Final
Archaeological Inventory Survey for the
Airport Section (Section 3) of the
Honolulu High-Capacity Transit Corridor Project,
Hālawa and Moanalua Ahupua‘a, ‘Ewa and Honolulu Districts,
Island of O‘ahu
TMK Sections (1) 1-1 and (1) 9-9 (Various Plats and Parcels)
Volume 2 of 2: Appendices

Prepared for
The City and County of Honolulu

and

The Federal Transit Administration

On Behalf of
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August 2013

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Introduction

1.1 Project Background

Cultural Surveys Hawai‘i, Inc. (CSH) completed this archaeological inventory survey (AIS) for Construction Section 3 (Airport) of the Honolulu High-Capacity Transit Corridor Project (HHCTCP) for the Honolulu Authority for Rapid Transit (HART) of the City & County of Honolulu (City), for the Federal Transit Administration (FTA), and on behalf of PB Americas, Inc. (PB). The AIS Airport study area is from Kalaloa Drive (100 m northwest of Hālawa Stream) in the west to Middle Street (directly west of Kalihi Stream) in the east, located within the traditional Hawaiian land divisions of Hālawa (‘Ewa District) and Moanalua Ahupua’a (Honolulu District), Island of O‘ahu, TMK: [1] 1-1 and 9-9 (Various Plats and Parcels) (Figure 1).

The entire proposed HHCTCP extends approximately 37 km (23 miles) from Kapolei in the west to Ala Moana Center in the east. This report is for the AIS Airport Section 3 construction portion that extends from Station 994+00 Kamehameha Highway at Kalaloa Drive to Station 1248+00 Kamehameha Highway at Middle Street, for a distance of 7.74 km (25,400 feet or 4.8 miles). This Airport Section 3 portion includes the following four transit facilities: (1) Pearl Harbor Naval Base Station, (2) Honolulu International Airport Station, (3) Lagoon Drive Station, and (4) a “System Site” transit facility 250 m east of the Lagoon Drive Station.

This Phase 3 AIS begins on the west at the southeast end of the Phase 2 AIS study area on Kamehameha Highway at Kalaloa Drive. It continues south on Kamehameha Highway. Directly south of Radford Drive, the Pearl Harbor Naval Base Station platform will extend over the highway with an associated section of the station at ground level on the southeast corner of Radford Drive and Kamehameha Highway. From this station, the route continues south on the highway, passes through the Center Drive intersection, and continues south following the alignment of the H-1 Freeway Viaduct before crossing to the makai (seaward) side of Nimitz Highway by Valkenburgh Street. The route continues southeast past Main and Elliott Streets. At Aolele Street the route turns south (makai), continuing along the east side of the mauka/makai (inland/seaward) trending Aolele Street, curving east at Ala Oanaona Street, to the Honolulu International Airport Station. The two alternate Honolulu International Airport Station locations are located in a presently at-grade parking area just northwest of the main Honolulu Airport overseas parking structure. From that station, the route continues east following the alignment of Ala Oanaona Street, crossing Pai‘ea Street. Past Aowena Place, the route angles mauka to cross from Aolele Street to Ualena Street. The route then follows Ualena Street, crossing Lagoon Drive. The Lagoon Drive Station is immediately east of Lagoon Drive on the south portion of Waiwai Loop; mauka and makai entrance buildings are on either side of this portion of Waiwai Loop. From that station, the route continues east on the south side of the south portion of Waiwai Loop, crossing over an area of warehouses to Keʻehi Lagoon Beach Park. The route angles northeast through Keʻehi Lagoon Beach Park, makai of the tennis courts, and crosses Moanalua Stream makai and parallel to Nimitz Highway. In the short stretch between Moanalua Stream and Kalihi Stream, the route crosses mauka of Nimitz Highway, joining Kamehameha Highway at the Middle Street intersection where it meets the Section 4 AIS study area.
Figure 1. U.S. Geological Survey Orthophoto showing the Airport Section in relation to the *ahupua'a*
The Airport Section 3 AIS study area comprises most of the west end which is addressed in the Phase 2 AIS report and the southeastern end which is addressed in the Phase 4 AIS report. This Phase 3 AIS study is depicted on a U.S. Geological Survey 7.5-Minute Series Topographic Map, Honolulu (1998) Quadrangle (see Volume 1, Section 1). This study area primarily occurs within existing road rights-of-way owned by the State of Hawai‘i or the City & County of Honolulu, including Kamehameha Highway, North Nimitz Highway, Aolele Street, and Ualena Street to the vicinity of Lagoon Drive, then back to Nimitz Highway, then turning to Kamehameha Highway directly west of Kalihi Stream. Support facilities along the project corridor are located on adjacent privately owned lands.

The HHCTCP’s purpose is to provide much needed rapid transit transportation in the highly congested east-west transportation corridor between Kapolei and the Ala Moana Center via a fixed guideway rail transit system. In addition to the guideway, the transit system will involve construction of transit stations and ancillary support facilities. The four transit facilities planned for Airport Section 3 are the following: (1) Pearl Harbor Naval Base Station, (2) Honolulu International Airport Station, (3) Lagoon Drive Station, and (4) a “System Site” transit facility 250 m east of the Lagoon Drive Station (Figure 1). The project also requires relocation of existing utility lines within the project corridor that conflict with the proposed project design. Minimally, land-disturbing activities will include grading of facility locations and excavations for guideway column foundations, subsurface utility relocation and installation, and station and ancillary facility foundation construction.

The HHCTCP’s area of potential effect (APE) for potential archaeological historic properties is defined in the Final HHCTCP Programmatic Agreement (Stipulation II.A.1.) as all areas of direct ground disturbance. The Airport Section 3 project area and APE consists of about 604,289 square feet or 13.87 acres.

1.2 Introduction to Appendices

This volume contains six appendices (A–F), each of which contains data that augments the detailed discussions provided in Volume 1. These appendices are briefly summarized below.

Appendix A: Inoa ʻĀina (Place Names), Wahi Pana (Storied Places) and Traditional Cultural Places

This appendix presents traditional, archival, historical, and ethnographic data generated by four recent studies, several of which were conducted in conjunction with or in support of the HHCTCP. This appendix augments the Mythological and Traditional Accounts (Section 2) and the Historic Background (Section 3) discussions in Volume 1.

Appendix B: Land Commission Awards in the Vicinity of Airport Section 3 Project Area

This appendix presents transcriptions and/or photocopies of original award information for seven Land Claim Awards identified in the immediately vicinity of the Airport Section 3 corridor. These transcriptions contain information obtained from the following sources: Land Commission Awards (LCAs), Foreign Testimony, Native Testimony, and a review of historical documents and maps. This information appeared earlier in Appendix A of the Archaeological Inventory Survey Plan prepared for this project (Hammatt and Shideler 2011).
Appendix C: Archaeological Inventory Survey Research Design

This appendix provides the research design developed for this project and previously presented in Sections 7 and 9 of the Archaeological Inventory Survey Plan (Hammatt and Shideler 2011). The research design has been updated to address all changes in test excavation locations that have occurred since the AISP was reviewed and approved by SHPD.

Appendix D: Consultation Letters and Consultation Responses

This appendix provides consultation letters and responses pertaining to the initiation, development, submittal, review, and acceptance of the Airport Section 3 AISP (Hammatt and Shideler 2011) and the Addendum Airport Section 3 AISP (Hammatt and Shideler 2013).

