

Archaeological Inventory Survey Testing Strategy for the Royal Kunia II Residential Development Property

Ahupua'a of Hō'ae'ae, 'Ewa District, Island of O'ahu
City and County Tax Map Key Parcels (1) 9-4-002:070,
(1) 9-4-002:071, and (1) 9-4-002:078

Revised Draft

DECEMBER 2023

PREPARED FOR
Haseko Development, Inc.

PREPARED BY
SWCA Environmental Consultants

EXHIBIT "5"

ARCHAEOLOGICAL INVENTORY SURVEY TESTING STRATEGY FOR THE ROYAL KUNIA II RESIDENTIAL DEVELOPMENT PROPERTY

Ahupua'a of Hō'ae'ae,
'Ewa District, Island of O'ahu
City and County Tax Map Key Parcels
(1) 9-4-002:070, (1) 9-4-002:071, and (1) 9-4-002:078

REVISED DRAFT

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EXECUTIVE SUMMARY

At the request of Haseko Development, Inc. (Haseko), SWCA Environmental Consultants (SWCA) has prepared the following Archaeological Inventory Survey Testing Strategy for the 211-acre Royal Kunia II residential development property located within the *ahupua‘a* (traditional land division) of Hō‘ae‘ae, in the *moku* (district) of ‘Ewa, on the island of O‘ahu. This document has been prepared at the request of the Hawai‘i State Historic Preservation Division (SHPD).

The Royal Kunia II development will cover approximately 211 acres of residentially zoned land located east of Kunia Road and north of the existing Royal Kunia I community and the Royal Kunia Country Club. The project area consists of County of Honolulu Tax Map Key (TMK) parcels (1) 9-4-002:070 (13 acres), (1) 9-4-002:071 (161 acres), and (1) 9-4-002:078 (37 acres). It is planned that Royal Kunia II will be developed for single-family or multi-family townhome-style structures. Development will take place in phases, with the first phase being located within the southeast corner of TMK parcel (1) 9-4-002:071, adjacent to the existing Royal Kunia Country Club. Further phases will expand development to include the entire Royal Kunia II property.

To support Haseko’s request for Hawaii Revised Statute (HRS) 6E-42 historic preservation review of the Royal Kunia II Development Project, SWCA completed a literature review and field inspection of the Royal Kunia II project area (Gerrish et al. 2021). This study identified several historic properties located within the Royal Kunia II project area, all of which date to the sugar plantation era. One of the newly identified archaeological features (SWCA-65875-006) represents the site of a former plantation-era water reservoir. The other (SWCA-65875-007) marks the site of a former plantation-era worker’s camp. Both of these features were identified through archival research and possess little in the way of surface evidence.

In their response to Haseko’s request for historic preservation review of the project, the SHPD requested that an archaeological inventory survey be conducted of the entire 211 acres prior to development to identify and document any historic properties present within the project area. The SHPD also requested that an Archaeological Inventory Survey Testing Strategy be submitted for both the general and more targeted subsurface testing.

The following testing strategy proposes that a total of twelve backhoe trenches be excavated within the Royal Kunia II project area. Six of these trenches are intended to address the SHPD request for “limited subsurface testing across the entire project area, to record baseline soils.” These trenches will be situated at various locations throughout the project area and will be located close to existing dirt roads to allow for ease of backhoe access. Of the remaining six backhoe trenches, one will be located within the area of the dry gulch identified as the former plantation-era water reservoir (SWCA-65875-006) and five will be situated at the site of the former plantation camp (SWCA-65875-007).

As clarified through discussions with the SHPD, no stratigraphically controlled hand excavation will be required as part of the current AIS. Should trenching reveal the potential for subsurface deposits in the area of the plantation-era camp, shovel testing or stratigraphic excavation will be included as part of potential mitigation measures.

Reeve, Rowland

2023 *Archaeological Inventory Survey Testing Strategy for the Royal Kunia II Residential Development Property, Ahupua‘a of Hō‘ae‘ae, ‘Ewa District, Island of O‘ahu City and County Tax Map Key Parcels (1) 9-4-002:070, (1) 9-4-002:071, and (1) 9-4-002:078.*
Prepared for Haseko Development, Inc. by SWCA Environmental Consultants, Honolulu, Hawai‘i

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INTRODUCTION

SWCA Environmental Consultants (SWCA) has prepared the following Archaeological Inventory Survey (AIS) Testing Strategy in support of Haseko Development, Inc.'s (Haseko's) planned Royal Kunia II residential development located within the *ahupua'a* (traditional land division) of Hō'ae'ae, in the *moku* (district) of 'Ewa, on the island of O'ahu (Figure 1). This document has been developed at the request of the Hawai'i State Historic Preservation Division (SHPD) to provide a strategy for subsurface testing to be undertaken as part of the AIS of the property.

Project Area

The planned Royal Kunia II development will cover approximately 211 acres of residentially zoned land located east of Kunia Road and north of the existing Royal Kunia I community and the Royal Kunia Country Club (Figure 2). The project area consists of County of Honolulu Tax Map Key (TMK) parcels (1) 9-4-002:070 (13 acres), (1) 9-4-002:071 (161 acres), and (1) 9-4-002:078 (37 acres) (Figure 3).

Project Description

Haseko plans to develop the Royal Kunia II property for single-family or multi-family townhome-style structures. Development will occur in phases, with the first phase (Parcel D) being located within the southeast corner of TMK parcel (1) 9-4-002:071, adjacent to the existing Royal Kunia Country Club. Further phases will expand development to include the entire Royal Kunia II property. Ground-disturbing activities will consist of mass grading of the property and constructing the infrastructure to support the development. Slightly more ground disturbance will occur along the alignment of the proposed city right-of-way as the primary infrastructure (i.e., underground drainage culverts, water mains, sewer lines, and telecommunication/electrical conduits) will be built within the roadways.

Regulatory Background

This report has been prepared to assist Haseko in fulfilling its historic preservation obligations under Hawaii Revised Statute (HRS) 6E-42 and Hawaii Administrative Rules Chapter 13-276 (HAR §13-276), Rules Governing Standards for Archaeological Inventory Surveys and Reports.

To support Haseko's request for HRS 6E-42 historic preservation review of the Royal Kunia II Development Project, SWCA completed a literature review and field inspection of the Royal Kunia II project area and submitted a report documenting the findings of this research, along with an HRS 6E submittal, through the SHPD's online Hawai'i Islands Cultural Resources Information System (HICRIS) (Gerrish et al. 2021).

In their response to Haseko's request for historic preservation review of the project (Project No. 2021PR01090, Doc. No. 2303MA01), the SHPD indicated that an AIS would need to be conducted of the entire 211 acres prior to development to identify and document any historic properties present within the project area:

