

ARCHEOLOGICAL FEATURE ASSESSMENT AT HONOULIULI NATIONAL HISTORIC
SITE: APPENDIX B – THE 2018 UNIVERSITY OF HAWAI‘I WEST O‘AHU
ARCHEOLOGICAL FIELD SCHOOL

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EXECUTIVE SUMMARY

This report presents the research and field operations conducted at the Honouliuli National Historic Site (nee Honouliuli National Historic Site) during the Volunteers in the Parks Program between July 2017 and May 2018 and the 2018 field season as part of the University of Hawai'i – West O'ahu (UH West O'ahu) archeological field school, which ran from 21 May to 29 June 2018. Training for students was combined with research and goals as stipulated in the Scientific Research and Collecting Permit Study # HONO 2016-0001, Permit # HONO 2016-SCI-001 (dated 18 May 2016) and the Task Agreement #P16AC01702 through the Hawai'i-Pacific Islands Cooperative Ecosystem Study Unit (CESU) #P14AC00637 (dated 13 September 2016, Continuation 1).

The Honouliuli National Historic Site is a culturally and historically important site that tells the story of civilian internment, martial law, and the experience of prisoners of war (POWs) in Hawai'i during World War II. It is located on the island of O'ahu about 15 miles northwest of Honolulu, north of Highway H1, and west of the Kunia Road. The site encompasses approximately 145 acres and is located within Honouliuli Gulch, roughly 6 miles mauka (inland) from the coast. The gulch varies from about 500 to 700 feet wide at the camp location, with steep slopes bounding the relatively flat floodplain. Elevation ranges from 280 feet above mean sea level (AMSL) along the Honouliuli Stream at the southern end of the site to up to 520 feet AMSL on the slopes at the north end of the site. This area is within the Kapolei town area, as well as the traditional Hawaiian land division of the Honouliuli *ahupua'a*.

Support for the project was provided by Jadelyn Moniz-Nakamura, Ph.D., Integrated Resource Manager, Hawai'i Volcanoes National Monument, who served as the Agency Technical Representative on the CESU Task Agreement. Logistical support and spatial resources were provided by Rebecca Rinas, Planner, Honouliuli National Historic Site in 2018. Field work was conducted by 15 students and one volunteer working approximately 5 hours a day, between 21 May and 29 June 2018. Between 1 July 2017 and 1 May 2018, a total of 15 students, volunteers, and Boy Scouts worked at the site as part of Volunteers in the Parks Program, directed by Ms. Johanna Fuller.

Dr. Moniz-Nakamura and Ms. Rinas provided preliminary maps and a spreadsheet of prioritized features throughout the property that were designated as needing additional documentation for NPS resource management and planning purposes. Of those, the students assessed all of the features on the 2018 priority list as well as finished most from the 2017 list; two features in the Fea L-1 series could not be relocated. Continued documentation of some linear features that appear to be in danger (L-1 series and Fea V-13 and V-15) was completed. Of note, a two key points can be noted of items in danger of destruction or damage: (1) the aqueduct area is cracking along the structure (probably due to the weight of at least one foot of sediment within the aqueduct itself); and, (2) any inscriptions, such as Feature V-13 "HoTchkiss", are written in a thin veneer of concrete which is cracking and flaking off. In total, 51 features were assessed, including three new ones discovered during the reporting period.

Three new sets of features (Features VI-60 and 61, Feature VII-22) were added to the inventory and continued examination of Features I-6 and I-7 was completed. Features VI-60 and 61 are two (in excess of 100 m) basalt rock walls (with stairs), while Feature VII-22 is a large concrete septic tank associated with Features VII-1 and VII-2 (both septic tanks). Feature I-7 is unique in that it represents a buried mess hall platform for the POW Compound I, so its size and configuration are currently unknown. Feature I-6 complex represents a complex irrigation system of control points, concrete flumes, and earthen ditches. This feature complex represents an important use of this property during the pre-World War II use as a sugar cane plantation.

The UH West O'ahu field school will commence again in 2019 under Modification 3 of the CESU and will focus on the excavation of Feature I-7; if time permits, additional survey will be conducted in Compounds III and VII. The primary conservation issue of the Honouliuli National Historic Site is root growth of both *koa haole* trees and guinea grass as well as banyan trees. While the concrete platforms and structures are in relatively good condition, some are in danger of major destruction through root growth and expansion. The thick vegetation at the site inhibits intensive study of the site and is certainly a challenge in terms of conservations as well as archeological visibility. Inscriptions with initials, names, and dates on various features are composed of thin veneers of concrete; these are in danger of exfoliation, cracking, and possible loss due to their fragile nature.

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INTRODUCTION

This report summarizes the research and field operations conducted during post-2017 field school and the 2018 field school conducted under the auspices of the University of Hawai‘i – West O‘ahu (UH West O‘ahu). The field school was conducted at Honouliuli National Historic Site, a culturally and historically important site that tells the story of internment, martial law, and the experience of prisoners of war (POWs) in Hawai‘i during World War II.

Location

The Honouliuli National Historic Site is located on the island of O‘ahu, Hawai‘i about 15 miles northwest of Honolulu, north of Highway H1, and west of the Kunia Road. This site encompasses approximately 145 acres and is located within Honouliuli Gulch, roughly 6 miles *mauka* (inland) from the coast. The gulch varies from about 500 to 700 feet wide at the camp location, with steep slopes bounding the relatively flat floodplain, and is mostly surrounded by commercial agricultural land (Figures 1 to 6). Elevation ranges from 280 feet above mean sea level (AMSL) along the Honouliuli Stream at the southern end of the site to up to 520 feet AMSL on the slopes at the north end of the site (see Figures 5 and 6).

Background History

Associated with the internment of U.S. citizens, long-term resident aliens, and POWs during World War II, Honouliuli National Historic Site serves as a tangible reminder of the fragility of constitutional rights, the effects of martial law, and as a POW camp, the management of both enemy troops and conscripted laborers (Ch‘oe 2009). Since its rediscovery in 2002, Honouliuli has been the subject of scholarship and awareness campaigns spearheaded by community organizations and institutions such as the Japanese Cultural Center of Hawai‘i (JCCH), Hawaii Korean Culture Center, and UH West O‘ahu. It was through these local efforts that Congress was prompted to authorize the National Park Service (NPS) to prepare a Special Resource Study of the Honouliuli Gulch and Associated Sites (National Park Service 2015), which led to the determination of Honouliuli’s eligibility for inclusion in the National Park system in February 2015. In March 2018, the Honouliuli National Monument was re-designated as the Honouliuli National Historic Site.

In 2012, Jeffrey F. Burton and Mary M. Farrell submitted a National Register of Historic Places Registration Form for the Honouliuli Internment Camp. Based on the 2008 to 2010 surveys, the Honouliuli Internment Camp demonstrated a high degree of historical and archeological integrity, as defined by the *Japanese Americans in World War II National Historic Landmark Theme Study* and the Department of Defense’s *Historic Context: World War II Prisoner-of-War Camps*. In terms of an archeological landscape, Honouliuli exhibits integrity with regard to location, setting, design, workmanship of building foundations, wall and fence remnants, feeling, and association. While there was modern use of the land up until the late 1990s, none of this really detracts from the site integrity. The hidden gulch environment that was surrounded by agricultural fields remains a huge part of the feeling of isolation of the camp. “To the former civilian internees who [...] visited the site during days of remembrance and pilgrimage, Honouliuli has integrity of feeling: the isolated setting, military design, prison-related artifacts,

mosquitoes, and steep valley walls that retain heat convey the discomfort experience when they named Honouliuli *Jugoku-Dani*, or Hell Valley” (Burton and Farrell 2012:36).

The Nomination recognized that Honouliuli Internment Camp was eligible for the National Register based on Criterion A (Property is associated with events that have made significant contributions to the broad patterns of our history) and Criterion D (Property has yielded or is likely to yield information important in prehistory of history). The primary period of significance is from 1943, when Honouliuli was constructed, to around 1946, when the camp was closed as both a civilian internee camp and a POW camp.

Areas of significance include: military and social history; politics, government, and law; Asian and European ethnic heritage; and historical archeology. As a POW camp, Honouliuli illustrates how the U.S. military managed and housed prisoners and balanced often conflicting goals of national security and compliance with the Geneva Convention.

Honouliuli Internment Camp was reviewed by the Keeper of the National Register of Historic Places and listed on 21 February 2012. The site was designated Honouliuli National Historic Site by Presidential Proclamation on 24 February 2015 by President Barack Obama. In March 2018, the property was re-designated

FIELD SCHOOL GOALS AND METHODS

The key purpose of the 2018 UH West O’ahu field school was to conduct research and provide training for students in line with several goals stipulated in the Scientific Research and Collecting Permit Study (# HONO 2016-0001, Permit # HONO 2016-SCI-001; dated 18 May 2016) and the Task Agreement (#P16AC01702) through the Hawai‘i-Pacific Islands Cooperative Ecosystem Study Unit (CESU, #P14AC00637; dated 13 September 2016). This particularly field school was under Modification 2 of this CESU as well as work done after the completion of the 2017 field school under the auspices of the Volunteers in the Park Program.

The primary goals of Task Agreement P16AC01702 (Modification 2; 2018 field season) were to conduct field work that focused on archeological assessment of previously-discovered features (prior to the 2016 field school) throughout the property, and to continue excavation of Feature I-7, a buried concrete platform associated with the POW occupation of the site in Compound I. A final goal of the field assessment was to determine the conservation needs and condition of features throughout the national historic site.

The education goals of the UH West O’ahu field school focused on introducing students to basic archeological methods, as well as expanding their knowledge of World War II incarcerations that included civilian internees and POWs as well as the social impacts in Hawai‘i of the civilian incarceration. Integration of the Hawai‘i internment and its broader sociopolitical context were emphasized by field trips to the USS *Arizona*, USS *Utah*, and USS *Oklahoma* Memorials, the Martial Law in Hawai‘i exhibit at the King Kamehameha V Judiciary History Center, and the exhibits at the Japanese Cultural Center of Hawai‘i. These experiences allowed students to view

the field work in its cultural and historical context, thus, increasing their understanding. As with previous field schools, the 2018 season included instruction on basic archeological techniques of survey/excavation and documentation through field notes, digital photography, GPS use, GIS data base use, historical artifacts, as well as drawing and mapping.

Geographically, the national historic site is divided into at least seven inhabited compounds, designated using roman numerals. These designations are based on a U.S. Army Corps of Engineers (USCOE) blueprint plan (U.S. Army n.d.; see Figures 2 to 3) for the internment camp sewage system, starting with Compound I in the north and finishing with Compound VII in the southern areas of the national historic site¹. In 2017, under the CESU, the field work was focused on assessing previously discovered features which NPS did not have full records of, as well as continuing with mapping, and documentation in various Compounds, with the majority of work undertaken in Compounds IV, V, and VI, including the numerous linear features. The NPS supplied a priority list of features in need of supplemental documentation within Compounds I through VII, encompassing 51 features in total; this list was only partially completed in 2017. Those 52 features unassessed from the 2017 list were completed during the 2018 field season.

All 2017-2018 field work was supervised by William R. Belcher, Ph.D., Assistant Professor, UH West O'ahu, with field assistance provided by Ms. Johanna Fuller, Integrated Resource Technician, Pacific Historic Parks. Additional field training and project oversight in 2018 was provided by Jadelyn Moniz-Nakamura, Ph.D., Integrated Resource Manager, Hawai'i Volcanoes National Monument, who served as the Agency Technical Representative on the CESU Task Agreement. Logistical support and spatial resources were provided by Rebecca Rinas, Planner, Honouliuli National Historic Site, prior to the beginning of the 2018 field season. Field work was conducted by 15 students and volunteers working approximately 6 hours a day, between 28 May and 29 June 2018, with approximately 25 VIP volunteers between July 2017 and May 2018.

The field school was confined to the Honouliuli National Historic Site property as designated in Figure 1. Boundaries, based on Global Positioning System (GPS) data and maps supplied by the NPS, are approximate. Features were originally identified by functional category by referencing USCOE plans (U.S. Army n.d.) for the internment camp sewage system. Figure 4 was taken from Burton and Farrell (2012) and shows the boundaries of the camp according to Lodge (1949) and the location of various buildings and compounds from the U.S. Army blueprints and historical photographs (Figures 7 to 12).