Appendix E: Ground-Penetrating Radar Survey for Airport Section 3, Test Excavation Locations T-001 through T-047

This appendix provides a detailed discussion of the ground-penetrating radar (GPR) survey conducted for Airport Section 3. This survey involved GPR data collection for each of the 47 test excavation locations (T-001 through T-047) examined during the archaeological inventory survey of this portion of the transit corridor. This GPR study tested the efficacy of GPR technology for identifying human burial remains and other types of subsurface archaeological features. The conducting of this GPR efficacy study was identified as a major component of the current AIS in Section 7.4 of the AISP (Hammatt and Shideler 2011). Pertinent GPR data appears in the text for each of the test excavation locations (T-001 through T-047) in Section 7 in Volume 1, while Appendix E presents an overview of the GPR study and summarizes the findings.

Appendix F. Pollen Analysis Report

This appendix consists of a pollen analysis report prepared by Linda Scott Cummings with assistance from R. A. Varney, PaleoResearch Institute, Golden, Colorado. This pollen analysis included samples collected as part of the current Airport Section 3 study. Also included are samples from other portions of the transit corridor, e.g., City Center Section 4. Pertinent pollen data obtained for individual test excavation locations appears in Section 7 in Volume 1, while Appendix F presents an overview of the pollen study objectives, methods, and findings.
Appendix A  Inoa ‘Āina (Place Names), Wahi Pana (Storied Places), and Traditional Cultural Places

This appendix presents traditional, archival, historical, and ethnographic data generated by four recent studies, several of which were conducted in conjunction with or in support of the HHCTCP. This appendix augments the Mythological and Traditional Accounts (Section 2) and the Historic Background (Section 3) discussions in Volume 1. Integration into the Airport Section 3 AIS report of relevant information from these other studies was specified in the AISP (Hammatt and Shideler 2011:15, 117).
The studies presented within this appendix are identified as follows:


2. **Study to Identify the Presence of Previously Unidentified Traditional Cultural Properties in Sections 1–3 for the Honolulu Rail Transit Project Management Summary** (The SRI Foundation and Kumu Pono Associates LLC 2012);

3. **A Study of Native Hawaiian Traditional Cultural Places Hickam Air Force Base, Hālawa and Moanalua Ahupua’a, ‘Ewa and Kona Districts, O’ahu, Hawai‘i** (Allen 2005); and


The following discussion is organized by study, briefly summarizes the study objectives, and discusses the salient topics and/or findings germane to the Airport Section 3 study area. It should be noted that two of the studies have not yet been finalized (studies 1 and 2).

**Studies 1 and 2: Maly and Maly (2012) and SRI Foundation and Kumu Pono Associates LLC (2012)**

Maly and Maly (2012) produced a detailed compendium of Hawaiian traditions, historic accounts, land tenure and survey data, Boundary Commission surveys and proceedings obtained from Hawaiian- and English-language sources, and oral history interviews, including two conducted with kāpuna and kama‘āina who passed away before the present project began. The SRI Foundation and Kumu Pono Associates LLC (2012) present preliminary findings on Traditional Cultural Places (TCPs) that draws extensively from Maly and Maly (2012).

Their findings are presented as follows:

1.1 **Inoa ‘Āina (Place Names)**

1.1.2 **Place Names in Hālawa Ahupua’a**

1.1.3 **Place Names in Moanalua Ahupua’a**

1.2 **Wahi Pana (Storied Places)**
Inoa ‘Āina (Place Names)

Place names (Inoa ‘Āina) offer insights into traditional patterns of land use. As a sweeping, crude, generalization (there are certainly exceptions) there is a relationship between the frequency of place names and the intensity of land use and the richness of the cultural landscape. More intensively utilized landscapes typically have more place names than less utilized landscapes. A summary of the place names reported for Hālawa Ahupua’a (Table 1) and Moanalua Ahupua’a (Table 2) by Maly and Maly (2012:5-45) and The SRI Foundation and Kumu Pono Associates LLC (2012:B-1-B-28) studies is given below. This listing only includes place names “for which traditions were recorded, or which were frequently referenced in historical accounts reviewed…” (Maly and Maly 2012:4) and are pertinent for the Airport Section 3 corridor study. Following The SRI Foundation and Kumu Pono Associates LLC (2012:B-1) approach, the place names “identified as in or near the project area” are presented in shaded rows in Table 1 and Table 2 below. Note these place names may or may not constitute Traditional Cultural Properties, as described in National Register Bulletin 38 (Parker and King 1998). Nonetheless they provide cultural context for the results of the AIS.

The supplied listing includes (not including the ahupua’a names themselves) five names for Hālawa Ahupua’a (Kalo’iiki, Kalokoloa, Kapukakohekohe, Konohikilehulehu, Piomoewai) and twenty place names for Moanalua Ahupua’a (Āhua, Au‘au, ‘Auwaiomiki, Awaawaloa, Ka‘ihikapu, Kai‘iki, Kaloaloa, Ka‘oki, Kauhi (Keuki), Koko, Kukukahi, Kumuma’u, Lelepaaua, Māpunapuna, Mokumoa, Moku‘o’eō, Moku‘onini, Pahunui, Pālani, and Weli). The place names are notably clumped. This is suggested to parallel, to be directly related to, and to support, the evidence of the distribution of Land Commission Awards and the distribution of wahi pana in indicating that the Airport Section 3 corridor was a relatively less utilized portion of these ahupua’a than lands seaward (makai), inland (mauka), or at the ends of the present study corridor.

The unique geography of the Airport Section 3 corridor places this study area in a rain shadow in the lee of the Makalapa, Āliamanu and Āliapa’akai post-erosional volcanic landforms of a second rain shadow in the lee of the Ko‘olau Mountain Range. The same post-erosional volcanic landforms not only decrease rainfall, they also serve to divert surface runoff, as Hālawa Stream is effectively pushed far to the west and Moanalua Stream is pushed far to the east.

Thus it is no surprise that the recorded Inoa ‘Āina are decidedly clumped around the two sources of surface water at the ends of the Airport Section 3 corridor.

Place Names in Hālawa Ahupua‘a

The five listed place names of particular importance for Hālawa in or near the project corridor fall in two clumps (see shaded rows in Table 1).

Three of the place names (Kalo’iiki, Konohikilehulehu, and Piomoewai) are located close together near a slight northern bend of the stream (Maly and Maly 2012:391). Kalo’iiki is the general name of a land section (‘ili) on the south side of the bend (Figure 2). Konohikilehulehu is the name of a mo‘o‘āina (agricultural parcel) claimed by Opunui (LCA 2156:parcel 1) within this small land division on the south side of the bend. The home (pāhale) of Opunui
Table 1. Place Names Associated with Hālawa Ahupua’a (Adapted from The SRI Foundation and Kumu Pono Associates LLC 2012:B-1 to B-28. Place names identified as in or near the Airport Section 3 project area are shaded and an * identifies indicated wahi pana)

