

3. HISTORIC PROPERTIES AND ANTICIPATED REMAINS

Kawailoa **Ahupua'a** was of great important in Precontact and historic times and the *ahupua'a* contains numerous significant cultural sites and archaeological deposits, including *heiau*, fishponds, (place of refuge), petroglyphs, burial areas, and Historic Period structures and bridges. Only one historic property, Lauhulu Stream Bridge (SHIP Site 8080) lies within the footprint of the project area (Figure 35).

KNOWN HISTORIC PROPERTIES WITHIN THE VICINITY OF THE AREA OF POTENTIAL EFFECT

Lauhulu Stream Bridge (SHIP Site 8080)

Built in 1937, Lauhulu Stream Bridge carries Kamehameha Highway over Lauhulu Stream. MKE and Fung (2013:4-123) (Figure 35). MKE and Fung (2013) identified the bridge as a significant historic property (Bridge No. 003000830300339) under Criterion c “for its association with early developments in concrete bridge construction in Hawaii.” They cited the bridge as “a good example of a 1930’s reinforced concrete bridge that is typical of its period in its use of materials, method of construction, craftsmanship, and design.” Subsequent survey by Rechtman and Lauko (2021:71) found the bridge is currently in the same condition as it was when it was earlier evaluated, with no diminished integrity. Therefore, the Lauhulu Stream Bridge continues to be evaluated as significant under Criterion c as a representative example of 1930s engineering and design in the context of roadway construction in Hawai‘i. Lauhulu Stream Bridge will not be physically impacted by the proposed roadway realignment project and will remain in place for pedestrian use. A draft preservation plan has been prepared for the bridge (Belluzzo and Oordt 2023).

Ceremonial Modified Outcrop (SIHP Site 8949)

Site 8949 is a modified bedrock outcrop interpreted to be a possible ceremonial site (Figure 35). Given this functional interpretation, the site is assessed as significant under Criterion d as a potential source of information relative to Precontact ceremonial activities within a cultural landscape where several other functionally similar sites have been identified, and under Criterion e for the cultural value that Hawaiian communities assign to such sites. While identified to be partially within the study corridor from Rechtman and Lauko (2021), this site falls outside of the proposed development footprint, and once roadway construction is complete the realignment Kamehameha Highway will be no closer to Site 8949 than it is currently. Additionally, the area of Site 8949 will not be acquired by the HDOT, but rather will remain under the ownership and control of Kamehameha Schools. Thus, beyond making sure the site is protected during construction activities, any long-term treatment of the site is not within the purview of the HDOT.



Figure 35. Aerial image of Lahulu Stream Bridge (SHIP Site 8080) and ceremonial modified outcrop (SIHP Site 8949) within current project area.

Anticipated Archaeological Remains

Given the known/potential historic properties within and the findings of prior archaeological studies conducted in the vicinity of the project area including the AIS for the current project (Rechtman and Lauko 2021), the locations of anticipated archaeological remains for the proposed undertaking are now discussed. Although Rechtman and Lauko (2021) did not observe intact buried cultural deposits within the current project area, the project area may still contain undiscovered intact deposits, including human burials. The northern portion of the project area and the central east portion of the project area, which consists of the already existing developed highway, are moderately likely to yield cultural materials as these areas consist of Beach and Jaucas sand deposits. As demonstrated in studies conducted on the *makai* side of Kamehameha Highway, such deposits have the potential for containing burials (Avery and Kennedy 1993; Smith and Masse 1989). Additionally, Rechtman and Lauko (2021:70) demonstrated that the soil profile on the

southern side of the Lauhulu Stream drainage was inconsistent with the soil survey and instead, consisted of a relatively thin surface layer of sandy clay loam underlain by Jaucas sand deposits. Therefore, the southern portion of the project area may also yield human burials. The central portion of project area may also contain buried cultural deposits as its stratigraphic profile consists of Waialua silty clay, 0 to 3 percent slopes overlaying alluvium. Waialua silty clay soils were often used for irrigated sugarcane and truck crops; thus, cultural deposit associated with agriculture may be present within the project area (Soil Survey Staff 2022).

