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DEPARTMENT OF LAND AND NATURAL RESOURCES

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August 25, 2010

Robert Spear, Ph.D.
Scientific Consultant Services, Inc.
711 Kapiolani Blvd., Suite 975
Honolulu, Hawaii 96813

LOG NO: 2010.1973
DOC NO: 1008MD08
Archaeology

Dear Dr. Spear:

SUBJECT: **National Historic Preservation Act (NHPA) Section 106 & Chapter 6E-42 Review – Archaeological Monitoring Plan for the Kawela Bridge Replacement Project Kawela Ahupua'a, Kona District, Island of Moloka'i**
TMK: (2) 5-4-001 (por.)

This letter reviews the aforementioned plan (McGerty and Spear May 2010; *An Archaeological Monitoring Plan for the Kawela Bridge Replacement Project, Kawela Ahupua'a, Kona District, Moloka'i Island, Hawai'i [TMK 5-04-001]; SCS Project Number 707AMP-1*), which we received on May 10, 2010. We apologize for the delay in our reply. This monitoring plan was prepared as part of a Memorandum of Agreement to mitigate the effects of the construction of the new bridge.

The Kawela Bridge located on Kamehameha V Highway (Route 450) is going to be replaced. The replacement will involve areas needed for a temporary detour road and bridge and the staging area for the construction. Archaeological monitoring was requested by SHPD in our earlier correspondence (*Log No. 2007.1179, Doc No. 0704NM30*) due to the presence of a known burial. SIHP 50-60-04-139 is located within the APE ca. 800' from the existing bridge. This site has been identified as an Historical sand mound burial from the battle of Pukuhiwa. Construction is not planned in this location.

This plan is accepted as final pursuant to HAR §13-279 and satisfies the Secretary of the Interior's Standards pursuant to 36 CFR §800. Upon receipt of this letter please submit one paper copy of your report marked "Final" to our Kapolei office along with a CD containing a searchable pdf version of the final report and a copy of this approval letter, marked to the attention of the Kapolei Library.

If you have any questions or comments about this letter, please contact Morgan Davis at (808) 896-0514 or email morgan.e.davis@hawaii.gov.

Aloha,

Theresa K. Donham
Acting Archaeology Branch Chief and Deputy SHPO
State Historic Preservation Division

SCS Project Number 707AMP-1

AN ARCHAEOLOGICAL MONITORING PLAN FOR THE KAWELA BRIDGE REPLACEMENT PROJECT KAWELA AHUPUA`A, KONA DISTRICT, MOLOKA`I ISLAND, HAWAI`I [TMK 5-04-001]

Prepared by:
Leann McGerty, B.A.
and
Robert L. Spear, Ph.D.

May 2010

Prepared for:
Mr. Mike Hunnemann
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31 No. Pauahi St., Second Floor
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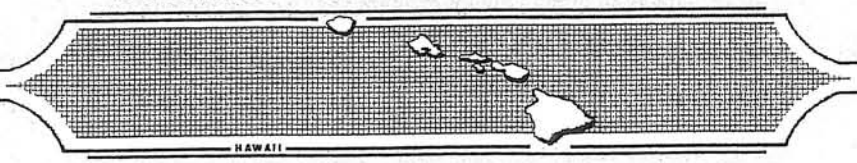
SCIENTIFIC CONSULTANT SERVICES Inc.



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INTRODUCTION

At the request of Kai Hawaii, Inc. Scientific Consultant Services, Inc. (SCS) has produced this Archaeological Monitoring Plan (AMP) for the Kawela Bridge replacement in Kawela Ahupua`a, Kona District, Moloka`i Island [TMK: 5-04-001] (Figures 1and 2).

The project area is comprised of land sections both *mauka* and *makai* of the present Kawela Bridge, as well as areas abutting the bridge to the east and west. It includes areas needed for a temporary detour road and bridge and the staging area for the construction parcel. The proposed Kawela Bridge Replacement Project is located between milepost 5.110 and milepost 5.118 on Kamehameha V Highway (Route 450).

