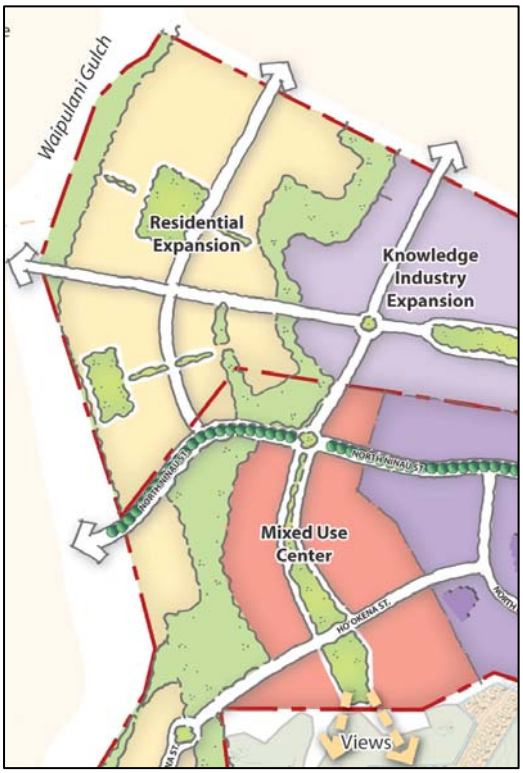
Environmental Impact Statement Preparation Notice

MAUI RESEARCH & TECHNOLOGY PARK
MASTER PLAN UPDATE
PART 2



Applicant:
Maui R&T Partners, LLC
1300 North Holopono, Suite 201
Kihei, Hawaii 96753

Prepared by:
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793-1717

Accepting Authority:
Land Use Commission
Department of Business, Economic Development & Tourism
State of Hawaii

May 2010

II. AFFECTED ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATION MEASURES

A. Physical Environment

1. Surrounding Land Uses

Existing Conditions. The MRTP is surrounded by undeveloped agricultural lands of the Haleakala and Kaonoulu Ranches to the north, east, and south. Seaward to the west, across Piilani Highway, are the developed lands of Kihei Town, including single and multi-family subdivisions, the Kihei Community Center, Piilani Shopping Village, South Maui Community Park as well as industrial and public/quasi-public developments. Waipui'lani Gulch abuts the property on the north and Keokea Gulch abuts on the south. The new South Maui High School is proposed for land abutting the north-west corner of the property, across Waipuilani Gulch.

Potential Impacts and Mitigation Measures. The project area is community plan designated Project District 6, "Kihei Research & Technology Park" and "Public/Quasi-Public" and has thus been considered for future urban development. During the preparation of the Draft EIS the potential impact to surrounding land uses from the implementation of the Master Plan Update will be fully assessed.

2. Topography and Soils

Existing Conditions. Geologically, the island of Maui is comprised of two shield volcanoes, Mauna Kahalawai (West Maui Mountains) in the west, and Haleakala to the east. These land forms create the subsections of Maui characterized as East and West Maui.

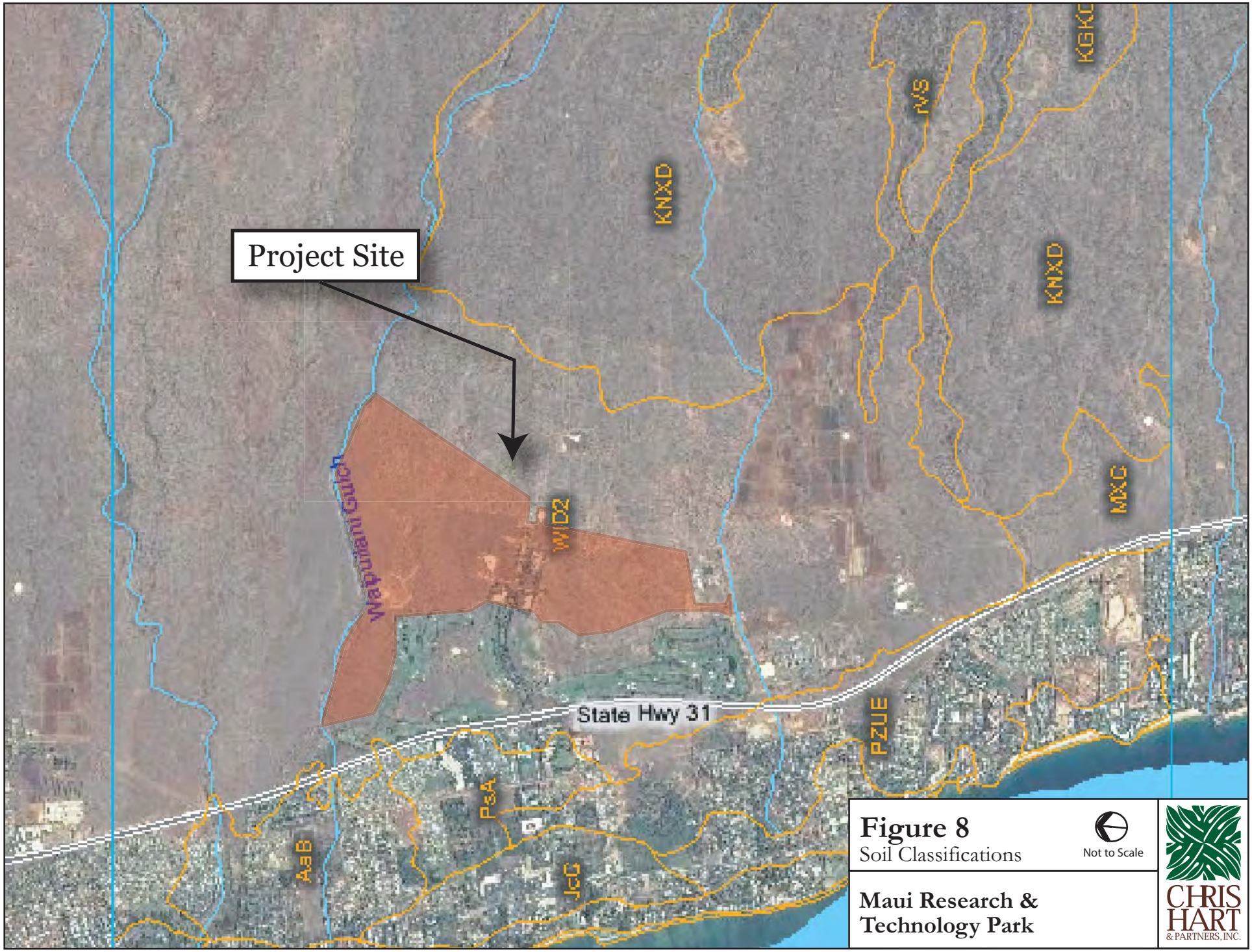


Figure 8
Soil Classifications

Not to Scale

Maui Research & Technology Park

CHRIS HART & PARTNERS, INC.

The site of the MRTP includes a single soil type, as described in the *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* See: Figure 8, "Soils Map". This soil type, "Waiakoa extremely stony silty clay", is characterized by medium runoff and severe erosion hazard, with at least half the surface layer eroded in most areas.

Potential Impacts and Mitigation Measures. Implementation of the master plan will require grading for roads and buildings upon development, for areas not currently developed.

