

2.2 Previous Archaeological Research

The earliest archaeological studies on the island of Maui were a part of island-wide surveys conducted in the early 1900s (Stokes 1917; Walker 1931). These studies tended to focus on the generation of descriptive lists of large-scale architecture or traditional ceremonial *heiau* sites. No *heiau* or other archaeological sites were documented in the immediate vicinity of the current project area. Between 1931 and 1976, only sporadic archaeological studies were undertaken in the region and none in the vicinity of the project area.

Following the passage of the National Historic Preservation Act in 1966 and HRS Chapter 6E, which established the Historic Preservation Program in 1976, archaeological studies occurred as a condition of development on a more frequent basis. The lands surrounding the current project area have been subject to a variety of studies as described in Table 2 and depicted in Figure 18. These studies have identified NAS Puunene, consisting of 59 standing structures and 165 total features (SIHP # 50-50-09-4164), sugarcane plantation features (SIHP # -4800), post-war ranching features (SIHP # -4801), the Kīhei Railroad bed (SIHP # -4802), the Haiku Ditch and reservoir (SIHP # -4803), and 90 other historic properties (SIHP #s 50-50-10-6693 through -6774), consisting of features associated with the sugar plantation, ranching and/or WWII period. No historic properties have been documented within the current project area. Historic properties that have been documented in the vicinity of the project area are depicted in Figure 19 and further described in Table 3.

2.2.1 Kennedy (1990)

In 1990, ACH completed an archaeological walk-through reconnaissance survey of the proposed Hawaiian Cement Puunene Quarry site including the current project area. The study documented that the entire property was covered in sugarcane with the exception of Kolaloa Gulch. The survey included an inspection of Kolaloa Gulch and the surrounding agricultural fields. No historic properties were identified, and no further work was recommended.

2.2.2 Tomonari-Tuggle et al. (2000)

In November 1999, International Archaeological Research Institute, Inc. (IARII) conducted an AIS of the former location of naval air station (NAS) Puunene (Tomonari-Tuggle et al. 2000), located north of the present project area. The entire NAS Puunene, consisting of 165 features, 59 of which are standing structures, has been deemed historically significant and designated SIHP # 50-50-09-4164. In addition to this historic military site, four other historic properties were identified: sugarcane plantation features (SIHP # -4800), post-war ranching features (SIHP # -4801), Kīhei Railroad bed (SIHP # -4802), and Haiku Ditch and reservoir (SIHP # -4803).

2.2.3 Lee-Greig et al. (2011)

From 18 October through 12 December 2009 and from 1 through 17 February 2010, CSH conducted an AIS of approximately 3165 acres in Pūlehu Nui for a proposed agricultural subdivision (Lee-Greig et al. 2011). Ninety historic properties (SIHP #s 50-50-10-6693 through -6774) were documented, consisting of features associated with the sugar plantation, ranching and/or WWII period.

Table 2. Previous Archaeological Studies in the Vicinity of the Project Area

Reference	Type of Study	Location	Results
Kennedy (1990)	Archaeological reconnaissance survey	Hawaiian Cement Puunene Quarry	No historic properties identified
Tomonari-Tuggle et al. (2000)	Archaeological inventory survey as part of an archaeology, architecture, and oral history report	Former NAS Puunene	Documented NAS Puunene, consisting of 59 standing structures and 165 total features (SIHP # 50-50-09-4164) and identified four other historic sites: sugarcane plantation features (SIHP # -4800); post-war ranching features (SIHP # -4801); Kīhei Railroad bed (SIHP # -4802); and Haiku Ditch and reservoir (SIHP # -4803)
Lee-Greig et al. (2011)	Archaeological inventory survey	Approximately 3165 acres located northeast and extending <i>mauka</i> from the present project area	Identified 90 historic properties (SIHP #s 50-50-10-6693 through -6774), consisting of features associated with the sugar plantation, ranching and/or WWII period
Rotunno-Hazuka et al. (2011)	Archaeological inventory survey	Hawaiian Cement Puunene Quarry Expansion Increment 1	No historic properties identified
Fuentes et al. (2015 Draft)	Archaeological inventory survey	Hawaiian Cement Puunene Quarry Expansion Increment 3	No historic properties identified