This AMP covers all ground disturbing activities associated with subsurface excavation and replacement of the bridge. Archaeological Monitoring is being conducted due to the potential for the inadvertent discovery of human remains and/or historic cultural deposits in subsurface strata. For the same reasons, the State Historic Preservation Division (SHPD) concluded that Monitoring was required in this area, as submitted in an August 31, 2007 letter (Log No.:2007.1179; Doc No.:0704NM30) SHPD 2003). This AMP has been written in accordance with the rules of the SHPD, Department of Land and Natural Resources (§13-279 HAR).

This AMP will ensure that if human remains are identified during subsurface work, appropriate and lawful protocol concerning the Inadvertent Discovery of Human Remains (pursuant to §13-300-40a, b, c, HAR) is followed. This AMP will also ensure that if cultural deposits are identified, the work will satisfy reporting requirements outlined in §13-279-5(5) through (6).

The following text provides more detailed information on the reasons for monitoring, potential site types to be encountered during excavation, monitoring conventions, and methodology

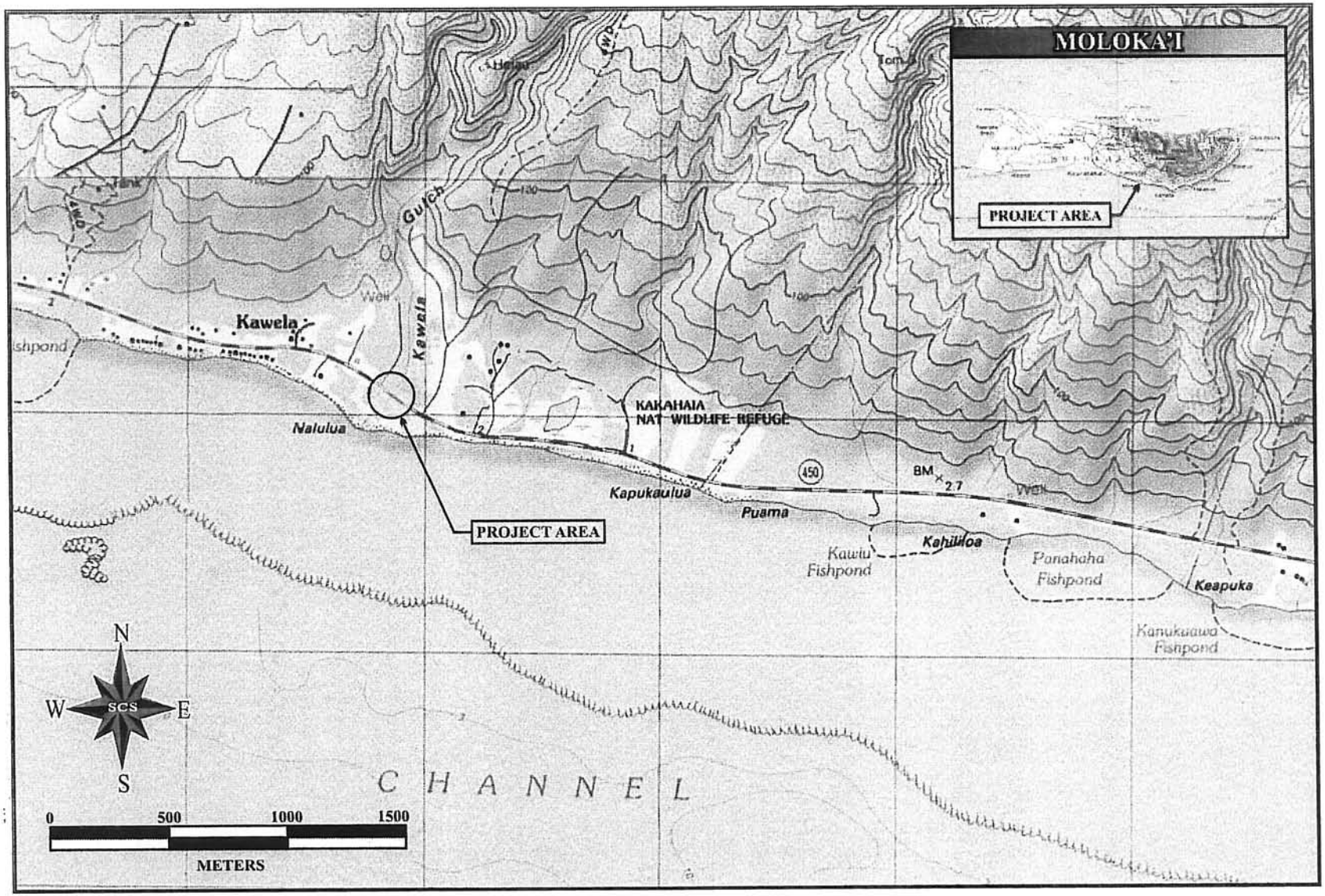

Figure 1: USGS Quadrangle Map Showing the Project Area.

