Chapter 343, HRS, and Chapter 11-200, HAR.

8. Public participation;

(A) Promote public involvement in coastal zone management processes;

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

(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Discussion:

Public involvement in the project will consist of public notice of the proposed action in the OEQC Bulletin, public information meetings and public hearing. A list of the organizations, agencies, and public parties that either will be or have been consulted for this project is also provided in the DEA.

9. Beach protection;

(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and 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.

Discussion:

The proposed project is limited to improvements to existing structures and is not anticipated to adversely affect natural shoreline processes.

10. Marine resources;

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

(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

(D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Discussion:

The proposed project will have no contact with or effect upon marine resources. As applicable, best management practices (BMPs) will be applied as part of the project's construction stormwater management plan to ensure against the discharge of untreated stormwater runoff from the construction site.

5.5. County of Hawai‘i General Plan

Project boundaries fall within the County of Hawai‘i Agricultural district. Goals of the Agricultural district as defined in Section 14.2.2(a) of the County of Hawai‘i General Plan are to:

(a) Identify, protect and maintain important agriculture lands on the island of Hawai‘i.
(b) Preserve the agricultural character of the island.
(c) Preserve and enhance opportunities for the expansion of Hawai‘i's Agricultural Industry.

While not directly supporting the goals of agricultural production, this beach park offers a valuable recreational and open space asset to the community and visitors. The Land Use Pattern Allocation Guide Map, presented in the County of Hawai‘i General Plan identifies the project location as land dedicated for open space. According to the General Plan, Section 14.8.1 – Introduction and Analysis, Open Space areas are designated to support human needs, natural resources, and some economic development. Human needs categories are defined to include uses such as the provision of active and passive recreation amenities. The proposed project is consistent with this goal; providing active and passive recreation amenities.

5.6. North Kohala Community Development Plan

The North Kohala Community Development Plan (NKCDP) indicates concern for the existing condition of regional parks and residents indicate that repair and upkeep of the parks is an issue requiring attention. Section 3.1 of the NKCDP, under "Infrastructure and Community Facilities", identifies the provision of community facilities that adequately serve the community as a priority. Section 4.4 of the NKCDP states that the improvement of parks as a goal and is outlined in Strategy 4.2. Upgrades at Kēōkea Beach Park are specifically mentioned in the "What needs to be done" section of the determined "Action Steps". The NKCDP implements the General Plan and supports the improvement of recreational facilities. The proposed project is consistent with this objective.

5.7. County Zoning

The proposed project is zoned by the County of Hawai‘i through the Hawai‘i County Code, Chapter 25, Zoning (**See Figure 5, County Zoning**). The project site is located within the zoning district: Agricultural A-20a, an agricultural district with a minimum building site area of twenty acres. Chapter 25 of the Hawai‘i County Code identifies recreational facilities as a permissible use in Agricultural Districts as defined by Article 5, Zoning District Regulations, Division 7.A. The regulations are detailed below:

> *(a) The following uses shall be permitted in the A district:*
>
> *(7) Campgrounds, parks, playgrounds, tennis courts, swimming pools, and other similar open area recreational facilities, where none of the recreational features are entirely enclosed in a building.*

The improvements proposed for the pavilions and associated facilities will maintain the open air design of the existing facilities. The proposed project is consistent with the permitted uses defined by the Hawai‘i County Code.

5.8. Special Management Area

The County of Hawai‘i Planning Commission in Rule 9 of the “Rules of Practice and Procedure” (RPP) has designated the shoreline and certain inland areas of the Island of Hawai‘i as within the Special Management Area (SMA). SMA areas are designated sensitive environments to be protected in accordance with the State’s Coastal Zone Management policies, as set forth in Section 205A, Coastal Zone Management, HRS. The project site is located within the SMA, (Refer to **Section 3 – Figure 6, SMA Map**). According to Rule 9, Section 9-8 Permits Required for Development, the Hawai‘i Planning Commission has the authority to require the filing of an SMA permit for projects that constitute a “development”:

> *A. No development shall be allowed within the Special Management Area without obtaining a permit in accordance with this rule.*
> *B. No State or County Agency authorized to issue permits within the Special Management Area shall authorize any development unless approval is first received in accordance with this rule.*

The proposed improvements to the existing beach park facilities require repair and reconstruction to the concrete slab and footings of the upper pavilion, a 696 square foot addition to the south end of the upper pavilion, relocation of and renovation to the kitchen and restrooms, removal of existing south and west facing walls, a reduction of the overall length of the structure, and a reconfiguration of the existing building footprint. The lower pavilion will be removed and rebuilt and the parking lot will be striped and resurfaced where damaged. The proposed project in consideration of Rule 9, Section 9-4 Definitions, is considered a “development” activity based on the following:

> *(10) A. “Development” includes the following uses:*
> *(v) Construction, reconstruction, demolition, or alteration of the size of any structure.*

Pursuant to Chapter 205A, Hawai‘i Revised Statutes, and the Rules of Practice and Procedure of the County of Hawai‘i Planning Commission, to preserve and protect the natural resources of the coastal zone of Hawai‘i an SMA Assessment will be filed with the County of Hawai‘i, Planning Department.

Section 6

Permits and Regulatory Approvals That May Be Required

6.1. State of Hawai‘i

Department of Land and Natural Resources

Conservation District Use Permit

Disability and Communications Access Board

Plan Review and Approval

6.2. County of Hawai‘i

Planning Department/Planning Commission

Special Management Area (SMA) Permit

Department of Public Works

Construction Plan Review

Building Department

Building Plan Review and Approval

Section 7

Agencies, Organizations and Individuals Consulted

The following agencies, organizations, and individuals were/will be contacted regarding the preparation of the Draft and Final EA for this project.

7.1. State Agencies

Department of Land and Natural Resources

Office of Hawaiian Affairs

Department of Health

Land Use Commission

7.2. County of Hawai‘i

Office of the Mayor

Planning Department

Department of Public Works

Hawai‘i County Council

Building Department

Department of Water Supply

Department of Environmental Management

Fire Department

Police Department

7.3. Private and Community Organizations

Hawaiian Telcom

Hawai‘i Electric Light Company

North Kohala Community Resource Center

Nani Svendsen

Sharon H. Hayden

Section 8
Summary of Impacts and Significance Determination

The potential effects of the proposed project are evaluated based on the significance criteria in section 11-200-12, HAR. The recommended preliminary determination for the proposed project is a Finding of No Significant Impact (FONSI). The following is a summary of the potential effects of the action.

(1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource:

The proposed project is not expected to result in the adverse loss of natural or cultural resources. There are no known threatened or endangered species of plants or wildlife present or which utilize the site for habitat. The subject property is located in a County owned and maintained beach park, and was previously disturbed and developed.

While it is acknowledged that this region is rich in cultural and historical significance, no known archaeological sites have been documented on the project site. If any skeletal remains or artifacts of cultural or historical significance are encountered all construction activity will cease and the SHPD notified for further instructions. All activities will comply with the required provisions of Chapter 6E, HRS, as well as other provisions of law governing natural or cultural resource preservation and protection to prevent the irrevocable loss of natural or cultural resources.

(2) Curtails the range of beneficial uses of the environment:

The proposed project is located on County property dedicated for use as a beach park. Implementation of this project will bring the land back to its intended use and is not anticipated to significantly detract from the function or use of the environment. Potential for negative adverse environmental impacts will be addressed through adherence to the mitigation measures and practices as described in this document.

(3) Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS:

The project is consistent with the environmental polices, goals, and guidelines expressed in Chapter 344, HRS. Potential sources of adverse impacts have been identified and appropriate measures have been developed to either mitigate or minimize the potential for impacts.

(4) Substantially affects the economic or social welfare of the community or State:

No negative adverse socioeconomic impacts are expected to result from this project. The community and State will benefit in the short-term from revenue generating activities associated with construction activity and the permit application process. The community will benefit long-term with the use of the pavilion and full access to park facilities.