A National Pollutant Discharge Elimination System (NPDES) permit will be required from the State of Hawaii Department of Health (DOH) prior to grading activities. During site preparation, storm runoff from the MRTP will be controlled in compliance with the County's "Soil Erosion and Sediment Control Standards". Typical mitigation measures include appropriately stockpiling materials on-site to prevent runoff and building over or establishing landscaping as early as possible on disturbed soils to minimize length of exposure.

Impacts to the soils include the potential for soil erosion and the generation of dust during construction. Clearing and grubbing activities will temporarily disturb the soil retention values of the existing vegetation and expose soils to erosion forces. Some wind erosion of soils could occur without a proper watering and re-vegetation program. Heavy rainfall could also cause erosion of soils within disturbed areas of land.

To the extent possible, improvements will conform to the contours of the land, further limiting the need for extensive grading of the site. In addition, graded areas will be limited to specific areas for short periods of time.

Measures taken to control erosion during the site development period may include:

- Minimizing the time of construction;
- Retaining existing ground cover as long as possible;
- Constructing drainage control features early;
- Using temporary area sprinklers in non-active construction areas when ground cover is removed;
- Providing a water truck on-site during the construction period to provide for immediate sprinkling as needed;
- Using temporary berms and cut-off ditches, where needed, for control of erosion;
- Watering graded areas when construction activity for each day has ceased;
- Grassing or planting all cut and fill slopes immediately after grading work has been completed; and
- Installing silt screens where appropriate.

All construction activities will comply with all applicable Federal, State and County regulations and rules for erosion control. Before issuance of a grading permit by the County of Maui, the final erosion control plan and best management practices required for the NPDES permit will be completed. All construction activities will also comply with the provisions of Chapter 11-60.1, HAR, Section 11-60.1-33, Fugitive Dust.

After construction, the establishment of permanent landscaping will provide long-term erosion control.

3. Natural Hazards

Existing Conditions. Natural hazards impacting the Hawaiian Islands include hurricanes, tsunamis, volcanic eruptions, earthquakes, and flooding.

Devastating hurricanes have impacted Hawaii twice since 1980: Hurricane Iwa in 1982 and Hurricane Iniki in 1992. While it is difficult to predict these natural occurrences, it is reasonable to assume that future events could be likely given the recent record.

Tsunamis are large, rapidly moving ocean waves triggered by a major disturbance of the ocean floor, which is usually caused by an earthquake but sometimes can be produced by a submarine landslide or a volcanic eruption. About 50 tsunamis have been reported in the Hawaiian Islands since the early 1800s. Seven caused major damage, and two of these were locally generated. The MRTP is outside of the Civil Defense Tsunami Evacuation Zone.

Volcanic hazards are not a concern in the South Maui area due to the dormant status of Haleakala.

In Hawaii, most earthquakes are linked to volcanic activity, unlike other areas where a shift in tectonic plates is the cause of an earthquake. Each year, thousands of earthquakes occur in Hawaii, the vast majority of them so small they are detectable only with highly sensitive instruments. However, moderate and disastrous earthquakes have also occurred.

The 1938 Maui Earthquake, with a magnitude of 6.7-6.9 on the Richter scale and an epicenter six (6) miles north of Maui, created landslides and forced the closure of the road to Hana. Damaged water pipes and ground fractures also were reported in Lahaina.

Flood hazards are primarily identified by the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), National Flood Insurance Program. According to the September 2009 update of FIRM Panel 1500030586E, the MRTP is located in Zone X, an area outside of flood hazard. See: Figure 9, "Flood Map."

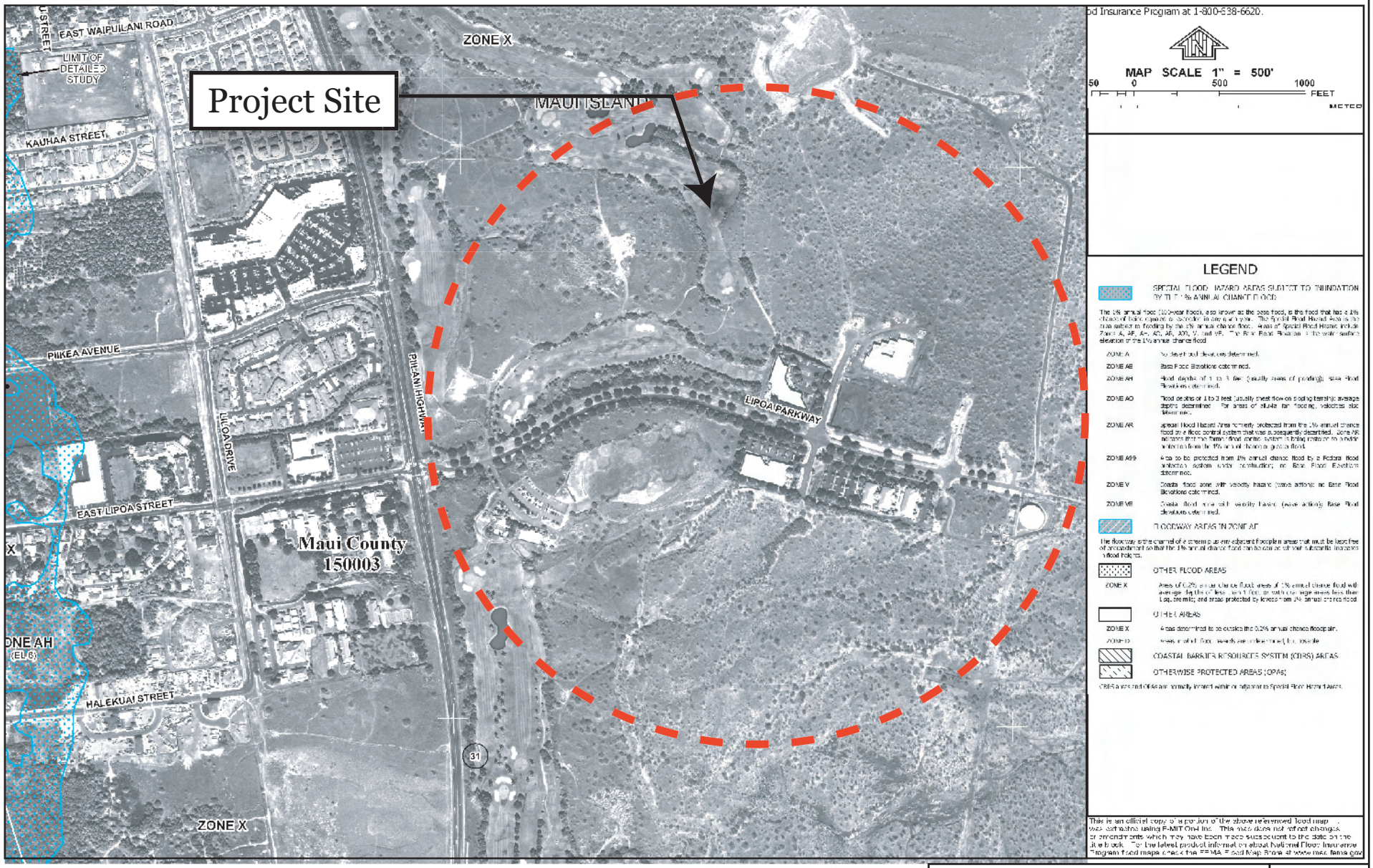


Figure 9
Flood Map

Maui Research & Technology Park

CHRIS HART & PARTNERS, INC.