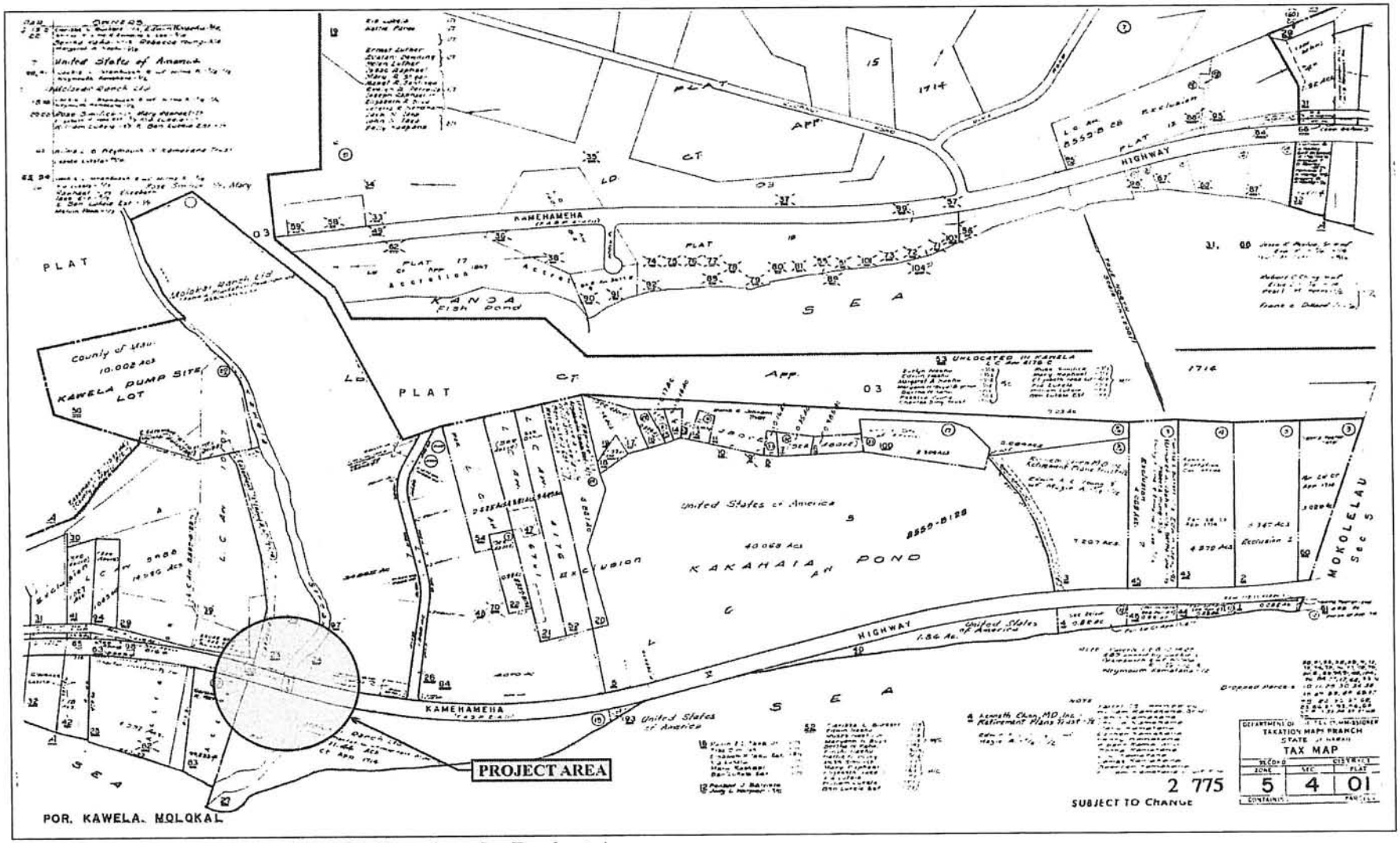

Figure 2: Tax Map Key [TMK] Showing the Project Area.

PROJECT AREA BACKGROUND

It is proposed that the present bridge be demolished and replaced with a longer and wider bridge that will conform to State of Hawai`i Department of Transportation and Federal Highway Administration Design and Seismic Standards. According to the project assessment report provided by Kai Hawaii Inc., the new bridge will be accessible to bicycles and pedestrians and will be designed according to the Flood Insurance Study conducted by the Federal Emergency Management Agency for 100 year recurrence period (M & E Pacific, Inc. 2000). A detour is planned to allow traffic to flow around the bridge construction area and may include the use of pipe culverts, a concrete span, or possibly a new temporary bridge. All design considerations will meet current State of Hawai`i Department of Transportation and Federal Highway Administration Design and Seismic Standards established by the State Department of Transportation and Federal Highway Administration.

PROJECT AREA DESCRIPTION

The project area covers approximately 96 m on each side of the present bridge (*mauka/makai*), incorporates a portion of Kawela Gulch, and extends along Kamehameha V Highway approximately 305 m from the center of the bridge. Kawela Gulch extends to the north and land to the south continues to the beach area.

SOILS

Pulehu clay loam (PsA) and Pulehu stony sandy loam (PoaB) are the two types of soil occurring in the project area (Foote *et al.* 1972:115,117). These sand types typically exhibit 0 to 7 percent slope and is found on alluvial fans ad stream terraces. Runoff is slow and permeability is moderate.

CLIMATE

Median Average Rainfall in this area of the southern coast of Moloka`i is less than five inches per year (Giambelluca *et al.* 1986).

PREVIOUS ARCHAEOLOGY AND SITES LIKELY TO BE ENCOUNTERED