4. THE MONITORING EFFORT

Prior to the start of any proposed subsurface development activities, a meeting will be held among the construction contractor, the project proponent, **the project's Principal Archaeologist and primary archaeological monitor to ensure** that any protective conditions placed on the project by DLNR-SHPD with respect to Sites 8080 and 8949 will be established prior to initiating construction. Also **prior to the initiation of construction, the project's Principal Archaeologist and the primary archaeological monitor** will meet with the equipment operators to discuss the procedures for monitoring. It will be explained that the monitoring archaeologist(s) has/have the authority to halt ground-disturbing activities in the event that cultural resources are encountered. If cultural resources identified during monitoring are deemed significant, DLNR-SHPD will be notified and **consultation will be coordinated as appropriate** with any groups or organizations. Additionally, DLNR-SHPD will be notified upon the **onset and completion of the monitoring activities**. Any change in status of the monitoring (i.e., a shift from on-site to on-call) will occur only with prior written approval from DLNR-SHPD.

FIELD METHODS

A qualified archaeological monitor(s) will be present on-site to **observe all subsurface ground-disturbing activities**. When on site, monitors will keep a daily log of activities **performed and any discoveries made**. Monitors will inspect all exposed soil and sediments, and the stratigraphic profiles of any deep cuts will be examined. A sampling of stratigraphic profiles of excavated areas without archaeological resources will **be documented** using scaled profile drawings at least one meter wide and photographs with a legible scale in order to provide useful information regarding the absence of cultural materials in a given area. Profile locations will be documented using a Global Positioning System (GPS) point collected using a submeter accurate system. At least one 2-meter-long profile will be included in the Archaeological Monitoring Report for reference. Documented stratigraphy will be recorded on project area maps. Profile walls, and trench floors when applicable, will **be cleaned using a hand trowel** prior to documentation, unless entering the excavated area poses a threat to safety. All stratigraphic documentation will include recording the depths in centimeters below surface from top to bottom of each stratigraphic layer, and the soil attributes of each stratigraphic layer using USDA soil descriptions and Munsell soil color charts. This practice will be followed in an effort to identify previously undiscovered and undisturbed cultural deposits, features, artifacts, and human skeletal material. If any such resources are encountered the following procedures will be initiated:

Cultural Deposits

The monitor will notify DLNR-SHPD if non-burial historic properties are identified. All cultural deposits and sequences (including representative natural sequences) identified during the monitoring effort will be mapped, representative scaled profile drawings and plan views will be prepared, photographs will be taken, and the soils will be described in detail (using standard USDA soil descriptions and Munsell colors).

If intact cultural deposits are discovered during monitoring, an assessment will be made as to their integrity and significance using the criteria enumerated in HAR 13§13-275-6(b). If the deposit is deemed significant and is likely to be further impacted by demolition activities, work in the affected area will be curtailed, and an appropriate mitigation strategy will be developed in consultation with DLNR-SHPD.

Cultural Features

Subsurface cultural features will be fully described, drawn, and photographed. Provenience information will also be recorded and related to an established project datum ensuring accurate horizontal and vertical placement. The limits of the feature will be defined, if possible without further excavation, and any natural or cultural associations (including surrounding soil) will be noted. Where appropriate, samples for further analyses will be recovered and processed. The locations from where stratigraphy as well as any in situ findings are exposed and documented will be recorded using a handheld GPS unit with submeter accuracy. The location from where the GPS data is gathered will also be recorded with the **archaeologist's** field notes and provided in the archaeological monitoring report. For example, "all GPS points

were taken from the northern most corner of an exposed stratigraphic profile.” All data collection will be overseen in the field by an archaeologist meeting the Secretary of the Interior’s qualifications for archaeological professionals.