Potential Impacts and Mitigation Measures. Although the project is not anticipated to exacerbate any hazardous conditions, the potential impacts will be fully assessed during the preparation of the Draft EIS. Any structures built by buyers of individual lots will be constructed for protection from earthquakes and the destructive winds and torrential rainfall of tropical hurricanes in accordance with the Building Code adopted by the County of Maui. All work will comply with applicable flood zone standards, such as those set forth in Chapter 19.62, "Flood Hazard Areas", Maui County Code. The proposed project is not anticipated to significantly impact the neighboring properties with regard to flood hazard potential.

4. Hazardous Substances

Existing Conditions. A Phase I Environmental Site Assessment was prepared for the MRTP in May 2007. See: Appendix B, "Environmental Site Assessment". Utilizing review of records, interviews with knowledgeable individuals, and site reconnaissance, the Environmental Site Assessment (ESA) noted that there were no current investigations of the site under any federal, state, or local environmental agency. The field survey noted that there are very limited amounts of soil-staining from ineffectively stored waste oil and that a limited amount of solid waste dumping, including special waste requiring proper management, was occurring. The ESA found no evidence of recognized environmental conditions at the property.

Potential Impacts and Mitigation Measures. No impacts from hazardous substances are anticipated at the MRTP site, based on the work conducted during the preparation of the Phase I ESA. The potential concerns identified by the ESA are limited in scope and will be mitigated during project development.

5. Flora and Fauna

Existing Conditions. Botanical and Faunal Surveys were conducted for the MRTP site in October 2008. See: Appendix C, "Botanical and Faunal Surveys". The project site was originally populated with dry native forest/scrubland plant species. These species have gradually diminished over the past 150 years as the area was used for grazing. Introduced Axis deer and human-resultant fires have further reduced the native plant population.

The site is now dominated by two (2) non-native species: *kiawe* trees and buffelgrass. A total of 14 species were noted during site surveys, of which two (2) were native to the Hawaiian Islands: *'ilima* and *'uhaloa*.

Three (3) mammalian species were noted in the report: cattle, Axis deer, and feral cats. Fourteen non-native bird species were recorded as well. Using sight survey and a bat listening device, the report found no evidence of the native hoary bat; neither was there evidence of Blackburn's sphinx moth.

Potential Impacts and Mitigation Measures. Based upon the Botanical and Faunal Surveys conducted in October 2008, no impacts on flora and fauna are anticipated as a result of project development. The Survey report recommends that native plant species on-site be incorporated into landscape design and that some standard measures are taken regarding seabirds.

6. Air Quality

Existing Conditions. The air quality in the South Maui area is generally good. Existing impacts to air quality include periodic impacts from distant volcanic emissions (VOG) and possibly occasional localized impacts from traffic congestion or agricultural activities.

Both Federal and State standards have been established to maintain ambient air quality. Seven parameters are regulated: particulate matter, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, carbon monoxide, ozone, and lead. State of Hawaii air quality standards are either equally or more stringent than the comparable national standards.

Regional and local climate together with the amount and type of human activity generally dictate the air quality of a given location. The climate of the South Maui area is very much affected by its location on the southern side of Haleakala. A generally semi-arid climate pertains, with an average monthly rainfall of 1.218 inches in 2007 (the latest available data).

Potential Impacts and Mitigation Measures. During development, grading and construction-related activities will result in short-term impacts to air quality. Best Management Practices (BMPs) will help to mitigate such impacts. Adequate dust control measures, in compliance with Section 11-60-1-33, "Fugitive Dust", of the Hawaii Administrative Rules will be implemented during all phases of construction.

Mitigation measures will be implemented to minimize potential air quality impacts, as listed below.

Short-Term Construction Activities. All construction activities will comply with the provisions of HAR, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust. In compliance with these provisions a dust control plan will be implemented during all phases of construction.

Fugitive dust emissions will be controlled to a large extent by watering of active work areas, using wind screens, keeping adjacent paved roads clean, and by covering of open-bodied trucks. Other dust control measures that may be implemented include limiting the area disturbed at any given time and/or mulching or stabilizing inactive areas that have been worked. Paving and landscaping early in the construction schedule will also reduce dust emissions.

Exhaust emissions from construction equipment can be mitigated by moving equipment and workers to and from the site during off-peak traffic hours.

Potential long-term impacts to air quality will be assessed in the Draft EIS.

7. Noise Quality

Existing Conditions. The dominant noise sources in the vicinity of the project are from vehicles using Pi'ilani Highway. The MRTP is located landward of the residential areas of central Kihei. Existing commercial uses within the MRTP generally occur only during daytime hours.

Potential Impacts and Mitigation Measures. The potential impact to short- and long-term ambient noise levels will be more thoroughly assessed during the preparation of the Draft EIS. Grading and construction-related activities will be limited to normal daylight hours in order to limit noise impacts and adhere to the Department of Health's noise regulations for construction equipment.

8. Historical and Archaeological Resources

Existing Conditions. An Archaeological Inventory Survey was prepared for the project in September 2008. See: Appendix D, "Archaeological Inventory Survey". A total of five (5) sites were noted in the survey report, three (3) on Parcel 17 and two (2) on the portion of Parcel 54. The State Site Numbers and descriptions of the sites themselves follow:

Site 50-50-10-6239:	an historic modified outcropping
Site 50-50-10-6240:	an historic modified outcropping
Site 50-50-10-6241:	a traditional or historic boundary wall
Site 50-50-10-6587:	an L-shaped military training feature
Site 50-50-10-6588:	three (3) mounds which are traditional location markers

Potential Impacts and Mitigation Measures. The following significance evaluations are broad criteria established for the State and National Register of Historic Places. These criteria are as follows:

> *Criterion A:* Site is associated with events that have made a significant contribution to the broad patterns of our history.
>
> *Criterion B:* Site is associated with the lives of persons significant to our past.
>
> *Criterion C:* Site embodies the distinctive characteristics of a type, period, or method of construction; or represents the work of a master; or possesses high artistic value; or represents a significant and distinguishable entity whose components may lack individual construction.
>
> *Criterion D:* Site has yielded or has the potential to yield information important in prehistory or history.
>
> *Criterion E:* Site has an important traditional cultural value to the native Hawaiian people or to another ethnic group of the state due to associations with traditional cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts (State of Hawaii criterion only).

Sites can be considered no longer significant when they meet only Criterion D and sufficient information has been collected from them during archaeological investigation.

All sites identified by the Inventory Survey have been assessed as significant under only Criterion D. Save for orange protective fencing to be placed along the northern ridgeline boundary of Parcel 17 to protect undocumented rock shelters occurring below in Waipuilani Gulch, no fur-

ther archaeological work or protective measures are recommended for this project area.