In the early 1900s, John Stokes (1909) spent 10 weeks on Moloka`i, surveying *heiau* (religious structures) and other notable sites. Kanoa Pond, Kakaha`ia Ponds and two other fishponds, were identified as belonging to Kawela Ahupua`a along, with the fishing grounds of Waiokama (Summers 1971). The battlefield of Pakuhiwa and the burial mound of the warriors

were identified close to the project area (State Site 50-60-04-139, Feature 144). A *pu`uhonua* (place of refuge), or *pu`ukaua* (fortification) was recorded on the ridge separating the west and east sides of Kawela Gulch with a possible *heiau* on the west side of ridge (*ibid*). Petroglyphs were noted by Emory on a boulder situated on the ridge east of Kawela Gulch, around 300 feet amsl; a house site and family shrine are nearby (*ibid*)

Most of the archaeological studies have concentrated on the Kalama`ula-Kaunakakai area. This was the place of the *ali`i* as the *luakini heiau* and royal bath attest. However, Weisler and Kirch conducted a survey and excavation in Kawela during the 1980s (1982, 1985). The 1982 report concerned evaluations of the nature and significance of archaeological resources in the Kawela-Makakupa`ia region with recommendations for their long term protection and management. An archaeological survey of approximately 450 acres identified 79 previously unknown sites, including shrines, petroglyphs, platforms, L-, C-, U-shaped and linear shelters, enclosures, midden and lithic scatters, a dune habitation, terraces, modified outcrops and stone mounds, cairns, an *hōlua* slide, and natural shelters.

An archaeological survey and geomorphological study of Kakahai`a Pond was conducted in 1983 for the U.S. Fish and Wildlife Service (Weisler 1983). A four-stage model of shoreline change was presented, from the practice of slash-and-burn agriculture on the upland slopes, to the modern machine grading and upland road building, It was proposed that these modifications influenced human settlement, as well as the flora and fauna, and included the construction of a *pu`uone*, or inland pond, from the marshy environment that had been created by freshwater springs along the inland margin.