All original paper documentation (student notebooks, plan maps, section drawings, final hard-copy NPS Archeological Sites Information Management System [ASMIS] feature forms) are stored in the Social Science Division/Anthropology Concentration Annex storeroom in Building E of the UH West O'ahu campus. All paper records were scanned, converted to digital media, and saved on a portable hard drive. Copies of all digital files were given as project deliverables

¹ A Compound VIII is indicated on the U.S. Army blue print, but this does not seem to have been utilized during the life of the camp, but was planned for a proposed sewer treatment area. This is an area that needs additional research and pedestrian survey.

to the Honouliuli National Historic Site representative (Dr. Moniz-Nakamura), including all digital records and imagery. Final versions of the ASMIS feature forms were digitally completed using a fillable PDF version by Mr. Jose Garcia III, Student Research Assistant. These forms are also included as part of the digital record stored at UH West O’ahu and at the NPS. All documentation was digitized and scanned, and spreadsheet photographic logs were completed by archival student employees (Ms. Kimberly Mendez and Chelsea Wanstaed). Eventually, all paper and digital records at UH West O’ahu will be transferred to the Honouliuli archives in the James and Abigail Library at UH West O’ahu.

FIELD METHODS

Primary documentation was completed by individual students using field notebooks. This documentation described daily tasks, and included feature maps and sketches, weather descriptions, and other personal observations and reflections. Each student was assigned specific duties during the day, including photography and logging, GPS readings and recording, and sketch map production. In previous field work seasons (2008, 2009, 2010, 2012, and 2014), measurements were taken using both the standard imperial and metric systems; for the most part, this practice was resumed in the 2018 field season; however, the instructor felt that the students needed a working knowledge of the metric system as many of the students go on to work in the cultural resource management system and need to be familiar with using the metric system for excavation, survey, and mapping. All sketch maps were drawn on metric (2 mm) grid paper (1-cm blocks) in the student notebooks. Student documentary photography was taken with Nikon Tru-Shot digital cameras with a handwritten photographic log following standard archeological best practices. Image resolution was set at “fine” to 10 megapixels. Dr. Belcher completed the final photography using a Nikon D-7000 digital SLR camera with a 15 to 100 mm lens; standard resolution was set at “fine” with an image size of “large,” 3872 X 2592, 10 megapixels.

The Task Order for the CESU during the 2017 field season added the additional goal of field checking and assessing known archeological features to fill in gaps in the NPS data for developing an archeological inventory. Dr. Nakamura provided data dictionaries and feature forms for entering field recordings, which included all required fields of the NPS Archeological Sites Management Information System (ASMIS). Dr. Moniz-Nakamura conducted training during the classroom portion of the field school, training Mr. Jose Garcia III, who was the Student Research Assistant for the field portion of the research. This training included orientation to terminology and how to complete condition assessments. During both the 2017 and 2018 field seasons many of the previously mapped features (2008 to 2014) had become reburied with silt and overgrown with guinea grass. To assess the condition of the features, most were cleared using shovels, rakes, and handpicks. The sediment from these areas was not screened and most artifacts were collected for analysis during the 2018-2019 academic year by student volunteers and assistants.

Global positioning system coordinates were recorded using the Universal Transverse Mercator Project with the North American Datum 1983 (NAD83). Trimble Juno SD (with ArcPad 8/9),

Garmin Garmin GPSmap 65Cx receivers were used to collect geographic data in the form of the Universal Transverse Mercator coordinate system. Other data that were recorded included number of satellites, as well as the estimated positional error (EPE). Data were either transcribed on to PACN feature forms, written into the notebooks, or digitally recorded either as waypoints or in ArcPad 8 or 9 with the Trimble Juno receivers. All data are presented in Table 1 in the Appendix.

For the excavation of the POW mess hall platform in Compound I (Feature I-7), excavation was conducted using a standard 1-x-1-meter test pits (designated sequentially by letters) using 10-cm arbitrary levels. Each unit had its own temporary datum located at the NE corner of each test pit. Standard archeological techniques were used to excavate the test pits with the use of hand tools such as hand-picks, trowels, and shovels. All sediment was screened through 1/4-inch (6 mm) mesh. All artifacts were collected and bagged by provenience (Site, Compound, Test Pit, Level/Depth, etc.). During post-field school processing, many of the items were discarded as they were non-artifactual (basalt rock fragments, coral gravel, etc.).

Starting in 2017, fragile artifacts (particularly glass bottles) were collected from the surface of the Honouliuli National Historic Site. While previously left *in situ*, it had been noticed that bottles were being broken, probably from illicit trespassers on the property. Locational information including Compound, feature association, and GPS coordinates were recorded for each artifact or cluster of artifacts. These data have been put into tabular form and are stored as part of the digital record set for Honouliuli National Historic Site. The UH West O'ahu will inventory and analyze these materials on behalf of the NPS. Initial analysis was conducted using standard best practices in historical archeology. This practice continued through the 2018 field season.

Feature designation was based on a system previously established by Burton and Farrell. The designation system was alphanumeric with the pre-World War II and World War II-era occupations divided by the Internment/POW Camp Compound designation (I to VIII). A sequential number was used (i.e., Feature V-6, represents the sixth feature in Compound V). Additionally, any post-World War II features were designated throughout the property as M (Modern) regardless of compound location; these features were primarily related to the use of the property as a ranch in the post-WWII time frame. Generally, pre- and post-World War II features that were walls or ditches were indicated as irrigation features (with no designation) or with an L prefix, indicating a "Linear" feature. However, it should be noted that this system is not consistent as many wall features in Compounds V and VI are designated as features and not linear features. Sub-features that are part of a continuous linear feature or group of similar features are designated with an alphabetic designation, such as linear features L-1a, L-1b, etc.

SURVEY RESULTS

The following summary details the features examined or discovered during the 2018 field seasons. A total of 51 features was examined including three new features. Where applicable,

initial descriptions were taken from the 2012 NRHP nomination form (Burton and Farrell 2012) with comments related to a field assessment in the 2018. Table 1 presents the feature number, description/designation, and GPS coordinates. While not displaying the location in detail, Figure 8 displays the general location of features within the Honouliuli National Historic Site. Within each discussion of the Compounds below, a detailed map displays the features that were assessed.

Compound I

Compound I is the northernmost compound of the Honouliuli National Historic Site and represents the large POW encampment (Figure 8). It is a relatively flat area covered with sparse *koa haole* trees and guinea grass. Figure 8 displays the features that were either discovered or assessed as part of the 2018 field season. Prior to the 2016 field school, a total of 5 features was identified in Compound I. A complex of irrigation troughs/flumes and a concrete mess hall platform were identified in Compound I during the 2016 field school, detailed below as Feature I-6 and Feature I-7, respectively. No additional features were discovered during the 2018 field season but Features I-6 and I-7 were continued to be assessed or expanded in descriptions, while Features I-1 and I-4 were assessed.

Feature I-1: Sewage Pipe (Figure 9). This feature appears to be an overflow sewage pipe, possible associated with a cesspool indicated on the U.S. Army Corps of Engineer map, approximately 750 feet to the east. This pipe is approximately 7 inches in diameter and is located across the stream from another pipe (also with the same diameter), Feature II-5.

Feature I-4: Flume Debris (Figure 10). While these were designated concrete trough fragments in in the 2012 NRHP Nomination Form, they are more properly designated as irrigation flumes. These are scattered, and broken remains of pre-fabricated, concrete flumes scattered over an area of approximately 120 feet. This debris appears stable and in good condition when compared to previous descriptions and photographs.

Feature I-6: Flume System (Figures 11 and 12). This is an “areal” feature that expands much of the northern portion of Compound I as well as along the ridgeline. This system is composed of an earthen ditch system, augmented with pre-fabricated concrete flumes, and several concrete and basalt control points to direct water to different areas of the fields. Detailed descriptions, drawings, and photographs of this feature complex can be found in Belcher (2018a). However, an additional 200 to 300 feet of *in situ* concrete flumes were documented on 10 February 2018, a few weeks after a large, estimated 11-acre brush fire. This brush fire did minimal damage (some thermal cracking and spalling of the concrete) to the feature, but did increase the archeological visibility of this feature complex (Belcher 2018b).

Feature I-7: Mess Hall Foundation (East) (Figures 13 to 17). This mess hall platform was initially found in 2016 using two 50-cm-x-50-cm test pits; since that time, the UH West O‘ahu field school has excavated a total of ten 1-x-1-meter excavation units (labeled TP-A to TP-I) (see Figure 17). TP-A to C were excavated in 2017, while TP-D through J were excavated in 2018.

The feature is identified as a possible POW mess hall platform based on comparison with the U.S. Army blueprints and an aerial photograph dated 1948 (see Figures 2 and 13).

The platform is level and ranges from 65 to 98 cm below surface (see Figures 14 to 16). Laminar sediments occur over the platform itself with at least four stratigraphic units of medium to coarse reddish brown clayey silts mixed with courser particles of clay peds, coral gravel, and fragmented basalt rock. Cultural materials are presented within these sediments, but primarily include asphalt shingle fragments, agricultural plastic, metal (including nails, etc.), and ceramic fragments. Based on these cultural sediments and the present of laminar silts, these sediments are primarily alluvial in origin and probably originate from a nearby erosional channel, which trends upward and northeasterly from the feature to the surrounding agricultural fields above Honouliuli Gulch. One interesting find was a “shadow” of a possible wooden wall or feature on the concrete platform when it was initially uncovered in TP-H (see Figure 15).

No thermal damage occurred to this feature complex from the early 2018 brush fire; the complex is stable with little damage since discovered in 2016.

Compound II

Compound II is a small area, south of Compound I, which lies primarily on the western side of Honouliuli Stream. A total of 30 features has been identified in Compound II; five of these were relocated by the field school students in 2017 and an additional 8 were examined in 2018 (Figure 18). Current photographs were taken along with updating descriptions and conditions of those features. Most of the buildings were associated with the POW occupation of the camp, with some areas specifically associated with showers and latrines on a north-south trending terrace above the stream. Other features in Compound II occur outside the national historic site boundaries and are on UH System lands.

Feature II-2: Shower Building Foundation (Figure 19). This feature was identified as a shower building in the 2012 nomination based on the locations on the U.S. Army Corps of Engineer maps. The north end of the foundation/platform remains buried (so complete measurements were not possible), but it measures approximately 16 feet, 8 inches wide by 35 feet, 3 inches in length. Other shower platforms are 40 feet in length, so Feature II-2 is thought to be similar in dimensions. There is a 4 inch wide raised perimeter; a raised concrete stem wall appears to define at least three rooms, two of which are approximately 8 feet wide by 25 feet long. Interestingly, a concrete repair patch appears just north of the doorway located in the center of the eastern room.

This feature appears in relatively good condition and stable when compared to the 2012 description.

Feature II-3: Cesspool (Figure 20). This is a block-lined cesspool (shown connected to the shower and toilet structures). Its size is not precisely known, but it appears similar to other features within the property with an access opening that is about 2 feet square with an octagonal

cover. The cesspool is in relatively good condition but still partially buried by sediments and obscured by heavy vegetation. The eastern edge of the octagonal lid has been fractured by *koa haole* growth. The UH West O‘ahu field school attempted to clear the entire area, but did not have sufficient time towards the end of the field school.

Feature II-4 Cesspool (Figure 21). This feature can be found on the USCOE blueprints and has an octagonal slab on the ground surface, measuring approximately 13 feet across; each side measures 5 feet, 4 inches in length and has a 3-inch rim along the edge. There is a 2-foot square access panel that has an elevated” flange around the panel. When removing the panel, there is a typical block-lined pit below, which is over 15 feet deep. An iron outlet tee pipe (6-inch interior diameter, 10-inch exterior diameter) extends from the southwest wall of the pit. This feature was not completely uncovered during the previous surveys, but the UH West O‘ahu team uncovered most of the octagonal cover. Two fragments of unglazed red ceramic pipe were encountered (but not collected) near this feature.

Feature II-8: Structural Debris and Artifacts (Figures 22 to 25). Two sets of items are found scattered under a very large *Ficus* tree. This tree has very little vegetation underneath, thus visibility is quite good. A metal (possible iron) stake is present near the tree, which is about $\frac{3}{4}$ -inch square and extends approximately one-foot above ground. This appears similar to stakes that are commonly used on O‘ahu to secure large canopy type structures for local camping. Near the stake are two conjoining fragments of a metal sink (with an enamel basin), one is on the surface and the other is partially buried. Also, there is a large concrete plug (approximately 18-inches by 24 inches) that may have been part of a pipe system (the concrete has a large hole, approximately 8 inches in diameter) through its middle. While the large concrete plug was not described earlier, the other items appear similar in description and condition from the 2012 NRHP Nomination Form. While the sink and the concrete plug may be associated with the camp construction, the iron stake may be associated with the post-camp occupation of the site and possible ranch camping.