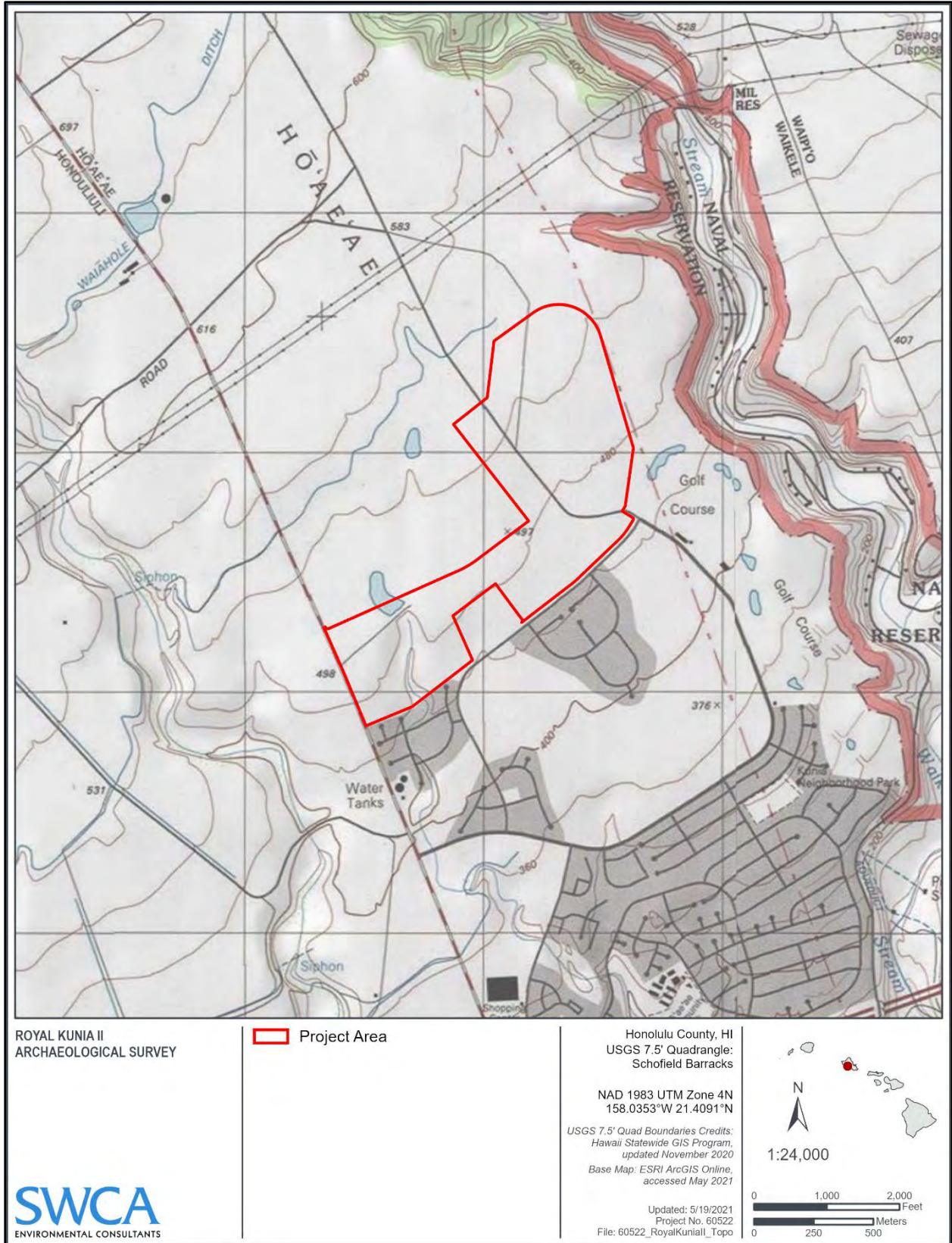


Figure 1. Location of the Royal Kunia II development property project area shown on the U.S. Geological Survey 7.5-minute Schofield Barracks quadrangle.

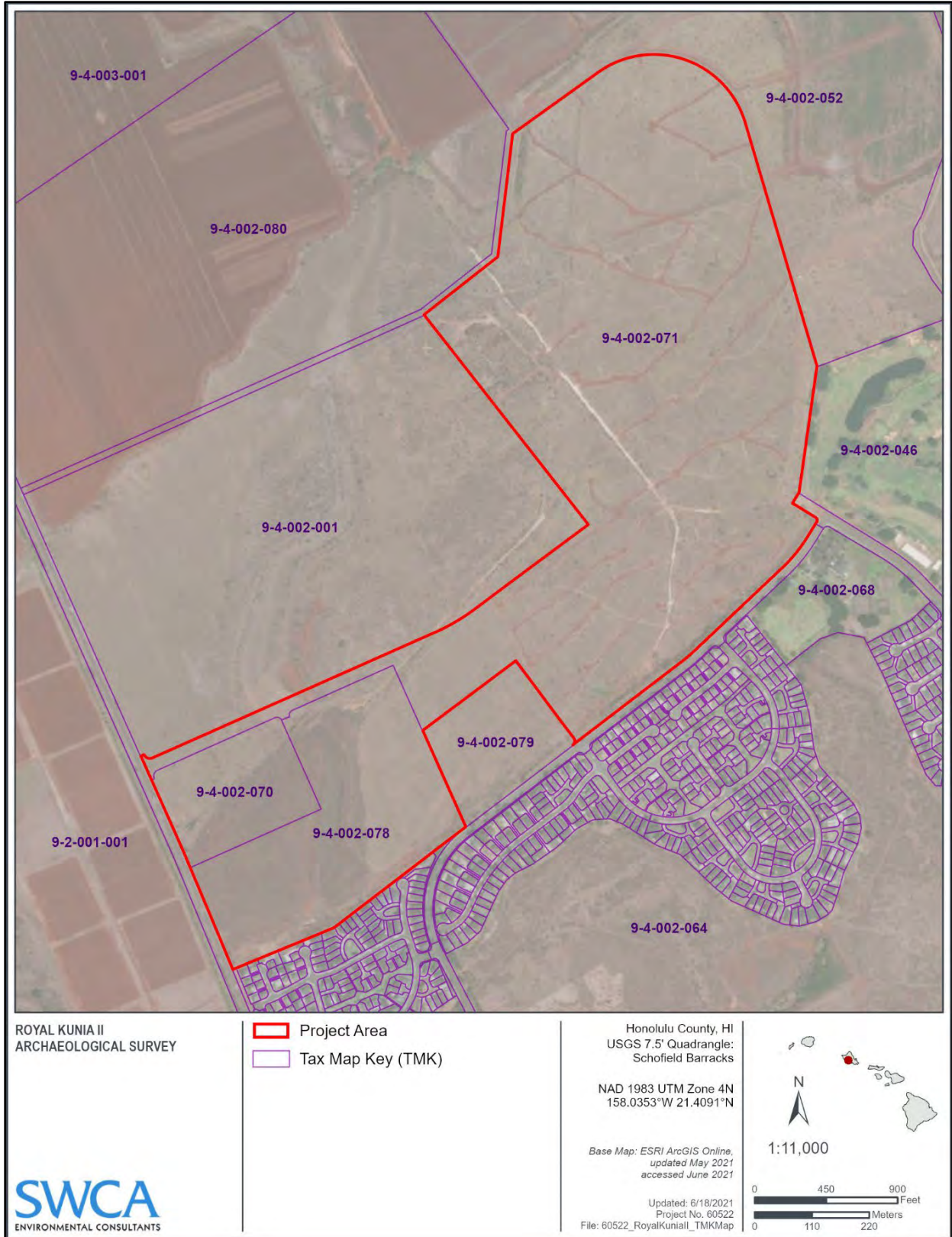


Figure 3. City and County of Honolulu Tax Map Key parcels located in and around the Royal Kunia II development project area (base image from Esri ArcGIS data from the City and County of Honolulu).

The SHPD requests that an Archaeological Inventory Survey (AIS) be conducted for the entirety of the Master Plan project area. For all parcels this will entail incorporating the research and results of the LRFI [Literature Review and Field Inspection] (Gerrish et al. 2021) into an AIS that meets the standards set forth in HAR §13-276, including: consultation with knowledgeable individuals, significance assessments, and recommendations.

The SHPD also noted,

The AIS will need to involve limited subsurface testing across the entire project area, to record baseline soils. General subsurface testing to record soils will extend into Parcel E [at the southwestern end of the project area], while a more focused testing strategy needs to be developed here to determine the presence, boundaries, integrity, and significance of the former plantation camp (SWCA-65875-007). The dry gulch in this parcel also needs to be subject to a 100% pedestrian survey with limited testing....

The SHPD requests that an AIS Testing Strategy be submitted for both the general and more targeted subsurface testing described in this letter.

During subsequent discussions with SHPD staff following the receipt of the historic preservation review letter requesting an AIS Testing Strategy, the SHPD clarified that no stratigraphically controlled hand excavation would be required as part of the AIS.

We will cut off the AIS subsurface testing at just trenching, and should this trenching reveal the potential for subsurface deposits in the area of the historically documented camp, any shovel testing or stratigraphic excavation will be pushed off to a potential mitigation in the relevant Parcel E. That way the project to develop Parcel D can go ahead, barring the discovery of anything significant during trenching there, without having to wait for any slow archaeological excavations in the camp area, should such additional documentation be requested there based on the findings of the AIS. (email from Megan E. Alvarez, SHPD Archaeologist IV to SWCA dated March 22, 2023)

The following AIS Testing Strategy details the locations and extent of subsurface excavations to be undertaken as part of the inventory survey and is intended for submittal to the SHPD for their review and approval prior to the initiation of the AIS. The results of subsurface testing will be presented in the AIS report.

BACKGROUND INFORMATION ON THE PROJECT AREA

Brief Landscape History of the Project Area

This brief history of the changing landscape of the Royal Kunia II project area is drawn from SWCA's literature review and field inspection report for the project (Gerrish et al. 2021). It is presented to provide background on the research questions associated with the current AIS Testing Strategy and to help determine the potential locations for subsurface testing.

Pre-Contact Landscape

A review of the cultural and archaeological literature regarding the Royal Kunia II project area and its surroundings revealed that during the pre-Contact period the project area formed part of the *kula uka* (inland plain). This environmental zone would have supported dry shrub and grassland dotted with

occasional dryland trees. While archaeological evidence suggests that traditional agriculture was undertaken within the deep stream gulches that cross the 'Ewa plain (Riford and Cleghorn 1986), the Royal Kunia II project area possesses only a relatively shallow gully running through it. Its level table lands were likely too dry to support the cultivation of traditional food plants. These open grasslands would, however, have provided the residents of Hō'ae'ae with a number of resources such as the native *pili* grass, which would have been gathered by the pre-Contact inhabitants of the ahupua'a to provide thatching materials for their house walls and roofs, as well as medicinal and decorative native dryland shrubs such as the *'ilima*. Here also, birds like the *kōlea* (Pacific golden plover) were seasonally hunted for food.

Post-Contact Landscape

During the late 1800s, the lands occupied by the Royal Kunia II project area consisted of dry scrublands used for cattle grazing. This arid cattle range was mostly covered with rocks, lantana, and scattered clumps of guava. By the close of the nineteenth century, however, these lands had been converted to commercial sugar cane cultivation under the control of the Oahu Sugar Company (Figure 4).