<table>
<thead>
<tr>
<th>Inoa ‘Āina</th>
<th>Ahupua’a and Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hālawa</td>
<td>Ahupua’a. “The broad flatlands extending 1.5 miles below the highway along Hālawa Stream are now under cane but were formerly terraces. The terraces also extended up the flats along the lower courses of Kamananui and Kamanaiki Streams which join to form Hālawa, and I am told that there were small terraces farther up both streams. Four and 5 miles inland, dry taro was planted on the banks of gulches” (Handy 1940:80).</td>
<td>Maly and Maly 2012:8</td>
</tr>
<tr>
<td>Haluluhale</td>
<td>‘Aiea-Hālawa boundary zone. An ancient burial cave with openings in both ahupua’a (1869, Boundary Commission proceedings).</td>
<td>Maly and Maly 2012:9</td>
</tr>
<tr>
<td>Iholena</td>
<td>‘Aiea-Hālawa boundary zone. An area situated in the uplands, there were once houses and workshops of olonā and canoe makers here.</td>
<td>Maly and Maly 2012:11</td>
</tr>
<tr>
<td>Kahakupōhaku (Mole o Kahakupōhaku)</td>
<td>‘Aiea- Hālawa boundary zone. A fishpond and large stone (Mole o Kahakupōhaku) in the wall between Kahakupōhaku and Kailōpā‘ia fishponds; marking the boundary between these two ahupua’a.</td>
<td>Maly and Maly 2012:12</td>
</tr>
<tr>
<td>Kahalekaha</td>
<td>‘Aiea-Hālawa boundary zone. An ala pi‘i (trail to uplands) rises on the bluff, between the two ahupua’a at this place (1869, Boundary Commission proceedings).</td>
<td>Maly and Maly 2012:12</td>
</tr>
<tr>
<td>Kailōpā‘ia</td>
<td>Hālawa. A fishpond boundary between Hālawa and ‘Aiea.</td>
<td>Maly and Maly 2012:14</td>
</tr>
<tr>
<td>Kaleinaaka‘uhane *</td>
<td>Moanalua-Hālawa boundary zone. This site situated on the inland side of Āliamanu, by Kapukakī and Leiolono is a leaping place for the spirits of the dead (leina a ka ‘uhane). Some passed this leaping place, went on to the care of their ‘aumakua, others, who had no one to help them, drifted down to Kaupe‘a, Kama‘oma‘o, and Kānehili (the plains around Pu‘u o Kapolei), where they would wander aimlessly in hope that someone would direct them to the spirit world.</td>
<td>Maly and Maly 2012:16</td>
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<tr>
<td>Inoa ‘Āina</td>
<td>Ahupua’a and Description</td>
<td>Source</td>
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<tr>
<td>Kalo‘iiki</td>
<td>Hālawa. A named locality. Cited in project area claims of the Māhele. A reconstruction of awarded kuleana supplied by Klieger shows the place name Kalo‘iiki as an ‘ili name centered on the south bank of a northern bend of Hālawa Stream approximately 1 km east of the north end of the Airport Section 3 corridor.</td>
<td>Maly and Maly 2012:16 Klieger 1995:61</td>
</tr>
<tr>
<td>Kalokoloa</td>
<td>Hālawa. An ‘ili. Cited in claims of the Māhele. A reconstruction of awarded kuleana supplied by Klieger shows the place name Kalokoloa as a fish pond (Pu‘uone Kalokoloa) located on the north side of the mouth of Hālawa Stream within a 100 m or so of the north end of the Airport Section 3 corridor.</td>
<td>Maly and Maly 2012:16 Klieger 1995:61</td>
</tr>
<tr>
<td>Kapua‘ikāula</td>
<td>Hālawa. A coastal site where the bodies of sharks were tossed during a battle between the sharks of Pu‘u‘ula and Keli‘iakaua‘ū. Kapua‘ikāula is a canoe landing and marks the narrowest point in the channel between Hālawa and Pu‘u‘ula, for the entry to Ke awa lau o Pu‘u‘ula (Pearl Harbor). Cited in traditions and historical accounts.</td>
<td>Maly and Maly 2012:21</td>
</tr>
<tr>
<td>Kapukakī *</td>
<td>Moanalua-Hālawa. A wahi pana boundary marker between the Kona and ‘Ewa Districts; situated on the upland side of Aliamanu near an ancient burial ground. (see also Kaleinaaka‘uhane and Leiolono)</td>
<td>Maly and Maly 2012:21</td>
</tr>
<tr>
<td>(Keka’an‘aukapukakī)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kapukakohekohe</td>
<td>‘Aiea-Hālawa boundary zone. Kapukakohekohe is situated on the coastal flats. It was near here where Kalanimanu‘ia (w.) died (1869, Boundary Commission proceedings). A reconstruction of awarded kuleana supplied by Klieger (1995:61) shows the place name Kalokoloa as 250 m east of the mouth of Hālawa Stream.</td>
<td>Maly and Maly 2012:22 Klieger 1995:61</td>
</tr>
<tr>
<td><em>Inoa ʻĀina</em></td>
<td><em>Ahupuaʻa and Description</em></td>
<td><em>Source</em></td>
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</tbody>
</table>
| Keahuakeʻoa    | ʻAiea-Hālawa boundary zone. Referred to by elder native witnesses in the 1869 Boundary Commission proceedings as a “storied place”: “…hiki i kahi awawa i kapaa ia Waipa mai laila a hiki i Keahuakeoa he wahi pana ia, he Ahua aa, holo mai a ke Awaawa o Kaawili mai laila a Nailiili a Malei...”  
(…then reach the gulch called Waipa, and from there go to Keahuakeoa, a “wahi pana” (storied place), a stone mound, from there go to the gulch of Kaawili, and from there to Nailiili a Malei...). | Maly and Maly 2012:25 |
<p>| Keanapuaʻa      | Hālawa. Site of a fishpond made by Kāne and Kanaloa. Also a famous cave on the coastal point, and resting place of the demigod, Kamapuaʻa. The cave was later used by fishermen as a shelter. Cited in the traditions of Kamapuaʻa and <em>Na Wahi Pana o Ewa</em> (1899). | Maly and Maly 2012:26 |
| Komoawa (Kamoawa) | Hālawa. Named for a guardian shark who was the watchman or keeper of the gate into Ke Awaau o Puʻuloa. He lived in the cave called Keʻaʻaliʻi, and kept man-eating sharks out of the region. Also identified as being the estuary channel leading into the eastern section of Ke awa lau o Puʻuloa. Now known as the “Hālawa Branch.” Cited in <em>Saturday Press</em>, Dec. 29, 1883; and in <em>Na Wahi Pana o Ewa</em> (1899). | Maly and Maly 2012:28 |
| Konohikilehulehu | Hālawa. A named locality. Cited in project area claims of the Māhele. | Maly and Maly 2012:28 |
| Kumumaʻu        | Moanalua-Hālawa boundary zone. Situated on the former shore line, just above the place called Pālani. Cited in the tradition of Puhio Laumeiki. A named locality cited in project area claims of the Māhele. | Maly and Maly 2012:29 |
| Kūnānā (Loko Kūnānā) | Hālawa. A fishpond and detached parcel on the Hālawa coastal flats. | Maly and Maly 2012:30 |</p>
<table>
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<tr>
<th>Inoa ‘Āina</th>
<th>Ahupua’a and Description</th>
<th>Source</th>
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<tbody>
<tr>
<td>Makaʻalaea</td>
<td>‘Aiea-Hālawa boundary zone. A large stone on the shore, marking the boundary between these two ahupua’a (at the land of William Poomoku) (1869, Boundary Commission proceedings).</td>
<td>Maly and Maly</td>
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<td>2012:32</td>
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<tr>
<td>Makalapa</td>
<td>Hālawa. An ancient crater perched above the Hālawa coastal flats.</td>
<td>Maly and Maly</td>
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<td>2012:32</td>
</tr>
<tr>
<td>Nāʻiliʻili</td>
<td>‘Aiea-Hālawa boundary zone. An upland gulch where olonā was grown and made, and ʻawa planted (1869, Boundary Commission proceedings).</td>
<td>Maly and Maly</td>
</tr>
<tr>
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<td>2012:35</td>
</tr>
<tr>
<td>Nāpēhā *</td>
<td>Hālawa. The western end of Leiolono, and place where spirits of the dead would be encouraged to pass through by their ʻaumākua. The spring was named “Lean over” because King Kūaliʻi leaned over to drink water here (‘Ī‘ī, 1959). It is also reported that the spring was guarded by a moʻo (water spirit). Kamakau. Nupepa Ke Au Okoa, Okatopa 6, 1870.) A spring near the ancient trail between ʻEwa and Kona. Cited in Na Wahi Pana o Ewa (1899).</td>
<td>Maly and Maly</td>
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<td>2012:35</td>
</tr>
<tr>
<td>Pāpua’a</td>
<td>‘Aiea-Hālawa boundary zone. An ancient cultivating ground (1869, Boundary Commission proceedings).</td>
<td>Maly and Maly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2012:38</td>
</tr>
<tr>
<td>Piomoewai</td>
<td>Hālawa. A named locality. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly</td>
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<td>2012:38</td>
</tr>
<tr>
<td>Pōhakuʻumeʻume</td>
<td>Hālawa-ʻAiea boundary zone. A legendary stone marking the boundary (1874, Boundary Commission Proceedings).</td>
<td>Maly and Maly</td>
</tr>
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<td>2012:40</td>
</tr>
<tr>
<td>Puʻua</td>
<td>‘Aiea-Hālawa boundary zone. An ancient canoe maker’s house and workshop (Kahualale kālai wa‘a).</td>
<td>Maly and Maly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2012:40</td>
</tr>
<tr>
<td>Wailolokai</td>
<td>Hālawa. A marshy area on the Hālawa coastal flats.</td>
<td>Maly and Maly</td>
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<td>2012:44</td>
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*indicates a wahi pana (see Figure 5 and Figure 7)
Figure 2. Overlay of the Airport Section 3 segment of the corridor (at upper left) on a reconstruction of the rich cultural landscape on the seaward side of Hālawa Stream (adapted from Klieger 1995:61); noted place names include: “Kalo‘iki ‘Ili” (at the north bend of Hālawa Stream, 1.0 km southeast of the north end of the corridor), “Kalokoloa” (southeast of the north end of the corridor), “Kakohekohe” (120 m northeast of the northern end of the corridor), “Konoahilehulehu” (the vicinity of Opunui’s LCA 2156:1) shown here as “Honolulu Plant Co.” within Kalo‘iki ‘Ili (1.0 km east of the north end of the corridor) and “Pioemoewai” (the vicinity of Opunui’s pāhāle or home LCA 2156:3) shown here as south of “Kamalanai and Kaheana’s Pasture” (700 m southeast of the north end of the corridor).
(LCA 2156:parcel 3) on the northwest side of the bend was in a field or pasture or small plain (*kula*) called Piomoewai. The closest of these three place names appears to be 700 m ESE of the northern end of the Airport Section 3 corridor. That general area approximately 700 to 1200 m upstream was clearly something of a quilt of homes and agricultural fields.