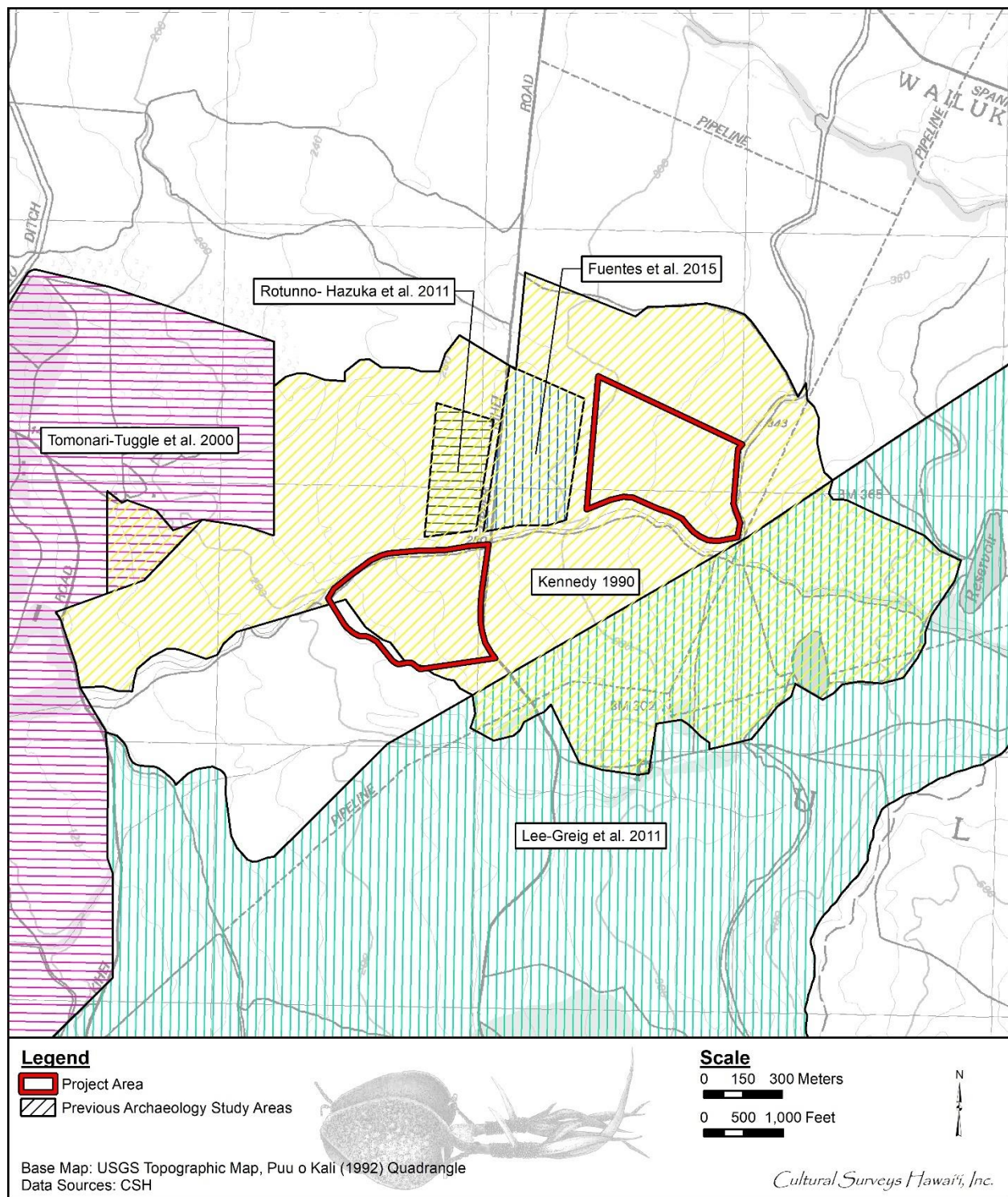


Figure 18. Portion of the 1992 Puu o Kali USGS topographic quadrangle depicting the location of previous archaeological studies in the vicinity of the current project area