In 1985, an article was published in the *New Zealand Journal of Archaeology* by Weisler and Kirch discussing the structure of settlement space on Moloka`i which was based on their 1985 survey and included residential complexes from a date range between A.D. 1650 to 1820. Their analysis confirmed that environmental, social, political, and semiotic elements were holistically the determinants of spatial organization.

Most recently a pedestrian survey was conducted by SCS (McGerty and Spear 2008). One archaeological site was identified in the streambed, but it will not be impacted by the new bridge construction. State Site 50-60-04-2478 was a series of three terraces located a short distance up a side swale that extended along the main drainage and merged with it to continue under the bridge to the ocean. Based on site location and construction, all three of these features were interpreted as traditional agriculture features.

BURIALS

An examination of past research within the vicinity of the project area has been utilized to assess site types that may potentially be encountered during the course of the project. State Site 50-60-04-139, identified as a Historical sand mound burial area from the battle of Pakuhiwa, is located within the area of potential effect, which is 800-feet of the old bridge. The National Register referred to a number of sites as the Kawela Complex and recorded:

> Feature 144 marks the location of an irregular-shaped burial mound at the Molokai Ranch's Kawela headquarters. As stated by Henry Meyer in 1965 (Summers 1971:95) burials were found just beyond the mango trees. The story was confirmed by Mr. Harry Otsuka, our guide, who pointed to a slight mound cut on the S by highway 45. He said that, at the time of highway construction, many burials were unearthed in the mound. No evidence of internment can't be seen now, as the mound is presently overgrown with grass. It is thus difficult to estimate the area of the burials, especially since the road construction removed and unknown part of the site. A 400-sq-m area would seem a reasonable estimate however. The "mound" is a sand dune, the origin of which may be partially natural and partly artificial (enlargement). No artifacts or midden were found. [On file, State Historic Preservation Division].

EXPECTED FINDINGS

Due to water erosion and flooding into adjacent land parcels, remains from previous activities were not expected to be recovered. The crossing is located in between the two sections noted for occupation on the lower ridges and the coast. Based on the close proximity and undefined boundaries of the burial mound Feature 144, we conclude that there is a moderate probability of encountering buried archaeological sites and/or human remains in the project area.

MONITORING CONVENTIONS AND METHODOLOGY

This AMP has been outlined in accordance with DLNR/SHPD administrative rule 13-279. SCS monitors will adhere to the following guidelines during monitoring procedures:

1. A qualified archaeologist familiar with the project area, and the results of previous archaeological work conducted in the area, will monitor all subsurface construction activities on the parcel. There must be one archaeologist per machine or subsurface excavation activity on the project area during all subsurface construction activities. If significant deposits or features are identified, and additional field personnel are required,

the archaeologist will notify the contractor or representatives before additional personnel are brought to the site.

2. If features or cultural deposits are identified during Archaeological Monitoring, the on-site archaeologist will have the authority to temporarily suspend construction activities at the significant location so that the cultural feature(s) or deposit(s) may be fully evaluated and appropriate treatment of the cultural deposit(s) is conducted. SHPD will be consulted to establish feature significance and potential mitigation procedures. Treatment activities primarily include documenting the feature/deposit through plotting its location on an overall site map, illustrating a plan view map of the feature/deposit, profiling the deposit in three dimensions, photographing the finds (with the exception of human burials), artifact and soil sample collection, and triangulation of the finds. Construction work will only continue in the significant location when all documentation has been completed.

3. Stratigraphy in association with subsurface cultural deposits will be noted and photographed, particularly those containing significant quantities or qualities of cultural materials. If deemed significant by SHPD and the archaeologist, these deposits will be sampled.