The other two specified Hālawa place names of particular import (Kalokoloa and Kapukakokekohe) are immediately east of the NW end of Airport Section 3 corridor. Kalokoloa was a fishpond and Kapukakokekohe (Kakohekohe) was a land area just to the northeast.

The main point in this discussion of the *Inoa ʻĀina* of Hālawa Ahupuaʻa is that there are a great many associated with the seaward portion of Hālawa Stream where there was fresh water and where people lived and grew kalo in *loʻi* and raised fish in *loko puʻuone* (fish ponds). None of these indicated place names are more than 250 m from the stream. There appear to be no other *Inoa ʻĀina* indicated along the Airport Section 3 segment in Hālawa Ahupuaʻa.

Moanalua Place Names

Most of the twenty cited *Inoa ʻĀina* (in addition to “Moanalua”) indicated as being in or near the Airport Section 3 in Moanalua Ahupuaʻa (Āhua, ʻAuʻau [wahi pana], ʻAuwaiomiki, Awaawalaoa [wahi pana], Kaʻihikapu, Kaiʻiki, Kaloaloa, Kaʻoki, Kauki [Keuki], Koko, Kukukahi, Kumumaʻu, Lelepuaa, Māpunapuna, Mokumoa, Mokuʻeō, Mokuʻonini, Pahunui, Pālani, and Weli) are shaded in Table 2 and appear on the 1890 Monsarrat and Lyons map of Moanalua and Kahauiki (Figure 3) and/or on the 1920 Monsarrat map of Honolulu (Figure 4). The relationship of each of these place names to the Airport Section 3 corridor is described below.

Āhua is understood to be a fishpond and a low silty sandy spit formerly on the west entrance to Keʻehi Lagoon approximately 2.25 km south of the Honolulu International Airport Station (see Figure 3).

ʻAuʻau is a *wahi pana* but not shown on any historic map to our knowledge. The posited location is shown on Figure 7.

ʻAuwaiomiki is understood as a point associated with the demarcation of the boundary of Moanalua Ahupuaʻa (Maly and Maly 2012:711) and of fishing rights (Maly and Maly 2012:513). The indicated location, called out between “Koko,” south of Āhua Point and “Palani” (a bunch of coral) “which is directly makai of Kumuma” suggests this point was off-shore two kilometers or more south of the central portion of the Airport Section 3 corridor.

Awaawalaoa is a *wahi pana* that included a large fishpond 700 m north of the Lagoon Drive station (see Figure 7).

Kaʻihikapu was a large fishpond 700 m south of the Honolulu International Airport Station (see Figure 3).

Kai-iki (Kaikikapu) was a medium sized fishpond 700 m NE of the Lagoon Drive Station (see Figure 4).

Kaloaloa was a medium sized fishpond 250 m SW of the Lagoon Drive Station (see Figure 3).
Kaʻoki is understood to be a point associated with the demarcation of fishing rights “near the island of Mokuonini” (Maly and Maly 2012:513) Mokuʻonini is 400 m east of the Lagoon Drive Station, but it is not shown on a map.

Kauki (Keuki) appears to be “Kaiiki” understood as a point associated with the demarcation of fishing rights in Keʻehi Lagoon “outside of island of Mokuoeo” (Maly and Maly 2012:513). Mokuʻoeō was a small island 2.4 m south of the Lagoon Drive Station. Neither Kauki nor Mokuʻoeō is shown on a map.

Koko is understood to be a point associated with the demarcation of fishing rights in Keʻehi Lagoon “south of Ahua Point” (Maly and Maly 2012:513), but it is not shown on a map. Āhua Point is understood as a low silty sandy spit formerly at the west entrance to Keʻehi Lagoon approximately 2.25 km south of the Honolulu International Airport Station.

Kukukahi is understood to be a point associated with the demarcation of fishing rights in Keʻehi Lagoon near Āhua Point (Maly and Maly 2012:513), but it is not shown on a map. Āhua Point is understood as a low silty sandy spit formerly at the west entrance to Keʻehi Lagoon approximately 2.25 km south of the Honolulu International Airport Station.

Kumuma was a “Stone on wall of Loko Ahua marking boundary the between Moanalua and Hālawa” (Maly and Maly 2012:504 see also 511). The Ahua Pond was located 200 m NE of the Lagoon Drive Station (see Figure 3).

Lelepaua was a large fishpond 1.5 km SW of the Honolulu International Airport Station (see Figure 3).