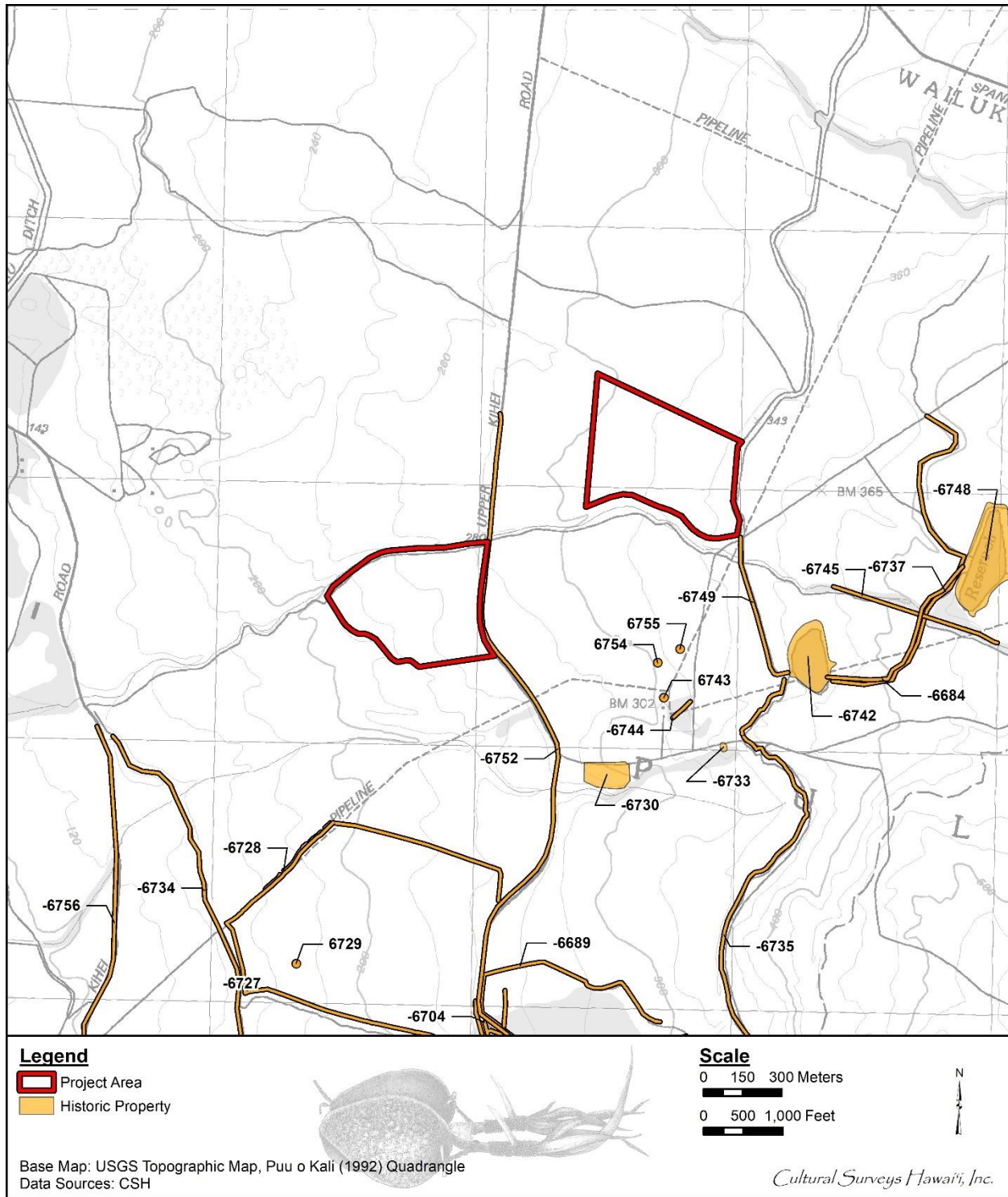


Figure 19. Portion of the 1992 Puu o Kali USGS topographic quadrangle depicting the location of previously documented historic properties in the vicinity of the project area