Feature II-11: Rock Wall (Figure 26). This wall is located just west of the Honouliuli Stream and runs parallel for it for approximately 40 feet. It is a dry stacked wall composed of undressed basalt cobbles and boulders. It is approximately 2 feet high and consists of between 3 and 5 courses of stones. The wall appears to be similar in terms of description and characteristics from the 2012 NRHP Nomination form.

Feature II-14: Inscription “WK” (Figure 27). Approximately half-way up the ridge on the west side of Honouliuli Gulch is a large, volcanic boulder (among many) with 7-inch inscribed/scratched letters “W K” scratched into the surface and has a vee-shaped cross-section. This inscription is stable, but probably represents one of the most isolated cultural items in the property.

Feature II-22: Culverts (Figure 28). This feature complex was not listed in the original NRHP nomination form. This is a concrete culvert approximately 20 feet long with a 3’ 3” exterior diameter pipe. It exits at the ground level on the southern side and begins on the north side with a dressed basalt block (with concrete mortar) enclosure. This wall is approximately three tiers in

size with blocks 1 foot to 3 feet in size. Rock Wall Feature II-11 may have acted as a diversion during flood in concerned with this culvert system.

Feature II-24: Water Trailer (“Donkey”) (Figure 29): This item is a cylindrical water tank with central hatch on the upper surface. It is on a welded trailer mount with wheels. Very little of the surface is intact with rust holes and dry-rot damage to the rubber wheels. This consistent with a military water tank, a 1 ½ ton, M106 Trailer with a 400-gallon capacity tank.

Compound III

Compound III is another small POW compound that, based on the U.S. Army blueprints, was located almost entirely on the western side of the Honouliuli Stream (Figure 30). A total of nine features was originally located in Compound III; an additional four features were relocated by the 2018 field school and documented with a revised description and photographs.

Feature III-2: Concrete Structure (Figure 31). This feature appears as a concrete “box” that is at least 3 feet deep. Two pipes, both with an exterior diameter of 2-inches, enter in the interior, northeastern corner of the feature (the unthreaded pipe enters in the north wall, while the threaded pipe enters the eastern wall). While its function is currently unknown, Burton and Farrell (2012:16) believe it may have housed a water pump. Miscellaneous trash, such as a Kenmore three-burner propane metal stove, window screening, etc. have been dumped into the feature. It appears relatively intact based on previous photographs and descriptions from the 2012 NRHP nomination packet.

Feature III-3: Cesspool (Figure 32). This cesspool is similar in appearance to previously described cesspools, except the cover is seven-sided and not octagonal. The access hatch is slightly less than 2 feet square and appears closer to the center of the cover. Three pipes enter the side of the cesspool, which is at least 10 feet deep. Trash, such as scrap lumber and a trash can have been thrown inside the feature. The cesspool appears to be in relatively stable condition, although it appears to be filling slowly with sediment through cracks between the cover and the lower stacked blocks that form the cesspool catchment.

Feature III-4: Shower Building Foundation (Figure 33). This feature is a shower building that is approximately 40 feet long by 6 feet, 9 inches wide. This foundation appears to have been divided into three rooms by concrete stem walls that are 3 to 3 ½ inches above the floor. Various vehicle parts are located near the concrete foundation. The descriptions from the 2012 NHRP nomination form suggest little change to the feature since its discovery in 2008.

Feature III-5: Septic Tank (Figure 34). This feature is located near (within 6 feet) Feature III-4 (Shower Building Foundation) and measures approximately 5 feet by 9 feet, 3.5 inches. There is a square (2 feet, 4 inches) access panel with a raised concrete flange, near the center of the surface slab. The interior is at least 6 feet deep with water present at the bottom. Two cast iron pipes enter the tank uphill and there is a cast iron outlet t-joint on the downhill wall. This feature appears to be in similar condition with the NHRP nomination form.

Compound IV

Compound IV is the main POW camp area with a mess hall, a shower building, two pit toilets, two cesspools, and two unidentified buildings indicated on the USCOE camp plans. According to this plan, most of the buildings are located on the west side of Honouliuli Stream (see Belcher 2018a). Based on an historic photograph, barracks buildings and several rows of pyramidal tents are present in this Compound. Other features visible in the photograph are two guard towers, foot bridges, and incinerators. Figure 35 displays the features assessed during the 2018 field season.

Feature IV-1: Manhole (Figures 36). This feature is a concrete manhole for this portion of the camp sewer system. It protrudes above ground in a “truncated” cone shape, expanding towards the ground surface; it has a 2 feet diameter, metal-rimmed opening. The manhole itself is 2 feet, 8 inches in diameter at the top and 3 feet, 8 inches in diameter at its base (where it enters the ground). This feature is brick-lined with a concrete floor with a trough that connects to pipes that open at a 90-degree angle to the side wall. This feature is located just west of the Honouliuli Stream and below the western side of the main aqueduct (Feature L-1). As indicated in the NRHP nomination form, the lid is missing; a concentrated search by the 2018 field school did not locate it. The feature appears stable.

Feature IV-2: Guard Tower Footings (Figure 37). These guard tower footings were completely buried and had to be uncovered to be relocated and assessed. The guard tower footings are almost directly across from Feature L-2 siphon and footings on the east side of the road. Each footing was composed of concrete poured in a circular hole that held a rectangular post (now a post hole). The post holes are approximately 5-x-8-inches in size but vary slightly. The outline of these postholes forms a square that is approximately 6 feet on a side. A deteriorated fence post that measures 4.5-x-5-inches is set directly into the ground adjacent to the footings; however, based on the composition and similar fence posts, it is thought that this post is from the post-camp occupation of the site. This feature is in relatively good condition when compared to pre-2018 photographs and descriptions.

Compound V

Compound V was the primary internee area and occupied much of the property on both sides of the Honouliuli Stream. According to historic records (see Burton and Farrell, various), the compound was divided into four areas: Japanese-American men’s section (west of Honouliuli Stream), Japanese-American women’s section (east of Honouliuli Stream), German-American section (in the middle of the east side), and the mess hall area (Feature V-1, on the south end of the east side of Honouliuli Stream). Currently, Compounds V and VI represent the areas with the highest density of internment camp features. A total of 29 features were initially located in

Compound V, prior to the 2016 to 2018 field schools. An additional seven features were discovered and added to the inventory, for a total of 36 features. An additional eight features were documented during the 2018 field season, including two new features. Figure 38 displays the Compound V features that were assessed during the 2018 field season.

Feature V-2: Structural Debris (Figure 39). Two overturned concrete slabs are located near the location of a water-borne latrine on the USCOE blueprints. One measures approximately 10 feet, 1 inch by 9 feet, 4 inches while the other is about 10 feet by 8 feet, 5 inches. Both are approximately 16 inches thick.

Feature V-4: Rock Alignment (Figure 40). This rock alignment is approximately 15 feet long and composed at least 18 rocks; it appears to form a straight line for about 9 feet perpendicular to the main road and then curves north for another 6 feet. These rocks may have lined a path near a possible building (concrete slab fragments are present nearby). The feature appeared stable in 2018, but since this is an ephemeral surface feature, it is very sensitive to disturbance.

Feature V-5: Metal Pole with Concrete Plug (Figure 41). This is a “mobile” feature in that it is not fixed to the ground and appears to have been moved since initially documented. It consists of a bent, hollow metal pole, approximately 4 feet, 3 inches long; the concrete plug is 6 inches in length and approximately one foot in diameter. Burton and Farrell (2012:19) suggest that this may be a post-camp, ranch era feature.

Feature V-11: Rock Wall (Figure 42). This feature is a dry-stack basalt rock wall composed of cobbles and boulders of various sizes. It is over 200 feet long with the northern 185-foot section well-constructed and intact; the southern portion has partially collapsed. The 2012 NRPH nomination form mentions tomato plants, mock orange, and togan (winter squash) present; these were not observed during the 2018 field season. The condition appears similar and it appears stable. Currently, no GPS coordinates were recorded for this feature.

Feature V-13: Posthole (Figure 43). This feature is a concrete posthole. This concrete-lined post anchor appears set in the ground (the post is now missing) and measures 4-x-6-inches. Burton and Farrell (2012:20) suggest that this fence post may have been used to subdivide the various sections of Compound V. This posthole appears stable. Nearby this posthole is a thin veneer of concrete with the inscription “R.N. HoTchkiss 8/13/43”. The veneer of concrete is actively cracking along its edges and may eventually damage the actual inscription.

Feature V-15: Rock Wall (Figure 44). This is a large retaining (225 feet long) wall is composed of basalt rock and cobbles, mortared with concrete where it enters the siphon under the main road. This wall appears to serve as a retaining wall, adjacent to main entry road from the east side of the camp. This wall has been described in Belcher (2018a) and is composed of square, dressed basalt rocks. It ranges in height from 1 foot on the northern end to approximately 18 feet on the southern end. The southern end appears to have been reconstructed in 1955 and filled with rubble behind the facing. This southern end is actively collapsing.

Feature V-28 Rock Wall (Figure 45). This feature was not recorded as part of the NRHP nomination form. The dry-stack wall is approximately 29 feet long and has an irregular height of

between one and two feet. It is composed of basalt cobbles and boulders in size but appears to be collapsing.

Feature V-29 Rock Wall (No figure). This is a dry-stack wall constructed of cobble and boulder-sized basalt rock. It is approximately 8 feet in height but truncated such that the bottom of the wall is approximately 6 feet long and the top is 12 feet long. This wall is in fair condition but is actively collapsing downslope.

Compound VI

Compound VI was designated as the main administration (or guard camp) area and is also “feature-rich,” like Compound V (Figure 46). While these areas were probably not the most densely occupied areas, they have the densest concentration of World War II-era (and later) features. This compound house a large number of military, administrative, and support materials such as generators, garages, and camp storage as well as barracks that housed the permanent military personnel stationed here. Compound VI is a relatively flat area on west of the main road and slopes up to the ridge line on the east side of the road; both areas are heavily overgrown with guinea grass and *koa haole* trees. Features were located on either side of the stream with support structures (such as Feature VI-3, generator building foundation) on the east side of the main access road. A total number of 59 features was located in Compound VI from the pre-2016 field assessments; an additional eight features were assessed during the 2018 field season, along with defining two additional features. Two linear walls (Features V-60 and 61) were identified an historic photograph (Figure 47).

Feature VI-13: Rock Wall (Figure 48). This feature is located along the east side of the entrance road and is approximately 150 feet long and ranges from 1 to 3 feet high. It is constructed of undressed, dry-stacked basalt rocks. This wall is in poor shape and is actively collapsing. Burton and Farrell (2012:24) suggest that concrete fragments on its northern end may represent the remains of steps.

Feature VI-37: Manhole Lid (Figure 49). This manhole lid may be associated with Feature VI-36 but is located approximately 75 feet away. It is approximately 2 feet in diameter with two rebar handles.

Feature VI-48: Foundation (?) (Figure 50). This feature is a mound of basalt rocks between a ditch (Feature VI-47) and Honouliuli Stream. Burton and Farrell (2012:28) suggest that this may represent a foundation for a building that is seen in historic photographs.

Feature VI-49: Laundry Building Foundation (Figure 51). This building is one of the largest buildings at Honouliuli National Historic Site. It measures approximately 60 feet by 55 feet. The southern side of the concrete slab is still covered in approximately one foot of sediment. Considerable effort will be required to uncover this (as well as other similar features throughout Honouliuli National Historic Site. Several beer bottles were mentioned in the 2012 NRHP

nomination form; not all were present in the 2018 survey. Those that could be located were collected for later analysis and curation.

Feature VI-50: Guard Tower Footings (Figure 52). Four concrete footings were located straddling the main aqueduct at an outlet gate (Feature L-1d). These are primarily composed of posthole impressions, probably using 4-x-6-inch lumber; these footings form a rectangle that is about 6.5-x-7 feet. The outlet gate was closed; a date is inscribed in the concrete of the gate “JAN 21-1943”. This may have been the construction date of this guard tower. The footings are in relatively good condition; however, like many of the inscriptions at Honouliuli National Historic Site, these are written in a thin veneer of concrete of basalt rock or some other substrate. These inscriptions are subject to damage by any pressure placed on them and they are in danger of being damaged or destroyed. The UH West O‘ahu field school reburied these to protect them, when possible.

Feature VI-55: Rock Wall (Figure 53). This rock wall is a dry-stack wall that is composed of cobble to boulder-sized basalt rocks. This wall is approximately one to two feet high and approximately 150 feet long. It is actively collapsing downslope.