Māpunapuna was a medium-sized fishpond 600 m north of the Lagoon Drive Station (see Figure 3 and Figure 4).

Mokumoa was a small island 1.1 km NE of the Lagoon Drive Station (see Figure 4).

Mokuʻoeō was a small island 2.4 m south of the Lagoon Drive Station (see Figure 3).

Mokuʻonini (Mokuoniki) was a small island 400 m east of the Lagoon Drive Station (see Figure 4).

Pahunui (Pahounui) was a medium-sized fishpond 600 m SE of the east end of the Airport Section (see Figure 4).

Pālani was understood as a point associated with the demarcation of fishing rights “a bunch of coral which is directly south of, or makai of, Kumumaʻu” (Maly and Maly 2012:513). Exact location is uncertain but as it is makai of Kumumaʻu it would be more than two kilometers south of the study corridor.

Weli was a medium-sized fishpond 100 m north of the east end of the Airport Section (see Figure 4).
Table 2. Place Names Associated with Moanalua Ahupua‘a (Adapted from The SRI Foundation and Kumu Pono Associates LLC 2012: B-1 to B-28. Place names identified as in or near the Airport Section project area are shaded and an * identifies indicated wahi pana.)

<table>
<thead>
<tr>
<th>Inoa ʻĀina</th>
<th>Ahupua‘a and Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Āhua</td>
<td>Moanalua-Kalihi boundary zone. A fishpond and coastal region. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:5</td>
</tr>
<tr>
<td>Āliamanu</td>
<td>Moanalua. A noted ʻili, geological feature and area of an ancient burial ground, near Leinakaʻuhane and Kapukakī (on the inland side of the crater overlooking the ancient trail and government road).</td>
<td>Maly and Maly 2012:6</td>
</tr>
<tr>
<td>Aliapa‘akai</td>
<td>Moanalua. A noted ʻili, ancient crater, which once held a pond that rose and fell with the ocean’s tides. Believed to have been a place visited by Pele on her migration across the Hawaiian Islands, as she looked for a home to keep her fires dry. Pele thrust her digging stick, Pāʻoa, into the ground here, and her ocean-formed sister, Nāmakaokāhi‘i, dug in through the ocean causing a clash between fire and water. The residual salt crusted along the inner rim of the crater. And from that day forward, the lake rose and fell with the tides and salt makers worked the land here, harvesting pa‘akai (salt) that was valued through the middle 1800s (the lake was filled in for development in the 1970s.)</td>
<td>Maly and Maly 2012:6</td>
</tr>
<tr>
<td>‘Au‘au *</td>
<td>Moanalua. A cave of refuge during times of war, near the shore of Moanalua. The cave entrance was on the shore, and was connected to the uplands of Moanalua via an underground cavern. The cavern was used a route of passage by the moʻo goddess, Kaluahine when she desired to go fishing on the shore. (Mokumaia 1922 in Maly and Maly 2012:6).</td>
<td>Maly and Maly 2012:6</td>
</tr>
<tr>
<td>Inoa ‘Āina</td>
<td>Ahupua‘a a Description</td>
<td>Source</td>
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</tr>
<tr>
<td>Kahauiki (Hauiki)</td>
<td>Moanalua Boundary. A ‘ili and kula (flat land) along the Kalihi boundary of Moanalua. Cited in mele, traditions and claims of the Māhele. “Kahauiki Stream irrigated a moderate-sized area of terraces extending from the sea inland for about half a mile” (Handy 1940:79).</td>
<td>Maly and Maly 2012:13</td>
</tr>
<tr>
<td>Ka‘ihikapu</td>
<td>Moanalua. A large fishpond salt making/collection site, reportedly built by Ka‘ihikapu Manuia (Kalanimanu‘ia) A named locality cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:14</td>
</tr>
<tr>
<td>Kai-iki (Kaikikapu)</td>
<td>Moanalua. A named locality cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:14</td>
</tr>
<tr>
<td>Kaleinaaka‘uhane *</td>
<td>Moanalua-Hālawa boundary zone. This site situated on the inland side of Āliamanu, by Kapukakī and Leiolono is a leaping place for the spirits of the dead (leina a ka ‘uhane). Some passed this leaping place, went on to the care of their ‘aumakua, others, who had no one to help them, drifted down to Kaupe‘a, Kama‘oma‘o, and Kānehili (the plains around Pu‘u o Kapolei), where they would wander aimlessly in hope that someone would direct them to the spirit world.</td>
<td>Maly and Maly 2012:16</td>
</tr>
<tr>
<td>Inoa ʻĀina</td>
<td>Ahupuaʻa and Description</td>
<td>Source</td>
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</tr>
<tr>
<td>Kaloaloa</td>
<td>Moanalua. An ʻili and large fishpond. Noted for the quality of awa (<em>Chanos chanos</em>) fish grown there. Cited in traditions and a named locality in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:16 (citing <em>Ke Au Okoa, lulai 31, 1865</em>)</td>
</tr>
<tr>
<td>Kaʻoki</td>
<td>Moanalua. A named locality. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:20</td>
</tr>
<tr>
<td>Kapukakī (Kekaʻanīʻauokapukakī)</td>
<td>Moanalua-Hālawa. A <em>wahi pana</em> boundary marker between the Kona and ʻEwa Districts; situated on the upland side of ʻAliamanu near an ancient burial ground (see also Kaleinaakaʻuhane and Leiolono).</td>
<td>Maly and Maly 2012:21</td>
</tr>
<tr>
<td>Kauki (Keuki)</td>
<td>Moanalua. A named locality. Cited in project area claims of the Māhele (boundary zone).</td>
<td>Maly and Maly 2012:23</td>
</tr>
<tr>
<td>Kauwālua (Kauālua) (written “Kanalua” in later texts)</td>
<td>Lapakea, Moanalua. Situated on the <em>mauka</em> side of the old trail to ʻEwa. Kauwālua was an ancient battle ground and favored traditional residence of chiefs of Oʻahu. Following Kahahana’s death, Kalai-koa, a Maui chief who served Kahekili, took up residence here. He had a house made with the bones of defeated Oʻahu warriors and chiefs. The house was also enclosed by a fence of human bones with the skulls placed on top of the bundles of bones. (Kamakau 1867 and Kamakau 1961 in Maly and Maly 2012:24) (note: in several later published accounts, the first letter “u” in “Kualua” was transposed in typesetting to an “n”).</td>
<td>Maly and Maly 2012:24</td>
</tr>
<tr>
<td>Inoa ‘Āîna</td>
<td>Ahupuaʻa and Description</td>
<td>Source</td>
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<tr>
<td>Kiao</td>
<td>Moanalua. An area associated with Leiolono and Kapukakī, noted for the ‘ulalena (reddish-yellow tinged rains).</td>
<td>Maly and Maly 2012:27</td>
</tr>
<tr>
<td>Koko</td>
<td>Moanalua. A named locality. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:28</td>
</tr>
<tr>
<td>Kukukahi</td>
<td>Moanalua. A named locality. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:28</td>
</tr>
<tr>
<td>Kumuma‘u</td>
<td>Moanalua-Hālawa boundary zone. Situated on the former shore line, just above the place called Pālani. Cited in the tradition of Puhi o Laumeki. A named locality cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:29</td>
</tr>
<tr>
<td>Leiolono</td>
<td>Moanalua. Named for an ancient god, guardian of a deep pit filled with the bodies of dead people. Leiolono is situated on the inland side of Āliamanu. Here, spirits of the dead, those who did not have helpful ‘aumākua would be lost. Leiwalo was on the eastern boundary of Leiolono, and Kapapakōea was the eastern boundary (see also Kaleinaa‘uhane and Kapukakī). From Kamakau 1870 in Maly and Maly 2012:31.</td>
<td>Maly and Maly 2012:31</td>
</tr>
<tr>
<td>Leiwalo</td>
<td>Moanalua. Once spirits passed through Leiolono, they would find themselves on the ‘ulu (breadfruit) tree, Uluoleiwalo. If leaping from the wrong branch, the soul would be lost forever in the realm of Milu. If leaping from the correct branch, the spirit would find helpful ‘aumākua to guide them to the desired realm. Cited in S.M. Kamakau, Nupepa Ke Au Okoa, Okatopa 6, 1870; and the tradition of Makanike‘oe.</td>
<td>Maly and Maly 2012:31</td>
</tr>
<tr>
<td>Inoa ʻĀina</td>
<td>Ahupuaʻa and Description</td>
<td>Source</td>
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<tr>
<td>Manawainuikeʻo’o</td>
<td>Moanalua. An underground cave to the ocean that comes out at Āliapaʻakai. Cited in the tradition of Makanikeʻoe.</td>
<td>Maly and Maly 2012:33</td>
</tr>
<tr>
<td>Māpunapuna</td>
<td>Moanalua. An ʻili land division and large fishpond extending to the shore of Moanalua. The pond of Māpunapuna was famed for its ʻamaʻama (mullet) fish. Cited in traditions; and a named locality cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:33</td>
</tr>
<tr>
<td>Moanalua *</td>
<td>Ahupuaʻa. “Inland of what is now Moanalua Park is a moderate-sized area of terraces. Mokumaia writes that Moanalua took its name from two taro patches watered by ʻĪemi Spring: ‘The name Moanalua came from two taro patches close to the road taken by travelers from Ewa. They were very close to the spring of Iemi. When the travelers came to the place just mentioned, they found the taro leaves so large that the keepers groped in the dark for taro for the chiefs. The taro and oha grew close together and that is how it [Moanalua] got its name which has remained famous to this day…’ These terraces are now planted in wet taro by Chinese, and are irrigated with water from Kalou Stream, which empties into Moanalua Stream three quarters of a mile inland. The large area southwest of lower Moanalua Stream, which is now partly park and partly planted to bananas, was formerly all taro terraces. Most of this area to seaward is still planted in flourishing taro grown by Chinese. There are also extensive irrigated patches east of the lower course of the stream which presumably used to be taro beds but are now partly planted in rice and partly unused” (Handy 1940:80).</td>
<td>Maly and Maly 2012:33-34</td>
</tr>
<tr>
<td>Mokumoa</td>
<td>Moanalua. A named locality. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:34</td>
</tr>
<tr>
<td>Inoa ʻĀina</td>
<td>Ahupuaʻa and Description</td>
<td>Source</td>
</tr>
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<td>-----------</td>
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</tr>
<tr>
<td>Mokuʻoeo</td>
<td>Moanalua. A named locality. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:34</td>
</tr>
<tr>
<td>Mokuʻonini</td>
<td>Moanalua. A named locality. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:34</td>
</tr>
<tr>
<td>Pahunui</td>
<td>Moanalua. A named locality. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:37</td>
</tr>
<tr>
<td>Pālani</td>
<td>Moanalua. A named locality. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:37</td>
</tr>
<tr>
<td>Pililua</td>
<td>Moanalua. A cave in which King Kahahana, his wife Kekuapoʻi, and Alapaʻi hid for a time, following the conquest of Oʻahu by the forces of Kahekili. Cited in the account of Makanikeʻoe.</td>
<td>Maly and Maly 2012:38</td>
</tr>
<tr>
<td>Waiola</td>
<td>Moanalua. A pond at the place in Moanalua Valley where the two streams join together. The water of this pond was noted for its healing qualities. Cited in historical accounts.</td>
<td>Maly and Maly 2012:44</td>
</tr>
<tr>
<td>Weli</td>
<td>Moanalua. A named locality. Cited in project area claims of the Māhele.</td>
<td>Maly and Maly 2012:45</td>
</tr>
</tbody>
</table>