Table 3. Historic properties documented in the vicinity of the project area

SIHP 50-50- 10-	Feature	Feature Type	Function	Probable Age	Condition
6684	None	Irrigation Pipe	Water Control	Historic Plantation	Fair to Poor
6689	None	Fence Line	Animal Husbandry	Historic Ranch	Good
6704	None	Fence Line	Animal Husbandry	Historic Ranch	Fair
6727	None	Fence Line	Indeterminate	Historic Ranch	Poor
6728	None	Irrigation Ditch	Water Control	Historic Plantation	Remnant
6729	None	C-Shape	Indeterminate	Possible Historic	Good
6730	Overall	Plantation Camp 3	Habitation	Historic Plantation	Good to Remnant
	A	Platform	Habitation	Historic Plantation	Good to Fair
	B	Wall	Indeterminate	Historic Plantation	Fair
	C	Wall	Indeterminate	Historic Plantation	Fair
	D	Depression	Indeterminate	Historic Plantation	Fair to Poor
	E	Mound	Indeterminate	Historic Plantation	Good
	F	Wall/Depression	Indeterminate	Historic Plantation	Poor
	G	U-Shape	Indeterminate	Historic Plantation	Poor
	H	Depression/Hole	Habitation	Historic Plantation	Poor
	I	Terrace	Habitation	Historic Plantation	Remnant
6733	None	Reservoir	Agriculture	Historic Plantation	Good
6734	None	Irrigation Ditch	Water Control	Historic Plantation	Good
6735	Overall	Irrigation Ditch and Component Gates	Water Control	Historic Plantation	Good to Fair
	A	Irrigation Ditch	Water Control	Historic Plantation	Good
	B	Irrigation Gates	Water Control	Historic Plantation	Fair
6737	None	Irrigation Ditch	Water Control	Historic Plantation	Good
6742	None	Reservoir	Agriculture	Historic Plantation	Good
6743	None	Pump House	Agriculture	Historic Plantation	Remnant
6744	None	Fence Line	Animal Husbandry	Historic Ranch	Remnant

SIHP 50-50- 10-	Featur e	Feature Type	Function	Probable Age	Condition
6745	None	Fence Line	Possible Boundary Marker	Historic Plantation	Poor
6748	None	Reservoir	Agriculture	Historic Plantation	Good
6749	None	Irrigation Ditch	Water Control	Historic Plantation	Good
6752	None	Historic Road	Transportation	Historic Plantation	Good to Poor
6754	None	WWII-Era Bomb Shelter	WWII Military	WWII Military	Excellent
6755	None	Concrete Cistern	Water Control	Historic Plantation	Good
6756	None	Historic Road	Transportation	Historic Plantation	Good to Poor

2.2.4 Rotunno-Hazuka et al. (2011)

In 2010, ASH conducted an archaeological inventory survey for the 24.476 acres for expansion within Increment 1 of the Hawaiian Cement Quarry (Rotunno-Hazuka et al. 2011). The study included the excavation of 20 backhoe-assisted test excavations that documented the agricultural plow zone developed over eroding and solid basalt bedrock. No historic properties were identified and as such, the study was termed an “archaeological assessment” in accordance with §13-284-5(5)(A). The study recommended no further work.