Ground-disturbing activities associated with sugar cane cultivation such as chain dragging and harrowing would have resulted in the destruction of any surface evidence of human land use prior to the plantation period. An aerial photograph taken of the area in 1959 shows how extensive the cultivation of the Royal Kunia II project area was (Figure 5). Sugar cultivation within the project area ended with the closing of the Oahu Sugar Company mill in 1995.

Early historical maps of the Kunia area reveal that the Oahu Sugar Company constructed a number of plantation-related features that cross through or are located within the project area. These include railway lines and cane haul roads, irrigation ditches, a former reservoir, and a small plantation worker's camp (Figure 6). Through the passage of years, these features have become eligible as historic properties.

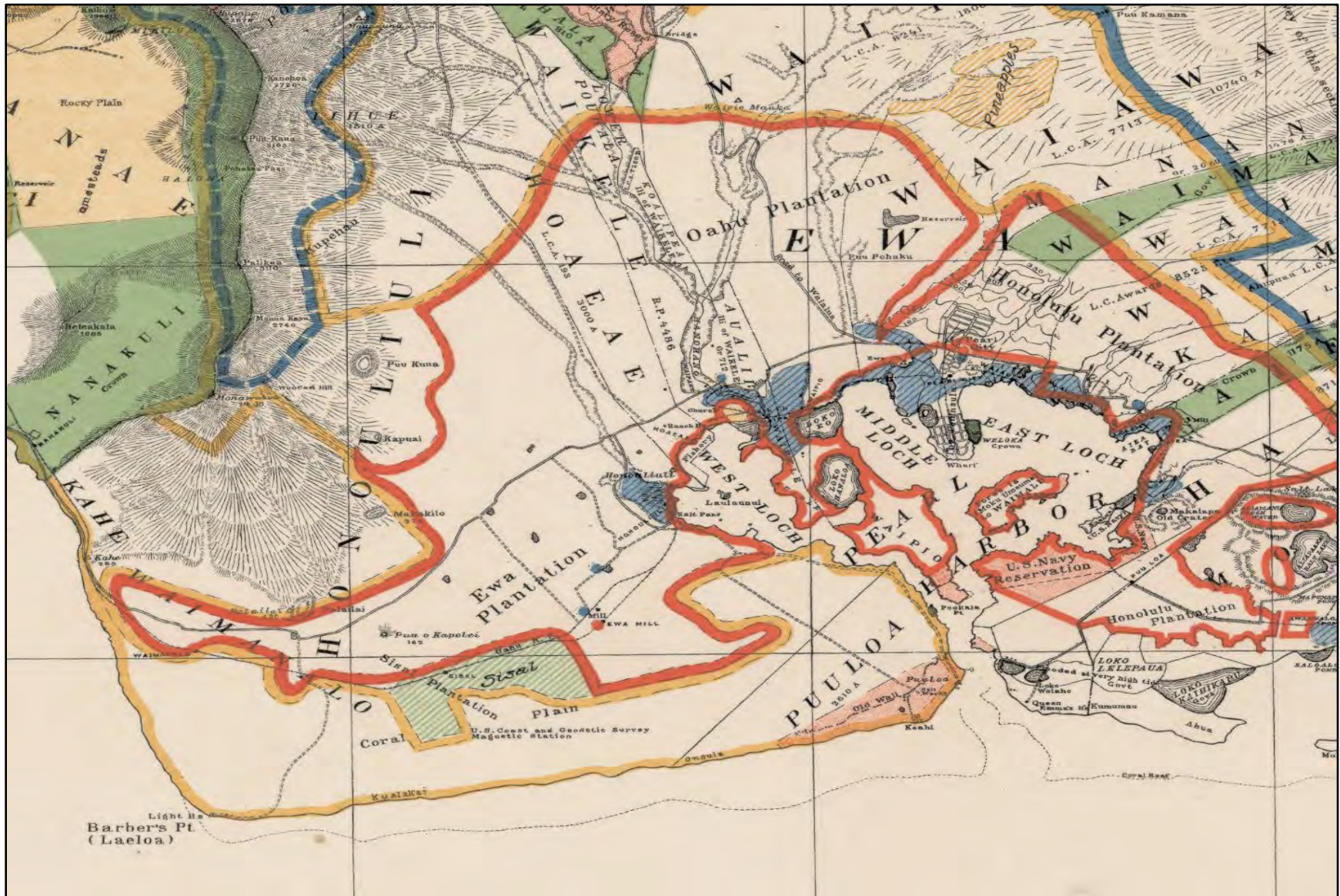


Figure 4. The location of “Oahu Plantation” as shown on a 1902 map of The Island of Oahu (Wall 1902). The project area is located east of the “Road to Wai’alua” (the present Kunia Road) just beneath the E in “EWA.”



Figure 5. 1959 U.S. Geological Survey aerial photograph showing the extent of sugar cane cultivation within the Royal Kunia II project area (USGS 1959).

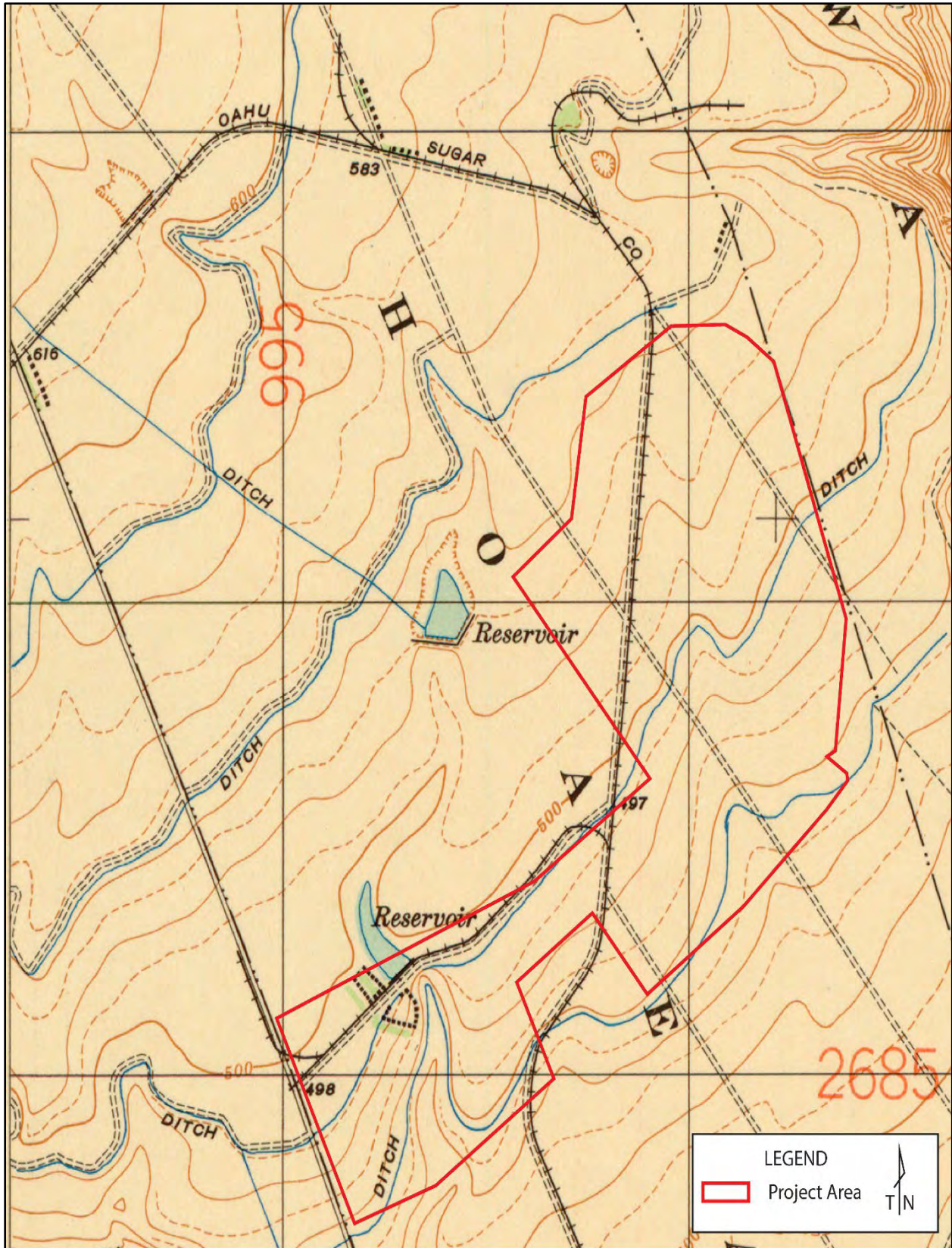


Figure 6. Detail of the 1935 War Department topographic map of the Waipahu quadrangle showing the plantation features within the project area (U.S. Army 1935).

Contaminated Soils

One legacy of the sugar plantation era that is of particular significance to this subsurface testing strategy is the presence of a former private airstrip that was built along the central northern edge of the Royal Kunia II project area. This airstrip, which appears on a 1950 Oahu Sugar Company General Field Map (Sueo 1950) (Figure 7), was used by crop-dusting aircraft that were loaded at the site to spray the surrounding sugar cane fields. Two aboveground tanks were reportedly used for mixing pesticides or herbicides. The airfield complex appears to have consisted of a chemical shed, two chemical mixing tanks, and an airplane staging area, as well as the runway (Mueting 1995:1).