Feature VI-60 (new): Linear Basalt Rock Wall (Figures 54 and 55). This feature is a very well-constructed dry-stack terrace wall. It is composed of cobble to boulder-sized basalt rocks and is approximately 182 feet long with a width of 1 to 2 feet and a height of one to three feet. It is composed of two to three tiers of rocks, except where large boulders are present, it is only a single tier. Features VI-60a and 60b are two distinct areas that are composed of two-tiers of dressed stones forming spaces (3 feet wide) in the wall. Feature VI-60b appears to form a series of two stone steps. Both Features VI-60 and VI-61 become very irregular along the southern end to appear to be a series of scattered cobbles.

Feature VI-61 (new): Linear Basalt Rock Wall (Figures 56 and 57). This dry-stack rock wall is approximately 127 feet long, 1 to 2 feet wide, and one to three feet high. It is composed of one to two tiers of cobble to boulder-sized basalt rocks. Several large *haole koa* trees are growing in the wall and could seriously damage it. A space appears in the middle of the wall, approximately 2 feet, inches wide; this space has been designated Feature VI-61a. Both Features VI-61 and VI-60 become very irregular along the southern end to appear to be a series of scattered cobbles.

Compound VII

Compound VII is believed to have been the southernmost compound of the internment and POW camp. Six features were previously documented at this site and in 2016 a pedestrian survey was conducted (Belcher 2018), but no additional features were encountered. However, in 2018, an additional septic tank (Feature VII-22) was encountered and documented. Figure 58 displays the features in Compound VII that were assessed in 2018. Between the 2017 and 2018 field schools, the local television station KHON removed the two large satellite dishes during Features VII-6

and VII-7. The ground in the area has been severely disturbed, but the recorded features did not appear to be damaged.

Feature VII-1: Septic Tank (Figure 59). This septic tank is located adjacent to Features VII-2 and VII-7) and are similar in construction, being rectangular with square access panels. Feature VII-1 is approximately 13.5 feet by 34.5 feet in size with a surface expression of 15 to 20 inches above ground. Along the north side is an access hatch that is 3 feet square with an interior ladder formed of bent rebar set into the concrete. While this was a proposed POW compound according to the USCOE blueprints, the waste-water system probably functioned for the military occupants in Compound VI as well.

Feature VII-2 Septic Tank (Figure 59). This septic tank is adjacent to Feature VII-1 and measures 24-x-10 feet with an extension of 7 feet, 8 inches by 4 feet, 8 inches at the eastern end. There are three 2-foot-square access hatches (two retain the concrete covers) and a single 1-foot opening.

Feature VII-3 Septic Tank (Figure 60). This septic tank is composed of a circular concrete slab and is located upstream of Features VII-1 to VII-3. It has a standard 2-foot square access opening with a 9-inch high flange.

Feature VII-4 Fence Remnants (Figure 61). This feature consists of three metal posts, wire mesh, and concrete post anchors that have been removed from the ground. These are probably associated with the Compound VII security fence based on the post size and length. While mapping and clearing this feature, another septic tank feature (Feature VII-22) was encountered (see below).

Feature VII-6: Structural Debris (Figure 62). This feature is just about 3 feet west of Feature VII-2 and consists of various metal posts, wire mesh, and concrete post anchors. These may be associated with a security fence or a baseball field that is indicated on the USACOE blueprints. Feature VII-7 was located below this feature.

Feature VII-7: Concrete Trough (Figure 63). This feature is just about 3 feet west of Feature VII-2 and consists of various metal posts, wire mesh, and concrete post anchors. These may be associated with a security fence or a baseball field that is indicated on the USACOE blueprints. Feature VII-7 was located below this feature.

Feature VII-22 (new): Septic Tank (Figure 64). This feature was discovered while clearing fence remnants of Feature VII-4. The septic tank is 28 feet long and 8 feet, 6 inches wide. A two-foot-square access panel with a raised flange lies along the northern edge. The interior is lined with bricks and is completely dry; it is approximately 15 feet deep.

Linear Features

Linear features associated with the pre- and post-World War II eras were designated with an ‘L’ designation. Most are complex, include various components, and serve a variety of functions, but are primarily used for retaining walls or irrigation canals or flumes.

Feature L-1: Feature L-1 is the most complex and runs most of the length of the camp from Compound VII where the irrigation system enters through a tunnel connected with the Waiāhole Ditch system that originates on the windward side of O‘ahu. Feature L-1 continues to Compound V along the eastern side of the national historic site, crosses under the main camp road, and connects to the main aqueduct that served as a boundary between Compounds IV and V. This feature is composed of several segments of interest: the large concrete aqueduct (Feature L-1a), the dry stack wall Feature L-1b), and metal siphon (L-2a). L-1 and L-2 complexes are displayed in Figure 65.

Feature L-1a Main Aqueduct (Figure 66). The aqueduct is a large rectangular concrete structure that sits on eight dressed basalt rock and concrete mortar piers. The six piers over Honouliuli Stream are straight on the downstream end and pointed on the upstream/leading edge, spaced approximately 16 feet apart. The aqueduct is approximately 170 feet long and is approximately 5 feet, 4 inches wide with a depth of about 4 feet (however, much of the aqueduct floor is filled with sediment). While one of the piers on the northwestern side of the concrete flume has partially collapsed (see below, Feature L-1b), it doesn’t appear to have a support function. This feature appears stable; however, there are several cracks in the aqueduct itself; clearing of the sediment will help relieve some of the constant stress and may help alleviate the damage from continuing.

Feature L-1b Concrete Pier with date (Figure 67). On the western side of Honouliuli Stream, the northern pier has collapsed during flooding in spring 2016; this pier has a written inscription on it that dates the construction of the aqueduct to August 1920 (the inscription reads “08 30 1920”). It should be noted that these piers on this western side of the main aqueduct do not appear to be structural in nature and don’t support the rectangular aqueduct. This main pier is rectangular in cross-section and composed of dressed basalt blocks with concrete mortar. The area with the inscription on it is created using a small veneer of concrete. The pier appears stable in its current configuration, but the inscription veneer could be easily damaged.

Feature L-1c Concrete Pipe (Figure 68): Just east of the main aqueduct, is a concrete drainpipe. It appears relatively stable.

Feature L-1d Closed Concrete and Rock Gate (Figure 69). This feature is a permanently closed concrete and basalt rock gate for the ditch portion of the aqueduct system in order to control water into the fields. A guard tower (Feature VI-50) was built on top of this closed gate, over the ditch system. A thin veneer of concrete was place over the top of the gate and inscribed as follows: “Jan 21 – 1943”. This inscription has already cracked along the edges and is in danger of further damage.

Feature L-1e Sealed Gate (Figure 70). This feature is another sealed gate like Feature L-1d. This lies within the Guard Camp Compound VI.

Feature L-1f Wooden Flume (Figure 71). This is a roughly constructed wooden flume built over the top of the irrigation ditch system in Guard Camp Area VI, but almost at the top of the ridgeline of the southwestern side of Honouliuli Gulch. It is relatively intact and due to its remoteness, it is relatively safe from any vandalism. However, it should be noted that it is exposed to the sun and is actively in the process of dry rotting.

Feature L-1g Rock Wall (Figure 72). This feature is a dry stack retaining wall above the irrigation ditch along the east side of the main concrete aqueduct. This wall is approximately 220 feet and 1 to 2 feet wide; it ranges from the edge of the road to over 19 feet tall at the southern end. The wall decreases in height to the north and curves to meet the road and the siphon into the concrete aqueduct (Features L-1a). While this wall is in good shape, because it is a dry-stack wall, stones can be loosened, especially from the top portion of the wall, along the old road. Any construction or testing along this road should be done with caution as it may cause erosion and collapse of the wall.

Feature L-1i Sealed Outlets (Figure 73). This is another sealed outlet on the western side of Compound V along the aqueduct. The gate has been (like others mentioned above) sealed permanently with concrete and basalt blocks. This feature sits about 200 feet north of guard tower and sealed gate (Features VI-50 and L-1d).

Feature L-2a Metal Siphon (Figures 74 and 75). This large metal pipe or siphon that carried water from a ditch on the west side of the Honouliuli Gulch to another ditch on the east side. The siphon is composed of 2-foot diameter sections of riveted steel pipe. It is supported at intervals by formed concrete piers that are approximately 48 inches high; the pipe sits in a half-cylinder formed depression on the top of the pier. A steel band girdles the siphon and connected with heavy gauge wire to eye-bolts that are fixed into clamps at small truncated pyramidal concrete anchors approximately 25 feet from the siphon on both the north and south ends. The siphon is in poor condition with numerous holes in the metal. The siphon is collapsing where it enters the road. This area was cordoned off to keep people from walking over it in order to minimize damage to the feature as well as injury.

Feature L-2b Exposed Ditch (Figure 76). Along the western access road into the camp, an exposed portion of the concrete ditch is visible. The ditch appears to be formed of rectangular dressed basalt rock with concrete mortar. It is lined over the top and the interior surface with concrete. This area is prone to erosion, but this is an important portion of the ditch as this allows visitors to view how this ditch was constructed.

Detailed Geographic Information System (GIS) mapping of the irrigation features in Compounds I, VI, and VII (as well as linear features along the western and eastern gulch margins) was completed during the 2018 field season, but these data are in the process of being incorporated into an ArcGIS data base for the site. to supply a more detailed map of those features throughout the entire national historic site.

An aerial photographic map (dated 1944) and a topographic map (dated 1943) show details related to the camp and occupation. These are included as Figures 77 and 78 for reference.

DISCUSSION AND SUMMARY

The 2018 UH West O'ahu field schools in cooperation and assistance with National Park Service were successful in training 14 students and volunteers in archeological techniques and methodologies. Additionally, it is hoped that the students gained an understanding of the fragile nature of our republic as played out during World War II in Hawai'i.

Since 2016, in Compound I, several new features were documented and recorded through mapping and photography. These include intact control points and ditches related to plantation irrigation were documented (Features I-6a through I-6d). Additionally, the mess hall platform associated with the POW camp in Compound I was finally found through deductive reasoning and excavation. This platform sits approximately 65 to 98 cm below surface and appears to have been buried by the deposition of sediments from a nearby northeasterly trending gulch that rises to the surrounding fields of Bayer Hawaii (née Monsanto Hawaii). Small artifacts such as possible shingle fragments, as well as agricultural plastic, nails, etc., were recovered from the sediments above the mess hall concrete platform. Continued excavation and documentation of the irrigation systems (Feature I-6) and the mess hall platform (Feature I-7) is necessary.

As with most of the material in this area, the biggest danger to the plantation-era, as well as the Internment/POW Camp features, is the continuous growth of the guinea grass, and more importantly, the *koa haole* trees. These trees are pervasive throughout the national historic site property and continue to fracture the platforms as well as the intact irrigation flumes. Continued clearance of many of these areas will be necessary for maintenance and observations, as sediment and guinea grass re-growth quickly cover them. Even during post-2017 field season volunteer work and inspections, many of the areas that were cleared by the UH West O'ahu students were not visible. It appears that many of the features can become engulfed by vegetation and buried by eroding sediments within as little as two months. Additionally, inscriptions done in thin veneers of concrete are vital to understanding the construction sequences during all phases of the property. However, due to the nature of the veneer, they are very susceptible to damage and eventual destruction, just through the weight of sediment and exposure. These include the following features and inscriptions: Feature V-13 ("R.N. HoTchkiss"), southern end of Feature V-15 (inscription "11/3/55 Gang 41"), western abutments of L-1a aqueduct ("8 30 1920"), and L-1d Linear gate ("1943"). A possible solution is to rebury these items (as the field school did) to protect them or cover with a possible plexiglass cover as has been done for sensitive paintings in places like Bandolier National Park, New Mexico so visitors may see these inscriptions. Table 2 presents the features that are most in danger based on the current assessment.

Finally, two linear basalt rock walls (Features VI-60 and VI-61) were identified based on interest and research done by the Japanese Cultural Center of Hawai'i.

The NPS, through Dr. Jadelyn Moniz-Nakamura, provided the UH West O‘ahu with preliminary maps and a spreadsheet of close to 100 features throughout the property that were designated either Priority 1 or Priority 2 in 2017 and 2018. During the 2018 field season, all but two features from the 2017 and 2018 list were found, documented, and assessed. These unlocated features (sealed gates along the Feature L-1 system) have not been relocated to date.