2.2.5 Fuentes et al. (2015 Draft)

In 2014, ASH returned to the area to conduct an archaeological inventory survey of Increment 3 of the Hawaiian Cement Quarry (Fuentes et al. 2015 Draft). The study included the excavation of 17 backhoe-assisted test excavations with no historic properties identified. As such the study was termed an “archaeological assessment” in accordance with §13-284-5(5)(A). The study was submitted to the SHPD on 13 October 2014. The SHPD requested revisions to the study in a 12 May 2015 historic preservation review letter (SHPD Log No.: 2014.04654; Doc. No: 1505MD19). The study was revised and resubmitted to the SHPD in July 2015 and again in September 2017 with no response. Quarrying work in Increment 3 began and has continued without SHPD acceptance of the archaeological inventory survey.

2.3 Predictive Model

While previous archaeological studies conducted in the vicinity of the project area have identified numerous surface historic properties related to commercial sugarcane cultivation, ranching, and military use, no historic properties have been identified within the current project area. The project area was subject to a reconnaissance level pedestrian inspection with no finds. Two adjacent archaeological inventory surveys included a total to 37 backhoe-assisted test excavations with no finds. The adjacent studies documented that the stratigraphy of this area includes an agricultural plow zone developed over eroding and solid basalt bedrock. Based on the results of previous archaeological studies, there is a low expectation of the inadvertent discovery of historic properties within the project area. However, architectural remnants or artifacts related to plantation agriculture, the plantation railroad, or nearby military use are possible. Furthermore, while unlikely at this location given the traditional and historic background of the area, human burials have been identified beneath agricultural plow zones on Maui (Yucha and Yucha 2018 Draft; Yucha et al. 2017).

Section 3 Archaeological Monitoring Provisions

Under Hawai'i State historic preservation legislation, "Archaeological monitoring may be an identification, mitigation, or post-mitigation contingency measure. Monitoring shall entail the archaeological observation of, and possible intervention with, on-going activities, which may adversely affect historic properties" (HAR §13-13-279-3).

Hawai'i State historic preservation legislation governing archaeological monitoring programs requires that each monitoring plan discuss eight specific items (HAR §13-13-279-4). The monitoring provisions below address these eight requirements in terms of archaeological monitoring for the excavations within the current project area.

1) Anticipated Historic Properties:

No historic properties have been previously documented within the project area. A review of traditional and historical research and previous archaeological studies conducted in the area suggests that architectural remnants or artifacts related to plantation agriculture, the plantation railroad, or nearby military use are possible.

2) Locations of Historic Properties:

The entire project area was previously used for commercial sugarcane agriculture and was subject to continuous plowing. Artifacts and structural remnants may be located anywhere within the project area.

3) Fieldwork:

Archaeological monitoring will begin with the completion of a 100% coverage pedestrian inspection to confirm that there are no historic properties on the surface of the project area. This inspection will be completed prior to the start of project-related ground disturbance and the results will be provided to the SHPD.

Archaeological monitoring will be conducted intermittently during the excavation of soils overlying bedrock within the project area and will include a combination of on-site and on-call strategies. CSH recommends that overlying sediment removal from the project area be scheduled to be completed in one effort as opposed to as needed during the quarrying effort if possible. An on-site archaeological monitor will observe sediment excavation for up to five (5) full days to confirm that there are no subsurface historic properties within the sediment deposits of the project area. If there are no significant finds during this effort, the remainder of sediment excavation will proceed under on-call archaeological monitoring with an archaeologist conducting spot checks once every 10 business-days (approximately twice per month) to record progress and confirm that subsurface conditions have not changed. No archaeological monitoring will occur during quarrying of basalt bedrock.

The monitoring fieldwork will likely encompass the documentation of subsurface archaeological deposits (e.g., trash pits, structural remnants) and will employ current standard archaeological recording techniques. This will include drawing and recording the stratigraphy of excavation profiles where cultural features or artifacts are exposed as well as representative profiles. These exposures will be photographed, located on project area maps, and sampled. Photographs and representative profiles of excavations will be taken

even if no historically significant sites are documented. As appropriate, sampling will include the collection of representative artifacts, bulk sediment samples, and/or the on-site screening of measured volumes of feature fill to determine feature contents.