Artifacts

Artifacts observed in the removed soil will be recovered and their general provenience recorded. All artifacts encountered will be documented in situ when possible, in scaled stratigraphic and/or plan view drawings, photographed in the field with a legible scale and north arrow, and the location of the find will be documented with a GPS using submeter accuracy and on project plans. All traditional Precontact Hawaiian artifacts and diagnostic post-Contact artifacts will be recovered for laboratory analysis. The precise locations of any items found in situ will be recorded and the items photographed and recovered for subsequent laboratory analysis. All collected artifacts shall be labeled with provenience information and the date of the find, at minimum. As appropriate, sampling will include the collection of representative bulk sediment samples, and/or on-site screening of measured volumes of feature fill to determine feature contents. When additional data may be gleaned from exposed stratigraphy, soil sampling may occur using standard archaeological methods appropriate to the type of data to be analyzed. Any observed associations will also be documented, and the surrounding soil will be fully described using standard USDA soil descriptions and Munsell colors. When additional data may be gleaned from exposed stratigraphy, soil sampling may occur using standard archaeological methods appropriate to the type of data to be analyzed. All data collection will be overseen in the field by an archaeologist meeting the Secretary of the Interior’s qualifications for archaeological professionals.

Human Skeletal Remains

If human skeletal remains are encountered during the monitoring effort, the on-site monitor will halt all ground-disturbing activity in the immediate area of the discovery, stabilize the remains, and contact the appropriate authorities. DLNR-SHPD staff from the Archaeology Branch and from the History and Culture Branch will be notified immediately, and the monitor will notify the appropriate on-site construction personnel, the Police, and Medical Examiner, as appropriate. If the skeletal material is determined to be Historic or Precontact (as opposed to recent), the monitoring archaeologist will direct the applicant to seek DLNR-SHPD guidance on how to proceed with the discovery, and the human skeletal remains will be handled in compliance with HRS Chapter 43.6, HAR §13-300, and DLNR-SHPD directives. If the remains are determined to be recent, the Honolulu Police Department will be contacted.

TREATMENT OF RECOVERED REMAINS

All recovered material will be temporarily stored within a secure location. The recovered items will be recorded in a field catalog, and upon completion of the monitoring fieldwork the disposition of the items will be as follows:

Cultural Material

Artifacts from intact contexts will be analyzed; those recovered from fill will simply be cataloged. Analyzed items will be cleaned, weighed, measured, photographed, and illustrated (if appropriate). Analysis will include formal description and functional interpretation. The identification of artifacts, vertebrate faunal remains, and invertebrate faunal remains will include comparison with reference collections and materials, as needed.

Recovered Samples

All recovered samples (soil, charcoal, etc.) will be initially processed by the qualified archaeological monitor before being dispersed to the appropriate institutions for detailed analysis.

Human Skeletal Remains

If DLNR-SHPD determines that the removal of buried human remains is an appropriate course of action, then a treatment/reburial plan will be developed in consultation with DLNR-SHPD and other consulted parties, as appropriate in accordance with Hawai‘i State law as outlined in HAR 13§13-300.

REPORTING

Within 30 days following completion of archaeological monitoring, an end of field report pursuant to HAR 13§13-282 will be submitted to DLNR-SHPD. A draft monitoring report will be prepared and submitted to DLNR-SHPD for review and acceptance within 60 days of completion of fieldwork. This report will follow the specifications contained in HAR 13§13-279-5. If any human skeletal remains are recovered as part of the monitoring project, they will be summarized in the final monitoring report following procedures contained in HAR §13-300.

CURATION OF RECOVERED ITEMS

Any material recovered during the project will be temporarily stored for a period of no more than one year following submission of the final monitoring report, during which time arrangements will be made for permanent curation in consultation with the respective landowner and DLNR-SHPD. It will be the respective **landowner's responsibility to** secure permanent curation in an acceptable facility; included in this responsibility are the costs associated with long-term curation.