FUTURE RESEARCH AND RECOMMENDATIONS

Future research at Honouliuli should consist of continued assessment of all previously identified features from previous surveys (2008 to 2014). This assessment will follow the methodology and research design presented above. Additionally, pedestrian survey will be completed in Compounds VI and VII.

Although we have completed 9 square meters of surface area, we do not yet know the dimensions or extent of Feature I-7 (Compound I POW mess hall); continued excavation is necessary. Excavation of this area has continued after the completion of the 2018 field school with volunteers from a variety of veteran’s and other groups, including archeology students from UH West O‘ahu; the Volunteers in the Parks Program is managed by Ms. Johanna Fuller, Resource Technician, Pacific Historic Parks and is an essential part of the excavation and documentation efforts approximately one day a month. Currently, two additional 1-x-1-meter test pits are being excavated by a series of volunteers but were not completed prior to the beginning of the 2019 field school. All this subsequent information between UH West O‘ahu field schools will be incorporated in the 2019 CESU report.

REFERENCES CITED

- Belcher, William R. 2018a. Archeological Feature Assessment at Honouliuli National Historic Site. Report submitted to the Department of Interior, National Park Service as part of Hawai‘i-Pacific Islands Cooperative Ecosystem Studies Unit Task Agreement P16AC01702.
- Belcher, William R. 2018b. MEMORANDUM FOR RECORD: ASSESSMENT OF POSSIBLE BRUSH FIRE DAMAGE IN COMPOUND I, dated 13 February 2018.
- Burton, Jeffrey F. and Mary M. Farrell. 2012. National Register Nomination, Honouliuli Internment and POW Camp. Nomination accepted by Keeper and listed on the National Register, March 2012.
- Lodge, R. H. 1949. *Waipahu at War: The War Record of a Hawaiian Sugar Plantation Community*. O‘ahu Sugar Company, Waipahu.

TABLES

Table 1. Location and Description of Honouliuli National Historic Site Features examined during 2018 field seasons.

Feature No.	Description	Coordinates (04Q)
<i>Compound I</i>		
Fea I-1	Sewage Pipe (Outlet into Honouliuli Stream)	0597453 2366071
Fea I-4	Flume Debris	0597377 2366212
Fea I-6a, b, c, and d*	Flume System (including concrete and earthen ditches)	0597408 2365309
Fea I-7	Concrete Platform (mess hall)	0597489 2366075
<i>Compound II</i>		
Fea II-2	Shower Building Foundation	0597429 2366096
Fea II-3	Cesspool	0597430 2366093
Fea II-4	Cesspool	0597463 2366004
Fea II-8	Structural Debris and Artifacts	0597424 2365980
Fea II-11	Rock Wall	0597456 2366061
Fea II-14	Inscription “WK”	0597372 2366120
Fea II-22	Culvert System	0597458 2366060
Fea II-24	M106 Trailer and Water Tank	0597390 2366118
<i>Compound III</i>		
Fea III-2	Concrete Structure	0597371 2365953
Fea III-3	Cesspool	0597373 2365953
Fea III-4	Shower Building Foundation	0597733 2365884
Fea III-5	Septic Tank	0597330 2365879
<i>Compound IV</i>		
Fea IV-1	Manhole	0597436 2365712
Fea IV-2	Guard Tower Footings	0597392 2365784
<i>Compound V</i>		
Fea V-2	Structural Debris	0597526 2365633
Fea V-4	Rock Alignment	0597526 2365633
Fea V-5	Rock Wall	0597540 2365629
Fea V-11	Rock Wall	No GPS coordinates
Fea V-13	Posthole/Guard Tower Footing	0597424 2365623
Fea V-15	Rock Wall	0597499 2365508
Fea V-28	Rock Wall	0597421 2365626
Fea V-29	Rock Wall	0597540 2365684
<i>Compound VI</i>		
Fea VI-13	Rock Wall	0597620 2365585
Fea VI-37	Manhole Lid	0597713 2365423
Fea VI-48	Foundation (?)	0597645 2365521

Feature No.	Description	Coordinates (04Q)
Fea VI-49	Laundry Building Foundation	0597744 2365426
Fea VI-50	Guard Tower Footings	0597504 2365542
Fea VI-55	Rock Wall	0597691 2355454
Fea VI-60 (new)	Linear basalt rock wall	0597799 2365508
Fea VI-61 (new)	Linear basalt rock wall	0597746 2365522
<i>Compound VII</i>		
Feat VII-1	Septic Tank	0597782 2365422
Fea VII-2	Septic Tanks	0597782 2365422
Fea VII-3	Septic Tank	0597781 2365422
Fea VII-4	Fence Remnants	0597816 2365399
Fea VII-6	Structural Debris	0597821 2365193
Fea VII-7	Concrete Trough (Irrigation Flume)	0597841 2365140
Fea VII-22	Septic Tank	0597815 2365398
<i>Linear Features</i>		
Fea L-1a	Concrete Aqueduct	0597435 2365709
Fea L-1b	Concrete and Rock Abutments/Inscription	0597431 2365714
Fea L-1c	Concrete Pipe, opening into Ditch	0597496 2365732
Fea L-1d	Concrete and Rock Gate	0597504 2365543
Fea L-1e	Sealed Gate, in Compound VI	0597702 2365390
Fea L-1f	Wooden Flume over Ditch in Compound VI	0597688 2365351
Fea L-1g	Stone Wall	0597516 2365693
Fea L-1i	Sealed Outlets	0597651 2365434
Fea L-2a	Siphon and Concrete Footings	0597374 2365783
Fea L-2b	Portion of Ditch Connected to Siphon	0597399 2365583
*Linear Feature; see Belcher 2018a for discussion of the distribution of these features as initially described. GPS coordinate represents a “center of mass”.		

Table 2. Location and Summary of Adverse Damage to Honouliuli National Historic Site Features examined during 2018 field seasons.

Feature No.	Description	Adverse Damage
Fea I-6	Flume System	Some thermal damage from February 2018 fire
Feat II-3	Cesspool	Lid being cracked by expansion of <i>koa hoale</i> brush growth
Fea II-24	Water Tanker	An artifact, but it the metal is actively deteriorating
Fea V-4	Rock Alignment	Very ephemeral feature; could be damaged very easily
Fea V-13	“R.N. HoTchkiss 8/13/43” inscription	Inscription is in a very thin veneer of concrete that is actively cracking
Fea V-15	Rock Wall Inscription “11/3/55 Gang 41”	Southern end of the wall is actively eroding and collapsing (already monitored by NPS)
Fea V-28	Rock Wall	Actively collapsing
Fea V-29	Rock Wall	Actively collapsing downslope
Fea VI-13	Rock Wall	Actively collapsing
Fea VI-50/L-1d	Guard Tower Footings with inscription “JAN 21 – 1943”	Inscription is in a very thin veneer of concrete that is actively cracking
Fea L-1a	Concrete Aqueduct	Structure is cracking, may be related to sediment accumulation in the trough and its associated weight
Fea L-1b	Concrete and Rock Abutments/Inscription “08 20 1920”	While the pier has detached from the aqueduct structure, it is stable; the inscription is in a thin veneer of concrete that is in danger of cracking
Fea L-1f	Wooden Flume over Ditch in Compound VI	Wood components in danger of dry-rotting and collapse.
Fea L-1g	Stone Wall	This dry-stack wall could be in danger of collapse if erosion occurs on the upper surface of the road above it.
Fea L-2a	Siphon and Concrete Footings	The metal of the siphon pipe is actively corroding; the portion under the road along the western portion of the property is actively collapsing.

Feature No.	Description	Adverse Damage
Fea I-6	Flume System	Some thermal damage from February 2018 fire
Feat II-3	Cesspool	Lid being cracked by expansion of <i>koa hoale</i> brush growth
Fea II-24	Water Tanker	An artifact, but it the metal is actively deteriorating
Fea L-2b	Portion of Ditch Connected to Siphon	This portion is exposed below the ditch construction and could collapse.

FIGURES



Figure 1. General outline of Honouliuli National Historic Site.

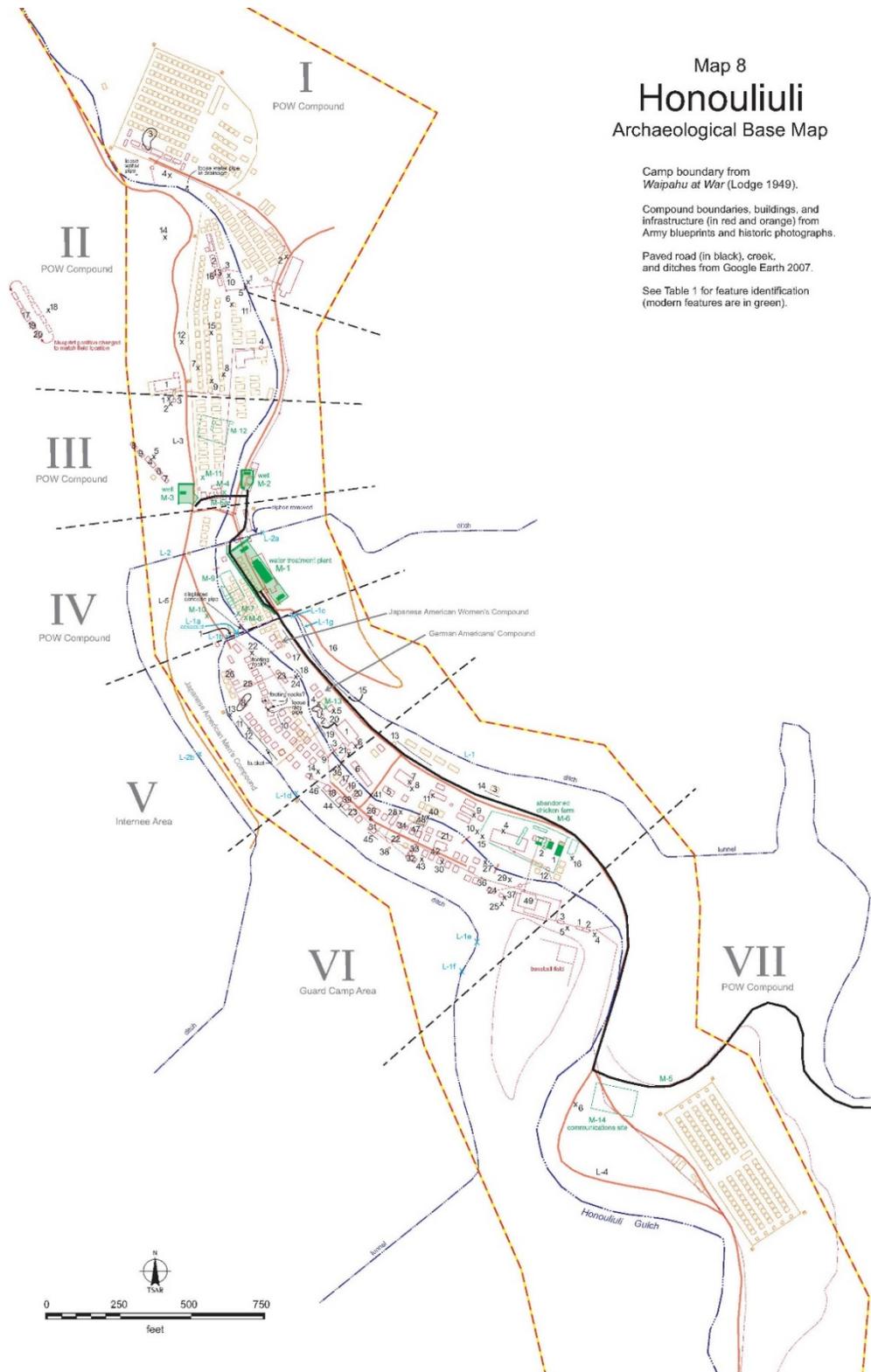


Figure 4. Overview of compounds and features based map from undated U.S. Army Corps of Engineer Sewage system blueprints (Figure 8, Burton and Farrell 2012).



Figure 5. Overview of Honouliuli National Historic Site, view is northwest towards Compounds I, II, and III, from UH West O’ahu Access Road; view in foreground is Compounds V and VI. May 2017.



Figure 6. Overview of Honouliuli National Historic Site, view is southeast toward Compounds V, VI, and VII from UH West O’ahu Access Road. May 2017.