*indicates a wahi pana (see Figure 5 and Figure 7)
Figure 3. 1890 Monsarrat and Lyons map of Moanalua and Kahauiki showing geographic relationship of Airport Section 3 corridor to various Inoa ‘Āina in Moanalua and Kahauiki Ahupua’a
Figure 4. 1920 Monsarrat map of Honolulu showing geographic relationship of Airport Section 3 corridor to various Inoa 'Āina in Honolulu District
The main point in this discussion of the *Inoa ‘Āina* of Moanalua Ahupua‘a is that there are a great many associated with the seaward portion of the confluences of Moanalua Stream, Kahauiki Stream, and Kalihi Stream where there was fresh water and where people lived and raised fish in fish ponds and exercised fishing rights in the lagoon. Of these eighteen place names, only Lelepaua Pond (1.5 km SW of the alignment and inland of Ke‘ehi Lagoon) is not located on the immediate margin of Ke‘ehi Lagoon or off-shore far to the south.

Clearly the well-watered lands of Moanalua, Kahauiki, and Kalihi and the virtual ring of fishponds surrounding Ke‘ehi Lagoon must have supported a large population may well have been a foci of early settlement. Kaloaloa Fishpond was probably less than 200 m to the south of the Airport section just west of the Lagoon Station. Most of the rest of the *Inoa ‘Āina* of Moanalua Ahupua‘a were at some distance away.

The confluence of Moanalua and Kalihi Stream must have been an attractive area in pre-Contact Hawai‘i. The reverend Hiram Bingham noted the muliwai (backwater estuaries) of Moanalua and Kalihi (Maly and Maly 2012:168). The extensive fishponds are understood to have been the property of the ali‘i of long-standing (Maly and Maly 2012:171), and the extent to which the maka‘āinana as a whole profited from these fishponds remains a matter of some debate. Most of this cultural landscape was buried under thick fill beginning in 1942 and 1943.

**Wahi Pana (Storied Places)**

The ahupua‘a of Hālawa and particularly Moanalua Ahupua‘a are rich with traditional associations and rich with wahi pana or “storied places.” Their posited location in reference to the present Airport Section 3 transit study corridor are shown in Figure 5, Figure 6, and Figure 7. The reader is referred directly to the Maly and Maly (2012) study for detail on the abiding relationship between Hawaiians and the ‘āina; only an overview focused specifically on the Airport Section 3 corridor is presented here.