The location of the former airstrip corresponds to an area of ground disturbance located at the northern edge of the project area. In 1995, Cotton and Frazier Consultants, Inc., were retained by Goodsill, Anderson, Quinn & Stifel to remove the two aboveground fuel storage tanks and to conduct soil sampling adjacent to the former private airplane runway (Mueting 1995:1). The soil sampling results revealed the presence of arsenic (Mueting 1996:1). As a result of this discovery, an environmental cleanup of the area was undertaken sometime between 2002 and 2006. Two stockpiles of contaminated soil were placed at the old airfield site. The southwest and northeast stockpiles are located along the north side of the dirt road, referred to then as Plantation Road, which runs from west to east through the western half of the project area (see Figure 5). The stockpiles cover approximately 8.5 and 10 acres in land area, respectively, with heights exceeding 10 feet above the natural grade (Chen 2021:1). This raised ground surface is clearly visible in LiDAR Digital Surface Model (DSM) imagery of the project area (Figure 8). The DSM data provide a representation of the ground surface beneath vegetation cover, including both natural and artificial features. Given the previously contaminated nature of the soils around the former airfield, and the possibility that some contamination may still remain, the current AIS Testing Strategy has avoided locating any subsurface excavations within or near this area.

Identified Historic Properties

The archival research and field inspection conducted by SWCA (Gerrish et al. 2021) identified several historic properties within the Royal Kunia II project area (Figure 9). These consisted of five features belonging to three previously recorded historic properties (Hawai'i State Inventory of Historic Places [SIHP] Site 50-80-08-7671, Features 3 and 4; SIHP Site 50-80-08-7758, Feature 7; and SIHP Site 50-80-09-2268, Features RK-1 and RK-2) and two newly identified archaeological features (SWCA-65875-006 and SWCA-65875-007) (Figure 10).

All of these archaeological features date to the post-Contact period and are related to the commercial cultivation of sugar cane by the Oahu Sugar Company. SIHP Site 50-80-08-7671, Features 3 and 4, and SIHP Site 50-80-08-7758, Feature 7, represent the remains of former plantation-era routes of travel (rail lines and cane haul roads) that were used to transport the harvested cane to the mill. The features of SIHP Site 50-80-09-2268 are irrigation ditches that formerly carried water to irrigate the cane fields and are likely associated with the Waiāhole Ditch Irrigation System (Gerrish et al. 2021:53–85).

One of the newly identified archaeological features, SWCA temporary field number 65875-006, represents the site of a former plantation-era water reservoir. The other feature, SWCA-65875-007, marks the site of a former plantation-era worker's camp. Historic maps suggest that structures existed at the site of the plantation-era camp as early as 1913, and that the camp itself was in existence from at least 1935 to 1959, and probably longer (Gerrish et al. 2021:25–31).

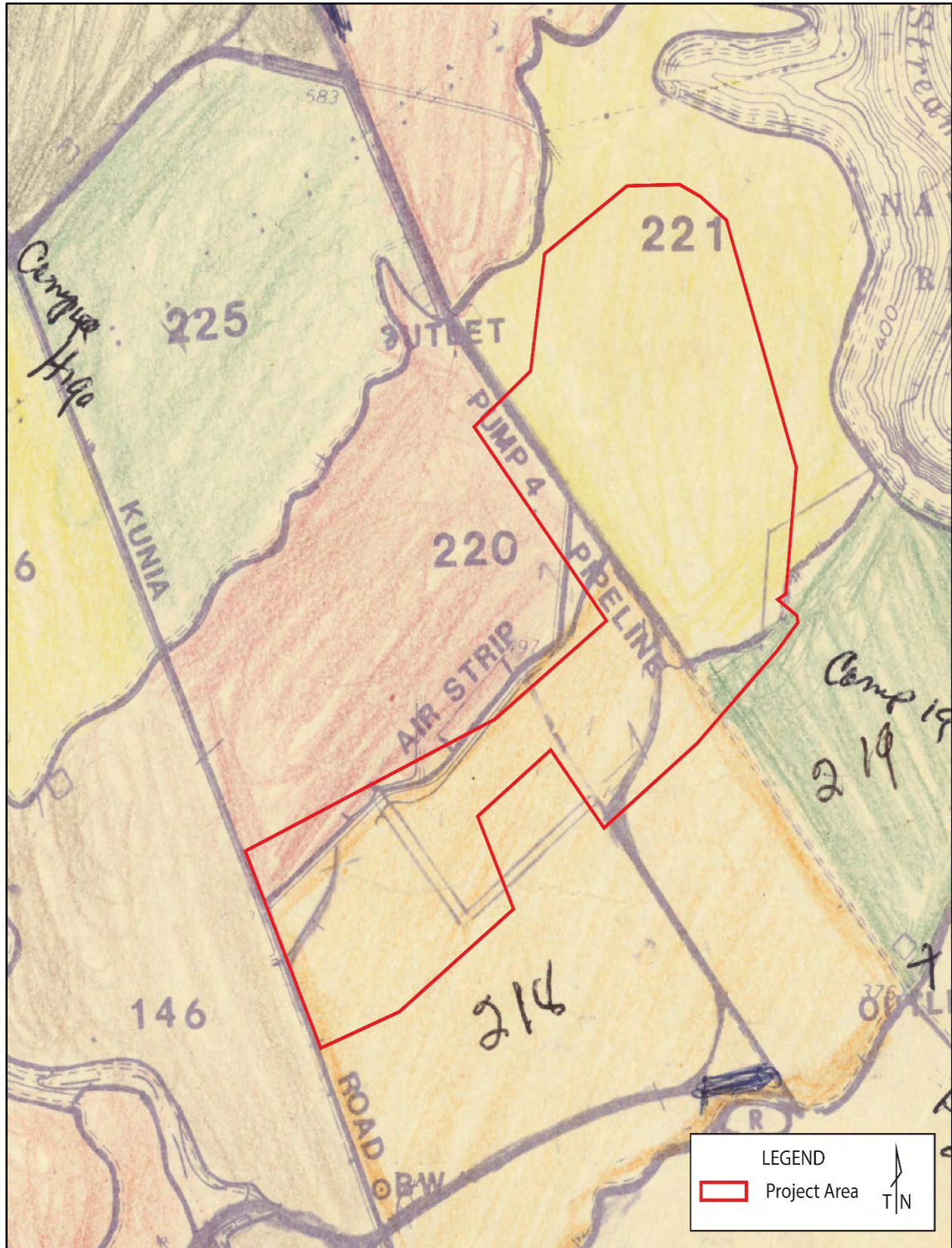


Figure 7. Detail of a 1950 Oahu Sugar Company General Field Map showing the location of the “Air Strip” (Sueo 1950).