9. Cultural Impact Assessment

Existing Conditions. The MRTP has been used for agricultural uses, primarily grazing, for some 150 years. Prior to ranching, the land comprising the MRTP did not attract significant settlements of Hawaiians. Cultural activities are not currently taking place on the property and cultural resources of importance to native Hawaiians for cultural practices were not identified in a Cultural Impact Assessment report or Archaeological Inventory Surveys conducted on the property (See: Appendices D and E)

Potential Impacts and Mitigation Measures. The Cultural Impact Assessment prepared for the project documents the history of the site and assesses potential cultural impacts resulting from the project. The Draft EIS will fully document the potential cultural impacts associated with development of the project area.

10. Visual Resources

Existing Conditions. The subject property is located on the southern slope of Haleakala, *mauka* (landward) of Kihei Town. Notable visual resources in the area include the Pacific Ocean and the island of Kahoolawe to the west, and the mountain of Haleakala to the east.

Potential Impacts and Mitigation Measures. Visual impacts will be assessed in the Draft EIS.

11. Agricultural Resources

Existing Conditions. The project site was historically used for passive agricultural purposes, specifically grazing for cattle ranching. Agricultural activities ceased upon the development of the MRTP.

ALISH. In 1977, the State Department of Agriculture developed a classification system to identify Agricultural Lands of Importance to the State of Hawaii (ALISH). The classification system is based primarily, though not exclusively, upon the soil characteristics of the lands. The three (3) classes of ALISH lands are: "Prime", "Unique", and "Other", with all remaining lands termed "Unclassified". When utilized with modern farming methods, "Prime" agricultural lands have a soil quality, growing season, and moisture supply necessary to produce sustained crop yields economically. "Unique" agricultural lands possess a combination of soil quality, growing season, and moisture supply to produce sustained high yields of a specific crop. "Other" agricultural lands include those that have not been rated as "Prime" or "Unique" but are still considered important agricultural lands.

The lands underlying the MRTP are "Unclassified". "Unclassified" lands do not meet the criteria for being rated "Prime", "Unique" or "Other" and are not considered to be agricultural lands of importance to the State of Hawaii. See: Figure 10, "ALISH Map".

LSB. The University of Hawaii, Land Study Bureau (LSB), developed the Overall Productivity Rating, which classifies soils according to five (5) levels, ranging from "A", representing the class of highest productivity soils, to "E", representing the lowest.

The lands underlying the MRTP are largely classified as "E" with some portions "Unclassified". See: Figure 11, "LSB Map".

Potential Impacts and Mitigation Measures. The Draft EIS will assess potential impacts to agricultural resources.

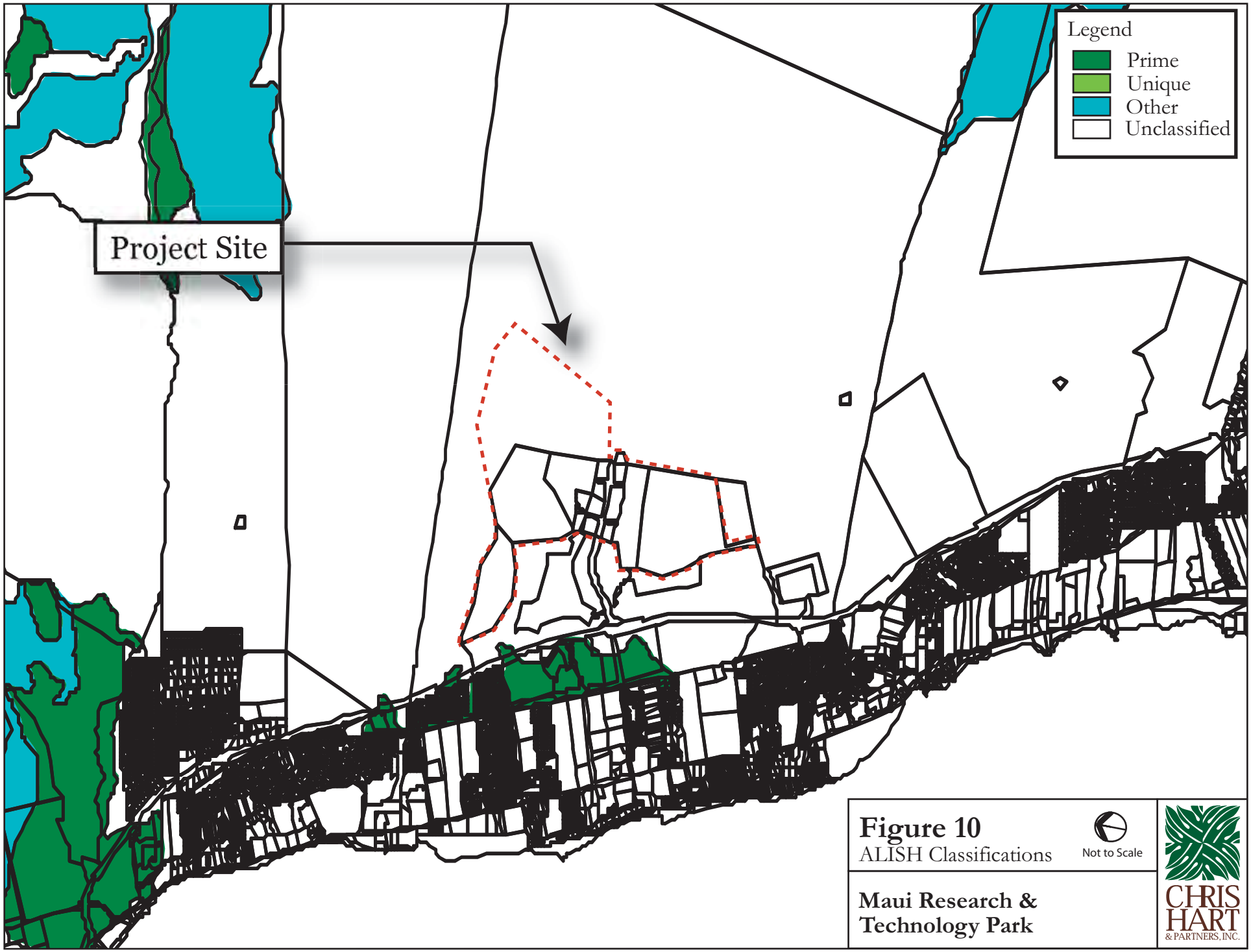


Figure 10
ALISH Classifications

Not to Scale

Maui Research & Technology Park

CHRIS HART & PARTNERS, INC.