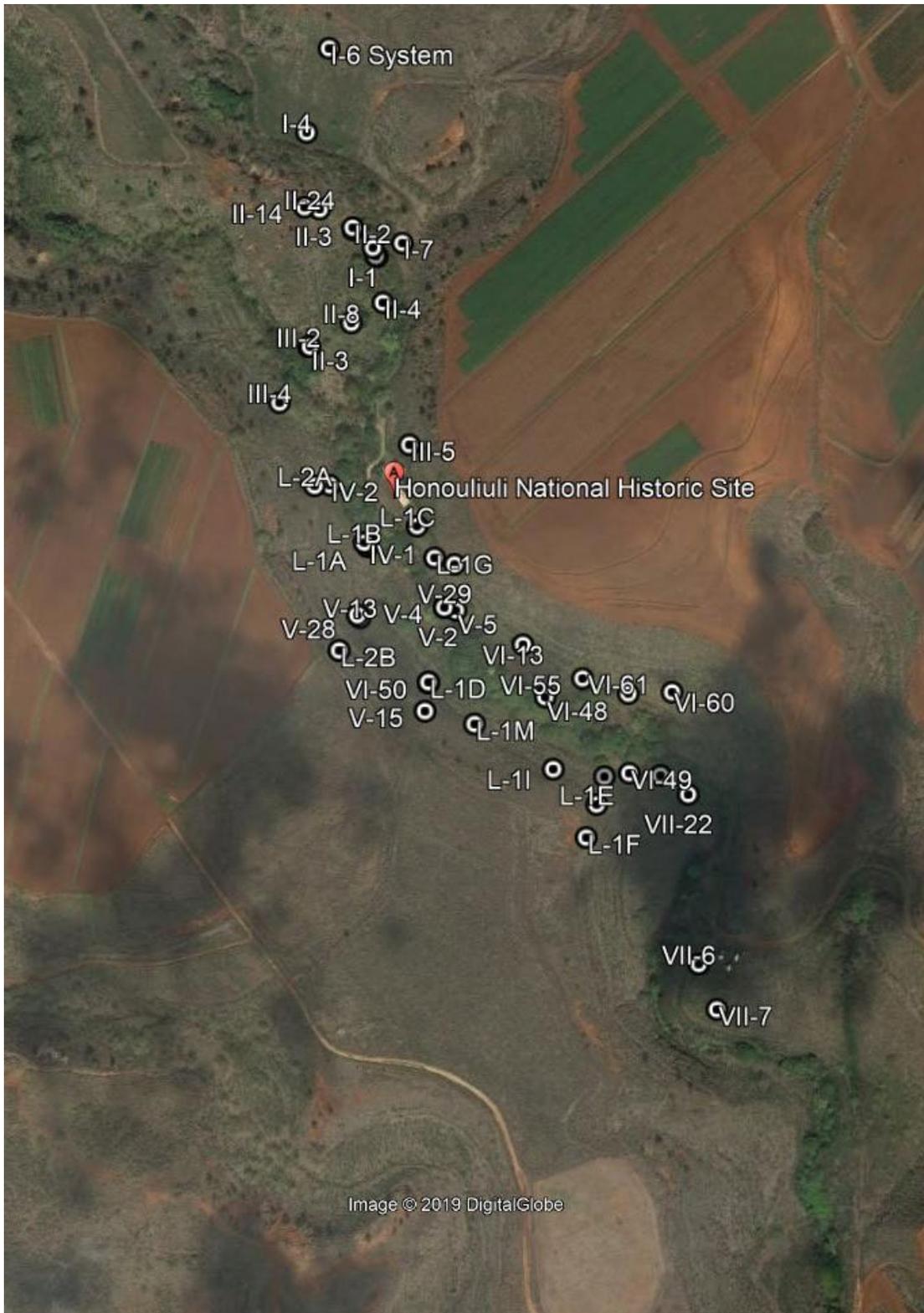


Figure 7. Distribution of 2018 assessed features within the Honouliuli National Historic Site. This Google product shows overlapping features that are near each other. See specific Compound feature distribution below.



Figure 8. Compound I distribution of features assessed during 2018 UH West O‘ahu field season.



Figure 9. Feature I-1, Sewer Pipe.



Figure 10. Representative sample of debris related to irrigation flumes, Feature I-4.



Figure 11. Exposed continuation of Feature I-6; view is south. Photograph is after fire in February 2018.



Figure 12. Exposed continuation of Feature I-6; view is east. Photograph is after fire in February 2018.



Figure 13. April 1948 Aerial Photograph (UM Mānoa Geospatial Map Collection). Feature I-7 is circled in red.



Figure 14. General overview of excavations area of Feature I-7, view is northwest.



Figure 15. Feature I-7, TP-H, south wall with floor “shadow”; view is south.

Honouliuli National Monument
Compound I
Feature I-7
TP-E, East Wall

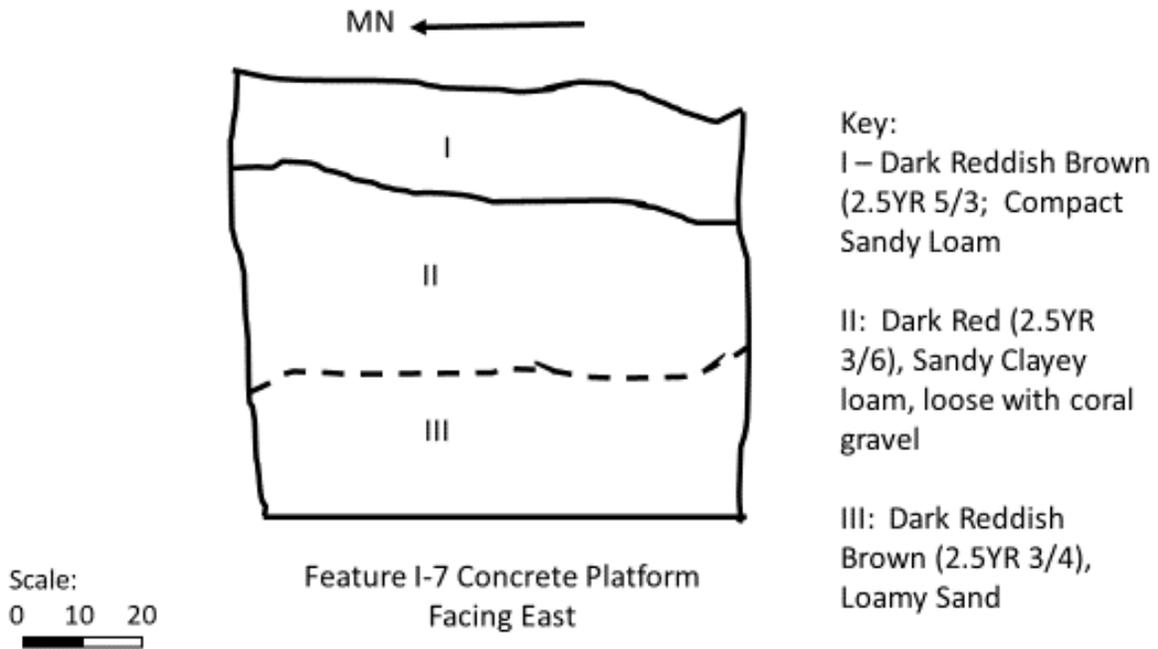


Figure 16. Feature I-7 west wall section drawing.

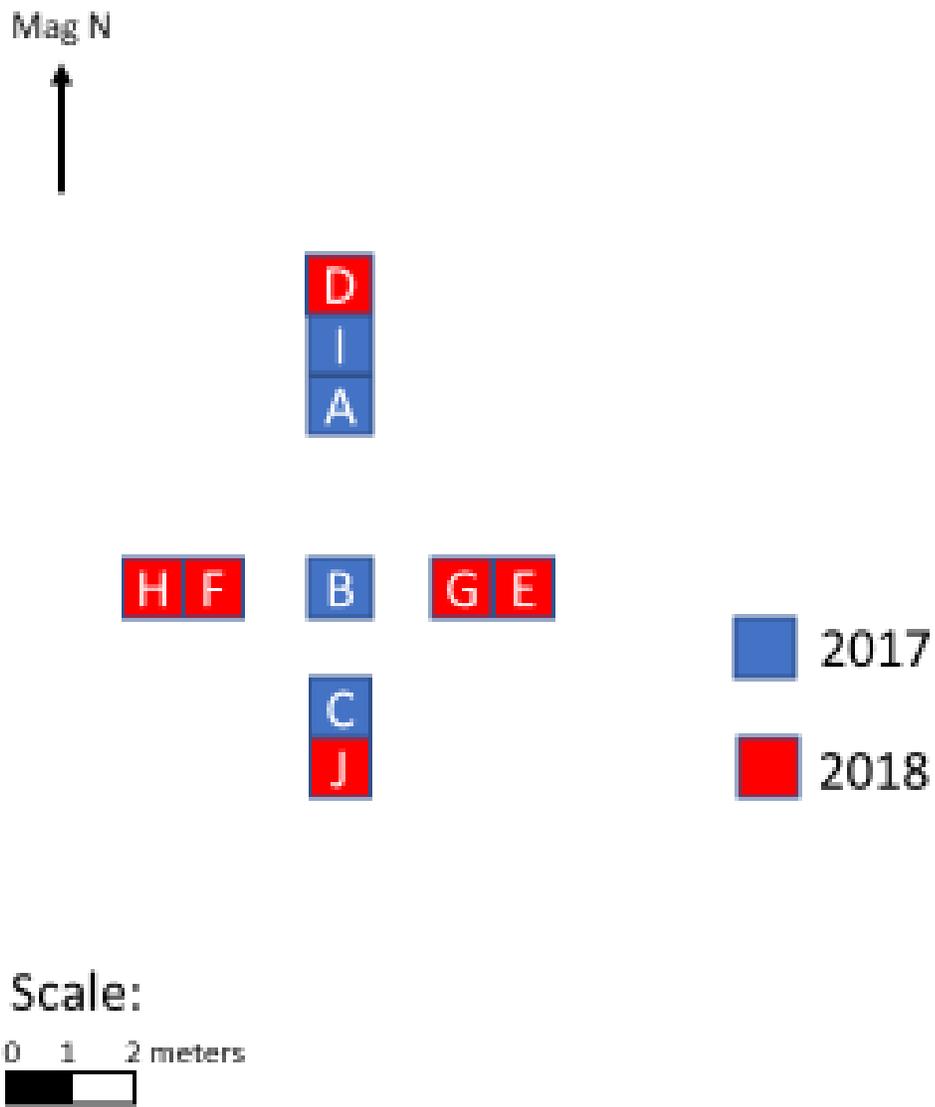


Figure 17. Schematic Map of Feature I-7 Excavations, 2017 and 2018.



Figure 18. Distribution of Compound II features assessed during 2018 field season.



Figure 19. Feature II-2, Shower Building Foundation (top, facing north; bottom, detail of shower drain).



Figure 20. Feature II-3, Cesspool (top, general view, facing northwest; bottom, damage from *koa haole* growth).



Figure 21. Feature II-4, Cesspool, partially uncovered, facing north (top overview; bottom hatch detail).



Figure 22. Feature II-8, Structural Debris and Artifacts, overview under *Ficus* tree; facing southeast.



Figure 23. Feature II-8, Vertical Stake.



Figure 24. Feature II-8, Sink Debris.



Figure 25. Feature II-8, Concrete Pipe (?) (top vertical view; bottom “side” view).



Figure 26. Feature II-11, Rock Wall.



Figure 27. Feature II-14, Inscription “WK”.



Figure 28. Feature II-22, Culverts (top, south end; bottom, north end).