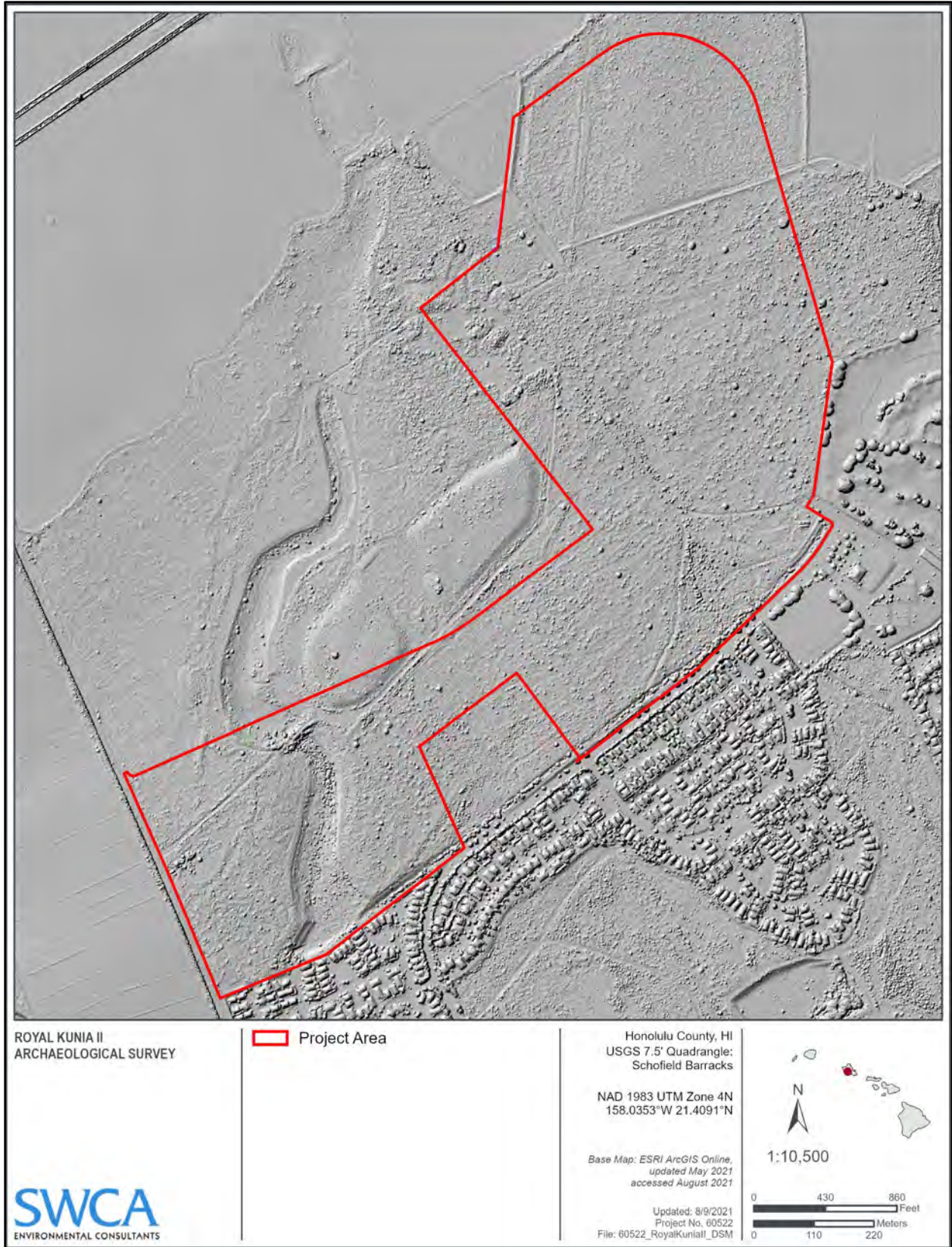


Figure 8. LiDAR DSM image of the Royal Kunia II project area (data from the Hawai'i Statewide GIS Program).

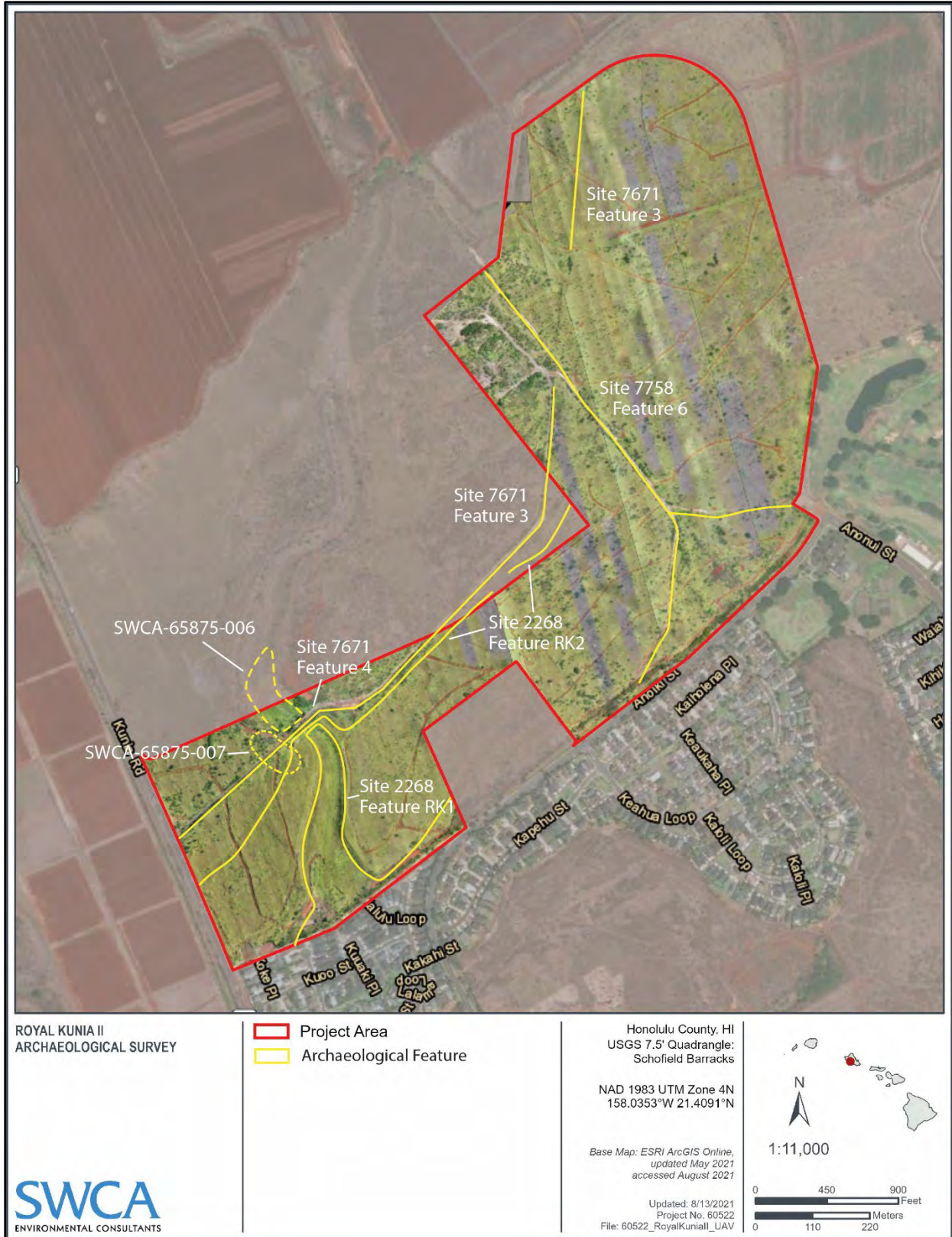


Figure 9. Relative locations of the historic properties identified within the Royal Kunia II project area (background UAV orthomosaic aerial image). Sites are identified by the last four digits of their SIHP number.

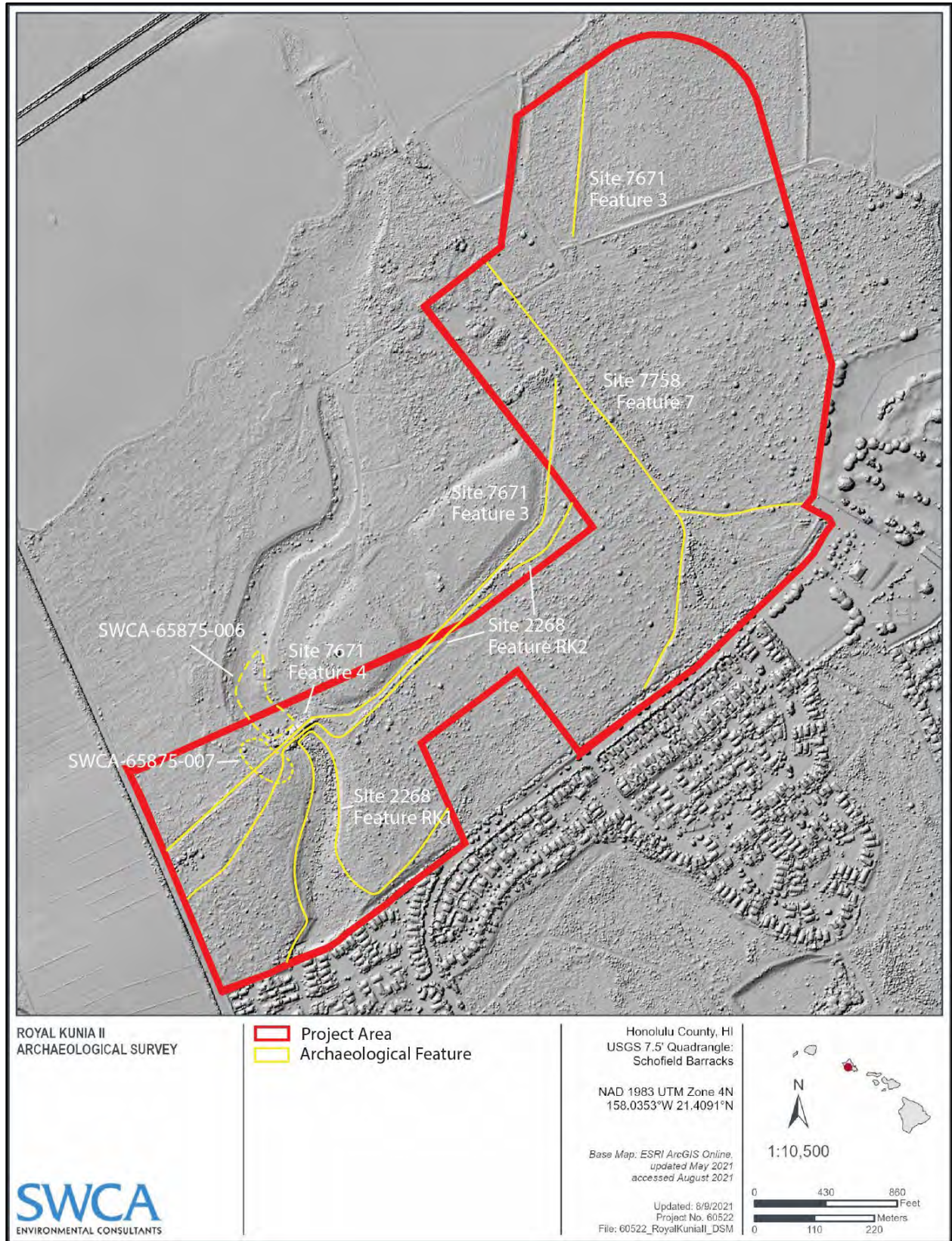


Figure 10. Relative locations of the historic properties identified within the Royal Kunia II project area (background DSM LiDAR image).