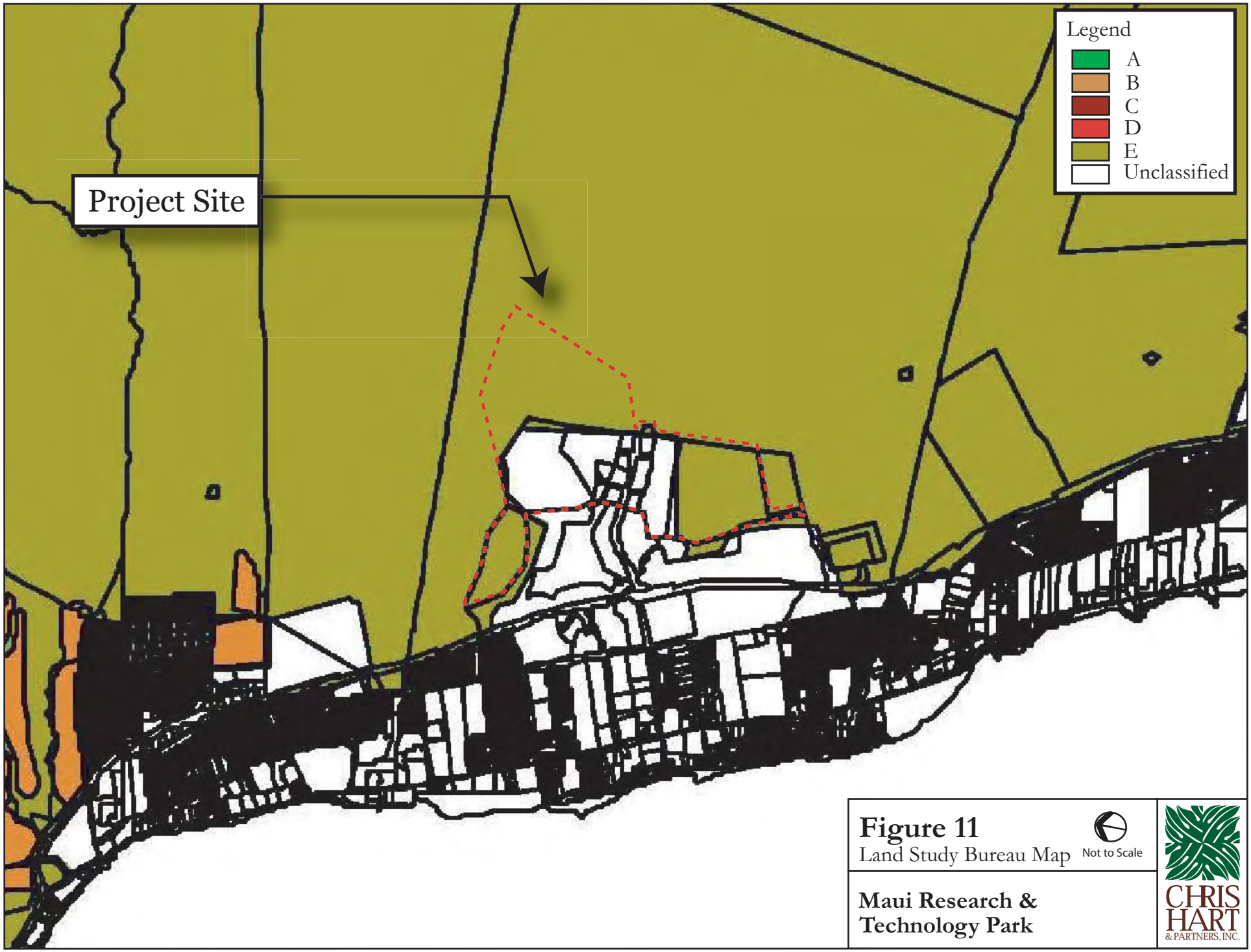


Figure 11
Land Study Bureau Map

Not to Scale

Maui Research & Technology Park

CHRIS HART & PARTNERS, INC.

B. Socio-Economic Environment

1. Population

Existing Conditions. The resident population in Maui County has experienced rapid growth, doubling in the last 30 years. The resident population expanded from 74,000 in 1981 to 141,902 in 2007 (*Maui County Data Book* 2008). Population growth is expected to continue, with the year 2020 resident population projected to reach 174,450. Visitor counts have increased even more dramatically, with the average daily visitor count increasing from 15,363 in 1980 to 51,222 in 2007. This represents a 215 percent increase in visitors per day. Thus the County's *de facto* population, which includes residents and visitors, grew from 85,803 in 1980 to 184,002 in 2007, representing a 214% percent increase.

Likewise, Kihei-Makena experienced high growth rates as the population grew to 25,609 in 2005, up from 15,365 in 1990, and 7,263 in 1980 (Socio-Economic Forecast, County of Maui, 2006). The anticipated 2030 population of the Kihei-Makena region is projected to reach 38,757. The average daily visitor population of the region in 1990 was 16,079 and is anticipated to reach 33,151 in 2030, a 106% increase over 1990 levels (Socio-Economic Forecast, County of Maui, 2006).

Population projections calculated by the Hawaii State Department of Business, Economic Development and Tourism, Research and Economic Analysis Division estimate that Maui County's resident population will reach 199,550 people in 2030, while the *de facto* population will reach 263,500 (*Maui County Data Book* 2008).

Potential Impacts and Mitigation Measures. The long-term implementation of the Master Plan Update may contribute to the increase in population projected for the Kihei-Makena region. This impact will be more

thoroughly analyzed in the Socio-Economic Impact Analysis Report prepared in support of the Draft EIS.

2. Housing

Existing Conditions. For a variety of reasons, there has been a generally high appreciation on real estate prices on Maui since the early 1970s. At the same time, the population has expanded dramatically, leading to high demand for residential units. According to the draft Maui Island Plan, there will be a demand for an additional 34,637 housing units on Maui through 2030. Of these units, approximately 11,154 are expected to be built on lands not currently entitled for urban development.

Potential Impacts and Mitigation Measures. The proposed Master Plan Update would allow for residential uses in conjunction with business uses in the MRTP. It is anticipated that the long-term building-out of the Park will generate sufficient employment to warrant the construction of additional housing to satisfy this demand. By locating additional housing within the Park housing is brought closer to jobs reducing commuting time and mitigating traffic congestion. The potential demand for additional housing created by the project will be more thoroughly analyzed in the Socio-Economic and Fiscal Impact Analysis Reports prepared in support of the Draft EIS.

3. Economy

Existing Conditions. Tourism is the predominant component of Maui County's economy. In Maui County, the Accommodations and Food Service Industry accounts for the largest proportion of jobs, 29%. The retail trade, also highly dependent upon tourism, ranks second at 13%. This is followed by government at 13%, professional and business services at 9%, and health care and social assistance at 6%. Agriculture generates just 2% of Maui County jobs, but is disproportionately important for its historic and cultural legacy and its contribution to the island's scenic beauty and

quality of life (Hawai'i County Department of Labor and Industrial Relations, Current Employment Statistics, 2007).

Maui County is much more dependant upon tourism than other Hawaii Counties. Of Maui County's Gross County Product (GCP), 39 percent is attributed to tourism, versus a range of 19 to 29% for the other counties[2]. Contending with Maui's high cost of living, most households support themselves on two or more jobs. Based on a living wage study of Maui County, a family of four (two adults, two children) would have needed an annual income of $61,650 to support itself in 1995[3]. A corresponding analysis of 2005 jobs and wage data for Maui found that the average wage of 78 occupations – representing 54 percent of all jobs – fell below the $30,800 living wage standard.

Maui County hosted 2,522,043 visitors in the year 2007 and hotels on Maui Island experienced a 76.5 percent occupancy rate (Maui County Data Book, 2008). However, with the current economic down-turn occupancy rates fell below 60% in January 2009, but have since risen to 67.2% in January 2010 (Maui News, March 27, 2010). With the current economic recession, unemployment in Maui County has risen from 1.7 percent in December 2006 to 8.8 percent in December 2009 (U.S. Bureau of Labor Statistics). In South Maui, economic activity centers on visitor and service industries, with two (2) of the island's three (3) Resort Districts located in South Maui. These Resort Districts--Wailea and Makena--represent substantial economic generators for Maui, but have been especially hard-hit during the current recession.