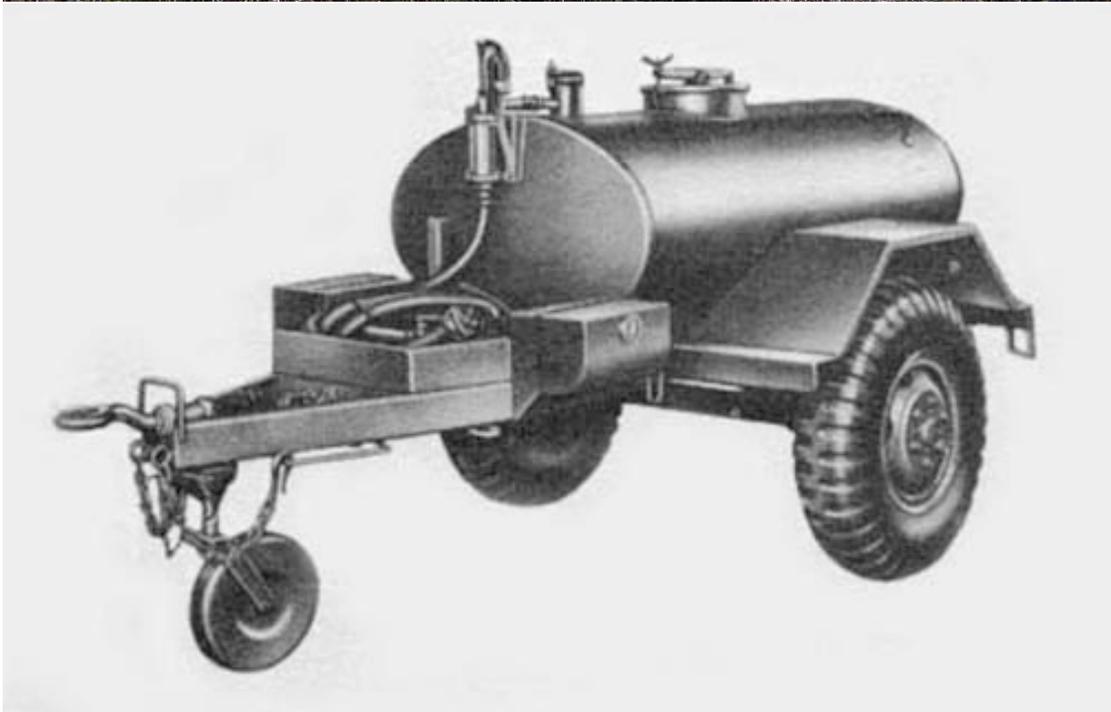


Figure 29. Feature II-24, M106 Trailer with Water Tank (top, current condition of feature; M106 Trailer with Water Tank, https://olive-drab.com/images/id_m106_trailer_700_01.jpg).

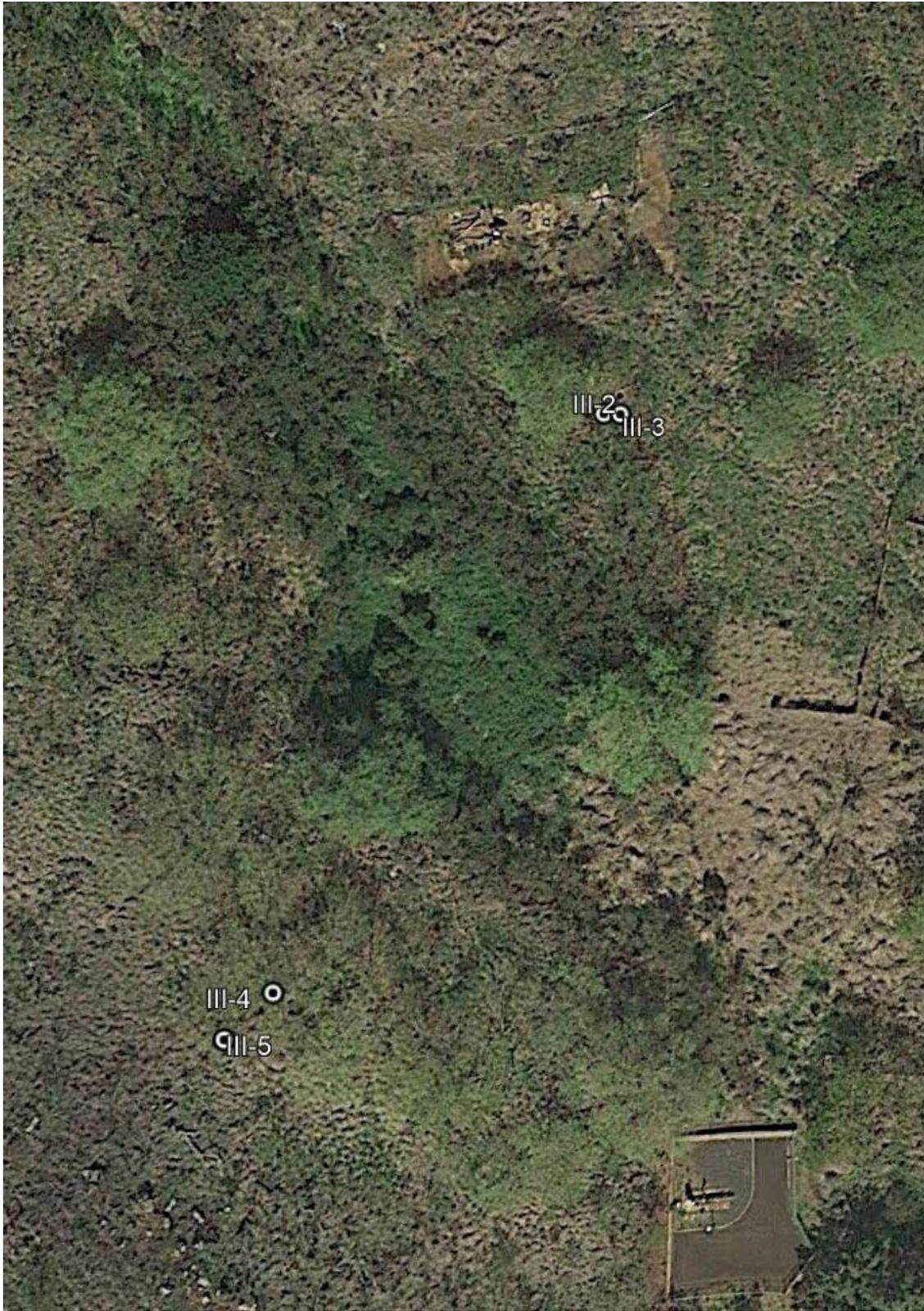


Figure 30. Distribution of Compound III features assessed during the 2018 field season.



Figure 31. Feature III-2, Concrete Structure.



Figure 32. Feature III-3, Cesspool (top, general view of cesspool, facing southwest; bottom, interior).



Figure 33. Feature III-4 Shower Building Foundation, facing northwest.



Figure 34. Feature III-5, Septic Tank (top, surface view, facing north; bottom, interior of tank).

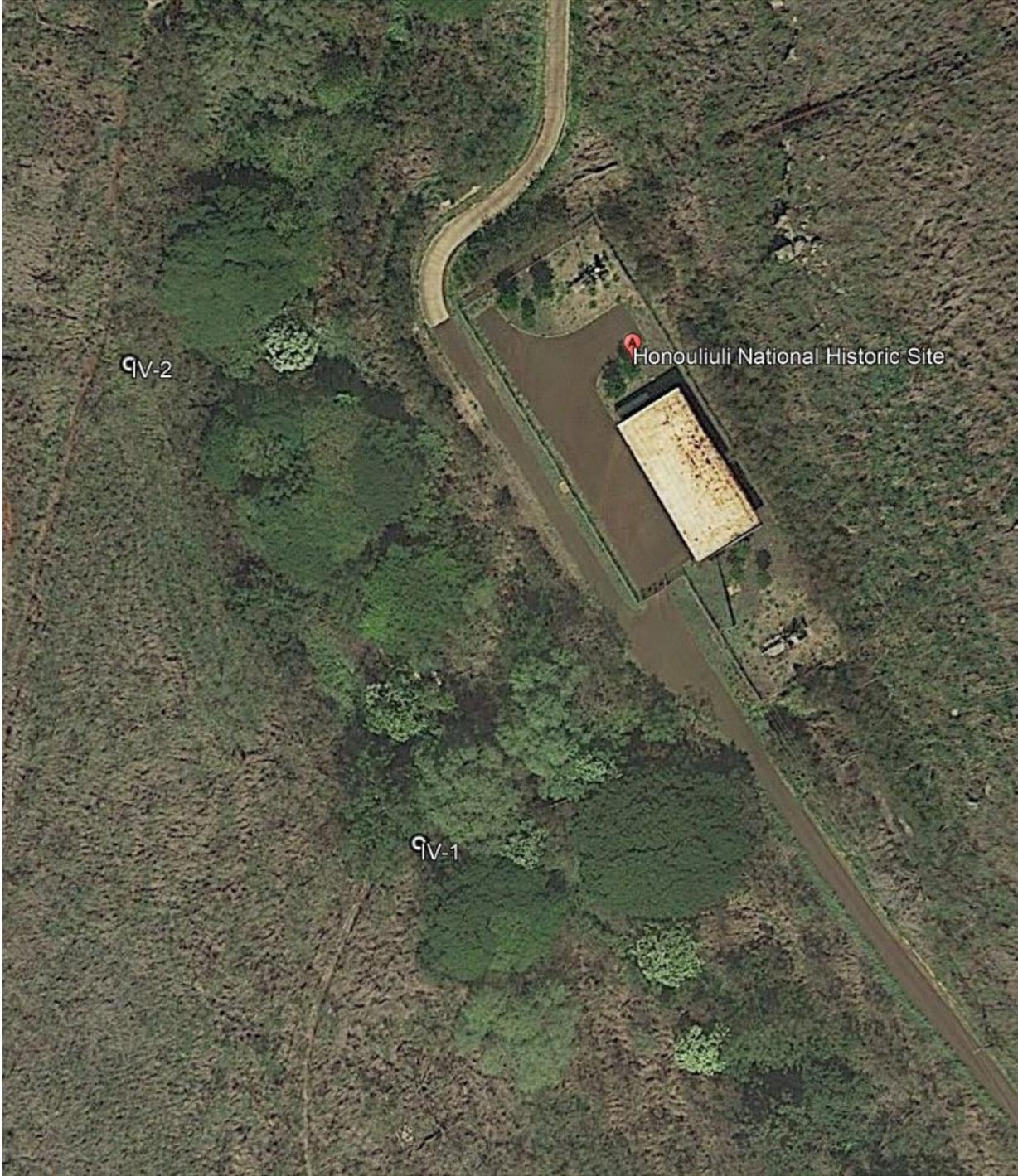


Figure 35. Map of Compound IV showing features assessed during the 2018 field season.



Figure 36. Feature VI-1, Manhole Exterior (top) and interior (bottom) showing pipes and concrete floor and troughs.



Figure 37. Feature IV-2 Guard Tower Footings, facing east.



Figure 38. Compound V features assessed during the 2018 field season.



Figure 39. Feature V-2, Structural Debris.



Figure 40. Feature V-4, Rock Alignment.



Figure 41. Feature V-5, Metal pole with concrete plug.



Figure 42. Feature V-11, Rock Wall.



Figure 43. Feature V-13, Posthole (upper, detail of posthole; lower, check on buried inscription, “R.N. HoTchkiss 8/13/43”).



Figure 44. Feature V-15, Rock Wall (upper, southern portion of wall, facing south; lower, bowing and cracking of 1955 wall repair).



Figure 45. Feature V-28, Rock Wall.



Figure 46. Compound VI features assessed in the 2018 field season.

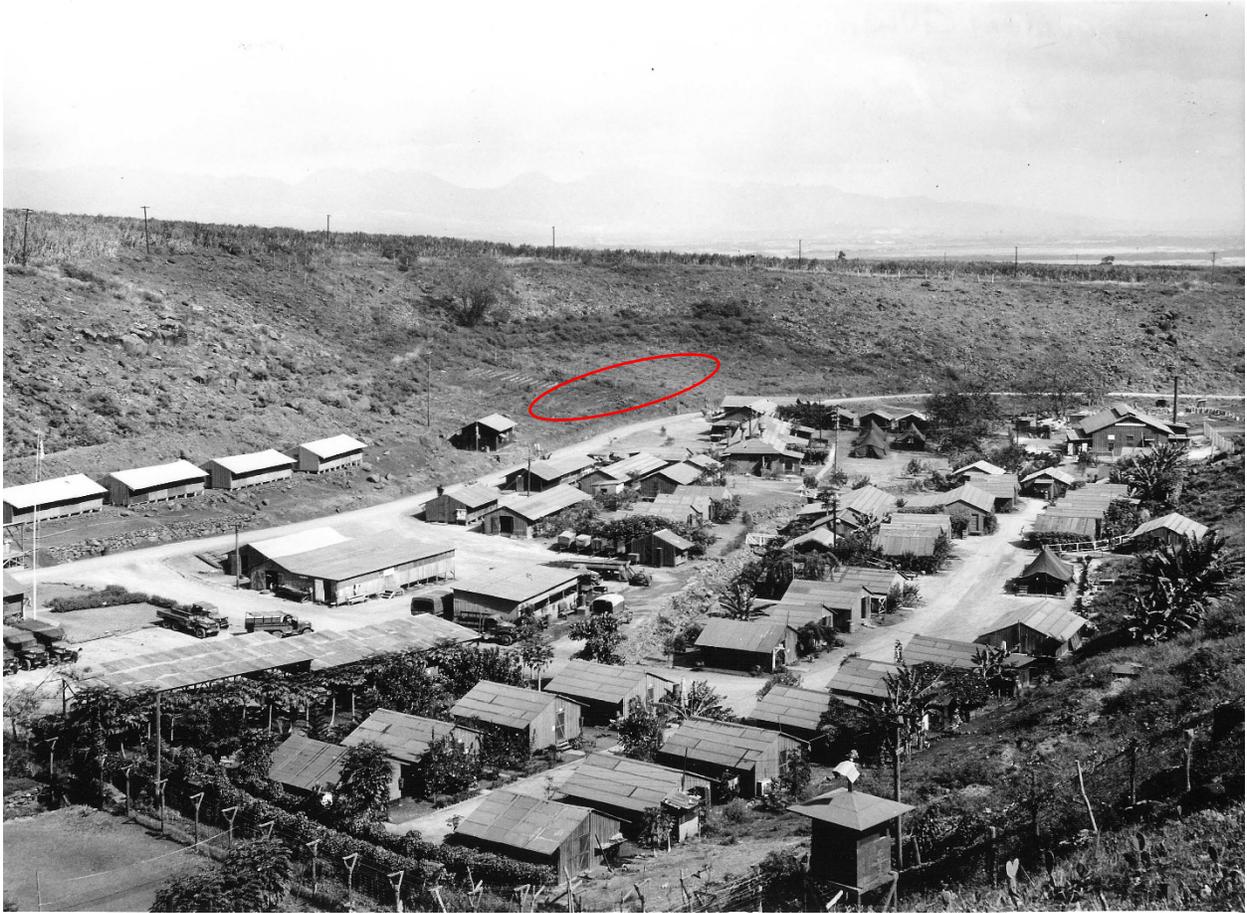


Figure 47. Compound VI, facing southeast (R.H. Lodge Collection, Hawaiian Plantation Villages). Location of Features VI-60 and 61 are in the red oval.