The SRI Foundation and Kumu Pono Associates LLC (2012) study posits 26 individual wahi pana in or near the first three construction phases of the project area (‘Au‘au, Hā‘ena Heiau [Ahu‘ena], Hālualani, Hā‘upu [Haupu‘u], Huewaipī, Ka‘aimalu, Kahō‘ai‘ai, Kaihuopapua‘a, Kaluawai [Kaluwi], Kalua‘olohoe, Kanukumanu [Kanukuokamanu], Ka‘oinaomaka‘ioulou, Kapukanawaiokahuku, Kauhihau, Kawai‘ilu‘ulā [Waili‘ulu‘ula], Keonekualimalaulā‘ewa, Kuka‘eki, Kūki‘iahu [Kūki‘i], Nāpōhakuloloa, Nāpōhakuahine, Nā‘ulaamiahea [also written Nauluamaihea], Piliamo‘o, Piliaumoa, Po‘ohilo, Punahinalo [Punanalo], and Waipāhū). One of the 26 wahi pana cited lies within Moanalua Ahupua‘a and none lie within Hālawa Ahupua‘a. The one wahi pana within Moanalua is named “‘Au‘au” and is described as follows:

A cave of refuge during times of war, near the shore of Moanalua. The cave entrance was on the shore, and was connected to the uplands of Moanalua via an underground cavern. The cavern was used as a route of passage by the mo‘o goddess Kaluahine when she desired to go fishing on the shore. Cited in traditions of Moanalua by J. K. Mokumaia (1922). (The SRI Foundation and Kumu Pono Associates LLC 2012:43)

The posited location of the ‘Au‘au cave of refuge (numbered “42”) is shown on Figure 7 as possibly extending to as close as 100 m north (mauka) of the Transit corridor approximately 500 m ENE of the Lagoon Drive Station.
Such fabulous caverns with underground trails are a common theme in Hawaiian legends. Maly and Maly (2012:100) cite several accounts from the Hawaiian language newspaper *Nupepa Ka Oiaio* from January 5, 1894 through May 10, 1895 by Moses (Mose) Manu of the travels of a certain Makanike'oe having landed at Kalihi “outside of Keahua, at the place called Keawakalai.”

“There he saw a crevasse open in the sea… Makanikeoe crawled along one of the crevasses in the sea, and going beneath the land, he exited out at Aliapaakai.” While this cave is not called “‘Au’au,” it is notably entered by swimming which has a certain resonance (‘Au’au meaning “to bathe”; ‘Au meaning “To swim, to travel by sea”). The fact that the natural “Kalihi Channel” (see Figure 3 and Figure 4) angles towards the salt lake of Āliapa’akai would certainly suggest such a connection as a subterranean passage.

Maly and Maly (2012:197) cite another series of accounts from the Hawaiian language newspaper *Kuokoa* by J. Kulia Mokumaia from February 17 through June 29, 1922. The core account supporting the “Au’au wahi pana is given below:

It was said that an old woman lived by the stream close to the hill. In the middle of the hill was a cave in which she lived. Sometimes she was said to assume the form of a lizard for she was a supernatural being. When the people who lived on Kamanaiki (that is the gulch with the Wai-a-puka pools) came down and passed the old woman’s home, she asked, “Are you going to the beach?” They said, “Yes. We are going to gather sea weeds, and some, squid. While we were in the uplands we had a desire for sea foods and this is the reason for this big company of people.” “Yes, I see that you are a big company.”

This woman was not a mischief maker but used her mana, so the natives said. As the big company went down, she sat on a long stone in the middle of the stream. She sat there until the last of the company passed and then moved back and vanished out of sight. She came out below at Auau. The place was said to be a cave used in war times. This spot is where the train comes to from Kuwili to the sea channel of Moanalua. The train reaches that side of the land and goes on to Puuola. The point that juts out just there has a cave. The old woman came out there and sat above it. She sent her eyes to go and catch her some fish and she sat there totally blind. No one thought that her eyes had caught her any fish for when the company returned, she was already at home scaling fish. Some of the people wondered at this and talked it over among themselves. This occurred whenever she wanted fish. She went down the short cut. That was the most wonderful thing. Another strange thing was that this old woman did was to change herself into a lizard. She assumed many other forms and the best of all was that she did not harm anyone. The place where she lived was on the path taken by the people of Ewa when they ascended. The bone fence of the bad chiefs of the valley of Kamanai was also near. (*Kuokoa* 1922, trans. by Pukui 1978, as quoted in Maly and Maly 2012:197)

A fairly clear geographic reference is given to the point on the west side of Ke‘ehi Lagoon just to the south of where the OR&L causeway reached the land of Moanalua (see Figure 4).

It may be also noted that both Hālawa and Moanalua were famous for their traditional Hawaiian fishponds lying both to the south/makai and to the north/mauka of the Airport Section 3 portion of the transit corridor. Fishponds are often considered to be wahi pana in and of
Figure 5. Wahi Pana of Hālawa Ahupua’a and western Moanalua Ahupua’a (as reported by The SRI Foundation and Kumu Pono LLC 2012:E-9)
Figure 6. *Inoa 'Āina* of coastal, eastern Hālawa Ahupua‘a and coastal western Moanalua Ahupua‘a (as reported by The SRI Foundation and Kumu Pono LLC 2012:E-10)
Figure 7. *Inoa ‘Āina* and *Wahi Pana* of coastal western Moanalua Ahupua‘a and southern Kahauiki Ahupua‘a (as reported by The SRI Foundation and Kumu Pono LLC 2012:E-10)
themselves or because they are often associated with stories. The Airport Section 3 corridor does not cross any fishponds.

**Study 3: Allen et al. (2005)**

Under contract with the Department of the Navy, the International Archaeological Research Institute Inc. (IARII) produced a study titled *A Study of Native Hawaiian Traditional Cultural Places, Hickam Air Force Base, Hālawa and Moanalua Ahupua‘a, ‘Ewa and Kona Districts, O‘ahu Hawai‘i*. The study examined 25 places in seaward Hālawa and Moanalua Ahupua‘a “that appeared likely at the outset of the project to qualify as TCPs [Traditional Cultural Properties].” Figure 8 shows the locations of known Hawaiian Traditional Cultural Places at the former Hickam Air Force Base. Fourteen of the 25 places were assessed as being potential Traditional Cultural Properties based on National Register of Historic Places (NRHP) criteria A-D (Table 3). It is notable that all 14 potential TCPs are located near the coast (see Figure 8) and none are within 2.5 km of the Airport Section 3 corridor.
Figure 8. Airport Section 3 corridor in relation to known Hawaiian Traditional Cultural Places at the former Hickam Air Force Base (now part of Joint Base Pearl Harbor Hickam) (adapted from Allen 2005:99)
Table 3. Potential TCPs within the Former Hickam Air Force Base (now part of Joint Base Pearl Harbor Hickam) (adapted from Allen 2005:89-90, Table 6)

<table>
<thead>
<tr>
<th>Place</th>
<th>Location in (Is), Partially in (Part), or Offshore (Offsh) by Hickam AFB</th>
<th>Ahusua'a</th>
<th>NRHP Criteria(s)</th>
<th>Notes for Criteria</th>
<th>Physical Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>A (Events)</td>
<td>B (Famous People)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C (Art. Period, Style)</td>
<td>D (Information)</td>
<td></td>
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</tbody>
</table>

| BMU: ground at Fort Kamahama (possible village in area) | In | Hālawa | x |                  | portions preserved |
| Entrance to Pu‘ula Lagoon (Pearl Harbor); see Pu‘ula, below, for land divisions | Offsh (also offshore from Honouliuli) | Hālawa | x | x | possibly intact |
| Fishponds, generally | Part | Hālawa and Moanalua | x | x |                  |
| Hālawa Hālau (ahupua'a) | Part | Hālawa | x | x | various; most Hickam AFB portions developed |
| Hickam AFB as kapu Crown lands | In | Hālawa and Moanalua | x | x | most portions developed |
| Kapaa‘a‘a Kapoi‘kika Keropoukana‘a (battlefield, settlement) | In | Hālawa | x | x | place where Kahahana and Ka‘o‘opu‘u killed |
| Loko Waiaho, also “Queen Emma’s Pond”; Waiaho | In | Hālawa | x | x | Queen Emma filled |
| Pāmakika Paliwai Paliwai (fish trap) | In | Hālawa | x | x | reportedly destroyed; area developed |