The presence of several rubble piles containing structural materials (e.g., fragments of reinforced concrete foundation pads, painted/burned milled lumber fragments, and metal sheeting) suggest that following the plantation camp's abandonment, its standing structures were bulldozed. The distribution of these rubble piles may correspond to the locations of individual structures or groups of structures. Surface scatters of broken glass, fragmentary ceramics, and other household artifacts have been observed in the location of the plantation camp (Gerrish et al. 2021:86–92).

SURFACE SURVEY

While the SHPD has indicated that a 100% pedestrian survey will not be required for the entire parcel (given the known extent of plantation era disturbance and the level of detail documented during the Literature Review and Field Inspection utilizing uncrewed aerial vehicle (UAV) imagery) the review letter did request that “the dry gulch in this parcel also needs to be subject to a 100% pedestrian survey with limited testing.” The SHPD further clarified, in comments to the draft version of this testing strategy, that a 100% pedestrian survey, with transects at no more than 5-m intervals, needs to be conducted of the dry gulch south of the causeway/dam. This more intensive surface survey was requested because of the increased potential for Traditional Hawaiian features/sites to be preserved within the gulch. The review comments noted that there was no need for trenching in this area as the gulch is not slated for development.

TESTING STRATEGY

The SHPD historic preservation review letter for this project (Project No. 2021PR01090, Doc. No. 2303MA01) specifically requested “limited subsurface testing across the entire project area, to record baseline soils. General subsurface testing to record soils will extend into Parcel E, while a more focused testing strategy needs to be developed here to determine the presence, boundaries, integrity, and significance of the former plantation camp (SWCA-65875-007). The dry gulch in this parcel also needs to be subject to a 100% pedestrian survey with limited testing.”

Research Questions

The subsurface testing component of the planned AIS for the Royal Kunia II project area has been designed to address, and hopefully answer, a specific set of research questions. These questions have been developed based on the findings of the 2021 literature review and field inspection, as well as the intent of the SHPD review letter.

Research questions to be answered by a program of test excavation include the following:

1. Is there subsurface evidence of pre-Contact land use within the project area?

Archival research suggests the Royal Kunia II project area was not the site of intensive habitation or cultivation during the pre-Contact period. Subsurface trenching undertaken at various locations within the project area can provide windows into the underlying stratigraphy. This will reveal the presence or absence of agricultural soils and/or subsurface cultural deposits indicating pre-Contact habitation.

2. Does the sediment profile within the dry gulch show evidence of the former plantation-era water reservoir?

Historic maps suggest that during the plantation era, the stone-faced dam that forms SIHP Site 50-80-08-7671, Feature 4, created a small reservoir within the now dry gulch that

runs from north to south through the western half of the project area. The placement of a test trench within the gulch just north of Site 50-80-08-7671, Feature 4, might reveal sediment deposits confirming the existence of this reservoir.

3. Are there any surviving subsurface remnants of the plantation-era camp?

The presence of rubble push piles as well as fragmentary surface artifacts at the site of the former plantation-era worker's camp (SWCA-65875-007) suggest that the camp was bulldozed following its abandonment. Subsurface testing undertaken in this area could reveal whether any subsurface cultural deposits associated with the camp have survived its destruction. Such excavations could also recover temporally diagnostic artifacts that might better date the occupation of the camp and help to determine the range of activities carried out there, as well as possibly the ethnic makeup of its residents.

the activities that went on there?

The types of artifacts recovered from the former plantation camp could potentially provide us with information, not only on the period during which the camp was occupied, but also who lived there (plantation camps were often occupied by members of a single ethnic group), whether the population was made up solely of men or composed of entire families, and what activities its inhabitants engaged in.

Methodology

Backhoe Trenching

After the SHPD review letter was issued, the testing strategy was discussed with SHPD staff, who indicated that backhoe trenching would serve to satisfy testing requirements for the "general subsurface testing to record soils" over most of the project area, including the dry gulch that runs from north to south through the parcel (see Figure 8) and was the site of the plantation-era reservoir. Backhoe trenching will also be employed because "a more focused testing strategy needs to be developed here to determine the presence, boundaries, integrity, and significance of the former plantation camp (SWCA-65875-007)."

TRENCH SIZE

In general, these test trenches will be of a standard size, with the supervising archaeologist having the ability to expand the length of the trench as they see fit. The trench should be wide enough to allow clear visibility of the profile while enabling safe exit and entry. For this reason, trenches will be at a minimum 2 meters (m) (78 inches) in width.

The intent is for each backhoe trench to be long enough so that stratigraphy and variability in profile composition can be confidently determined. As the maximum length of the backhoe arm limits trench length to approximately 4 m (13 feet) without moving the backhoe, individual subsurface test trenches will be of this length unless they need to be extended for recording purposes.

Due to U.S. Occupational Safety and Health Administration safety requirements, all backhoe trenches will be less than 1.5 m (5 feet) in depth. The exact depth of the trench will be determined by the supervising archaeologist based on the exposed stratigraphy. One end of the trench will be stepped to allow for ease of access and egress.

TESTING WITHIN THE PLANTATION CAMP AREA

For those test trenches located within the boundaries of the former plantation era camp area, backhoe excavation will be undertaken using a flat-bladed bucket in shallow lifts of no more than 12 cm depth and short pulls of no more than 1m in length in order to increase the likelihood that any subsurface features encountered during trenching can be mapped in plan view and sampled as distinct contexts.

In the event that a subsurface feature is encountered during backhoe trenching, the feature will be fully exposed and drawn to scale in plan view if that is possible. The feature will also be drawn to scale in profile view using the methods described below for general trench profiles.

Features found to be present within trench sidewalls will be drawn in profile and their internal stratigraphy, if any is present, will be recorded. These sidewall features will also be sampled. A stratigraphic column sample of from 0.5 to 1.0 m in width and extending 20 cm back into the sidewall will be taken from the densest or most stable portion of the feature. 100% of artifacts excavated from the sidewall will be bagged by strata so as to correlate with the profile drawing. These artifacts will be taken back to the laboratory for cleaning and analyses.

Should any component of the collection strategy outlined above prove impractical due to field conditions, the SHPD will be immediately contacted and consulted regarding next steps.

PROFILES

Each backhoe trench will be photographed during and after excavation. These photographs will include a scale and, where possible, a north arrow.

[REDACTED]

informed of the issue.

All sedimentary deposits will be described in conformance with Munsell Color Notation and U.S. Department of Agriculture (USDA) standards (Natural Resources Conservation Service 1995). Photographs will be obtained that will correspond to each profile drawing and will include a north arrow and vertical and/or horizontal scales.

CULTURAL MATERIAL

Should backhoe trenching unearth any cultural materials, these materials (with the exception of modern artifacts = those less than 50 years old) will be recorded. All traditional artifacts, if any are encountered, will be collected for analysis and documentation. Any non-diagnostic post-Contact artifacts deemed too fragmentary to be collected will be documented in the field. Field documentation will include a descriptive list of the artifacts by type and material and photographs with scale. Diagnostic post-Contact artifacts – essentially any artifacts that have the potential to yield additional information as a result of detailed analysis – will be collected and their provenience documented by trench, depth below surface, and, if possible, by sedimentary layer. The location of all diagnostic artifacts will be recorded using a submeter accurate Global Positioning System (GPS) unit.

Field collection decisions regarding which artifacts will be collected will be made by a qualified archaeologist with knowledge of artifact types likely to be encountered during AIS fieldwork. This will include a familiarity with both traditional Hawaiian artifacts and post-Contact artifacts (including historic glass, ceramics, construction materials, etc.). The diagnostic potential of an artifact and whether or not it

is collected for detailed laboratory analysis (particularly artifacts recovered from the former plantation-era camp) will be based upon its integrity as well as its potential to provide information regarding age and function, particularly as to how they relate to specific activities undertaken at the site.

Human Skeletal Remains

[REDACTED]

Branches of the SHPD.

[REDACTED]

remains.

Controlled Excavation

As clarified through discussions with the SHPD, no stratigraphically controlled hand excavation will be undertaken as part of the AIS. Should trenching reveal the potential for subsurface deposits in the area of the plantation-era camp, shovel testing or stratigraphic excavation will be included as part of potential mitigation measures.

Analysis of Cultural Material

All cultural materials recovered during fieldwork will be processed, identified, and analyzed. The determination as to what materials are to be collected will be made by the on-site archaeologist in consultation with the Principal Investigator and will include all diagnostic artifacts and certain non-diagnostic materials as deemed appropriate. Field documentation of uncollected material will include descriptions and scaled photographs.

Analysis of collected materials will include sorting, identification, labeling, and temporary curation. Identification, documentation, and tabulation of cultural materials collected during fieldwork will comply with the requirements set forth in HAR §13-276.