In the event of significant finds, the SHPD will be notified. If human remains are identified, construction activity in the vicinity will be stopped and no exploratory work of any kind will be conducted unless specifically requested by the SHPD. All human skeletal remains that are encountered during excavation will be handled in compliance with HAR §13-13-300 and HRS §6E-43.

4) Archaeologist's Role:

The on-site archaeologist will have the authority to stop work immediately in the area of any findings so that documentation can proceed, and appropriate treatment can be determined. In addition, the archaeologist will have the authority to slow and/or suspend construction activities in order to ensure that the necessary archaeological sampling and recording can take place.

5) Coordination Meeting:

Before work commences on the project, an archaeologist shall hold a coordination meeting to orient the construction crew to the requirements of the archaeological monitoring program. At this meeting the monitor will discuss the procedures for both on-site and on-call monitoring. The archaeologist will also emphasize his or her authority to temporarily halt construction and that all finds (including objects such as bottles) are the property of the landowner and may not be removed from the construction site. At this time, it will be made clear that the archaeologist must be on-site to conduct a pedestrian inspection before work commences, remain on-site for five (5) full days of sediment excavation, and continue with spot checks once every 10 business-days for the duration of sediment excavation. It will also be clarified that no archaeological monitoring is required during quarrying of basalt bedrock.

6) Laboratory Work:

Laboratory work will be conducted in accordance with HAR §13-13-279-5(6). Laboratory analysis of non-burial related finds will be tabulated, and standard artifact and midden recording will be conducted as follows. Artifacts will be documented as to provenience, measurements, weight, type of material, and presumed function. Photographs of representative artifacts will be taken for inclusion in the archaeological monitoring report. Bone and shell midden materials will be sorted down to species, when possible, and then tabulated by provenience.

As appropriate, collected charcoal material obtained within intact cultural deposits will be analyzed for species identification. Charcoal samples ideal for dating analyses will be sent to Beta Analytic, Inc. for radiocarbon dating. If appropriate, artifacts may be sent to the University of Hawai'i-Hilo Geoarchaeology Lab for Energy-Dispersive X-ray Fluorescence (EDXRF) analysis in order to identify and possibly geographically locate the source material. All analyzed samples, provenience information, and results will be presented in table form within the archaeological monitoring report.

7) Report Preparation:

The report will contain sections on monitoring methods, archaeological results, stratigraphy, and results of laboratory analyses, and it will present a synthesis of these results. The report will address the requirements of a monitoring report (pursuant to HAR §13-13-279-5). Photographs of excavations will be included in the monitoring report even if no historically significant sites are documented. Should burial treatment be completed as part of the monitoring effort, a summary of this treatment will be included in the monitoring report. Should burials and/or human remains be identified, CSH will provide all appropriate additional written documentation (e.g., letters, memos, reports) that may be requested by the SHPD.

8) Archiving Materials:

All burial materials will be addressed in accordance with SHPD directives. Materials not associated with burials will be temporarily stored at CSH's Wailuku office until an appropriate curation facility is selected, in consultation with the landowner and the SHPD. All data generated will be stored at the CSH offices.

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Appendix A SHPD Correspondence

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
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WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAPOLEI AND ISLAND RESERVE COMMISSION
LAND
STATE PARKS

August 8, 2012

Mr. Jeffrey Pantaleo, Principal Investigator
C/O Ms. Lisa Rutunno-Hazuka
Archaeological Services Hawai'i
Via Email: lisa@ashmaui.com

LOG NO: 2011.0298
LOG NO: 2011.0340
DOC NO: 1208JP01

Aloha Ms. Rotunno-Hazuka:

**SUBJECT: Chapter 6E-42 Historic Preservation Review-
Archaeological Assessment Report for the Hawaiian Cement Quarry Expansion Project
Pulehunui Ahupua'a, Wailuku District, Island of Maui
TMK (2) 3-8-004:001 (por.)**

Thank you for the opportunity to review the report titled *Draft Archaeological Assessment Report for Hawaiian Cement Quarry Expansion Located at TMK [2] 3-8-04:001 por., Pulehunui Ahupua'a, Kula Moku, Wailuku District, Island of Maui* by Rotunno-Hazuka, Fuentes, O'Claray and Pantaleo (January 2011). The report was originally received on January 26, 2011. We apologize for the delayed response.