According to the *Economic Development Issue Paper* (October 2007) prepared for the County of Maui, Department of Planning, in support of the Maui County General Plan 2030 update, diversifying Maui's economy has been a key, longstanding County policy. The current draft of the *Maui Is-*

[2] Hawai`i Tourism Authority, Maui County Tourism Strategic Plan: 2006-2015, 2006, p. 11, citing DBEDT Long Range Forecast, 2005.
[3] D. Pearce, the Hawai`i Self-Sufficiency Standard, Maui County 2003; updated to 2005 based on increase in the Consumer Price Index, U.S. Bureau of Labor Statistics.

land Plan (Chapter 4, Economic Development) states the following in its analysis of the island's challenges and opportunities:

> "The Island of Maui, like the County as a whole, faces two fundamental challenges in economic development: (1) diversification; and (2) increasing the number and proportion of *living wage* jobs. There is a subset of more specific challenges, such as the high cost of housing and the need to strengthen public education".

Potential Impacts and Mitigation Measures. Fuller development of the MRTP is expected to generate short-term economic benefits in the form of construction-related employment, as well as long-term benefits that include increased permanent employment and tax revenues. Short- and long-term economic benefits will be more thoroughly analyzed in the Socio-Economic Impact Analysis Report prepared in support of the Draft EIS.

C. Public Services

1. Recreational Facilities.

Existing Conditions. Numerous public beach parks are located in the South Maui area, such as the three (3) Kamaole Beach Parks, Charley Young Park, and Kalama Park. Other recreational facilities include the Kihei Aquatic Center and the Kenolio Recreational Complex. The South Maui Community Park, located just across Piilani Highway, is under construction of Phase I improvements which will include soccer and baseball fields.

Potential Impacts and Mitigation Measures. The long-term implementation of the Master Plan Update may contribute to the increase in population projected for the Kihei-Makena region. This impact, and its associated impact to recreational facilities, will be more thoroughly analyzed in

the Socio-Economic Impact Analysis Report prepared in support of the Draft EIS.

2. Medical Facilities

Existing Conditions. Maui Memorial Medical Center, located approximately 10 miles from the MRTP, is in Wailuku and is the island's only acute care hospital. It is an approximately 240 bed hospital. Various private medical offices and facilities are located in the South Maui area.

Potential Impacts and Mitigation Measures. The long-term implementation of the Master Plan Update may contribute to the increase in population projected for the Kihei-Makena region. This impact, and its associated impact on the demand for medical facilities, will be more thoroughly analyzed in the Socio-Economic Impact Analysis Report prepared in support of the Draft EIS.

3. Police and Fire Protection Services

Existing Conditions. The applicants' properties fall within the Maui Police Department's (MPD) District 6 – Kihei. This police district is served by the Kihei Station, located approximately 2.5 miles from the MRTP at 1881 S. Kihei Road.

The MRTP is serviced by the Wailea Fire Station. The fire station is located at 11 Waimahaihai St, approximately 2 miles from the MRTP.

Potential Impacts and Mitigation Measures. The long-term implementation of the Master Plan Update may contribute to the increase in population projected for the Kihei-Makena region. This impact, and its associated impact to police and fire services, will be more thoroughly analyzed in the Socio-Economic Impact Analysis Report prepared in support of the Draft EIS.

4. Schools

Existing Conditions. Maui schools are organized into two complex-areas. A complex consists of a high school and all of the intermediate/middle and elementary schools that flow into it. Groups of two to four complexes form a "complex area" that is under the supervision of a complex area superintendent.

The MRTP is located within the State Department of Education's (DOE) Maui Complex, within the Baldwin-Kekaulike-Maui Complex-Area. The Maui Complex is composed of the following schools:

Elementary Schools

- Kahului Elementary
- Kamalii Elementary
- Kihei Elementary
- Lihikai Elementary
- Pomaikai Elementary
- Maui PC Elementary School

Intermediate Schools

- Lokelani Intermediate
- Maui Waena Intermediate
- Maui PC Intermediate School

High Schools

- Maui High
- Kihei PC High School

Potential Impacts and Mitigation Measures. The long-term implementation of the Master Plan Update may contribute to the increase in population projected for the Kihei-Makena region. This impact, and its associated impact on the demand for school facilities, will be more thoroughly

analyzed in the Socio-Economic Impact Analysis Report prepared in support of the Draft EIS.

In 2007, the Hawaii Legislature enacted Act 245 as Section 302A, HRS, "School Impact Fees". Based upon this legislation, the Department of Education (DOE) will be enacting impact fees for residential developments that occur within indentified school impact districts. The Maui Complex may be designated as a school impact district. Should the area be so designated, the applicant will coordinate with the DOE to determine the appropriate measures to be taken as required by the Section 302A-1603(b), HRS.

5. Solid Waste

Existing Conditions. Weekly, residential, solid-waste collection in the area is provided by the County of Maui, Department of Environmental Management. The Department's Residential Collection program collects and disposes of residential waste in 3 major districts: Wailuku (including Kahului and South Maui), Makawao (including Kula, Pukalani, Paia, and Haiku) and Lahaina (West Maui).

The Central Maui Landfill, which is located in the Wailuku-Kahului Community Plan region, receives residential solid waste from the area. Green waste is collected by Eko Compost, which is located at the Central Maui Landfill. Construction and demolition (C&D) waste is accepted at the privately operated C&D Landfill in Ma`alaea.

Plastic, glass, metal, cardboard, and newspaper can be recycled when left at various drop-boxes throughout the County. Green waste recycling is provided by several private organizations.

Potential Impacts and Mitigation Measures. In the *Public Facilities Assessment Update County of Maui* (2007), R.M. Towill Corporation projected that the Central Maui Landfill will have adequate capacity to accommo-

date residential and commercial waste through the year 2025. This projection was arrived at by multiplying the Maui County's de facto population projections by an estimated number of pounds per person per day of waste generated, and assumes that solid waste generated by commercial and industrial growth will be captured by a corresponding trend in projected population growth. This estimate does not take into account future increases in source reduction and waste diversion. Increases in waste diversion achieved through education, recycling, composting, and reuse programs are expected to decrease demand for landfill space and extend the life of the Central Maui Landfill beyond the currently projected closure date. The County's Department of Environmental Management, Solid Waste Division, anticipates that additional phases of the Central Maui Landfill will be developed as needed to accommodate future waste.

Waste generated by site preparation will primarily consist of vegetation, rocks, and debris from clearing, grubbing, and grading. Very little demolition material is expected, as the site is essentially vacant.

During the short term, construction activities will require the disposal of the existing onsite waste, as well as cleared vegetation and construction-related solid waste. A solid waste management plan will be coordinated with the County's Solid Waste Division for the disposal of onsite and construction-related waste material. The applicants will work with the contractor to minimize the amount of solid waste generated during the construction of the project.

The long-term implementation of the Master Plan Update may contribute to the increase in population projected for the Kihei-Makena region. This impact, and its associated impact on solid waste facilities, will be more thoroughly analyzed in the Socio-Economic Impact Analysis Report prepared in support of the Draft EIS.

D. Infrastructure

1. Roadways

Existing Conditions. The MRTP is accessed via Lipoa Parkway, a two-lane, two-way road that connects to Pi'ilani Highway, the only arterial roadway in South Maui. Traffic is, at present, very light due to the relatively underdeveloped nature of the Park.