4. In the event that human remains are encountered, all work in the immediate area of the find will cease; no screening of back dirt will occur; no cleaning and/or excavation of the burial area will occur; no exploratory work of any kind will occur unless specifically requested by the SHPD. The area will be immediately secured from further activity until burial protocol has been completed. The appropriate SHPD archaeologist and SHPD-Culture History Branch will both be immediately notified about the inadvertent discovery of human remains on the property. Notification of the inadvertent discovery will also be made to the appropriate Burial Council by either SHPD or by the contracting archaeologist. A determination of minimum number of individuals (MNI), age(s), and ethnicity of the burial(s) will be ascertained in the field by SCS, following standard osteological procedures. Rules outlined in Chapter 6E, Section 43 shall be followed. Profiles, plan view maps, and illustrative documentation of skeletal parts will be recorded to document the burial(s). The burial location will be identified and marked on a plan view map of the parcel. If a burial is disturbed, materials excavated from the vicinity of the burial(s) will be manually screened through 1/8-inch wire mesh screens in order to recover any displaced skeletal material. If the remains are to be removed, the work will be in compliance with HRS 6.E-43.6, Procedures Relating to Inadvertent Discoveries after approval from SHPD.

5. To ensure that contractors and the construction crew are aware of this AMP and possible site types to be encountered on the parcel, a brief coordination meeting will be held between the construction personnel and monitoring archaeologist prior to initiation of the project. The construction crew will also be informed as to the possibility that human burials could be encountered and how they should proceed if they observe such remains.

6. The archaeologist will provide all coordination with the contractor, SHPD, and any other group involved in the project. The archaeologist will coordinate all monitoring and

sampling activities with the safety officers for the contractors to ensure that proper safety regulations and protective measures meet compliance. Close coordination will also be maintained with construction representatives in order to adequately inform personnel of the possibility that open archaeological units or trenches may occur in the project area.

7. As necessary, verbal reports will be made to SHPD and any other agencies as requested.

LABORATORY ANALYSIS

All samples collected during the project, except human remains, will undergo analysis at the SCS laboratory in Honolulu. In the event that human remains are identified and the SHPD authorizes their removal, these remains and all associated cultural materials will be curated at an appropriate location on O`ahu. Photographs, illustrations, and all notes accumulated during the project will be curated at the Honolulu laboratory of SCS. All retrieved artifact and midden samples will be sent to the SCS laboratory in Honolulu to be cleaned, sorted, and analyzed. Significant artifacts will be photographed, sketched, and classified (qualitative analysis). All metric measurements and weights will be recorded (quantitative analysis). These data will be presented in tabular form within the final monitoring report. Midden samples will be minimally identified to major 'class' (e.g., bivalve, gastropod mollusk, echinoderm, fish, bird, and mammal). All data will be clearly recorded on standard laboratory forms which also include number and weight (as appropriate) of each constituent category. These counts will also be included in the final report.

Should any samples amenable to dating be collected from a significant cultural deposit, they will be prepared in the SCS laboratory and submitted for specialized radiocarbon analysis. While primary emphasis for dating is placed on charcoal samples, we do not preclude the use of other materials such as marine shell or nonhuman bone materials. SCS will consult with SHPD and the client if radiocarbon dates are deemed necessary.

All stratigraphic profiles will be drafted for presentation in the final report. Representative plan view sketches showing the location and morphology of identified sites/features/deposits will be compiled and illustrated.

CURATION

If requested by the landowner, SCS will curate all recovered materials in Honolulu (except human remains and associated burial items) until a permanent, more suitable curation locale is determined. The land owner(s) may request to curate all recovered materials once analysis has been completed.

REPORTING

An Archaeological Monitoring report documenting the project findings and interpretation, following SHPD guidelines for Archaeological Monitoring reports, will be submitted within 180 days of the completion of fieldwork. This time line is requested to account for any radiocarbon age determinations (typically 60 days), if necessary.

If cultural features or deposits are identified during fieldwork, the sites will be evaluated for historical significance and assessed under State and Federal Significance Criteria. Should burials and/or human remains be identified, then other letters, memos, and/or reports may be requested by the Burial Sites Program. Photographs of excavations will be included in the monitoring report even if no historically significant sites are documented. The Archaeological Monitoring report will be drafted until accepted by SHPD and will be submitted to both SHPD and to the client.

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