The archaeological survey with negative findings was conducted for the 24.476-acre proposed rock quarry expansion site. A surface investigation occurred along with twenty excavated mechanical backhoe test trenches. Over the years, the project area has been disturbed continuously by intensive agricultural propagation and rock mining. Approximately 9.5 acres are active sugarcane fields. No further archaeological work is recommended for the project area, we concur with this recommendation.

The report contains information as required for assessment reports, pursuant to Hawaii Administrative Rule (HAR) 13-284 and 13-276-5; it is accepted as final. We request that a few corrections to be included in the final report (see attachment). Please send one hardcopy of the corrected final document, clearly marked **FINAL**, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library. Please send a corrected final report to the Maui SHPD office as well. For questions about this letter, please contact Jenny at (808) 243-5169 or Jenny.L.Pickett@Hawaii.gov.

Mahalo,

Theresa K. Donham
Archaeology Branch Chief

cc: County of Maui, Planning fax: (808) 270-7634
County of Maui DSA fax: (808) 270-7972

Ms. Lisa Rotunno-Hazuka
August 8, 2012
Page 2

ATTACHMENT

Requested corrections for: *Draft Archaeological Assessment Report for Hawaiian Cement Quarry Expansion Located at TMK [2] 3-8-04:001 por.s., Pulehunui Ahupua'a, Kula Moku; Wailuku District, Island of Maui* by Rotunno-Hazuka, Fuentes, O'Claray and Pantaleo (January 2011).

Previous Archaeological Studies

- 1) Please add the recent Cultural Surveys Hawaii archaeological surveys (2007 etc) to the map (Figure 9) and to the previous archaeology background text.

Lab Work

- 2) Please edit this section to indicate nothing was identified, collected, or being curated.

Trench Descriptions

- 3) Please correct the associated trench Figures to correspond with the accurate text references.

Additional Comment

- 4) Please adjust the contents regarding archaeological recommendations for adjacent areas accordingly. In the final copy of the report, please adjust the associated contents accordingly. As we recently discussed in meeting regarding the project report, individual projects are usually treated separately so each project needs to be evaluated on a case-by-case basis. We hope to continue evaluating and providing recommendations regarding future proposed projects for the surrounding areas.

DAVID Y. IGE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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CONSERVATION AND RESOURCES ENFORCEMENT
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FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

May 12, 2015

Jeffrey Pantaleo, M.A.
c/o Lisa Rotunno-Hazuka
Archaeological Services Hawaii, LLC
PO Box 1015
Puunene, Hawaii 96784
Via email to: lisa@ashmaui.com

LOG NO: 2014.04654
DOC NO: 1505MD19
Archaeology

Aloha Mr. Pantaleo:

**SUBJECT: Chapter 6E-42 Historic Preservation Review–
Draft Archaeological Assessment for the Hawaiian Cement Quarry
Pūlehu Nui Ahupua'a, Wailuku District, Island of Maui
TMK (2) 3-8-004:001 (por.)**

Thank you for the opportunity to review the submittal titled *Draft Archaeological Assessment Report for Hawaiian Cement Quarry Expansion Located at TMK: [2] 3-8-004:001 por., Pūlehu Nui Ahupua'a, Wailuku District, Island of Maui* by Fuentes, Rotunno-Hazuka, O'Claray-Nu and Pantaleo (October 2014). We received the submitted report on October 13, 2014 and apologize for the delay in our reply.