Potential Impacts and Mitigation Measures. A Traffic Impact Analysis Report (TIAR) will be prepared for the project and included within the Draft EIS. This report will analyze current conditions and project conditions with and without full development based upon the Master Plan Update. It will also make recommendations for any traffic mitigation measures deemed necessary.

2. Utilities

Existing Conditions. There are existing power, telephone, and cable television transmission facilities along Pi'ilani Highway.

Potential Impacts and Mitigation Measures. Proposed electrical, telephone, and cable television distribution systems will be served from the existing facilities along Pi'ilani Highway. Potential impacts to utilities will be more thoroughly analyzed in the Preliminary Engineering Report prepared in support of the Draft EIS.

3. Drainage

Existing Conditions. A Preliminary Drainage Report will be prepared for the Draft EIS. The report will analyze current conditions, including drainage patterns, existing improvements, and runoff totals.

Potential Impacts and Mitigation Measures. The Drainage Report will analyze anticipated changes in stormwater runoff and recommend improvements necessary to comply with County drainage requirements.

4. Water

Existing Conditions. A Preliminary Engineering Report will be prepared for the Draft EIS. The report will analyze current water source and transmission requirements to support the implementation of the Master Plan Update.

Potential Impacts and Mitigation Measures. The Engineering Report will analyze anticipated increases in water demand and propose means of meeting that demand.

5. Wastewater

Existing Conditions. A Preliminary Engineering Report will be prepared for the Draft EIS. The report will analyze current wastewater system capacity and existing infrastructure to support the project.

Potential Impacts and Mitigation Measures. The Engineering Report will analyze anticipated increases in wastewater flows and propose means of meeting that demand.

E. Cumulative and Secondary Impacts

Cumulative impacts are defined as the impact on the environment, which results from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions.

Secondary impacts are those that have the potential to occur later in time or farther in distance, but which are reasonably foreseeable. They can be

viewed as actions of others that are taken because of the presence of the project. Secondary impacts from highway projects, for example, can occur because they can induce development by removing transportation impediments to growth.

The Draft EIS will discuss potential cumulative and secondary impacts from the proposed Master Plan Update.

F. Summary of Unavoidable Impacts on the Environment and Resources

The Draft EIS will discuss unavoidable impacts on the environment and resources and analyze their significance.

III. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. State Land Use

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission (LUC), establishes four (4) major land use districts in which all lands in the state are placed. These districts are designated as *Urban*, *Rural*, *Agricultural*, and *Conservation*. The lands of the MRTP lie within the State *Urban* and *Agricultural* districts. Refer to Figure 5, "State Land Use Map".

The proposed Master Plan Update will require a State Land Use District Boundary Amendment in order to bring the entire Park site into the *Urban* district, as outlying portions remain classified as *Agricultural*. The total land area expected to be affected comprises approximately 252.20 acres and is identified by Tax Map Parcels (2) 2-2-024:16 and 17 and a portion of (2) 2-2-002:54 (hereafter "Parcels 16, 17, and 54 por"). Additionally, the proposal would require amendments to the conditions placed upon currently urbanized lands, comprising approximately 141.736 acres.

The Draft EIS will analyze the proposed boundary reclassification's consistency with the following standards of the Urban District, Sec 15-15-18, Hawaii Administrative Rules:

1. It shall include lands characterized by "city-like" concentrations of people, structures, streets, urban and other related land uses; streets, urban level of services and other related land uses.
2. It shall take into consideration the following specific factors:
3. Proximity to centers of trading and employment except where the development would generate new centers of trading and employment;

4. Availability of basic services such as schools, parks, wastewater systems, solid waste disposal, drainage, water, transportation systems, public utilities, and police and fire protection; and
5. Sufficient reserve areas for foreseeable urban growth.
6. It shall include lands with satisfactory topography, drainage, and reasonably free from the danger of any flood, tsunami, unstable soil condition, and other adverse environmental effects.
7. Land contiguous with existing urban areas shall be given more consideration than non-contiguous land, and particularly when indicated for future urban use on state or county general plans.
8. It shall include lands in appropriate locations for new urban concentrations and shall give consideration to areas of urban growth as shown on the state and county general plans;
    (A) It may include lands which do not conform to the standards in paragraphs (1) to (5):
    (B) When surrounded by or adjacent to existing urban development; and
    (C) Only when those lands represent a minor portion of this district;
9. It shall not include lands, the urbanization of which will contribute toward scattered spot urban development, necessitating unreasonable investment in public infrastructure or support services
10. It may include lands with a general slope of twenty per cent or more if the commission finds that those lands are desirable and suitable for urban purposes and that the design and construction controls, as adopted by any federal, state, or county agency, are adequate to protect the public health, welfare and safety, and the public's interests in the aesthetic quality of the landscape.

B. Hawaii State Plan

Chapter 226, HRS, also known as the *Hawaii State Plan*, is a long-range comprehensive plan that serves as a guide for the future long-range development of the State by identifying goals, objectives, policies, and priorities, as well as implementation mechanisms. As stated in Section 226-1:

The purpose of this chapter is to set forth the Hawaii state plan that shall serve as a guide for the future long-range development of the State; identify the goals, objectives, policies, and priorities for the State; provide a basis for determining priorities and allocating limited resources, such as public funds, services, human resources, land, energy, water, and other resources; improve coordination of federal, state, and county plans, policies, programs, projects, and regulatory activities; and to establish a system for plan formulation and program coordination to provide for an integration of all major state, and county activities.

The Draft EIS will analyze the Master Plan's consistency with State Plan Objectives and Policies.

C. Maui County General Plan

The General Plan of the County of Maui refers to a hierarchy of planning documents that together set forth future growth and policy direction in the County. The General Plan is comprised of the following documents: 1) County-wide Policy Plan; 2) Maui Island Plan; and 3) nine community plans.

The County-wide Policy Plan was adopted in March 2010 and is a broad policy document that identifies a vision for the future of Maui County. It establishes a set of guiding principles and provides comprehensive goals, objectives, policies and implementing actions that portray the desired direction of the County's future. The County-wide Policy Plan provides the policy framework for the development of the Maui Island Plan and nine Community Plans.

The Maui Island Plan functions as a regional plan and addresses the policies and issued that are not confined to just one community plan area, including regional systems such as transportation, utilities and growth management, for the Island of Maui. Together, the Island and Community Plans develop strategies with respect to population density, land use maps, land use regulations, transportation systems, public and community facility locations, water and sewage systems, visitor destinations, urban design and other matters related to development. The

draft Maui Island Plan was transmitted to the Maui County Council for adoption in October 2009. The County Council has until October 2010 to adopt the Plan.

The Master Plan Update, and request for land use entitlements, must conform to the goals, policies and actions found in the General Plan.

County-wide Policy Plan

The County-wide Policy Plan establishes a list of county-wide goals, objectives, policies, and implementing actions related to the following core themes:

- Protect the Natural Environment
- Preserve Local Cultures and Traditions
- Improve Education
- Strengthen Social and Healthcare Services
- Expand Housing Opportunities for Residents
- Strengthen the Local Economy
- Improve Parks and Public Facilities
- Diversify Transportation Options
- Improve Physical Infrastructure
- Promote Sustainable Land Use and Growth Management
- Strive for Good Governance

Analysis. The Draft EIS will provide a comprehensive discussion of the project's conformance to the County-wide Policy Plan's themes and associated goals, policies and actions.