(5) Substantially affects public health:

Construction and operation of the proposed project are not anticipated to result in adverse effects to public health. During construction appropriate construction management practices will be employed to avoid potential for negative adverse impacts to public health and safety.

(6) Involves substantial secondary impact, such as population changes or effects on public facilities:

The proposed activity is expected to have little to no secondary or indirect impacts such as population changes or effects on public facilities based on the limited scope and scale of the project.

(7) Involves a substantial degradation of environmental quality:

Impacts to air and water quality, noise levels, natural resources, and land use associated with the planned improvements are anticipated to be negligible. Mitigation measures, detailed in this document, will be employed as necessary to further minimize potentially detrimental effects to the environment. The proposed project does not involve substantial degradation of environmental quality.

(8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions:

The project is not expected to result in cumulative impacts or involve a commitment to larger actions. The proposed project will be developed in accordance with federal, state, and County of Hawai‘i laws, regulations, and policies.

(9) Substantially affects a rare, threatened, or endangered species:

The proposed project is not anticipated to impact any rare, threatened, or endangered species or habitats.

(10) Detrimentally affects air or water quality or ambient noise levels:

Ambient air and noise conditions may be affected during construction phases, but these are temporary and can be controlled by the mitigation measures described in this EA. Upon project completion air and noise quality in the project vicinity are expected to return to normal levels.

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

The project site is located in Flood Zone VE, which corresponds to 10-year coastal floodplains and has the additional hazard of storm waves. Base flood elevations in the project area are determined to be 26 to 27 feet above msl. The lower pavilion, situated at 20 feet above msl, has the potential to be impacted by coastal flooding and storm waves. Because this pavilion is comprised of posts and a roof, and does not have walls, it is anticipated that this structure could withstand the storm waves associated with 10-year storm surges. Due to the elevation of the upper pavilion, over 30 feet above msl, and its location on a steep embankment, it is not expected to be adversely affected by flooding and no adverse impacts to this structure are expected.

Stream bank erosion is occurring beside the west wall of the upper pavilion. Removal of 16 linear feet of the west end of the pavilion is expected to avert erosion related impacts.

Tsunamis are a threat in the Pacific Basin and the project site is located in a tsunami evacuation zone. If natural warnings occur, or sirens followed by radio broadcasts tell of an oncoming tsunami the area should evacuated. Evacuation facilities are located at the Kohala Hospital and Kohala Schools. Reconstruction of these facilities to current building standards is anticipated to improve its resiliency to seismic events.

Impacts to estuary, fresh or coastal waters are not anticipated, and the proposed project is not anticipated to affect or suffer damage from the existing natural environment. The proposed improvements will be developed and built according to federal, state, and county standards, regulations, and laws to ensure minimal impact to the surrounding environment.

(12) Substantially affects scenic vistas and view planes identified in county or state plans or studies:

The proposed project involves the improvements to existing structures and associated facilities. Additions associated with the redesign of the upper pavilion will result in a total increase of approximately 104 square feet of floor space. There will be no additions or expansions to other facilities. Upon project completion no impacts to the existing scenic vistas and view planes are anticipated.

(13) Requires substantial energy consumption:

Construction of the proposed project will require the consumption of energy. The use of energy during construction, though unavoidable and irretrievable, will not be of significant amounts. Upon project completion the site will require no more energy for the operation of lights and other utilities than were in operation before the 2006 earthquake.

Section 9
Findings

In accordance with the provisions set forth in HRS, Chapter 343, and the significance criteria in HAR, Section 11-200-12 of Title 11, Chapter 200, it is anticipated that the proposed project will have no significant adverse impacts to water quality, air quality, existing utilities, noise levels, social welfare, archaeological sites, or wildlife habitat. All anticipated impacts are expected to be temporary in duration and will not adversely impact the environmental quality of the area. It is expected that an Environmental Impact Statement (EIS) will not be required and that a Finding of No Significant Impact (FONSI) will be issued.

Section 10

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