Figure 48. Feature VI-13, Rock Wall (top, general shot, facing northeast; bottom, detail of lava rock tiers, facing east).



Figure 49. Feature VI-37, Manhole Lid.



Figure 50. Feature VI-48, Rock Wall, Possible Foundation (?); facing south.



Figure 51. Feature VI-49, Laundry Building Foundation.



Figure 52. Feature VI-50, Guard Tower Footings with inscription “JAN.21-1943”; note cracks in cement veneer.



Figure 53. Figure VI-55. Rock Wall.



Figure 54. Feature VI-60 Rock Wall.



Figure 55. Feature VI-60 Rock Wall detail (mid-wall stairs).



Figure 56. Feature VI-61 Rock Wall.



Figure 57. Feature VI-61, Rock Wall detail (gap/opening).



Figure 58. Distribution of Compound VII features assessed during the 2018 field season.



Figure 59. Features VII-1 (background) and VII-2 (foreground), Septic Tank, facing south.



Figure 60. Feature VII-3, Septic Tank/Concrete Structure.



Figure 61. Feature VII-4, Fence Remnants.



Figure 62. Feature VII-6, Structural Debris (Irrigation Flumes)



Figure 63. Feature VII-7, Irrigation Flume (Concrete Trough).



Figure 64. Figure VII-22 (new), Septic Tank.

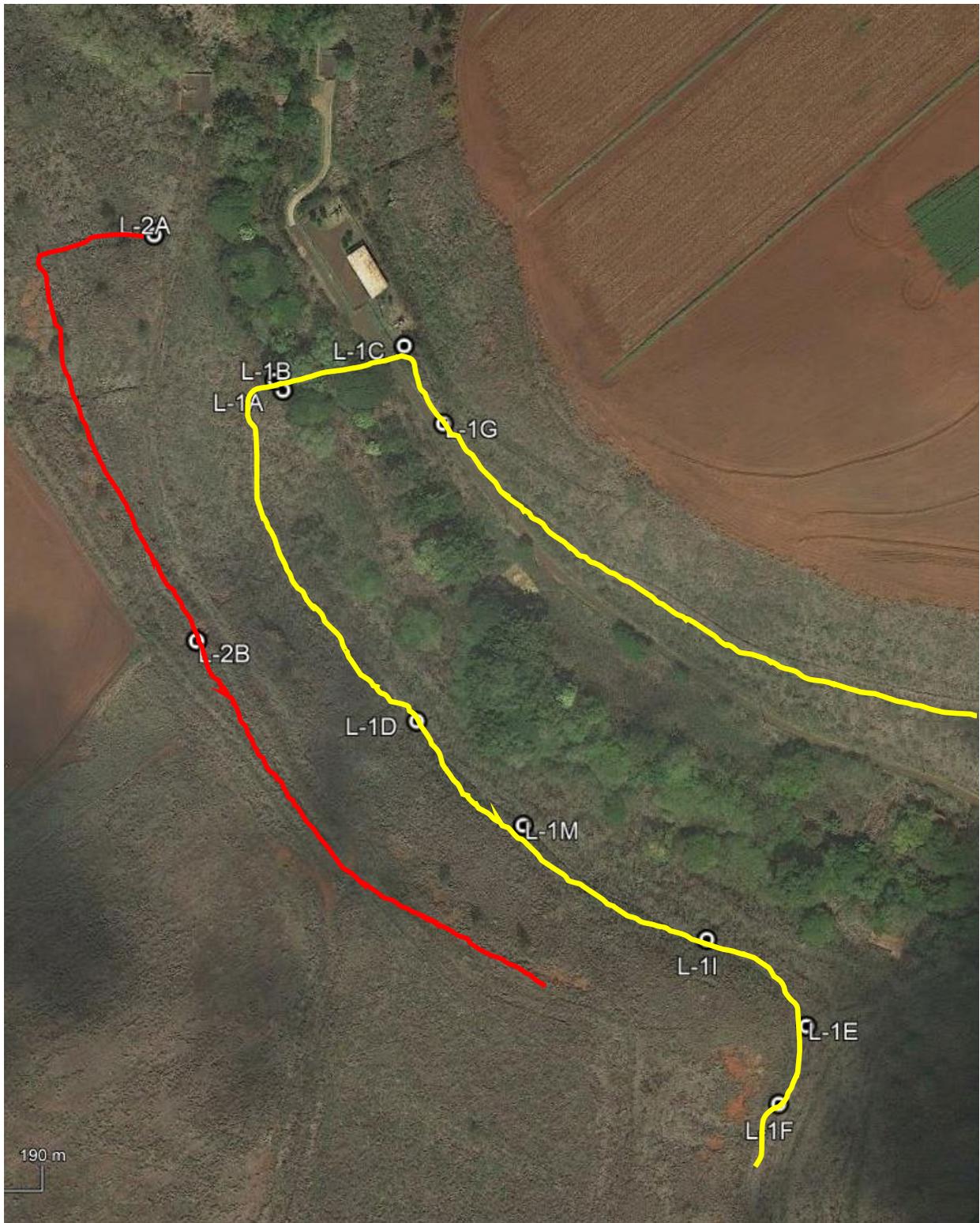


Figure 65. Distribution of Linear Features assessed during 2018 field season (red is irrigation features associated with L-2; yellow is associated with L-1).



Figure 66. Feature L-1a, Main Aqueduct.



Figure 67. Feature L-1b, Concrete Pier with Date.



Figure 68. Feature L-1c, Concrete Pipe, leading to Aqueduct, L-1a.



Figure 69. Feature L-1d, Closed Concrete and Rock Gate.



Figure 70. Feature L-1e, Sealed Gate, facing south.



Figure 71. Feature L-1f, Wooden Flume (top, general view, facing northwest; bottom, detail of flume tray, facing north).



Figure 72. Feature L-1g, Rock Wall (top – overview of wall facing south-southeast; bottom – detail of dry-stack technique).



Figure 73. Feature L-1i, Sealed Outlet, facing south.



Figure 74. Feature L-2a, Metal Siphon and Concrete Piers, facing downslope/east.



Figure 75. Feature L-2a, Metal Siphon. This portion of the feature is buried under the western road into the national historic site and is actively collapsing.



Figure 76. Feature L-2b, Exposed Irrigation Canal.



Figure 77. Portion of Hawaiian Islands Photomap 1:25,000 scale, Sheet 15 of 25 showing the Honouliuli Camp with structures and tents, dated 1944.

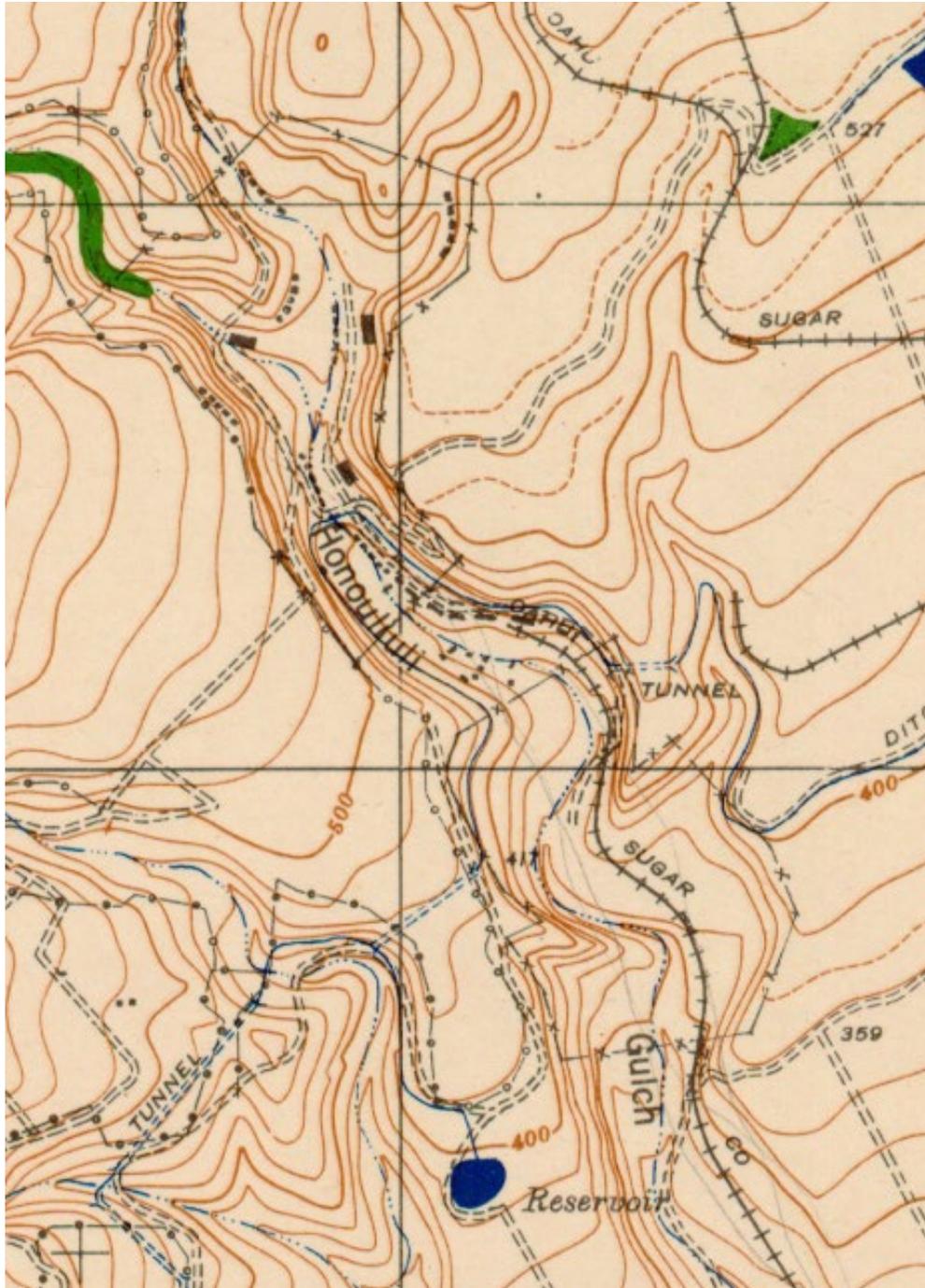


Figure 78. Portion of topographic map showing Honouliuli Internment and POW Camp (War Department, Corps of Engineers U.S. Army, Territory of Hawaii, Island of Oahu – Waipahu Quadrangle). This shows the irrigation canals and tunnels as well as portions of the mess hall platforms (black rectangular squares); dated 1943. Absent is the large mess hall (Feature V-1) associated with the internees, suggesting that these features were not constructed when the data for this map was collected (prior to 1943).