ARTIFACTS

[REDACTED]

the artifact was recovered.

Standard artifact references will be used in identification and analysis. For traditional artifacts, this will include Te Rangi Hiroa's *Arts and Crafts of Hawaii* and similar volumes. For post-Contact artifacts this

will include online sources such as the Bureau of Land Management and Society for Historical Archaeology Historic Glass Bottle Identification & Information Website.

FAUNAL REMAINS

All recovered faunal material will be sorted, weighed, and analyzed. When possible, based on the size of bone fragments and presence of identifying characteristics, this material will be identified by element and sorted by family, genus, or species.

Proposed Locations of Test Excavations

trenches will be oriented either North to South or East to West, with 16 of each orientation.

Twenty (20) of these trenches are intended to address the SHPD request for “limited subsurface testing across the entire project area, to record baseline soils.” These will be situated at various locations throughout the project area (as shown in Figure 11) and will be located in central areas away from existing dirt roads. As previously mentioned, these trenches will avoid the area of contaminated soil surrounding the old plantation airstrip.

One trench will be located within the area of the dry gulch identified as the former plantation-era water reservoir (SWCA-65875-006).

The remaining twelve (12) backhoe trenches will be situated at the site of the former plantation camp (SWCA-65875-007). The purpose of these trenches will be to determine the boundaries of the camp and delimit it as an archaeological site, as well as to test to determine whether subsurface evidence of the camp (rubbish pits, buried cultural deposits, etc.) have survived.

Plantation-Era Reservoir

The SHPD review letter for the Royal Kunia II project indicates that “The dry gulch in this parcel [Parcel E] also needs to be subject to a 100% pedestrian survey with limited testing.” During the literature review and field inspection (Gerrish et al. 2021), a former plantation-era reservoir was identified as being located immediately north of the SIHP Site 50-80-08-7671, Feature 4 causeway/dam. This feature was assigned the temporary designation SWCA-65875-006. The reservoir can be clearly seen on early topographic maps of the area beginning in 1935 (see Figure 6). The reservoir was probably still filled with water as late as the 1990s, because it appears on the latest U.S. Geological Survey topographic map (see Figure 1); however, it was likely drained following the close of the plantation in 1995, because it does not appear in Google satellite images from the early 2000s. The reservoir appears to have been artificially created by the construction of SIHP Site 50-80-08-7671, Feature 4, which served as a dam, blocking the natural flow of water down the gully and turning what was likely an ephemeral stream fed by the winter rains into a permanent (or at least seasonal) reservoir (Figure 12). The relative location of the reservoir can be determined through the use of historical maps, but its extent and shape would have varied depending on the level of water present. A single backhoe trench will be excavated within the floor of the gully in the location of the reservoir to obtain a soil profile.

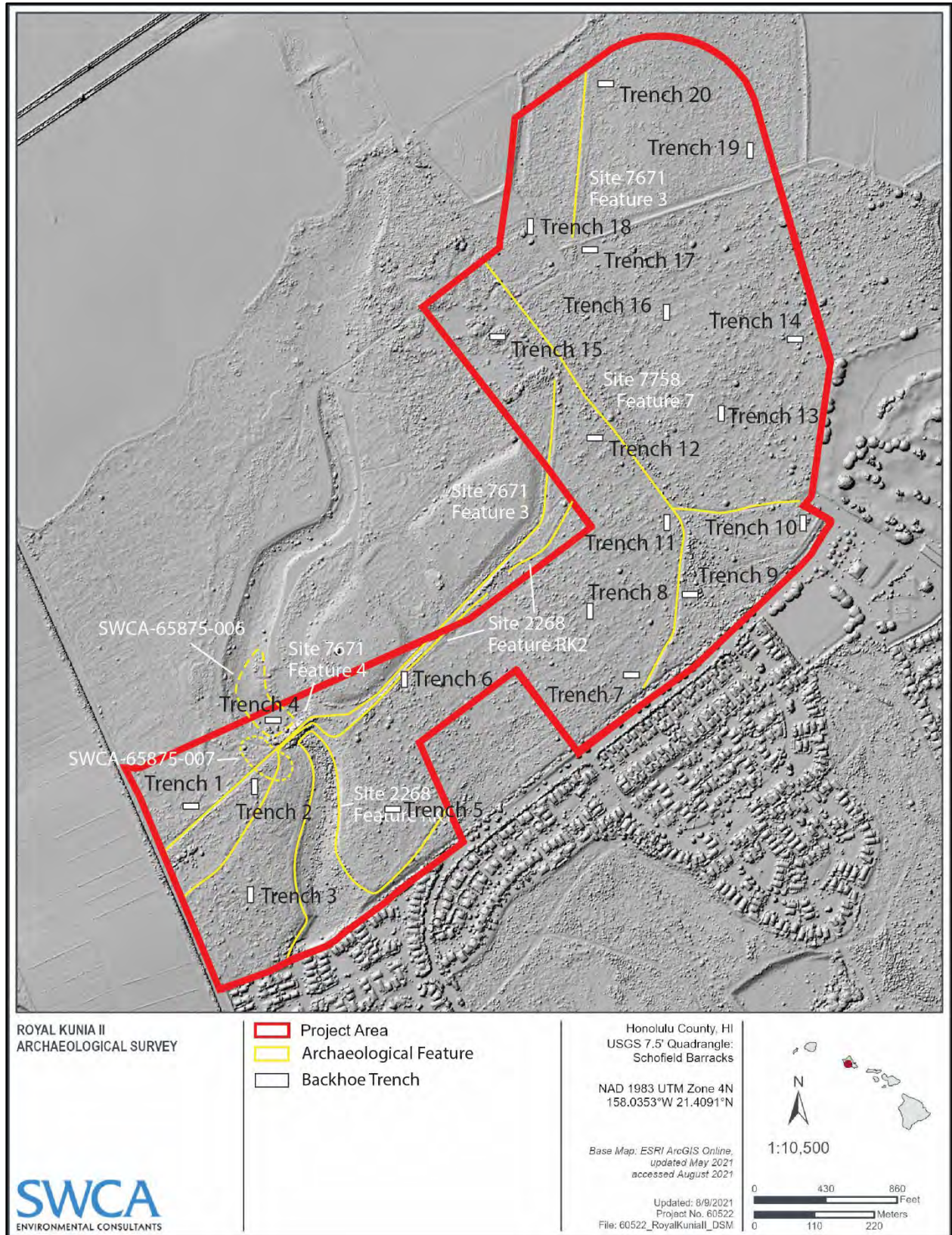


Figure 11. Approximate location of proposed backhoe trenches to record baseline soils and investigate plantation-era reservoir.



Figure 12. Location of the former plantation-era reservoir (SWCA-65875-006), view to the northeast.

Former Plantation Camp

Historic maps show the gradual growth of the SWCA-65875-007 plantation-era camp, possibly beginning as early as 1913 and continuing into the 1950s (Gerrish et al. 2021:25–31). At its greatest extent (see Figure 6), the camp extended both north and south of the SIHP Site 50-80-08-7671, Features 3 road. Although the camp has been long destroyed, probably bulldozed sometime in the 1960s, the potential exists for subsurface deposits such as trash pits, post holes, and other foundational remnants to be present.

The SHPD review letter requested that “a more focused testing strategy needs to be developed here to determine the presence, boundaries, integrity, and significance of the former plantation camp (SWCA-65875-007).” SHPD also requested that information be collected on the remnant surface features of the plantation era camp site, which consist primarily of rubble piles containing structural materials (e.g., fragments of reinforced concrete foundation pads, painted/burned milled lumber fragments, and metal sheeting).

Prior to excavation, the locations of the rubble piles within the SWCA 65875-007 plantation camp will be recorded using GPS and each pile will be comprehensively documented in an effort to determine the age, and possibly even the function, of the original structures. While the bulldozer push rubble piles appear to represent the remnants of former camp structures, there is no indication that the locations of these piles represent the locations of former structures. More likely, the structures were bulldozed flat, and the remnants pushed aside as the work progressed. For this reason, only those rubble piles that investigation suggests might indicate the location of a former structure, will be the subject of subsurface testing.

In an attempt to determine the extent of the plantation camp, a total of backhoe trenches will be dug within the estimated boundaries of the camp (Figure 13). The locations of these trenches may be shifted based upon on-the-ground evidence such as bulldozer push piles of rubble, surface concentrations of artifact fragments, and stained soil. Trench will be dug north of the SIHP Site 50-80-08-7671, Features 3 road in the approximate location of the row of houses shown on the 1935 War Department topographic map (see Figure 6). These trenches may also yield information on the age, function, and significance of the features and of the camp itself, as well as the relative integrity of the site.



Figure 13. Approximate location of proposed backhoe trenches in the area of the SWCA-65875-007 former plantation camp.