An archaeological survey was conducted prior to planned expansion of the existing Hawaiian Cement Quarry at the request of Mr. Gomes for the owner. This report documents an archaeological inventory survey of 41.968 acres, a portion of the 2,008 acres contained in parcel 001. Fieldwork occurred on the 14th and 28th of June and the 3rd and 12th of July in 2014. 33.168 acre were cultivated in sugarcane at that time, while 8.8 acres were cleared following harvest. Pedestrian survey was performed by one archaeologist and was followed by 19 mechanical excavations, including 17 backhoe trenches and two bulldozer cuts. No historic properties were identified in any of the excavations or above ground.

We are requesting revisions to the report as detailed in the attachment to this letter. Please contact me at (808) 243-4641 or Morgan.E.Davis@hawaii.gov if you have any questions or concerns about this letter.

Mahalo,

Morgan E. Davis
Lead Archaeologist, Maui Section

Archaeological Services Hawaii, LLC
May 12, 2015
Page 2

Attachment

*Draft Archaeological Assessment Report for Hawaiian Cement Quarry Expansion Located at
TMK: [2] 3-8-0047:001 pors., Pūlehu Nui Ahupua'a, Wailuku District, Island of Maui
by Fuentes, Rotunno-Hazuka, O'Claray-Nu and Pantaleo (October 2014)*

1. Executive Summary, page 2, first paragraph: please replace "As detailed in" for "The" before 'background research.'
 - a. Fifth paragraph: please delete everything after the second paragraph, beginning with the sentence beginning "Similarly" – these statements regarding areas outside of the survey area are out of scope for this report.
2. Introduction, page 9, first paragraph: please include a citation for the prior AA work in the nearby 42 acres mentioned here.
3. Figure 2, page 11: please provide a more detailed/closeup view (or a second map showing a portion, not all, of parcel 001) of the APE including the boundaries of Camps 3 and 13.
4. Existing Conditions, page 12, Environmental Setting first paragraph, first sentence: please replace "piece of land district" with "section of land."
 - a. Second to last sentence, same page: please replace "Kula District" with either "Makawao District" or "Kula Moku."
 - b. Last sentence: please clarify which "this" *ahupua'a* is referring to, as two were mentioned above.
5. Previous Archaeology, page 17, second entry: please note that Sinoto and Pantaleo 1991 does not appear on figure 8; please include.
 - a. Page 18, ASH 2010 AA, end of page: please provide a citation for the information about adding marine shells as a soil conditioner to provide phosphorous.
 - b. Page 19, final sentence: please replace lead-in "Unfortunately" with "However."
6. Field Work, page 21, second paragraph: please indicate the transect spacing used in pedestrian survey.
 - a. Third paragraph, second sentence: please revise – testing was not "systematic random" because it was worked around actively-farmed acreage, approximately 70% of the parcel was farmed in sugarcane at the time.
7. Results of Survey, page 22, third sentence: please revise as necessary, the sentence appears to have been cut off/incomplete after the number 17.
 - a. Somewhere in here, the inconsistency of excavation results needs to be addressed. Some trenches contained only a single layer, while others were up to five deep; yet all this was within a generally consistent depth. Please revise as necessary.
8. Table 1, pages 24-25: please continue the header on both pages.
 - a. Please provide a key for the null (?) value appearing first in the entry of Layer V, Trench #1.
9. Discussion and Recommendations, page 54, paragraph 2: please revise to include an explanation for variety observed in the findings and questioned in item 7a above.

Archaeological Services Hawaii, LLC
May 12, 2015
Page 3

- a. Fourth paragraph, sentence beginning "Similarly" and below – delete text between this word and the final sentence, these statements regarding areas outside of the survey area are out of scope for this report.
10. Appendix A, beginning on page 60: please review and revise. There are too many trench profiles labelled "TR 3" to be accurate; and only TRs 1-6 appear to be present. Also, specifically anomalous trenches like TR 9 are missing.