Table 6. Locations, significance recommendations, and condition summaries for potential TCPs in Hālawa Ahupua‘a portion of Hickam AFB; TCPs organized alphabetically

<table>
<thead>
<tr>
<th>Place</th>
<th>Location in (Is), Partially in (Part), or Offshore (Offsh) by Hickam AFB</th>
<th>Ahusua'a</th>
<th>NRHP Criteria(s)</th>
<th>Notes for Criteria</th>
<th>Physical Condition</th>
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<td></td>
<td></td>
<td></td>
<td>A (Events)</td>
<td>B (Famous People)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C (Art. Period, Style)</td>
<td>D (Information)</td>
<td></td>
</tr>
</tbody>
</table>

| Pu‘ulua region (Poulei; see Entrance, above, for lagoon) | Part | Hālawa and Moanalua | x | x | settlement association with geoducks, moko, shark dories, battleground where Kahahana conquered Kahahana |
| Queen Emma’s house (structure) | In | Hālawa | x | x | Queen Emma destroyed |
| Watertown (settlement) | In | Hālawa | x | x | development of Pearl Harbor buildings destroyed; roads in use |
Study 4: Kaʻimipono Consulting Services (2008)

Under contract to the City and County of Honolulu, Kaʻimipono Consulting Services (2008) carried out a Cultural Resources Study identifying cultural resources, practices, and beliefs that may be affected by the HHCTTC Project. One historic resource was also identified.

One aspect of this study was to produce a summary of cultural resources and practices “within the 500-foot APE around the proposed stations.” These resources and practices identified near the Airport Section 3 corridor are summarized by *ahupua’a* below.

Table 4. Summary of Cultural Resources and Practices Identified Near Airport Section 3 Corridor (adapted from Kaʻimipono Consulting Services 2008:4-37 and 4-38)

<table>
<thead>
<tr>
<th>Ahupua’a</th>
<th>Resource</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hālawa</td>
<td>Hālawa Stream</td>
<td>Resource (water)</td>
</tr>
<tr>
<td>Hālawa</td>
<td>Pearl Harbor Kai Elementary School</td>
<td>Practice</td>
</tr>
<tr>
<td>Hālawa</td>
<td>Richardson Park and Pool</td>
<td>Practice</td>
</tr>
<tr>
<td>Hālawa</td>
<td>Arizona Memorial Access &amp; Bowfin Museum</td>
<td>Resource (historic)</td>
</tr>
<tr>
<td>Hālawa</td>
<td>Cincpac Command Headquarters</td>
<td>Practice</td>
</tr>
<tr>
<td>Moanalua</td>
<td>Holy Family Catholic Academy</td>
<td>Practice</td>
</tr>
<tr>
<td>Moanalua</td>
<td>Keʻehi Lagoon Park</td>
<td>Practice</td>
</tr>
<tr>
<td>Moanalua</td>
<td>Disabled American Veterans’ Hall</td>
<td>Practice</td>
</tr>
<tr>
<td>Moanalua</td>
<td>Keʻehi Lagoon Park Canoe Facility</td>
<td>Practice</td>
</tr>
<tr>
<td>Moanalua</td>
<td>Assets School</td>
<td>Practice</td>
</tr>
<tr>
<td>Moanalua</td>
<td>Nimitz Elementary School</td>
<td>Practice</td>
</tr>
<tr>
<td>Moanalua</td>
<td>Pearl Harbor Elementary School</td>
<td>Practice</td>
</tr>
</tbody>
</table>

Of the twelve cultural resources and practices identified near Airport Section 3 (see Table 4), it appears that only Hālawa Stream and the Keʻehi Lagoon Park/ Keʻehi Lagoon Park Canoe Facility relate directly to locales of traditional Hawaiian cultural landscapes. The present archaeological inventory survey documented that both of these areas have been massively transformed by twentieth century fill activities and yielded minimal information regarding cultural practices.

Another component of the Kaʻimipono Consulting Services (2008) study was an oral history project. Of the oral histories recorded, one interview was substantively relevant to the Airport Section 3 corridor. Specifically, an interview with Mr. Shad Kane provided details regarding the cultural traditions associated with Leilono at Āliamanu at Moanalua. While certainly *wahi pana* in the Hawaiian past, this area is understood as about 2.8 km east of the Airport Section 3 corridor (see Figure 5) and will not be affected by the transit project.

Mr. Kane also discussed the seaward portion of the boundary between Hālawa Ahupuaʻa of ʻEwa District and Moanalua Ahupuaʻa of Kona District. His account is given below:

…After much research it was learned that the moku boundary between ʻEwa and Kona (Honolulu) has changed several times. Today the moku boundary parallels the fence line dividing Pearl Harbor Naval Shipyard from Hickam Air Force Base. However upon further investigation it was learned that anciently the actual boundary was 1 mile east of the fence separating the bases. It allowed both ʻEwa and Kona to share in the inland fish
ponds of Lelepua and Kaʻihikapu which were built by Kaʻihikapu-a-Manuia who was the son of Kalaimanuia and the father of Kakuhihewa. Those fishponds which were 332 and 258 acres respectively now lie beneath the tarmac of both Hickam AFB and the Honolulu International Airport. The auwai are still there today and exit Mamala Bay and Keehi Lagoon. You can still see them today on your occasional flights off island. Kapuaʻi‘akaua is Hickam Air Force Base. The ancient moku boundary between ‘Ewa and Kona used Kapuaʻi‘akaua as a description of that division. Today the center of Kapuaʻi‘akaua would be in the approximate location of Hickam Harbor Beach adjacent to the reef runway. Is it any wonder why there is a street name of Pu‘uloa in Mapunapuna?

[Re: current cultural practices] Since 2002 the O‘ahu Council of Hawaiian Civic Clubs and the 15th Airbase Wing Commander of Hickam Air Force Base has been sponsoring an annual Makahiki at Kapuaʻi‘akaua. The Makahiki is an ancient, annual festival that was dedicated to Lono, the deified guardian of agriculture, rain, health and peace. For over two thousand years, the significance of Lono and his contributions to the beliefs and practices of the early Hawaiian people, influenced the celebration of events held during the Makahiki Festival throughout the Hawaiian Islands. According to the ancient lunar calendar of Hawai‘i, the beginning of the Hawaiian new year began on the first night of the rising of the star constellation Makaliʻi (Pleiades). The four months following the rise of the Makaliʻi (from October to the end of January) was set aside as a time for Lono to give thanksgiving for the bounty of the land and sea. Since Lono was the embodiment of all the characteristics of peace and welfare, all warfare was strictly forbidden during the time of the Makahiki. Since Lono represented the spiritual life-force that came out of all agricultural efforts, much feasting of every kind was done during the four months of the Makahiki. This focus on health and welfare made games of skill that tested a healthy body and mind which is a focal point of the Makahiki games. It was here at Kapuaʻi‘akaua, some 250 years and earlier where the Makahiki Festival was celebrated. Other places in ‘Ewa where the Makahiki games were played were Puuokapolei, Waikiki, Waipio and Puuloa. (Kaʻimipono Consulting Services 2008: F-31)

Mr. Kane’s account draws attention to the Hālawa/Moanalua Ahupua'a (which is also the ‘Ewa/Kona moku or district) boundary as a focus of traditional Hawaiian activity. This merited another look at the survey results (T-012) and the historic record in the vicinity of the posited boundary but no clear evidence was found of any cultural practices in that portion of the posited ahupua’a boundary traversed by the Airport Section 3 corridor.
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