Maui Island Plan

The Maui Island Plan serves as the regional plan for the Island of Maui. The Plan is comprised of the following ten elements: 1) Population; 2) Heritage Resources; 3) Natural Hazards; 4) Economic Development; 5) Housing; 6) Infrastructure and Public Facilities; 7) Land Use; 8) Directed Growth Plan; 9) Long Range Implementation Plan; and 10) Monitoring and Evaluation. Each element contains goals, objectives, policies and implementing actions. The Directed Growth Plan

identifies the location of future development through 2030. The Directed Growth Plan is intended to guide the location and general character of future urban development and will direct future zoning changes and guide the development of the County's short-term and long-term capital improvement plan budgets.

Analysis. The Maui County Council is currently reviewing the draft Maui Island Plan and has until October 2010 to complete its work. The MRTP site is currently within the Plan's Urban Growth Boundary and the draft Plan envisions a mixed-use new town component being incorporated within the Park.

The Draft EIS will analyze the proposed development's consistency with the Maui Island Plan's goals, objectives and strategies.

D. Kihei-Makena Community Plan

Within Maui County, there are nine (9) community plan regions. From a General Plan implementation standpoint, each region is governed by a Community Plan which sets forth desired land use patterns, as well as goals, objectives, policies, and implementing actions for a number of functional areas including infrastructure-related parameters.

The MRTP is located within the Kihei-Makena Community Plan region. The majority of the park is designated Project District 6 (R&T Park) in the Community Plan, with a portion designated *Public/Quasi-public*. Refer to Figure 6.

A Community Plan Amendment will be sought to bring the entire Park site into a community plan designation that better aligns with the vision of the Master Plan Update and amendments to Maui County Code (MCC) Title 19.33.

The Draft EIS will analyze the proposed project's consistency with the *Kihei-Makena Community Plan* Objectives and Policies.

E. County Zoning

Title 19 of the Maui County Code provides comprehensive zoning for the county. The purpose and intent of this comprehensive zoning is to regulate the utilization of land in a manner encouraging orderly development and to promote and protect the health, safety and welfare of the people of the County.

The Master Plan Update will require a Change in County Zoning in order to bring the entire Park site into the *Kihei Research and Technology Park* District (MCC Title 19.33), whereas portions are currently zoned *Agricultural*. Refer to Figure 7. As above, changes will also be sought to the language of Chapter 19.33, MCC, to allow for a more diversified development that comports with the vision of the Master Plan Update.

F. Coastal Zone Management

Coastal Zone Management objectives and policies (section 205A-2 HRS) and the Special Management Area Rules for the Maui Planning Commission (Chapter 202) have been developed to preserve, protect, and where possible, to restore the natural resources of the coastal zone of Hawaii. While the subject property is not located within the Special Management Area, the Draft EIS will analyze the project's consistency with Coastal Zone Management Objectives and Policies:

1. Recreational Resources

Objective: Provide coastal recreational resources accessible to the public.

Policies:

(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 require reasonable monetary compensation to the state for recreation when replacement is not feasible or desirable;

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

(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

(v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having standards and conservation of natural resources;

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

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

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

2. Historical/Cultural Resources

Objective: Protect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the

coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:

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

3. Scenic and Open Space Resources

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

Policies:

(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.

4. Coastal Ecosystems

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

Policies:

(a) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;
(b) Improve the technical basis for natural resource management;

(c) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;
(d) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; 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 non-point source water pollution control measures.

5. Economic Use

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

Policies:

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

6. Coastal Hazards

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

Policies:

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

7. Managing Development

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

Policies:

(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 of conflicting permit requirements; and
(c) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

8. Public Participation

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

Policies:

(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 medications to respond to coastal issues and conflicts.

9. Beach Protection

Objective: Protect beaches for public use and recreation.

Policies:

(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.

10. Marine Resources

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

Policies:

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

ventory 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. [L 1977, c 188, pt of §3; am L 1993, c 258, §1; am L 1994, c 3, §1; am L 1995, c 104, §5; am L 2001, c 169, §3]

IV. FINDINGS AND CONCLUSIONS

According to the Department of Health Rules (11-200-12), an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequences both primary and secondary, its cumulative impact with other projects, and its short and long-term effects. In making the determination, the Rules establish "Significance Criteria" to be used as a basis for identifying whether significant environmental impact will occur. The criteria are:

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

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

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

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

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

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

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

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

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

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

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

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

13. The proposed action will not require substantial energy consumption.

The Draft EIS will analyze the project in relation to these Significance Criteria. A final declaration will be made after the Accepting Authority has considered all agency and public comments on the Draft EIS.

V. CONSULTATION AND REVIEW

A. Early Consultation

Prior to the preparation of this Notice, consultation on the project was undertaken with the following agencies and groups:

February 3, 2009	Department of Planning, Director and Long-Range Division staff
July 21, 2009	Presentation to the Maui Planning Commission regarding *Maui Island Plan* Urban Growth Boundaries
October 27, 2009	Kihei Community Association Planning Committee to discuss Master Planning Process and Project Objectives
October 27, 2009	Maui Economic Development Board (MEDB) to discuss Master Planning Process and Project Objectives
October 28, 2009	Department of Planning, Director and Long-Range Division staff
October 28, 2009	Haleakala Ranch to discuss plans for the ranch lands to the north and east of the project
Dec 15, 2009	Presentation of Conceptual Project Plans to the Maui Tech Ohana technology industry association
Dec 15, 2009	Presentation of Conceptual Plans to the Department of Planning, Director and Long-Range Division staff
Dec 16, 2009	Presentation of Conceptual Plans to Montessorri Schools and Kihei Charter School

Dec 16, 2009	Presentation of Conceptual Plans to the Kihei Community Association Planning Committee
Dec 16, 2009	Presentation of Conceptual Plans to Haleakala Ranch
Dec 16, 2009	Presentation of Conceptual Plans to MEDB stakeholder group including current tenants of MRTP

Additionally, there has been on-going consultation with the State Department of Education regarding integrating the project with the proposed South Maui High School.

B. EIS Preparation Notice Distribution

This EIS Preparation Notice is being transmitted to the following agencies and organizations for review and comment:

Federal Agencies
Natural Resources Conservation Service
US Army Engineer Division
US Fish and Wildlife Service

State Agencies
Department of Agriculture
Department of Accounting and General Services
Department of Bus, Econ. Dev. and Tourism
DBEDT – Energy Division
DBEDT – Office of Planning
Department of Education
Department of Hawaiian Home Lands
Department of Health
Department of Human Services
Department of Labor and Industrial Relations

Department of Land and Natural Resources
DLNR – Historic Preservation Division
Department of Transportation
Hawaii Housing Financing and Development Corporation
Office of Hawaiian Affairs
UH Environmental Center

County Agencies

Department of Environmental Management
Department of Fire and Public Safety
Department of Housing and Human Concerns
Department of Parks and Recreation
Department of Planning
Department of Public Works
Department of Transportation
Department of Water Supply
Police Department