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APPENDIX A

Hawai'i State Historic Preservation Division Correspondence

JOSH GREEN, M.D.
GOVERNOR OF THE STATE
SYLVA LUKE
LIEUTENANT GOVERNOR / KA HOPE NA'AWAHE



STATE OF HAWAII | KA MOKU'ĀINA 'Ō HAWAII
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ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAOLOAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

March 14, 2023

Dawn Takeuchi-Apuna, Director
Attn: Permit Issuance Branch
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IN REPLY REFER TO:
Project No. 2021PR01090
Doc. No. 2303MA01
Archaeology, Architecture

Dear Ms. Takeuchi-Apuna and Ms. Simeon:

**SUBJECT: HRS Chapter 6E-42 Historic Preservation Review –
Permit Application – Cluster Development 2022/CL-2
Royal Kunia II Development Project
Hō'ae'ae Ahupua'a, 'Ewa District, Island of O'ahu
TMK(s): (1) 9-4-002:070, 071, and 078**

This letter provides the State Historic Preservation Division's (SHPD's) review of the subject permit and proposed project titled *Royal Kunia II Development Project*. The initial submission for this project was received via HICRIS on September 2, 2021, with a second submission made on June 22, 2022; see HICRIS Project No. 2021PR01090 for submission documents.

Haseko Royal Kunia, LLC proposes a 15-year Master Plan for the phased residential development of single and multifamily units covering the approximately 211-acre Royal Kunia II Development Project area on former sugar plantation land just north of Royal Kunia Country Club and the Royal Kunia I community. Ground-disturbing activities for this proposed Master Plan development will involve mass property grading, as well as excavations for infrastructure including underground drainage culverts, water mains, sewer lines, and telecommunication/electrical conduits. This phased work is scheduled to begin with Parcels D and A in 2026, followed by Parcel B in 2029, Parcel E in 2030, and Parcel C in 2032. To date, Haseko has only applied to the City and County of Honolulu Department of

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Planning and Permitting for a Cluster Housing Permit (Cluster Development 2022/CL-2) that covers all three TMKs of the Master Plan project area [TMK: (1) 9-4-002:070, 071, 078]. However, this permit application only included detailed plan drawings (site, grading, roadway, etc.) for the 37.4-acre Parcel D [TMK: (1) 9-4-002:071 por.].

The Master Plan project area—currently owned by Haseko Royal Kunia, LLC, a Hawai'i limited liability company by Haseko Development, Inc.—is situated north of the H-1 freeway on O'ahu's broad central plain, between Kunia Road and Waikele Stream. The project area has remained undeveloped since the Oahu Sugar Company ceased commercial sugar production in the area in 1995, despite development on adjacent properties and unrealized plans dating back to the early 1990s to develop these parcels as well. The area is currently covered in dense stands of California grass, tangled vines, and *koa haole*.

In support of the project, Haseko contracted SWCA Environmental Consultants to produce a Literature Review and Field Inspection (LRFI) report titled *Archival Research and Field Inspection for the Royal Kunia II Residential Development Property, Ahupua'a of Hō'ae'ae, Ewa District, Island of O'ahu, City and County Tax Map Key Parcels (1) 9-4-002:070, (1) 9-4-002:071, and (1) 9-4-002:078* (Gerrish et al. 2021). SWCA conducted field inspections for this LRFI, involving staff archaeologists and architectural historians, in May and June 2021 to determine the current condition of the project area and locate potential historic properties identified through archival research. Densely overgrown vegetation (California grass and vines) covering most of the project area reduced ground visibility to nearly zero and precluded 100% coverage of the area with pedestrian transects. Existing roadways within the project area were instead used to access and document possible historic properties. An unmanned aerial vehicle (UAV) conducted a 100% photographic survey along predetermined transects at a 150-foot elevation that was processed into a georeferenced orthomosaic with 0.5-inch resolution. This was supplemented with the use of publically-available Hawai'i State-wide LiDAR imagery that provided a Digital Surface Model (DSM) of the area stripped of vegetation. The UAV was also used to document identified historic properties in a more targeted way.

Background research for the LRFI (Gerrish et al. 2021) concluded that the project area, as part of O'ahu's arid inland plain, was likely not intensively inhabited or cultivated in the pre-Contact period. Important traditional Hawaiian resources were likely harvested from this plain, which an extensive network of pre-Contact trails crisscrossed, however. In the post-Contact era, the area was first used for cattle grazing, with sugar cane cultivation taking over in the final decade of the 19th century. Grubbing and chain dragging to prepare fields for sugar cane planting likely destroyed any surface traces of pre-Contact activity in the area outside of protective gulches. Previous archaeological studies in the vicinity of the current project area identified remnant historic properties related to the plantation era, however. Field inspections and remote sensing data collected for the LRFI confirmed these expectations, encountering no traditional Hawaiian sites or materials during the inspection, but identifying a number of plantation-era features, including some associated with previously identified historic properties.

SWCA documented further sections of a railway line/road and a stone-faced causeway/dam that tied into the former railway line/road to the north (SIHP # 50-80-08-07671); a cane haul road associated with assorted plantation period features to the northwest (SIHP # 50-80-08-07758), and two ditches that were part of the Waiāhole Ditch Irrigation System (SIHP #50-80-09-02268). They also identified two previously unrecorded historic properties: a historic reservoir (SWCA-65875-006) and a sugar plantation worker's camp (SWCA-65875-007). Both were identified through archival research, with only scant surface evidence indicating their presence on the ground due to low surface visibility and impassible vegetation. The LRFI presents no assessments of integrity or significance for any of these historic properties but does note that such work would need to be done in the future. Due to field conditions precluding full pedestrian survey coverage of the project area, SWCA recommends that the data collected for the LRFI be used to identify areas requiring additional identification and documentation efforts ahead of development. They specifically recommend subsurface testing of the worker's camp area (Gerrish et al. 2021). Haseko indicates, in their letter requesting SHPD consultation, a willingness to possibly preserve significant historic properties within the project area by modifying development designs.

The SHPD agrees that potentially significant historic properties were identified and preliminarily recorded within the Royal Kunia II Development Project area during research and fieldwork for this LRFI. The SHPD further agrees that additional identification and documentation efforts are needed across this project area in advance of the proposed development, to more fully identify, document, and assess these historic properties and the impact the proposed project will have on them. Based on the information provided, the SHPD has insufficient information to determine the potential impacts of the project on significant historic properties.

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Therefore, the **SHPD requests** a Reconnaissance Level Survey (RLS) report be completed for the full Royal Kunia II Development Project area, given the presence of landscape-engineering historic properties within that project area. The information needed for completing an RLS report may be found at https://dlnr.hawaii.gov/shpd/files/2020/11/02-2018_SHPD_ARCHITECTURE-SURVEY-GUIDELINES.pdf on page 8. The RLS Report must be completed by a Secretary of the Interior (SOI) qualified architect, architectural historian, or historic architect. Additionally, the report must include an assessment of the seven aspects of integrity and site significance each historic property in accordance with Criteria a-e, as specified in HAR §13-284-6. The RLS is considered an architectural survey report and thus subject to filing fees (\$450) per HAR §13-284-4(3). The survey must be accompanied by a completed SIHP Requests for each architectural historic property, to generate new files or modify the existing file with new information on each.

In addition to this, the **SHPD requests** that an Archaeological Inventory Survey (AIS) be conducted for the entirety of the Master Plan project area. For all parcels this will entail incorporating the research and results of the LRFI (Gerrish et al. 2021) into an AIS that meets the standards set forth in HAR §13-276, including: consultation with knowledgeable individuals, significance assessments, and recommendations. The findings of this AIS and the requested RLS should correspond. The AIS will need to involve limited subsurface testing across the entire project area, to record baseline soils. General subsurface testing to record soils will extend into Parcel E, while a more focused testing strategy needs to be developed here to determine the presence, boundaries, integrity, and significance of the former plantation camp (SWCA-65875-007). The dry gulch in this parcel also needs to be subject to a 100% pedestrian survey with limited testing. The AIS report is subject to filing fees (\$450) per HAR §13-284-4(3). SIHP Request(s) will need to be submitted for any archaeological historic properties identified or further documented in this AIS report.

The **SHPD requests** that an AIS Testing Strategy be submitted for both the general and more targeted subsurface testing described in this letter. Once this AIS testing strategy is approved by SHPD, the AIS will need to be conducted and a report produced and accepted by SHPD.

The SHPD looks forward to receiving a draft RLS, SIHP Requests, and AIS Testing Strategy in order to move forward the HRS 6E-42 Historic Preservation Review for Royal Kunia II Development Project. Please submit any forthcoming information and correspondence related to the subject project to SHPD via HICRIS to Project No. 2021PR01090 using the Project Supplement option.

Note: U.S. Army Corps of Engineers (USACE) has yet to determine whether the subject project will require federal permitting under the Clean Water Act Section 404. Should such permitting be required, USACE will need to initiate the NHPA Section 106 Historic Preservation Review process with SHPD for the project.

Please contact Jessica Puff, Architecture Branch Chief, at Jessica.Puff@hawaii.gov for matters regarding architectural resources and Megan E. Alvarez, O'ahu Island Lead Archaeologist, at megan.alvarez@hawaii.gov for any matters concerning archaeological resources.

Aloha,
Susan A. Lebo
Signed For
Alan S. Downer, PhD
Administrator, State Historic Preservation Division
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